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DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR 1982

DOCUMENTS

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

HOUSE OF REPRESENTATIVES

NINETY-SEVENTH CONGRESS

FIRST SESSION

SUBCOMMITTEE ON THE DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES

SIDNEY R. YATES, Illinois, *Chairman*

CLARENCE D. LONG, Maryland
JOHN P. MURTHA, Pennsylvania
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DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR 1982

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DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR 1982

THURSDAY, MARCH 26, 1981.

UNITED STATES SYNTHETIC FUELS CORPORATION

WITNESSES

JOHN J. McATEE, JR., ACTING CHAIRMAN OF THE BOARD AND GENERAL COUNSEL
PIERRE DE SAINT PHALLE, ASSISTANT GENERAL COUNSEL
CHARLES W. WIECKING, DEPUTY CONTROLLER

Mr. YATES. The hearing will come to order.

This is the hearing on the appropriation for fiscal year 1982 and possibly for fiscal year 1981 for the United States Synthetic Fuels Corporation and appearing in connection with that appropriation is Mr. John J. McAtee, Jr., Acting Chairman of the Board and General Counsel, and he is accompanied by Mr. Pierre de Saint Phalle, Assistant General Counsel, and Mr. Charles W. Wiecking, Deputy Controller.

Mr. McAtee's biography may be placed in the record at this point as may Mr. de Saint Phalle's and Mr. Wiecking's.

JOHN J. McATEE, Jr.

237 Round Hill Road
Greenwich, Connecticut 06830
(203) 869-1353

Davis Polk & Wardwell
9 West 57th Street
New York, New York 10019
(212) 826-6960

Born: St. Louis, Missouri, November 23, 1936
Married: A. Cooley McAtee. Children: John C.C. and Elizabeth P.

EDUCATION

Webster Groves High School, 1954
Princeton, A.B. Economics, 1958
Yale Law School, J.D., 1963
- Editor, Yale Law Journal

MILITARY SERVICE

Commissioned Ensign 1958; Released Lt. (j.g.) 1960; Second Division Officer U.S.S. Pickaway (APA 222); Investigations and Discipline Officer, U.S.N. Training Center San Diego.

LEGAL AND BUSINESS EXPERIENCE

Davis Polk & Wardwell since October 1963; Partner since March 1, 1969

Experience at Davis Polk & Wardwell

Representation of corporations, investment bankers and lending institutions, both domestic and foreign, in hundreds of financings including secured project financings, private placements, registered public offerings, municipal financings and public Eurodollar offerings; representation of corporations and investment bankers in many of the leading takeovers in recent years, both friendly and unfriendly and both on the offensive and defensive; representation of a number of Japanese, English, German and Dutch companies in connection with their acquisitions and general business in the United States; representation of a number of U.S. corporations in connection with their general business and corporate strategies and policies; representation of various types of creditors in bankruptcies; representation of various categories of clients in joint ventures. The above representations involved a significant percentage of the 100 largest U.S. corporations.

Lecturer

Frequent lecturer before various organizations including: Practicing Law Institute, The Southwestern Legal Foundation, The Law Journal, New York University Business School, and Yale Law School on a variety of subjects

including international financing and investment, urgent legal issues, foreign acquisitions in the United States, the role of the dealer manager in the disclosure process, exchange offers, duties of directors and officers, defensive measures in takeovers, duties of lawyers in the disclosure process and antitrust developments.

Author of articles relating to the above.

OTHER ACTIVITIES

Trustee, Yale Law School
Trustee, Long Island College Hospital (President and Chief Executive Officer 1973-1974)
Trustee, The Ethel Walker School (Executive Committee)
Trustee, The Southwestern Legal Foundation
Former Trustee, Brooklyn Institute of Arts and Sciences--Governing board of Brooklyn Museum, Brooklyn Botanic Garden and Brooklyn Academy of Music (Executive Committee)
Director, NLT Corporation (insurance holding company, Nashville, Tennessee)
Director, various wholly-owned subsidiaries of European corporations
Inspector, Bankrupt estates of Provincial Refining Company and Newfoundland Refining Company (largest bankruptcy in Canada)
Member, Bar Association of the City of New York (Chairman of Securities Act of 1933 and Investment Company Act of 1940 Subcommittee, 1978-79); New York State Bar Association; American Bar Association; International Bar Association
Clubs - Round Hill Club, Greenwich Field Club, Greenwich Skating Club, Knickerbocker Club, Down Town Association.

PIERRE C. DE SAINT PHALLE

Home Address: 345 East 52nd Street
New York, New York 10022

Washington Address: 3227 Reservoir Street
Washington, D.C. 20007

Born: New York, New York (1948)

Telephone: 202/337-2759

Position: Assistant General Counsel, U. S. Synthetic Fuels Corporation

Education

1973 J. D., Columbia University Law School; Law Review

1970 B. A., History, Trinity College, Hartford, CT

Recent Experience

1973-80 Davis Polk & Wardwell, Associate, Corporate Department

General corporate legal experience including work on private placements, public offerings, debt restructuring, project financing, commercial bank loans, mergers and acquisitions, the establishment of singl-epurpose finance subsidiaries, the issuance of commercial paper by foreign entities, and various corporate governance and SEC compliance questions. Most recently, I have worked on the restructuring of the debt of Chrysler Corporation and Chrysler Financial Corporation on behalf of a major New York bank, the merger of Belden Corporation with a subsidiary of Crouse-Hinds Company, and the financing of an oil refinery in the United Kingdom by a joint venture of two major oil companies. From February 1976 until June 1977, I worked in the Paris Office of Davis Polk & Wardwell, primarily on Euro-dollar offerings and the financing of a gas pipeline system in Belgium.

Professional Associations and Qualifications

Admitted to the Bar of the State of New York since 1974. Admitted to practice before the Court of Appeals (Second Circuit), the Southern District of New York and the Eastern District of New York since 1975. Member of the American Bar Association and the Council of New York Law Associates.

CHARLES W. WIECKING

Mr. Wiecking, 56, has served in a variety of financial management positions in the Federal government and related agencies. Following one year at the U.S. Bureau of the Budget in 1949-50, he served in economic and financial analysis positions with the Housing and Home Finance Agency and the Veterans Administration and as a budget analyst with HHFA. With the establishment of the Department of Housing and Urban Development, he joined the Office of the Deputy Under Secretary as a member of the PPBS staff. In 1968, he assisted in the organization of the Federal Insurance Administration, becoming Assistant Administrator. With the initiation of the Congressional budget process, he became Associate Director for Budget Priorites (Community Resources and General Government). During 1980 he was employed by the U.S. Railway Association.

He received his A.B. degree with High Honors at Indiana University in 1948 and is a member of Phi Beta Kappa. He has served as Professional Lecturer in public financial management at George Washington University.

Mr. YATES. Is this a wake for you this morning, do you think?

Mr. MCATEE. I hope not, Mr. Chairman.

Mr. YATES. What is the intention of the administration respecting synthetic fuels, that everything be turned over to you?

Mr. MCATEE. That is our impression, yes, sir.

Mr. YATES. It is a wake for the other program then?

Mr. MCATEE. Well, perhaps some of those programs will come over to us and it won't be a wake for anybody.

Mr. YATES. At any rate, your statement may be made a part of the record.

[The statement follows:]

STATEMENT OF JOHN J. MCATEE, JR., ACTING CHAIRMAN

UNITED STATES SYNTHETIC FUELS CORPORATION

BEFORE

SUBCOMMITTEE ON DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES

COMMITTEE ON APPROPRIATIONS

U.S. HOUSE OF REPRESENTATIVES

March 26, 1981

Good morning Mr. Chairman and Members of the Subcommittee. I am John J. McAtee, Jr., Acting Chairman of the United States Synthetic Fuels Corporation. With me this morning are Pierre de Saint Phalle, Assistant General Counsel and Charles Wiecking, our Deputy Controller.

This is our first appearance before an Appropriations Committee of the Congress. It is a pleasure to be here to report to you on the significant progress made since the Corporation's inception, to discuss our current planning for the future, and to respond to any questions you may have concerning the program.

As the Subcommittee knows, the Corporation was created by Title I of the Energy Security Act approved June 30, 1980. As explained in the Joint Explanatory Statement of the Committee of Conference that accompanied the legislation, the Corporation was created as a special purpose Federal entity to carry out the national synthetic fuel development program established by the Act. It's mission is to provide financial assistance to the private sector to encourage and bring about the commercial production of synthetic fuels by private industry. In order to accelerate achieving the national objectives of the legislation, and obviate the delays that often attend the administration of other Federal programs, the Corporation was established free of a variety of constraints placed on many departments and agencies of the Executive Branch. For example, under Section 153 of the Act the Corporation was established as an off-budget entity in order to permit its Board of Directors to make reasonable and credible financial commitments to private industry for projects requiring long lead times free of the uncertainty that attends the annual Federal budget process. While the obligation and outlays by the Secretary of the Treasury for the purchase of the Corporation's obligations must be included in the totals of the Federal budget, the receipts and disbursements of the Corporation itself are not included but must be presented annually for review as part of the budget process.

In the words of the Conferees -- because of the nature of its mission to provide financial assistance to the private sector, the Corporation is expected to function much like a private corporate entity such as a financial investment institution, subject to the accountability provisions of the Act.

Under Section 116 of the Act, the powers of the Corporation are vested in its Board of Directors -- consisting of a full-time Chairman and six other Directors appointed by the President by and with the advice and consent of the Senate. The nominations of our initial Chairman and Board of Directors were sent to the Senate by President Carter last September. The nominations were not acted on and were still pending when the Senate began its recess last fall. In early October, the President gave recess appointments to Mr. John Sawhill as Chairman, and Miss Catherine Cleary, and Messrs. John D. de Butts, Frank Savage and Lane Kirkland as Directors. The Board held its first organizational meeting on October 8, 1980, so we have been in business for less than six months.

Activities to Date

At its initial meeting, the Board took a number of actions to move the Corporation forward. It approved an initial set of and an organizational framework. It established the office and duties of the position of Vice President-Finance and, subject to the Act and the by-laws, authorized the Chairman to commence recruiting personnel. To secure funding, the Chairman was also authorized to execute and deliver the Corporation's promissory notes to the Secretary of Treasury, and to take the steps needed to establish banking facilities. At that time, the Board also received a briefing by the Department of Energy concerning the "Interim Alternative Fuels Program" that had been launched by the Department under the Defense Production Act, the Non-nuclear Energy Research and Development Act, and the funding made available by this Subcommittee. In addition to the obvious need to get on with the recruitment of staff, the principal concern was the need for expedited action if the Board was to meet the statutory deadline for the issuance of the Corporation's initial solicitation for synthetic fuel project proposals. The deadline was less than three months away. Under the Act the solicitation had to be ready for review by the Corporation's Advisory Committee not later than the end of November. An unusually diligent effort was needed by the Chairman, the Board, and the Advisory Committee. And, as a result of that effort and cooperation the Corporation was able to act well ahead of the deadline. The initial solicitation was issued on November 21 and published in the Federal Register on December 2. It consisted of a two-phase process for the submission and evaluation of proposals for financial assistance. Phase One invites interested parties to present proposals for all types of projects for basic evaluation. The Corporation will then select proposals for Phase Two applying reasonable standards which take into account the statutory criteria set forth in the Energy Security Act. Promising projects selected under Phase One for further evaluation will be asked to submit detailed, supplemental technical, business and financial information. Based on those submissions, and any further material that may be requested, the Board of Directors will decide which projects it will select for the award of financial assistance.

In addition to issuing the initial solicitation, since October the Corporation has been busy with all of the start-up tasks normally associated with a new organization -- obtaining space, assembling staff, setting our funding and banking operations in place in cooperation with the Treasury Department, defining responsibilities within the Corporation, formulating internal operating policies and procedures, and a myraid of details having to do with fiscal, personnel and property administration. At its November 17 and December 22, 1980 meetings, the Board of Directors established a salary grade structure for the Corporation, and directed the Chairman to obtain a program of health and life insurance and other employee benefits consistent with recommendations presented to the Board in an outside study of personnel salaries and benefits.

Also, the Corporation has had to analyze and implement the financial disclosure provisions and conflicts of interest rules which apply to the Directors, officers and employees of the Corporation. An Ethics and Conflicts Officer has been designated and an Internal Conflicts of Interest Policy was established by the Board on January 23, 1981.

The recruitment of an experienced staff has occupied a great deal of our time. We completed our senior staffing by February 1. For example, I joined the Corporation in early January as its Senior Vice President and General Counsel. However, I have been serving as Acting Chairman since President Reagan accepted the resignations of Mr. Sawhill and our other Directors on January 30. Since my arrival, I have devoted a great deal of time trying to assemble a staff of experienced attorneys to meet the Corporation's need for legal services, and have made some progress. Since mid-January and in cooperation with the other offices of the Corporation, we have also begun the process of interpreting the requirements contained in our statute.

Special work is underway on the Act's requirements in various areas, including public access to information; patent requirements; the anti-trust laws; the Davis-Bacon Act and other labor related provisions; and small business participation in the program. We are also doing a thorough-going evaluation and compilation of the legislative history of the Act to guide the Corporation's implementation of the statute. Another critically important on-going task has been a major undertaking by our Planning, Project Development, Finance, Technology and Engineering, and legal staffs to refine the project selection process for recommendation to the Board of Directors when it is in place.

Also, in order to acquaint the public with the program, we have had numerous meetings with governors and local officials, industry representatives, prospective project sponsors, environmentalists, and other interested groups to receive their recommendations. For example, two public meetings were held during January -- one in New York City on January 19, and the other in Denver on January 28. The purpose of these meetings was to acquaint prospective project sponsors and other interested parties with the program, provide them an opportunity to meet Corporation staff, and to discuss the initial solicitation and the various forms of financial assistance available under the Act.

Another aspect of our current activity of particular interest to this Subcommittee concerns the interim Alternative Fuels Production program funded by the Subcommittee under Public Law 96-126, the Interior Appropriations Act for FY-1980, Public Law 96-304, the Supplemental Appropriations and Recission Act of 1980, and Public Law 96-514, the Interior Appropriations Act for FY-1981. As the Subcommittee knows, under the "fast-start" program, the Department of Energy has solicited proposals for synthetic fuel projects under authorities contained in the Defense Production Act and the Non-nuclear Energy Research and Development Act. Public Law96-304 anticipates that certain of these initiatives will be transferred to the Corporation for evaluation under our authorities. Anticipating this, and under the leadership of the Department of Energy, the Corporation is currently engaged in a supportive role in the Department's evaluation of three major proposals submitted under the Department's Defense Production Act solicitation. We are also participating in the Department's evaluation of the ANR coal gasification project, and 10 other projects submitted to the Department under its Non-nuclear Act authorities.

Turning to budgetary matters, section 120(c) of the Energy Security Act authorizes the Corporation to make expenditures for reasonable and necessary administrative expenses within certain statutory limitations in accordance with a detailed statement of such expenditures transmitted along with the President's proposed budget. A statement has been submitted to the Subcommittee presenting the Corporation's current estimates of administrative expenses for Fiscal Year 1982 in such detail as is possible under current circumstances.

The statute (Section 120(c)) provides that expenditures for fiscal year 1980 and 1981 may be made without a prior statement, and the Corporation's activities and administrative expenses are being carried out and incurred during FY-1981 under this exemption. Current estimates of our expenditures for FY-1981 have been submitted for information purposes. There were no Corporation activities in FY-1980.

The President's Budget

The Office of Management and Budget has included certain information relating to the synthetic fuels program and OMB estimates of the Corporation's activities in Part IV, Off-Budget Agencies, of the Appendix to the Budget of the United States Government for Fiscal year 1982. The estimates contained in the Corporation's independent submission are somewhat lower than those published by OMB, and reflect a slower rate of progress in staffing than was assumed when the budget was initially prepared.

The revisions to the budget for fiscal year 1982 transmitted to Congress in March, 1981, do not significantly affect the overall estimates of administrative expenses included in the statement submitted to the Subcommittee. The budget proposals of the new Administration contemplate continuation of the Corporation under a newly appointed Board of Directors and the transfer to the Corporation of some portion of the alternate fuel effort now being administered by the Department of Energy.

Pending clarification of budget proposals of the new administration, the Corporation's statement is based upon decisions of the previous Board of Directors and Chief Executive Officer.

Limitations on Administrative Expenses

. Section 120(c) of the statute make clear the intent of Congress that the Corporation's expenditures for administrative expenses shall reflect due consideration for economy and efficiency. In addition to the exercise of prudence and economy in its expenditures, the statute imposes several contraints on the Corporation's administrative expenses.

Within total funding made available through appropriation to the Energy Security Reserve in the Treasury Department, the Corporation is authorized to expend a maximum amount for administrative expenses in any one year. The maximum amount was initially set at $35 million. The amount is adjusted annually by an amount equal to the change in the GNP implicit price deflator. Pursuant to this statutory direction, the limitation on the Corporation's administrative expenditures in fiscal year 1981 will be $38,185,000. Our computation of the adjustment is included in our submission to the subcommittee.

The Corporation's current estimates of the limitation on its administrative expenses for fiscal year 1982 is $41,600,000, based upon the assumption adopted by the Office of Management and Budget in connection with the March, 1981 revision of the fiscal year 1982 budget of a GNP implicit price deflator increase of 9.9% during that year.

Limitations on Numbers of Employees

In addition to the statutory limitation on outlays for administrative expenses, Section 117(d) of the Act provides that the Corporation shall not be authorized to employ more than three hundred individuals in full-time professional positions at any time.

At this time, we estimate a full-time professional staff of approximately 200 professionals at the end of fiscal year 1982 and a total of 300 employees, although we may be able to operate with fewer professionals.

Summary of Administrative Expenses

For fiscal year 1981, the Corporation estimates outlays for administrative expenses, subject to limitation under Section 120(c) of the Act, at $12,000,000, providing funds for 97.0 staff-years of employment and an estimated 230 employees on September 30, 1981.

For fiscal year 1982, we estimate outlays for administrative expenses at $25,000,000, providing funds for 273.0 staff-years of employment and an estimated 300 employees on September 30, 1982.

Cash Outlay Basis - In administering the Section 120(c) limitation, the Corporation understands the statutory term "...authorized to expend..." to mean cash outlays, rather than obligations (as for Federal government agencies pursuant to appropriation action) or accrued expenses (as in most private organizations). In practice, since the majority of the Corporation's administrative expenses are for employee salaries and direct related costs, there are only minor differences among the three concepts.

Sources of Funds for Administrative Expenses

Funds for the Corporation's activities are derived from borrowing from the Energy Security Reserve established in the Treasury. Additional information concerning the sources of our funds and the Corporation's organization, Board of Directors and officers has been included in our submission to the Subcommittee.

As I have said, Mr. Chairman, I am representing the Corporation here today as its Acting Chairman. As the Subcommittee knows, President Reagan accepted the resignations of our previous Chairman and Directors on January 30. Since then, we have continued to do those things of a non-policy-making nature that are necessary to place the staff in a position to make carefully prepared recommendations to the new Chairman and to the new Board when they have been appointed. The President has indicated that this will be forthcoming very soon. As I have said, the powers of the Corporation are vested in its Board of Directors. However, I am satisfied that the efforts currently underway at the Corporation are all very important and necessary for the future administration of this tremendously important and challenging national program.

In conclusion, I would like to call the Subcommittee's attention to some of the principles that have guided our stewardship of the program to date.

As mandated by the Energy Security Act, they have been developed to insure that the paramount role of private enterprise is preserved and that private companies--not the Corporation--make the basic technical and business judgments as to which technologies to employ, where to locate facilities, how to market the products, etc.. The principles are also designed to ensure that the Corporation is a highly professional organization, able to quickly, effectively and efficiently negotiate financial assistance agreements with the private sector, and able to carefully expose the credit of the United States to accelerate the development by, the private sector of a commercially viable synthetic fuels industry.

Some of our present principles are:

(1) Recognizing it's enormous public responsibility, the Corporation will endeavor to make itself available to interested parties to provide information about the Corporation, and will endeavor to keep the Congress fully informed of its activities.

(2) The Synthetic Fuels Corporation will be a small organization with a highly specialized professional staff. While the Act authorizes the Corporation to hire up to 300 professionals, we will endeavor to operate with fewer people. At this time our total staff, including support personnel, consists of approximately 90 people.

(3) The Corporation will recruit its professional staff to a large extent from the private sector and will compensate staff at levels required to hire and retain the specialized professionals needed to analyse large complicated, first-of-a-kind projects and to negotiate financial assistance agreements specially tailored to the particular requirements of individual transactions, recognizing that to the maximum extent practicable employees should be compensated within the ranges set forth in the Federal salary schedules.

(4) The Corporation will operate along the lines of a private banking institution and use the flexibility afforded by its statute to expedite, simplify and streamline its operating procedures as much as possible.

(5) The Corporation will maintain a continuous and active dialogue with project sponsors and other interested parties, including state and local government officials. The Corporation recognizes that regulatory delays can be a source of large cost overruns and will work with sponsors and government officials to expedite regulatory reviews and minimize such delays.

(6) The Corporation will give priority to contingent forms of financial assistance such as loan guarantees, price guarantees and purchase agreements over other forms of financial assistance. This means that funding made available to the Corporation may never be spent if the synthetic fuels produced by assisted projects can sell at competitive prices in the marketplace and provide an adequate return to the sponsors, or unless and until there is a default under a contingent liability financial assistance agreement. Other forms of assistance such as loans or joint ventures will be provided where necessary to advance the purposes of the Act.

These principles have guided our efforts as we have begun carrying out the mandate of our enabling statute.

The Corporation's staff has no interest in becoming a permanent fixture in Washington. The program has a clear and limited goal. The Congress has provided the Corporation with a sound framework for achieving its goal. I am convinced that given these operating principles and the stimulus the Corporation is chartered to provide, the private sector will respond by establishing a viable synthetic fuels industry and succeed in creating a more secure energy future for the nation.

This concludes my formal statement, Mr. Chairman. I will be pleased to try to answer any questions you or any member of the Subcommittee might have.

United States
Synthetic Fuels Corporation

Statement of Administrative Expenses

Submitted Pursuant to Section 120(c)
Energy Security Act of 1980

Prepared for:
The Committee on Appropriations
United States House of Representatives

Prepared by:
United States
Synthetic Fuels Corporation
1200 New Hampshire Avenue
Washington, D.C. 20586

March 1981

UNITED STATES SYNTHETIC FUELS CORPORATION

Statement of Administrative Expenses

Introduction

The United States Synthetic Fuels Corporation was established by Title I of the Energy Security Act (Public Law 96-294; 94 Stat. 611; 42 USC 8701 note) (the "Act") to provide financial assistance in achieving the national goal of synthetic fuel production capacity equivalent to at least 500,000 barrels per day of crude oil by 1987 and at least 2,000,000 barrels per day of crude oil by 1992, from domestic resources.

Among the purposes of the Act are:

- fostering greater energy security and reducing the nation's economic vulnerability to disruptions in imported energy supplies;
- accelerating the creation by the private sector of commercial synthetic fuel production facilities of diverse types with the aggregate capability to produce from domestic resources in an environmentally acceptable manner the national production goals set forth in the Act;
- providing for financial assistance, preferably on a contingent basis, to encourage and ensure the flow of capital funds to those sectors of the national economy which are important to the domestic production of synthetic fuel;
- encouraging private capital investment and activities in the development of domestic sources of synthetic fuel and fostering competition in the development of the nation's synthetic fuel resources;

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- encouraging and supplementing but not competing with or supplanting private capital investments in the development of domestic sources of synthetic fuel;
- giving special consideration to the production of synthetic fuel which has national defense applications and expediting its initial development; and
- creating the United States Synthetic Fuels Corporation, a Federal entity of limited duration, to provide financial assistance to undertake synthetic fuel projects.

The Corporation was formed October 8, 1980, by recess appointment by the President of the United States of a Board of Directors as provided in the Act. The President of the United States may declare the Corporation established and fully operational pursuant to section 305(k)(1) of the Defense Production Act of 1950, as amended, on which date certain authorities of the Department of Energy under that Act are to be transferred to the Corporation. The President has not yet made such a declaration. The President accepted resignations of all Board members on January 30, 1981, and has not yet submitted new nominations.

The Corporation, characterized in the Act as a "Federal entity of limited duration", is categorized for budgetary accounting purposes as an "off-budget entity", in that its corporate financial transactions are not included in the receipts, expenditures, and deficit in the budget. However, Corporation funding derived from the Treasury is treated as an

obligation and expenditure of the Treasury Department and thus enters into the budget.

Section 120(c) of the Energy Security Act (PL 96-294; 94 Stat. 611,640) authorizes the United States Synthetic Fuels Corporation to make expenditures for reasonable and necessary administrative expenses within certain statutory limitations in accordance with a detailed statement of such expenditures transmitted along with the President's proposed budget.

This statement presents the Corporation's current estimates of administrative expenses for fiscal year 1982 in such detail as is possible under current circumstances. Planning factors used as a basis for these estimates were developed under the direction of the prior Board of Directors.

The statute provides that expenditures for fiscal years 1980 and 1981 may be made without such prior statement. Corporation activities are being carried out and administrative expenses incurred during fiscal year 1981 under the exemption cited above. Current estimates of such expenditures for fiscal year 1981 are included in this statement for comparative purposes. There were no Corporation activities in fiscal year 1980.

President's Budget

The Office of Management and Budget has included certain information relative to the synthetic fuels program and OMB estimates of the Corporation's activities in Part IV, Off-Budget Federal Entities, of the Appendix to the Budget of the United States Government for Fiscal Year 1982. The estimates of administrative expenses contained in this independent submission

are lower than those published by the Office of Management and Budget, reflecting a slower rate of staffing than was assumed when the budget was initially prepared.

Revisions to the Budget for Fiscal Year 1982 transmitted to Congress in March, 1981, do not significantly affect the overall estimates of administrative expenses included in this statement. The budget proposals of the incoming Administration contemplate continuation of the United States Synthetic Fuels Corporation under a newly appointed Board of Directors and transfer to the Corporation of some portions of the synthetic fuels effort currently administered in the Department of Energy.

This statement is based upon decisions of the previous Board of Directors and Chairman and is subject to review by the new Board of Directors and Chairman when nominated, confirmed, and appointed.

Limitations on Administrative Expenses

The statute sets forth the intent of Congress that the Corporation's expenditures for administrative expenses shall reflect due consideration for economy and efficiency. In addition to exercise of prudence and economy in its expenditures, the statute provides several constraints on the Corporation's administrative expenses.

Limitations on Funding

Within total funding made available through appropriation to the Energy Security Reserve in the Treasury Department, the Corporation is authorized to expend a stipulated maximum amount for administrative

expenses in any one year. The maximum amount is initially stated at $35 million, which amount is adjusted annually by an amount equal to the change in the GNP implicit price deflator from fiscal year 1979. Pursuant to this statutory direction, the limitation on the Corporation's administrative expenditures in fiscal year 1981 will be $38,185,000, computed as follows:

GNP Implicit Price Deflator (1972 = 100), July-September quarter, 1979	164.03
GNP implicit Price Deflator (1972 = 100), July-September quarter, 1980	179.18
Percent change	9.1%
Initial maximum amount	$35,000,000
Statutory increase (9.1%)	3,185,000
Limitation effective in fiscal year 1981.	$38,185,000

The Corporation's current estimate of the limitation on administrative expenses for fiscal year 1982 is $41,600,000, based upon the assumption of an increase of 9.9% in the GNP implicit price deflator during 1982 adopted by the Office of Management and Budget in connection with the March, 1981 revision of the fiscal year 1982 budget.

Limitations on Number of Employees

In addition to the statutory limitation on outlays for administrative expenses, section 117(d) of the Act provides that the Corporation is authorized to employ not more than three hundred individuals in full-time professional positions at any time.

For budgetary purposes, the Corporation is estimating a full-time professional staff of 200 employees at the end of fiscal year 1982 and a total staff of 300

employees, although this may be subject to change after review by a new Board of Directors.

Organization of Presentation

This statement of administrative expenses contains --

(1) Aggregate administrative expenses estimated for fiscal years 1981 and 1982.

(2) A description of the corporate organization and functions.

(3) Personal services and directly related costs for each organizational component.

(4) Other administrative expenses (travel, rent, etc.).

Chapter I

Summary of Administrative Expenses

For fiscal year 1981, the Corporation currently estimates outlays for administrative expenses subject to limitation under section 120(c) of the Act at $12,000,000, providing 97.0 staff-years of employment and an estimated 230 employees on September 30, 1981, together with associated costs and contractual administrative expenses.

For fiscal year 1982, the Corporation currently estimates outlays for administrative expenses subject to limitation under section 120(c) of the Act at $25,000,000, providing 273.0 staff-years of employment and an estimated 300 employees on September 30, 1982, together with associated costs and contractual administrative expenses.

Cash Outlay Basis

In administering the section 120(c) limitation, the Corporation understands the statutory term "..authorized to expend..." to mean cash outlays, rather than obligations (as for Federal government agencies pursuant to appropriation action) or accrued expenses (as in most private organizations). In practice, inasmuch as the majority of the Corporation's administrative expenses are for employee salaries and directly related costs, there are only minor differences among the three concepts.

Sources of Funds for Administrative Expenses

Corporation funds for its activities are derived from borrowings from the Energy Security Reserve fund established in the Treasury. The

Supplemental Appropriations Act, 1980, appropriated $18,792,000,000 to the Energy Security Reserve, of which $17,522,000,000 was apportioned so as to provide:

- $6,000,000,000 available immediately (July 8, 1980);
- Up to $5,310,000,000 available on June 30, 1981 insofar as not committed or conditionally committed by the Department of Energy; and
- $6,212,000,000 available after June 30, 1982.

In addition, the Corporation is authorized to charge and collect certain fees in connection with financial assistance provided under the Act, not to exceed 1 percent of the amount of such financial assistance, which fees may be applied against administrative expenses related to providing financial assistance.

Until such time as financial assistance is provided and administrative fees collected, the Corporation is defraying all administrative expenses out of funds borrowed from the Energy Security Reserve.

Although the Corporation is also authorized to charge an annual loan guarantee of 1/2 of 1 percent in connection with loan guarantees, the proceeds of these fees are not available for administrative expenses.

Procedure for Drawing Treasury Funds

Section 151 of the Act authorizes the Corporation, to the extent provided in advance in appropriation Acts, to issue its notes and other obligations to the United States of America acting by and through the

Secretary of the Treasury. Pursuant to this provision, the Corporation and the Treasury Department have entered into a Memorandum of Understanding that provides for funding such notes through a checks-paid letter of credit, under which the Treasury provides funds to the Corporation's commercial bank on a day-to-day basis to the extent required to cover checks presented for payment. In this manner, the Corporation is provided with funds actually required for its expenditures while at the same time minimizing the budget outlays of the Treasury and consequent need for Treasury borrowing from the public.

To further ensure that Federal outlays are held to the lowest practicable figure, the Corporation deposits all receipts and refunds immediately to the Energy Security Reserve fund in the Treasury so that such receipts and refunds may be used on a day-to-day basis in preference to drawing appropriated funds.

Chapter II

Corporate Organization

A chart of the corporate organization concept adopted by the initial Board of Directors is included as Appendix A to this Statement.

Board of Directors

The United States Synthetic Fuels Corporation is governed by a Board of Directors, consisting of seven members appointed by the President of the United States, by and with the advice and consent of the Senate.

The Chairman of the Board, who is also the Chief Executive Officers of the Corporation, is appointed for a seven-year term, shall devote full working time to the affairs of the Corporation, and may hold no other salaried position. The other six members of the Board are initially appointed for terms of from one to six years, so that the appointment of one member expires each year. Not more than four Directors shall be members of any one political party.

Pursuant to recommendation of the Board of Directors, the President initially established compensation for the Chairman of the Board at $175,000 per year. Compensation for other members of the Board was established at $10,000 per year, a fee of $300 for each Board meeting attended, and reimbursement for out-of-pocket expenses incurred in connection with meetings of the Board. Compensation of the Board of Directors may be adjusted from time to time with the concurrence of the President.

The Board is required to meet at least quarterly. At least semi-annually it must meet with a statutory advisory committee, consisting of the Secretary of the Treasury, Secretary of Defense, Secretary of Interior, Secretary of Energy, and Administrator of the Environmental Protection Agency.

Chief Executive Officer

The Chairman of the Board is the Chief Executive Officer of the Corporation and will be assisted by a small staff within the immediate office, budgeted at 10 employees for fiscal year 1982.

Inspector General

The Act provides for appointment of an Inspector General and a Deputy Inspector General by the President of the United States, by and with the advice and consent of the Senate. The Inspector General reports directly to, and is under the general supervision of, the Board of Directors, and is not under the control of, or subject to supervision by, any other officer of the Corporation.

In addition to the duties usual to such officers, such as policy direction for auditing, investigative, and inspection activities and reporting thereon, the Inspector General is responsible for determining the extent to which Corporation programs are consonant with and in compliance with the Act. The Inspector General is required to prepare an annual report to the Board of Directors, the President and the Congress, which is to be made available to the public.

The Corporation provides office space and administrative services to the Inspector General, and a limitation of $2,000,000 per year is authorized for reasonable and necessary administrative expenses. This budget anticipates a staff of 19 auditors, investigative, and support personnel to assist the Inspector General in performing assigned duties.

Audits of the Corporation's activities are performed by an independent public accounting firm selected by the Board of Directors and under the direction of the Board's Audit Committee.

Vice President-Administration

The Board of Directors has established the position of Vice President-Administration as the chief administrative officer of the Corporation to perform all duties normally incident to the chief administrative officer of a corporation and such other duties as are assigned by the Board of Directors or the Chairman. The Vice President-Administration also serves as the Treasurer of the Corporation.

The Vice President-Administration and his technical and support staff, budgeted at 80 employees for fiscal year 1982, provide services in the areas of personnel, budgeting and financial planning, accounting and financial control, management information, procurement, space management, and associated administrative support functions.

Vice President-Finance

The Board of Directors has established the position of Vice President-Finance to be the chief financial officer of the Corporation and to perform all duties normally incident to the chief financial officer of a corporation and such other duties as are assigned by the Board of Directors

or the Chairman.

The Vice President-Finance and a staff of professional and support personnel, budgeted at 29 employees for fiscal year 1982, design financial incentives, support solicitation preparation, evaluate proposals, support project negotiation, conduct liaison with the financial community, and analyze project costs.

General Counsel

The Corporation's General Counsel will also serve as Senior Vice President and Chairman of the Management Committee as well as performing the duties ordinarily assigned to the chief legal officer of a corporation. As Senior Vice President, he is the officer of the Corporation responsible for such management duties normally incident to such an officer in a corporation, and such other duties as are assigned by the Board of Directors or the Chairman of the Board. The General Counsel also currently serves as Secretary of the Corporation.

The General Counsel supervises a staff of attorneys, para-legal employees, and support personnel budgeted at 35 employees for fiscal year 1982. In addition, the General Counsel is responsible for overseeing performance under contracts entered into by the Corporation for legal services where it is impracticable to procure the services through additional staff attorneys.

Vice President-Government Affairs and Public Information

The Board of Directors has established the position of Vice President-Government Affairs and Public Information to be the chief public information and government affairs officer of the corporation and to perform all duties normally incident to such officer of a corporation and such other duties as are assigned by the Board of Directors or the Chairman.

The Vice President-Government Affairs and Public Information and a staff of professional and support personnel, budgeted at 21 employees for fiscal year 1982, provides the Corporation liaison with Congress and its committees, other Federal entities and agencies, and States and local governments; relations with public information media; and assistance to the public in communicating the Corporation's activities.

Vice President-Planning

The Board of Directors has established the position of Vice President-Planning to be the chief planning officer of the Corporation and perform all duties normally incident to the chief planning officer of a corporation and such other duties as are assigned by the Board of Directors or the Chairman.

The Vice President-Planning and a staff of professional and support personnel budgeted at 20 employees for fiscal year 1982 are responsible for preparation of a comprehensive strategy, conducting environmental analysis, assessing technological and regional balance among synthetic fuels projects, and evaluating production objectives.

Vice President-Project Development

The position of Vice President-Project Development has not yet been formally established by the Board of Directors, although included in the approved organization concept. In the interim, the functions of such position are performed by an Acting Director on detail from the Department of the Navy through the Department of Energy.

The professional and support staff of this segment of the organization, budgeted at 55 employees for fiscal year 1982, serve as principal contact with project sponsors, prepare solicitations, manage the process for screening proposed projects, manage negotiations of individual transactions, develop ongoing relationships with industry and labor, and develop and manage systems for monitoring project performance.

Vice President-Technology and Engineering

The Board of Directors has established the position of Vice President-Technology and Engineering as the chief technical officer of the corporation to perform all duties normally incident to the chief technical officer of a corporation and such other duties as are assigned by the Board of Directors or the Chairman. Vice President-Technology and Engineering and a professional engineering and technical staff, budgeted at 22 employees for fiscal year 1982, assess technologies, assess engineering feasibility of projects, support the development of synthetic fuels strategy, and identify environmental issues.

Chapter III

Personal Services Costs

Table I on the following page sets forth estimated staff-years of employment, end-of-year employment, salary costs by organization unit within the Corporation, and directly related personnel benefits costs.

Salaries

The Board of Directors has approved and the Corporation has established a salary schedule based upon recommendations of a nationally known consulting firm that--except for officer and senior executive positions--is consistent with the General Schedule and Senior Executive Schedules established for Federal employees by the United States government. In the officer and senior-level positions, the Corporation salary schedule departs from the General and Senior Executive Schedules, as contemplated by the Act, to establish salary rates more generally comparable to rates paid in private industry and other exempt Federal entities and thus not subject to the "compression" of upper-level salaries typical of the General and Senior Executive Schedules.

With respect to officer and senior-level positions, the Act provides that the Board of Directors shall fix the compensation of individual officer positions and categories of other employees taking into consideration the rates of compensation in effect under the Executive Schedule and the General Schedule; if the Board determines that it is necessary to fix the compensation of any officer position or category of other positions at a rate or rates in excess of that prescribed for level I of the Executive

Table I

UNITED STATES SYNTHETIC FUELS CORPORATION

Personal Services Cost by Organization Unit

(dollars in thousands)

	FY 1981 Estimate			FY 1982 Estimate		
	Staff Years	9/30 Empl.	Amount	Staff Years	9/30 Empl.	Amount
Board of Directors	...	(6)	$ 55	...	(6)	$ 80
Office of the Chairman and Chief Executive Officer	5.0	11	295	11.0	11	495
Inspector General	7.0	18	245	19.0	20	665
Administration	20.0	55	500	70.0	81	1,750
Finance	8.0	22	320	27.0	30	1,080
General Counsel	10.0	26	400	32.0	36	1,280
Government Affairs and Public Information	9.0	16	270	20.0	22	600
Planning	8.0	18	320	20.0	21	800
Project Development	25.0	50	1,000	54.0	56	2,160
Technology and Engineering	5.0	14	200	20.0	23	800
Total compensation	97.0	230	3,605	273.0	300	9,710
Employee benefits			750			2,065
TOTAL PERSONAL SERVICES COST			4,355			11,775

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Schedule, the Board may transmit to the President of the United States its recommendations with respect to the rates of compensation it deems advisable for such positions and categories; such recommendations become effective after the President has had thirty days to specifically disapprove and so notify the Board.

Rates of pay for officers and senior-level employees were transmitted to the President of the United States on several dates between November 4, 1980, and January 21, 1981, as follows:

October 4	Vice President-Administration and Treasurer	$ 95,000
November 28	General Counsel and Senior Vice President	150,000
December 12	Assistant Vice President-Project Development	100,000
December 19	Vice President-Government Affairs and Public Information	80,000
	Vice President-Finance	150,000
January 27	Vice President-Technology and Engineering	120,000

The statutory thirty-day period for consideration by the President elapsed without disapproval except in the case of the last officer position, Vice President-Technology and Engineering, which was specifically disapproved by the President on February 25, 1981.

All salaries recommended to the President are within the ranges recommended to the Corporation by its personnel consultant firm, as shown on the following page.

UNITED STATES SYNTHETIC FUELS CORPORATION

Proposed 1981 Salary Ranges
For Senior Executive Positions

Position	Minimum (000)	Target (000)	Maximum (000)
Chairman & CEO	$160	$200	$240
Finance Executive	130	165	200
General Counsel	130	165	200
Planning Executive	110	140	170
Technical Support Executive	95	120	145
Administration & Treasury Executive	90	113	136
Project Development Executive	90	113	136
Government Affairs and Public Information Executive	80	100	120
Inspector General	60	75	90

The succeeding table shows the salary schedules adopted by the Board of Directors, together with illustrative typical positions by type within each salary level.

PROPOSED 1981 SALARY RANGES FOR EXECUTIVE, MANAGERIAL, PROFESSIONAL, ADMINISTRATIVE/TECHNICAL, CLERICAL AND SECRETARIAL STAFF

Salary Grade	Salary Range Minimum ($000)	Target ($000)	Maximum ($000)	Typical Positions by Type: Illustrative Secretarial/ Clerical	Admin./Tech.	Professional	Executive/ Managerial	Salary Grade
1	$ 8,800	$ 11,000	$ 13,200	Mail/Supply Clerk				1
2	,9,700	12,100	14,500	Clerk-Typist				2
3	10,700	13,300	15,900	Receptionist-Typist				3
4	11,700	14,600	17,500	Secretary-Pool	Junior Programmer			4
5	12,900	16,100	19,300	Secretary-Staff Unit				5
6	14,100	17,600	21,100	Secretary-Senior Staff		Asst. Economist Asst. Financial Analyst		6
7	15,500	19,400	23,300	Secy--Senior Staff Member	Programmer Paralegal	Asst. Engineer		7
8	17,000	21,300	25,600	Secy to Dir. or AVP		Assoc. Economist Fin. Analyst		8
9	18,800	23,500	28,200	Admin. Asst.-Secy to VP	Programmer/ Analyst		Mgr., Mail & Reproduction Services	9
10	20,700	25,900	31,100	Admin. Asst.-Secy to CEO	Senior Paralegal	Assoc. Engr.		10
11	22,800	28,500	34,200			Economist, Fin. Analyst		11
12	25,000	31,300	37,600		Systems Analyst			12
13	28,000	35,000	42,000			Assoc. Attorney Engineer		13
14	31,400	39,200	47,000		Senior Systems Analyst	Senior Staff Member	Manager, Employment	14
15	35,100	43,900	52,700			Attorney	Director, Office Services Mgr., Comp. & Ben.	15
16	40,000	50,000	60,000			Sen. Staff (Team Leader)		16
17	46,000	57,500	69,000			Sen. Attorney Sen. Engineer	Dir. Personnel	17
18	53,800	67,400	81,000			Sen. Attorney (Team Leader) Sen. Engineer (Team Leader)	AVP-Corp. Mgt. Services Asst. GC	18
19	64,000	80,000	96,000			Chief Economist Planning	AVP-Project Tracking Controller, Asst. GC	19
20	80,000	100,000	120,000				AVP-Proj. Assessment & Negotiation	20
							V.P.-Gov't Aff & Pub. Inf.	
	90,000	113,000	136,000				V.P.-Admin.&Treas. V.P.-Proj.Dev.	
	95,000	120,000	145,000				V.P.-Tech.Sup.	
	110,000	140,000	170,000				V.P.-Planning	
	130,000	165,000	200,000				V.P. Fin.; V.P. & GC	
	160,000	200,000	240,000				Chairman & CEO	

Directly-Related Costs (Personnel Benefits)

The Corporation provides personnel benefits to all its employees similar to those provided by regular Federal agencies, comparable Federal entities, and private enterprise. These include not only statutory benefits such as social security, unemployment compensation, and workers' compensation, but such additional benefits as health insurance, group life insurance, long-term disability insurance, and--ultimately--a retirement plan. In addition, certain benefits are funded within the Corporation's payroll, as in the Federal government, such as sick leave (short-term disability), vacation, and holidays.

The exhibit on the following page shows the projected 1981 employer costs of the Corporation's benefit plans. Only the funded plans and the statutory plans, of course, are additive to the Corporation's payroll, aggregating an estimated 20.9 percent of payroll costs in fiscal year 1981. For fiscal year 1982, the estimate is 21.5 percent, recognizing the probability of inflation in the medical-insurance premium rate.

UNITED STATES SYNTHETIC FUELS CORPORATION

Estimated 1981 Employer Costs for Employee Benefit Plans
Plus Statutory Benefits

	Plan	Annual Cost As A Percent of Payroll	
1.	Funded Plans		
	a. Retirement	9.50%	
	b. Medical	3.35	
	c. Life	0.90	
	d. Long-term disability	0.85	
	e. Total funded plans		14.60%
2.	Statutory Plans		
	a. Social Security	4.30	
	b. Workers' Compensation	1.00	
	c. Unemployment Compensation	1.00	
	d. Total statutory plans		6.30
3.	Plans Included in Payroll		
	a. Short-term disability	1.75	
	b. Vacation	5.80	
	c. Holidays	3.85	
	d. Total plans included in payroll		11.40
4.	Total Estimated 1981 Benefit Plan Costs		32.30%

CHAPTER IV

Other Administrative Expenses

Insofar as practicable, the Corporation provides for the categorization of its administrative expenses, for purposes of presentation to Congress and the Office of Management and Budget, in the standard object classification prescribed for Federal agencies.

Table II on the following page presents current estimates by object of expense.

Travel

Given the current state of organization of the Corporation, a definitive estimate of travel expenses is impossible. For purposes of this statement of administrative expenses, travel expenses are anticipated to average 10 percent of expenditures for personal services. This average is somewhat greater than in the typical Federal government agency, partially in recognition of the distribution of raw materials for synthetic fuel undertakings and thus the probable geographic distribution of projects proposed for financial assistance under the Act.

Recruitment and Relocation

During the Corporation's start-up period, fiscal year 1981, significant expenses for recruitment and for reimbursement of expenses for relocation of newly hired employees are anticipated. The estimates in this statement assume relocation reimbursements to some ten to twenty employees at an average reimbursement somewhat less than the typical private industry average of $20,000.

TABLE II

UNITED STATES SYNTHETIC FUELS CORPORATION

Administrative Expenses by Object
(in thousands of dollars)

	FY 1981 Estimate	FY 1982 Estimate
Personal services (Table I)	$ 4,355	$ 11,775
Travel	400	1,200
Recruitment and Relocation	300	100
Office rent, etc.	1,000	2,500
Telephone, postage, etc.	250	500
Printing and reproduction	100	200
Contractual services	3,295	7,425
Supplies and materials -	300	300
Furniture and equipment	2,000	1,000
TOTAL OUTLAYS	12,000	25,000

Office Rent, Etc.

The Corporation currently occupies four separate parcels of office space located in three buildings, including the corporate headquarters at 1200 New Hampshire Avenue, N.W. Full staffing of 300 employees as budgeted in this statement for fiscal year 1982 is expected to require approximately 100,000 square feet of general office space. Prior to resignation of the former Board of Directors, authorization was provided to the Chairman to procure by lease up to 115,000 square feet of office space at a rate not to exceed $22.50 per square foot per year. The estimates herein are based upon a lower rental rate in the expectation that a more favorable lease may be obtained.

This category of expense also includes such items as equipment rental. The Corporation currently has under lease standard office furniture, copying machines, special typewriters, word-processing equipment, and three motor vehicles.

Telephone, Postage, Etc.

The Corporation currently procures telephone service by reimbursement through the Department of Energy. Use of the U.S. Postal Service is authorized to the same extent available to Federal government departments and agencies.

Inasmuch as the Corporation has no recorded experience with these costs, the estimates herein are based upon typical costs incurred by Government agencies.

Printing and Reproduction

Printing and reproduction services procured by contractual arrangement with private vendors have been estimated herein at a minimal level, inasmuch as significant expenditures will not appear to be required.

Contractual Services

A wide variety of other services will be required in the administration of the Corporation's program, such as audit and legal services, data processing and technical studies.

	FY 1981	FY 1982
	(in thousands)	
Legal services	$ 750	$ 500
Technical and analytical services	(1,645)	(4,725)
Finance	200	250
Planning	50	100
Project Development	950	3,375
Technology & Engineering	445	1,000
Data processing services	100	500
Audit services	50	150
Other common support services	750	1,550
Total	$ 3,295	$ 7,425

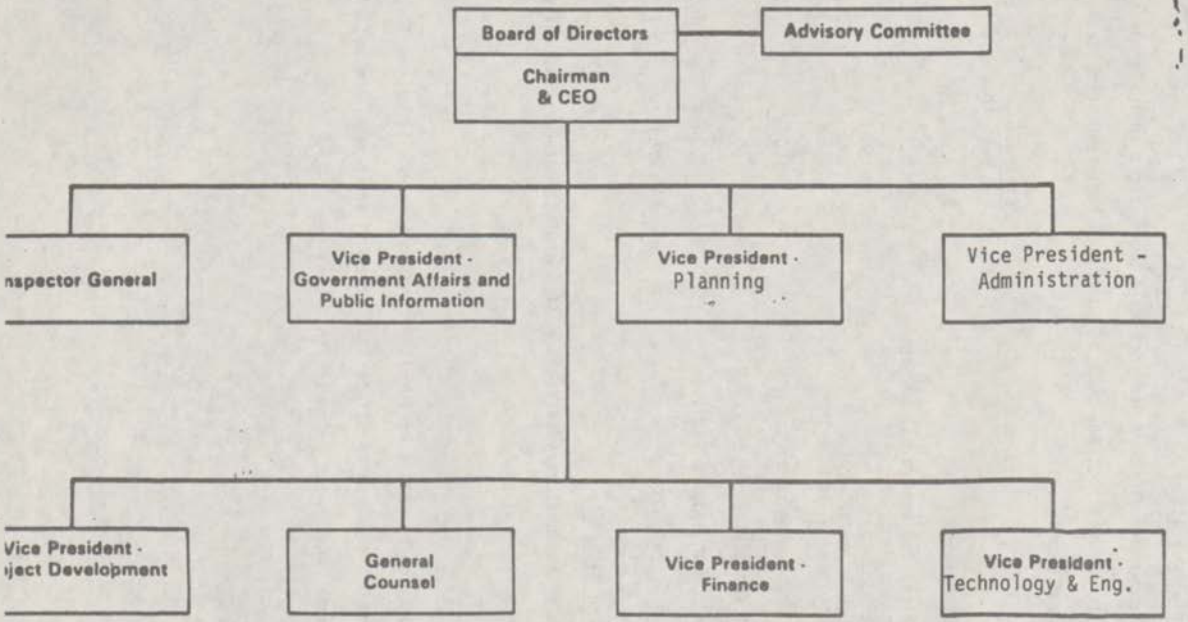
Supplies and Materials

Ordinary and customary office supplies are estimated consistent with experience of Federal agenices.

Furniture and Equipment

Corporation purchases of furniture and equipment will depend largely upon the amount and type of office space that is procured. The estimates herein assume procurement primarily in fiscal year 1981.

Synthetic Fuels Corporation
Organizational Concept



Appendix A

UNITED STATES SYNTHETIC FUELS CORPORATION

ADDENDUM

to

STATEMENT OF ADMINISTRATIVE EXPENSES, MARCH 1981

The annual salary rates for officers of the Corporation, shown on page 17 of the Statement, are the rates established by the Board of Directors and not disapproved pursuant to the provisions of the Energy Security Act, with one exception indicated on page 17.

In a memorandum from President Reagan to the Acting Chairman of the Board of Directors, John J. McAtee, Jr., dated February 25, 1981, the President formally disapproved salaries and compensation packages to the extent his approval had been sought by the Corporation. The memorandum was read as not affecting salaries already legally established. However, by memorandum to the President dated March 5, 1981, Mr. McAtee stated that he and certain officers of the Corporation whose level of compensation exceeded that for Level I of the Executive Schedule had voluntarily reduced their rate of compensation, as of February 25, 1981, to Level I pending a review of the appropriate level of compensation by the new Board of Directors to be nominated by the President.

In addition, by agreement dated March 5, 1981, certain officers of the Corporation also agreed that reimbursements for living, moving, or commuting expenses would be made in accordance with general policies of the Corporation's relocation and assistance plan applicable to all employees, pending review by the incoming Board of Directors of the appropriate level.

THE WHITE HOUSE

WASHINGTON

February 25, 1981

MEMORANDUM TO: JOHN J. McATEE, JR.
Acting Chairman of the Board
U.S. Synthetic Fuels Corporation

To the extent that the Memorandum for the President dated January 27, 1981, from then Chairman of the Board, John C. Sawhill, was intended to request approval for the compensation, terms, benefits and conditions of employment for the individuals referred to therein, please be advised that such compensation, terms, benefits and conditions of employment are specifically disapproved by me pursuant to Section 117(b)(2) of the Energy Security Act.

If you have any questions regarding this memorandum, please contact Counsel to the President Fred Fielding.

Ronald Reagan

United States Synthetic Fuels Corporation
1200 New Hampshire Avenue, N.W. Washington, D.C. 20586 Tel: (202) 653-4400

March 5, 1981

The President
The White House
Washington, D.C. 20500

Dear Mr. President:

To be respectful of and responsive to your memorandum to me dated February 25, 1981 which disapproved a level of compensation of one of our Vice Presidents over Level I of the Executive Schedule and with due recognition of the role of the Board of Directors of this Corporation, the compensation, effective February 25, 1981, of myself and certain of the other officers of the Corporation whose compensation exceeds Level I of the Executive Schedule will be at an annual rate equal to Level I pending a review of the appropriate level of compensation by the Board of Directors to be nominated by you. In addition, any payments to myself and these officers with respect to living, moving or commuting expenses shall be as provided in the Corporation's general relocation and assistance plan pending a review by the incoming Board of Directors of the appropriate level of payment.

We will do everything in our power to assist in the implementation of the policy in the Energy Security Act and your program for economic recovery to reduce our military and economic dependence on imported oil as well as your policy to minimize government expenditures.

Sincerely,

John J. McAtee Jr.

John J. McAtee, Jr.
Acting Chairman of the Board

United States
Synthetic Fuels Corporation

March 5, 1981

To be respectful of and responsive to President Reagan's memorandum dated February 25, 1981 and with due recognition to the role of the Board of Directors of this Corporation, the undersigned agree to the following:

1. As of February 25, 1981 payments with respect to salary shall be at an annual rate equal to Level 1 of the Executive Schedule pending a review by the incoming Board of Directors of the appropriate level.
2. Payments with respect to any reimbursement of living, moving or commuting expenses shall be as provided in this Corporation's general "Relocation and Assistance Plan" pending review by the incoming Board of Directors of the appropriate level.

CURRENT PLANNING

Mr. YATES. Tell us as you go along your current operational status and the number of people and staff you have in your corporate offices and are you fully operational?

Mr. MCATEE. Thank you, Mr. Chairman.

As you know, this is our first appearance before the Appropriations Committee and it is a pleasure to be here to discuss our current planning. The corporation was created by Title I of the Energy Security Act which was approved last June 30. As explained in the joint explanatory statement of the committee of conference that accompanied the legislation, the corporation was created as a special-purpose Federal entity to carry out the national synthetic fuel development program established by the Act. Its mission is to provide financial assistance to the private sector to encourage and bring about the commercial production of synthetic fuels by private industry.

I have summarized in the prepared statement as well as in our justification statement a number of our activities to date. Basically, our senior staffing was completed in January of this year; that is when I joined the corporation. Towards the end of January the Board of Directors resigned. The President has said that a new board will be nominated soon. In the interim we are working as hard as we can so that in anticipation of a new board we will be prepared to brief them so that they can go about making the important decisions that the board needs to be making as soon as possible.

As the subcommittee knows, under the Fast Start program the Department of Energy has solicited proposals for synthetic fuel projects under authorities contained in the Defense Production Act and the Nonnuclear Energy Research and Development Act. Public Law 96-304 anticipates that certain of these initiatives will be transferred to the corporation for evaluation under our authorities. Anticipating this and under the leadership of the Department of Energy the corporation is currently engaged in a supportive role in the Department's evaluation of three major proposals submitted under the Department's Defense Production Act solicitation; we are also participating in the Department's evaluation of the ANR coal-gasification project and 10 other projects submitted to the Department under its Nonnuclear Act authorities. Under the Energy Security Act those funds and any commitments made under the Defense Production Act or that part of the Nonnuclear Act will be transferred to us automatically on June 30 or earlier if the President declares us operational.

Now, since the resignation of the directors in January, we have continued to do things of a non-policy-making nature that are necessary to place the staff in a position to make carefully prepared recommendations to the new chairman and to the new board when they are appointed—the powers of the corporation are vested in its board of directors. However, I am satisfied that the efforts currently underway are all very important and necessary for the future administration of this tremendously important and challenging national program and I don't think that we have actually lost much time to date.

PRINCIPLES OF SYNFUELS PROGRAM

I would like to call to the subcommittee's attention some of the principles that have guided our stewardship of the program. As mandated by the Energy Security Act these principles have been developed to insure that the paramount role of private enterprise is preserved and that private companies, not the corporation, make the basic technical and business judgments as to which technologies to employ, where to locate facilities, how to market the products, etc.

Mr. YATES. Does this mean that the decisions that were made prior to your coming into existence with respect to the opening of the synfuel program and the operation by the companies that were operating the projects were not made with those considerations in mind? You have certain policy guidelines that you propose to follow.

Mr. MCATEE. These are guidelines which are basically consistent with the mandate of the Energy Security Act.

Mr. YATES. Right. That does not mean necessarily that with respect to the programs that were in existence prior to your own creation they were not operated in conformity with that?

Mr. MCATEE. That is the Department of Energy?

Mr. YATES. That is right.

Mr. MCATEE. I would say that under the Energy Security Act that there was more emphasis on our going to assist the private industry as opposed to getting into research and development. That is not the goal that is set forth for us.

Mr. YATES. Good. I think that perhaps what I am searching for then is how do your present guidelines differ from what you conceive to be the guidelines of the Department of Energy in administering the programs that they are administering for synthetic fuels? Can you tell us that?

Mr. MCATEE. Well, I can tell you a lot about our guidelines. Exactly what their guidelines are I am not as familiar with.

Mr. YATES. Are you taking over their program?

Mr. MCATEE. Yes, sir.

Mr. YATES. So it is not really important then what their guidelines were except that it is important for your purposes, as well as ours, to know what the status is of those programs, how well they were operating and what condition they are in as you take them over. I would think that you would want to know that and we would want to know that. Its nature should be that of an audit.

Mr. MCATEE. And that is why I mentioned those particular projects. Under the Defense Production Act there are three projects that would come over to us if commitments are made in the Department of Energy. We are sitting in all the meetings, we are participating. The authority, until June 30, is under the Department of Energy. The Department of Energy has selected under the Defense Production Act three projects—the TOSCO and the Union and the Tennessee Synfuels—which are in what they referred to as Phase Two for negotiations. I think we know everything about those projects that the Department of Energy knows.

SRC PROJECTS

Mr. YATES. Tell us about the SRC projects.

Mr. MCATEE. That is different. The SRC projects, the SRC–I and SRC–II, are two of the five so-called demonstration projects. I have some notes on that.

Mr. YATES. Before you start, as I understand the purpose of the administration, it is that you should take over those projects, is it not?

Mr. MCATEE. No, I don't believe that is correct. No, sir.

Mr. YATES. Explain to me where that is wrong. I had the impression, at least from witnesses from Gulf who are interested in SRC, who appeared before our committee that they were at a loss to know where they are going. They have the impression that the Administration proposes that it move from the Department of Energy over to the Synfuels Corporation.

Mr. MCATEE. That is correct. I believe the administration's position, as set forth in the letter to Secretary Edwards from Mr. Stockman, is that with respect to those demo projects they might ask the directors to consider the projects, but the projects will come over and be filed in competition with all of the other projects that are filing pursuant to our solicitation. We have a solicitation out that expires on March 31.

Mr. YATES. I don't understand that and the reason I don't understand is because I have the impression that the SRC–II contracts between the Government and the governments of Germany and Japan are established contracts.

Mr. MCATEE. Yes, sir, they are.

SRC CONTRACTS

Mr. YATES. Under these contracts it is proposed that they go forward and the proposed takeover by Synfuels Corporation will in effect either be an amendment or a rescission of those contracts. In any case those contracts will require a renegotiation in some measure. Is my impression correct?

Mr. MCATEE. I think perhaps it would be better to talk to the Department of Energy on that. I know that there are provisions of those contracts that they are aware of. They will discuss with the partners in SRC–II any changes in those contracts pursuant to the provisions of those contracts. The Synthetic Fuels Corporation could handle those demonstration projects in one of two ways. First, the demonstration projects, any of the five, could file and compete with anyone else.

Mr. YATES. Why would the SRCs want to do that? They are already established, why would they want to compete? If they have certain rights established under the contracts under which they go ahead, why would they suddenly voluntarily agree to compete with your other projects?

Mr. MCATEE. I can't answer that.

Mr. YATES. If you were their lawyer, would you advise them to do so?

Mr. MCATEE. No.

Mr. YATES. I see by your background you have a very substantial legal experience as well as an impressive legal background. Now

here are your clients SRC. Are you going to tell them to voluntarily agree to move over so they can compete for whatever largess and goodies that you have which they already have?

Mr. McAtee. I think what I would do, Mr. Chairman, is study those contracts very carefully. Those contracts, I believe, have a termination clause in them at the convenience of the Government. At the same time I understand that they have provisions in them that any modifications to the contracts will be done pursuant to meetings with the various parties, which will be honored. That is my understanding.

Mr. Yates. Well, all right. Let me read to you from page 28. I think this has some value, certainly it has as far as I am concerned because I still don't understand. I thought I understood this present relationship before the budget announcement by the Administration. I thought these were ongoing projects that were moving; as a matter of fact, I thought the Hygas projects were ongoing, too. They were less firmly established than these but nevertheless the Hygas has moved to the point of where it was about to come into existence.

I asked Mr. Flinn of Gulf about the proposed budget announcement and Mr. Flinn says:

Mr. Yates. How would you be affected by the budget announcement by Mr. Reagan? Do you have any idea yet? Have you made any inquiry?

Mr. Flinn. We have made inquiries. It is very difficult for us to say at the moment how it would affect the proposal that has been made that we should switch over to the Synthetic Fuels Corporation and we have not had the time to determine how that might be done.

Our problem is that we immediately see a number of hurdles, and since it has not been done before we are concerned that the transition might not be effective.

Mr. Yates. What hurdles do you foresee? Can you give us some example?

Mr. Flynn. This is a demonstration plant of noncommercial size. As we see it the Synthetic Fuels Corporation is set up to provide financial support for commercial ventures which have the prospect of making some money in the size that they are built. That is not true of the demonstration plants. The demonstration program, including SRC–I and SCR–II, was conceived as a very large attempt to show that it should be done on commercial scale equipment, and thereby to say perhaps 10 years, so that industry could than build the plants in 1985 or 1968 or 1987 rather than the late Nineties.

We are not sure that we fit that commercial mold.

I think that is the essence of the distinction, isn't it?

Mr. McAtee. Let me elaborate on that. I think that it is not necessarily inconsistent with what you said. But it is clear in looking at our legislation that Congress did not intend for us to go into the business of research and development, but demonstration of a technology is typically considered a stage separate from and subsequent to research and development. The definition of the term "demonstration" is imprecise in both law and fact.

DEFINITION OF DEMONSTRATION PROJECT

Mr. Yates. Is there a distinction to be drawn between demonstration and commercial? As I understand what you are saying now, demonstration may be commercial.

Mr. McAtee. That is right. Our act does not define the term "demonstration project" and other than the joint venture projects which I will get to in a minute—which also may be a place that is

relevant for these five projects that don't automatically come over with the funding under the DPA and the Nonnuclear Act—but other than those projects our legislation limits funding by us to synthetic fuels projects as defined.

Now while the section defining "synthetic fuels project" requires a project funded by the corporation to be "for the purpose of commercial production of synthetic fuels," it does not define commercial production, so now we are down to what does it mean by "commercial production?" In our judgment, the question of whether a facility is for commercial production depends upon a number of factors which, when considered in combination, satisfy the corporation that the principal purpose of the facility is to produce a sufficient quantity of marketable products. The fact that a project may have been labeled——

Mr. YATES. That would include research and development. If you are going to include demonstration plants in that kind of a definition, why then can you not include, as well, research projects because that is part of the same process. I think what you are saying is that a demonstration plant leads to commercial development and therefore it is within the definition that is in the act. If that is true, so would research because that, too, leads to commercial development, does it not? What is the distinction?

Mr. MCATEE. Well, while the fact that a project may have been labeled a demonstration project for the purposes of receiving financial assistance from DOE is not determinative of whether a project might be able to qualify for funding from the corporation as a synthetic fuel project. A synthetic fuel project must be for the purpose of commercial production of synthetic fuel. Now what is the output at the end? Is it commercial production of synthetic fuel or is it something that is going to be abandoned? Those types of questions are ones that are asked and are responses that I have gotten when I have asked the exact same question that you have phrased.

Mr. YATES. It is important to this committee because we don't know what the extent of our funding is and where the funding should go. It is one thing to make money available for the development of synfuels at certain phases of develolpment at the Synfuels Corporation and it is another thing to make funding available to the Department of Energy, assuming that the Department of Energy will still continue to exist because the dirges have already begun for that establishment.

Mr. MCATEE. Yes, sir.

INITIATION OF THE SYNFUELS PROGRAM

Mr. YATES. But separate and apart, I don't think we have fully explored the question of legal definitions here. This committee was instrumental in the initiation of the synfuels program prior to the creation of the Synfuels Corporation and we were interested in getting it on the road and moving it so that there would be a minimum of delay. I don't know about my good friend Mr. McDade, but I sense that the announcement by the Administration of the fact that Synfuels is going to take over the SRC programs creates certain impedimenta, certain hurdles, but apart from your question of definition that I find quite baffling.

For example, we read again from Mr. Flinn's testimony:

Further, it has been suggested that the Department of Energy's foreign partners—that is, the government in Germany and the government in Japan—regard their partner as the United States Government.

Not the Synfuels Corporation but the United States Government.

I think what was signed with the Department of Energy and was signed by the ambassadors of those two countries and is regarded as an international agreement akin to a treaty rather than a contract to us * * *.

So your cancellation clause may not be all that governs in this case, you may if it is a treaty or not—I thought I heard you cite the cancellation clause.

Mr. McATEE. No, I believe that is the Department of Energy's cancellation clause.

Mr. YATES. I see. At any rate, and for them to provide the money to a private organization is not very attractive to them.

FUNDING FOR THE SYNFUELS PROJECTS

So where are we? Are you in a position to give us advice on this? Shall we go along with you and say, all right, you're the agency that should be funding these two agreements, or should we continue to keep some portion of the Department of Energy alive, a synfuel department of the Department of Energy alive, for the purposes of continuing the development of these two fundamental synfuel plants?

I am not asking you to be a lawyer but to be an administrator.

Mr. McATEE. Well, from a practical point of view and in view of the goals of the Energy Security Act, the ones that we are trying to administer and the reason why all of us are down here from the private side is that we have experience in negotiating big deals. We want to negotiate the big deals in order to get on with a commercially viable synthetic fuels industry. We think because the size and the magnitude of the projects is so great that a limited form of government assistance is necessary.

Mr. MURTHA. It is not necessary, it is imperative.

Mr. McATEE. I agree with you, yes, sir, Congressman.

Mr. YATES. What do you mean by limited form?

Mr. McATEE. An $800 billion investment over the next 20 years is what some of the numbers are as to what it will take to really get a synthetic fuels industry. Let's say the present $17.5 billion, you can compare that with what the exact number is, 2.2 percent.

Mr. YATES. But the full nunber is $88 billion.

Mr. McATEE. All right, $88 billion.

Mr. McDADE. Is it a leverage figure representing a much greater number than even the figure we are suggesting.

Mr. McATEE. That is right. The $88 billion is subject to the $68 billion which is after we come back to Congress under the present legislation and you approve the next $68 billion. That is years off.

Mr. YATES. Right.

Mr. McATEE. What we are dealing with right now is a maximum of approximately $17.5 billion. The philosophy is to carefully expose the credit of the United States to the private sector and negotiate them into developing a synthetic fuel industry that meets the goal of 500,000 barrels a day in 1987 and 2,000,000 barrels a

day in 1992. That is our job. We think the private sector needs that encouragement. The goal is bottom line to get the liquids out so we can decrease our military and economic dependence on oil.

SRC–I AND SRC–II FUNDING

Now where does the SRC-I and SRC-II fit into that picture? In our program, if it is a competitive program if those are competitive programs, that can fit in with our goals, the directors to be appointed by the administration and confirmed by the Senate have the discretion to grant assistance to those projects; but they have to compete with the other projects.

Now except in a limited way, there is also another authority—perhaps you don't want to go into the discussion right now—which is the joint ventures authority. This is a little bit different and also might be used by our directors in their discretion to grant assistance. It could be that under the joint venture authority——

Mr. YATES. Which has the lowest priority.

Mr. MCATEE. Which has the lowest priority, it has the most Government involvement, it is the one that we like the least because the Government is going to go in there and start making decisions; decisions that under the Energy Security Act the draftsman, and it was not me, determined that it was better that private industry make these. Now if we give contingent forms of assistance and limited assistance such as loan guarantees or price guarantees or purchase agreements, even though we have a substantial amount of exposure for the Government, we get private sector money in there. We make the private sector bleed along with us, so that they have an incentive to make those right decisions. The philosophy, as I read it in the Energy Security Act, is that the end result will be much better if we do it that way, because they know the business of developing these large scale plants better than the Government and can do it more efficiently.

Mr. YATES. Mr. Murtha.

THE BOARD OF DIRECTORS

Mr. MURTHA. Maybe you have already done this, but would you tell us exactly what is the status? Why don't we have appointments to this very important board at this point?

Mr. MCATEE. Congressman, there is not anybody in the world who wants those appointments as badly as I do.

Mr. MURTHA. Well, what is the hold up? Can't you get anybody to take the job?

Mr. MCATEE. The appointments are made by the administration. There does not appear to be any greater holdup on these appointments than other appointments. I am new to Washington, but I have tracked the appointment schedule in this administration versus other administrations and it seems to be about the same, somewhat to my surprise. The appointments are under consideration and there is a lot of activity going on. There is an effort to move them forward and we expect that they will be made shortly.

Mr. MURTHA. Maybe I am overly concerned about this particular board because this committee, the Chairman and the ranking member have been so instrumental in moving a program forward

and of course what you have just been saying is basically what we believe. We believe that we need Government incentive, it is imperative in order to move a synthetic fuel program through but when we don't have a Chairman or board members it is kind of hard to complain because you don't have anybody to complain to.

Mr. McATEE. Well, that does not stop a lot of others.

Mr. MURTHA. It does not stop the complaining.

SOLICITATION FOR DEMONSTRATION PROJECTS

Mr. YATES. I don't understand where you are going. I don't understand what your business is going to be if you don't get the SRC plants. If you don't get the SRC plants, the gasohol program is cut back, other programs are cut back by the Administration. What is you business then?

Mr. McATEE. Well, Mr. Chairman, we have a solicitation that expires next Tuesday which went out in December. Pursuant to that we expect that there are a lot of proposals that are coming in. That is number one.

Mr. YATES. For commercial development?

Mr. McATEE. For commercial development, yes, sir. We want that, bottom line.

Mr. YATES. What do you expect to come in? You are putting your proposal out on the street. Who is going to come in with it ready for a commercial development other than gasohol?

Mr. McATEE. We expect a lot. We have seven in already.

Mr. YATES. Give us some examples.

Mr. McATEE. Well, Tennessee Synfuels is in.

Mr. YATES. You mean oil shale?

Mr. McATEE. Yes.

Mr. YATES. What is the Tennessee proposal, is that oil shale, too?

Mr. McATEE. No, it is coal to gasoline.

Mr. McDADE. That is the old Memphis Gas. We used to call it the Memphis Gas.

Mr. McATEE. No, that is a different one. I'm getting as confused as you.

Mr. McDADE. I will let you speak for yourself.

Mr. McATEE. I get very confused.

There are about four or five different Tennessee projects, but what we refer to as the Memphis Gas is one of the five demonstration projects. They have come in to us and have had a number of meetings; they are basically saying that they are going to file with us for a commercial scale program by next Tuesday. They are one of those five demonstration programs along with SRC–I and SRC–II.

Mr. McDADE. They made a conscious decision to shift over to the Corporation.

Mr. McATEE. Yes, sir.

Mr. McDADE. They are coming in to file.

Mr. McATEE. Yes, sir. That is what they say. I don't know if they filed this morning.

Mr. McDADE. I beg your pardon?

Mr. McATEE. They say that. I don't know if they have filed yet.

Mr. McDADE. The solicitation closes when?

Mr. McATEE. On March 31, next Tuesday.

Mr. McDade. So in a couple days you will be able to report back to the committee all the solicitations that you received.

Mr. McAtee. Yes, sir.

Mr. McDade. In addition to that you are tracking ones that we intended to advance on the fast track under the interim authorities—TOSCO oil shale, Union oil shale, ANR.

Mr. McAtee. Tennessee Synfuels. Tennessee Synfuels is the Koppers Corporation. You call it Tennessee Synfuels.

Mr. McDade. Have they now removed themselves from the interim authority and decided to go over to the Corporation?

Mr. McAtee. No. Tennessee Synfuels has filed under both. Perhaps Union and TOSCO will, but those three projects, which are relatively far along and are commercially viable projects. They are on the fast track under the Defense Production Act. We are working with the Department of Energy. There could be commitments between now and June 30 when those funds that they are authorized to handle in the interim would come over to us automatically with any commitments. Those projects are going very well and ANR likewise. We had people meeting in Detroit yesterday and in Washington today along with the Department of Energy. It's moving very fast.

DONOR SOLVENT PILOT PLANT

Mr. Yates. What about donor solvent?

Mr. McAtee. Is that a pilot plant?

Mr. Yates. What is the distinction between a pilot plant, a demonstration plant and a commercial development under your definition?

Mr. McAtee. It is a difficult distinction.

Mr. Yates. Suppose donor solvent came in, too, could they compete?

Mr. McAtee. Well, we would have to look at it. They might be able to.

Mr. Yates. As I understand your definition, any plant from the very beginning to the very end can come in and ask for your help.

Mr. Murtha. I thought the legislation was clear that it was for the commercial side.

Mr. McAtee. That is not quite right. The synthetic fuels projects, which is what they have to be, have to be for the purpose of commercial production of synthetic fuel.

Mr. Yates. Donor solvent is.

Mr. McAtee. Well, indirectly.

Mr. Yates. Yes, but that is in the demonstration stage and he says that's included in the definition "commercial development."

Mr. McDade. Without us arguing back and forth, the question for him as the fellow who has to make the distinction is there are obviously plants that have been supported by this committee for years. There have been power plants which have led toward the second stage which is usually the demonstration projects which leads to the third stage which is the commercialization. Now we have a whole series of projects, you testified, some of which have filed under both the interim authorities and under your authorities. Your solicitation closes on the 31st and you will know the response you get. You indicate you are aware of at least——

Mr. McAtee. Seven. Two came in yesterday so there are now seven.

Mr. McDade. Tell us what the seven are.

Mr. McAtee. The two that came in yesterday we have not announced and if it is permissible I won't go into those.

Cathedral Bluffs, which is a general partnership between Occidental and Tenneco. It is an oxy-modified in situ process with a production goal of 55,000 barrels a day by 1988 and 94,000 barrels a day by 1990. They request a loan guarantee.

The Hampshire project in Gillette, Wyoming, involving Kaneb Services, Koppers Co., and Northwestern Mutual, involves coal conversion to gasoline using the KBW and Lurgi gasifiers, methanol synthesis, and the Mobil MTG process. It would produce 19,000 barrels a day of unleaded gasoline. They are asking for price and loan guarantees.

Then the Tennessee Synfuels, which we are tracking with the Department of Energy right now under the DPA. They are filed in both places. This is a joint venture with Koppers and Citco which is a subsidiary of Cities Services. The technology involves coal conversion to gasoline, again using the KBW gasifiers.

Pullman, Kellogg's methanol synthesis and the Mobil MTG catalytic process. The project has a production goal of 50,000 barrels a day equivalent product. They would like loan guarantees and price guarantees.

The fourth one is United Shale of West Virginia. This proposes developing the Everman retort process for producing shale oil. The technology would produce three-barrels a day as a pilot plant and 120 barrels a day as a commercial plant. They are requesting a loan guarantee.

Mr. Yates. Are you saying that a pilot plant did file?

Mr. McAtee. They did file, yes.

Mr. Yates. I didn't know a pilot plant could file.

Mr. McAtee. Well, it has filed but nobody has taken any action on it. It also includes 120 barrels a day of commercial plant.

Then W. R. Grace is to gasify high sulphur coal to produce methanol for conversion to high-octane unleaded gasoline. Again, it is 50,000 barrels a day by 1989.

Mr. Murtha. Excuse me, Mr. Chairman.

If they file, it is unrealistic to believe that a loan guarantee would be sufficient to keep a project going that produces only three barrels of oil a day. That is not a viable commercial project which could be guaranteed, that is something that would obviously have to be a demonstration or a pilot type project.

Mr. McAtee. They did file for 120 barrels a day.

Mr. Murtha. Even that would not be a viable project. For instance, they could not make a profit producing 120 barrels; I would not think they could.

Mr. McAtee. I have not studied it and I don't want to prejudge anybody.

Now we expect many, many more filings.

Mr. Murtha. Here is a concern that I have. You have a number of organizations waiting to hear about the feasibility study which we think will be rejected or it might be approved.

Does the fact that they will not file until the feasibility study is funded prejudice their case?

Mr. McAtee. I think they will file. There is no real incentive for these people to file earlier. Why file before March 31? We have been talking to many, many, many companies that we know are going to file by next Tuesday. I think when we announce on Wednesday the number of people who will file by Tuesday, that all of us will have a much better feel for what is out there in the universe. That is the whole purpose of this process.

Mr. Murtha. Will they file even though they have not completed the feasibility study?

Mr. McAtee. It would be my guess some will, yes, sir.

Mr. Murtha. Would you suggest that they file even though they have not completed the feasibility study?

Mr. McAtee. We like to have as much information as we can for our directors to make their decision; we would like to see people file so we have more direct access to information—even someone who may be two years later coming onstream.

Mr. Murtha. So you are saying it is helpful and you would suggest that they should file.

Mr. McAtee. Yes, sir. It would be helpful to us in making recommendations to the board if we know something is coming along two years later or three years later that looks very promising. It should be in that context.

Mr. Murtha. Do you feel that the feasibility study which will undoubtedly in my estimation be funded by the Government prejudice their case since they will have to wait a year before they can present their final proposal?

Mr. McAtee. I don't think so. I think that what we are trying to do is treat it very differently than the way the Department of Energy has treated it: treat it more like a private lending institution; that is that you know the universe. If they file and they are not ready to go, we will have them on hold.

Mr. Murtha. All right.

Mr. McAtee. We will have to fast-track other people. I mean, that is the purpose of the Energy Security Act, but we will have them in mind and monitor everything that they are doing.

SOLICITATION DEADLINE

Mr. McDade. Let me ask you this question. You have a solicitation that closes March 31.

Mr. McAtee. Yes, sir.

Mr. McDade. And at that time you hope to have some idea of the universe that is out there.

Mr. McAtee. Yes, sir.

Mr. McDade. What happens after that? I know you will make a certain point. A corporation starts making the appropriate incentives; from there we hope we will build an alternative fuels program in this country. After you have closed the solicitation window on the 31st of March, what will the Corporation then do? Will you begin to prepare another round of solicitations to go out and, if so, when will you do that?

Mr. McATEE. Well, we are planning on having a board to make that decision. We don't have a board which is perhaps a plus.

Mr. YATES. I know. Pity poor Secretary Edwards, he hasn't got an Assistant Secretary yet.

Mr. McATEE. Yes.

For perhaps one or two months there will be an enormous amount of work to do because with that universe we will then be exploring where we go for additional information and categorizing these projects to understand them in the framework, so that the staff can be in a position to make recommendations to the chairman and the board and also to answer the appropriate questions.

Mr. McDADE. Let me ask this question. Suppose you get a large number of solicitations, and we hope you do, at the close of business on the 31st. Have you the technical capacity in the Corporation now to evaluate those proposals? And also the financial capability to look at the mix and evaluate them, so when you finally have a board, and we hope it will be tomorrow, you will be able to present them recommendations for action?

Mr. McATEE. We have a substantial capability, particularly at the senior level. It needs to be filled out at the junior level but we do have a substantial capability now in-house.

Now, we don't have lawyers that get in the way. We want to get these deals done. We don't want to have very many lawyers. The whole philosophy of the synthetic fuels organization is to keep it lean and have the very best talent—to have the very best talent actually working on the projects, as opposed to having the very best talent supervising or not working on the projects. There won't be that many projects that are important, perhaps there are only a handful.

For instance, from the private sector in the financial area you mentioned, we have an ex-partner of Morgan Stanley who is an expert on financing, who is on board and who has attracted other investment bankers who are working for him and will continue to do so. Our Vice President of Technology comes from Pullman, Kellogg; he is a leading authority in the field and he is attracting others.

STAFFING THE PROJECTS

Mr. McDADE. Are you telling the committee that in the absence of the appointment of the board when these proposals come in they would be staffed before submission to the board and that is about a two month process?

Mr. McATEE. I am saying something like that, yes, sir. We plan to staff these projects in the absence of the board. We think we are mandated to do it under the Energy Security Act.

Mr. McDADE. Is the board meant to be full time or part time?

Mr. McATEE. Part time. In the absence of a board, we cannot make any commitments, and I want to make that clear. We are not going to make policy decisions or any commitments, that is all for the board. But there is an awful lot of staff work that will need to be done and we plan to do it. The chairman of the board is full time and there can be other people who are full time.

Mr. McDADE. So after you receive the proposal you go through an evaluation process which you estimate at this point would be a couple of months after which there would be submissions of those to

the board and the board would vote on which of those to accept or to reject, is that correct?

Mr. McAtee. The couple of months and so forth are very loose time frames but that is what we are shooting for—to get something. We have a Phase One and Phase Two. What we would ideally like to do is to go to the board with the preliminary selection as to who we concentrate on in Phase Two and have them make that decision as an interim step. We are going to work as hard as we can doing the most work we can. When the board comes on nobody will be more relieved than we.

Mr. McDade. Let me ask you a question if I can. We are talking at some length about the difference between the various definitions and I am sure, of course, you have the usual authority to make recommendations consistent with the charter and I assume you are about that process. On the SRC plants that we have paid a lot of attention to in this committee, you are saying that they are eligible to make applications to you, is that correct?

Mr. McAtee. Yes, sir.

EXTENDING THE SOLICITATION DEADLINE

Mr. McDade. Must they do that by the 31st of March?

Mr. McAtee. That is a very tricky question. Frankly what we had contemplated—when we had a board—was that we would take what is in by March 31 and we would extend the date so we more or less keep an open solicitation. So in making all decisions you would have the whole universe before you at all times. It would not be one of these things that you are making decisions over here, but you know out there there is somebody who is better, but you cannot deal with him because he didn't file by March 31. To us that doesn't make any sense.

So when the new board comes in, the new board will perhaps be able to retroactively—it sounds funny but that is one alternative, to retroactively extend the March 31 deadline or perhaps to put out an identical solicitation or perhaps to put out a different solicitation. We would anticipate that all of these things would be possible.

Mr. McDade. That expects to interface on the private side, are you aware of the fact that you might be doing that? Have they received notice?

Mr. McAtee. Yes, sir. We have a mailing list and we have had forums for 500 at a time, both in New York and in Denver. It is conceivable in the future a new board decision might take the action that I just mentioned.

Mr. McDade. It does put a tremendous strain on these people who are caught in the demo plants as we like to call them, the demonstration of commercialization about where they fit. I am sure you recognize it and I know that is not your problem. What you are telling me is very hopeful, I am not sure exactly how it is going to mesh. At least it is hopeful to think that we are going to give notice to the world it will be the intention to recommend to the board that you are not just going to close the window on the 31st and that is the end of it, but that you will be looking at all times.

Mr. McATEE. One of our basic principles, which I didn't get into, is to maintain a continuous dialog with these project sponsors and the whole community and Congress to keep an open movement. This is the way we believe we will get to our production goals, not to have arbitrary time limits and telephone books filled full of data before you talk to someone.

Mr. McDADE. Thank you, Mr. Chairman.

Mr. YATES. Well, I must confess I am bewildered and baffled. I have the impression that nothing will transpire between the Department of Energy which is nonoperative at this moment and Synfuels which is not operative at this moment because neither of you have your people on board. Why in the world were the resignations of the board accepted before you had a new board? I don't understand that. If you are going to act like a corporation, and I hope you will, ordinarily you don't find a going corporation which has a going board of directors moving out of office until people have taken their place.

Mr. McATEE. I can't answer that, I didn't accept the resignations. Remember, except for a $300 million footnote of the $17.5 billion, Synfuels Corporation has not been cut back. The President announced that he was going to nominate a board as soon as possible; I know that there is a lot of activity on the board. It is unfortunate perhaps that there is this hiatus of these weeks. In the interim the staff that is on board is staffed at——

TABLE OF ORGANIZATION

Mr. YATES. What kind of staff do you have on board? Do you have a Table of Organization?

Mr. McATEE. Yes, we do. We submitted that with the statement of administrative expenses.

Mr. YATES. Let's take a look at that.

Mr. MURTHA. Did you get this salary situation settled?

Mr. McATEE. Congressman, the salary situation is a nonissue with us. We regret that most of what has been written in recent days and weeks about the Synthetic Fuels Corporation is focused on this peripheral issue rather than on our mission of creating a commercially viable synthetic fuels industry.

Mr. MURTHA. But is it settled?

Mr. McATEE. It is settled. As far as we are concerned, we have settled the salary matter.

Mr. MURTHA. You are not going to lose any people?

Mr. McATEE. I hope not. What happened simply is that of the seven senior officers in that chart, and the chart is filled out, six of those came on board prior to President Reagan. The procedure of the Energy Security Act is that the salaries are submitted to the White House and if the White House does not reject them within 30 days that they go into effect. Six of those officers were in that situation. The seventh that came on last was in a period well into President Reagan's administration. Consistent with his policies, he did not approve that salary. Because of that the rest of the officers, myself and five of the other six, voluntarily reduced our salaries to the Level 1 pending review of the appropriate level by the new board and that's that. We are too busy focusing on the goals of the Energy Security Act.

Mr. MURTHA. You are not going to lose any of the people because of the salaries at this point?

Mr. MCATEE. I hope not. I anticipate that it will work out and that it is not an issue. I hope that we will not. Right now we clearly won't because people have reduced their salaries pending review by the new board. I hope the new board does not spend much time on it because we've got other things to consider.

Mr. MURTHA. I thought the attractive salary was to attract the people with the expertise who would not leave private industry, so I have no quarrel. As a matter of fact, I think you need high salaries in order to attract the appropriate people.

Mr. MCATEE. Now we have attracted them and they are down here and they are all caught up in the enthusiasm of getting on with the national goals. They reduced their salaries pending the review of the appropriate level by the board and the new board can do what they want. I think that you are absolutely correct, it is difficult to attract people quickly from the private industry at those salaries but at the present time the salaries are not an issue—they are not an issue with me, they are not an issue with four of the other gentlemen who reduced them.

Mr. YATES. Have you finished?

Let's take the Table of Organization. The Board of Directors, that is blank, isn't it?

Mr. MCATEE. The Board of Directors is blank, yes.

Mr. YATES. Zero.

The Chairman and Chief Executive Officer, that is you.

Mr. MCATEE. That is me, Acting.

Mr. YATES. Yes, you are Acting.

Now the Advisory Committee. Is there an Advisory Committee?

Mr. MCATEE. Yes, sir.

Mr. YATES. Who is on the Advisory Committee?

Mr. MCATEE. Secretary of the Treasury, Secretary of Commerce, Secretary of Defense, Secretary of Energy and the administrator of EPA.

Mr. YATES. EPA?

Mr. MCATEE. The Environmental Protection Agency.

Mr. YATES. Who is the Inspector General.

Mr. MCATEE. The Inspector General has not been appointed. That again is a presidential appointment, but we have an Acting Inspector General who is very aggressive and we keep him informed of all the meetings. I think he is acting and behaving pursuant to his instructions like he was appointed. But he is actually a consultant.

Mr. YATES. I bet you have a Vice President in charge of Governmental Affairs.

Mr. MCATEE. Of course. That is the largest department. Yes, we do.

Mr. YATES. Do you have a Vice President for Planning?

Mr. MCATEE. Yes, we do.

Mr. YATES. Can you give us the name of the Vice President for Governmental Affairs?

Mr. MCATEE. Bill Rhatican.

Mr. YATES. Bill Rhatican. Would you be kind enough to give us his biography?

Mr. McAtee. I certainly will.
Mr. Yates. Who is the Vice President for Planning?
Mr. McAtee. Vice President for Planning is Chev Haskell.
Mr. Yates. Who?
Mr. McAtee. Chev Haskell.
Mr. Yates. How do you spell his first name?
Mr. McAtee. C-h-e-v-e-s.
Mr. Yates. Oh, Cheves.
Mr. McAtee. Cheves, yes. C-h-e-v is——
Mr. Yates. Is diminutive.
Mr. McAtee. Yes, it is. Chev is what he is used to.
Mr. Yates. All right.
Mr. McAtee. He comes from IBM.
Mr. Yates. He is a friendly fellow.
Mr. McAtee. He's very friendly.
Mr. Yates. Is he in charge of Planning?
Mr. McAtee. He is in charge of Planning. He was with Planning at IBM. Mr. Carey, I think, urged him to come down.
Mr. Yates. Who is the Vice President in charge of Administration?
Mr. McAtee. That is Bob Harris.
Mr. Yates. You will give us biographies on all these people?
Mr. McAtee. Yes, sir.
Mr. Yates. All right.
[The biographies follow:]

WILLIAM F. RHATICAN

EXPERIENCE

1. Private sector—10 years

a. *President*—Rhatican and Associates, Inc.; Public Relations Firm specializing in national issue-oriented campaigns.

b. *Vice President, Public Relations*—American Paper Institute. Responsibilities included directing public relations activities for this national trade association; developed public relations objectives, plans and budgets.

c. *Partner in Public Relations Agency*—Directed public relations and community relations program for a series of clients, ranging from a national chain of roller rinks to the New Jersey State Department of Education Division of Vocational Education.

d. *Vice President for Public Affairs*—The Viguerie Company. Provided advice and public relations support for The Viguerie Company, the nation's largest Direct Mail Advertising Agency, and its assorted clients. Supervised all public relations activities for Mr. Viguerie, his company and his company's clients.

2. Federal Government—10 years

a. *Special Assistant to President Ford*—Responsible for development and coordination of all Executive Branch department and agency public affairs activity; participant in communications strategy development; principal White House contact point for news organization's bureau chiefs and "out-of-town" editors.

b. *Deputy Special Assistant to President Nixon*—Responsible for development and implementation of issue-oriented media planning for both domestic and foreign policy.

c. *Press Secretary to Rogers C.B. Morton*—At both the U.S. Department of Interior and U.S. Department of Commerce. Responsibilities included all press contact with Secretary Morton; briefings for the Secretary prior to all press conferences; participant in issue development strategy sessions dealing with a diverse range of issues such as the Arab Boycott of U.S. firms doing business with Israel, auto-dumping procedures against Poland and the Endangered Species Act.

Responsibilities also included that of press spokesman (and active participant) for the Energy Resources Council, which developed President Ford's Energy legislative package.

d. *Press Secretary to William E. Simon, Secretary of the Treasury*—Responsibilities included all press contact on behalf of the Secretary; participation in "issue" meetings; accompanying the Secretary on all domestic and foreign travel; Press Spokesman for Economic Policy Board.

EDUCATION

Seton Hall University, South Orange, New Jersey, B.S. in Education with majors in English and American History

PERSONAL

Age—40.
Marital Status—Married; two sons.
Visiting Lecturer—Presidential Classroom for Young Americans; University of Maryland; University of Florida; Christendom College.
Faculty Member—American College of Hospital Administrators; Convention Technology Conference; U.S. Chamber of Commerce Education Program.
Writer—Several articles on Middle-East, U.S. Bureaucracy, U.S. public policy for leading daily newspapers, including New York Times Los Angeles Times, Chicago Tribune and Miami Herald.

A. CHEVES HASKELL, JR.

Current Position—1980–1979.

IBM Director of Policy Development

Responsible to Senior Vice President, Finance/Planning and to IBM's Corporate Management Committee for development and use for IBM's product line of appropriate terms and conditions of sale which (in conjunction with price) assure both adequate investment recovery and adequate product acceptance in worldwide markets.

In addition, responsible for 1980 study to characterize and make plans for IBM in the Information Industry in the 1990's.

Previous IBM Position—1979–1954.

Vice President, Marketing/Service, IBM Europe/Middle East/Africa—Paris

In this unit doing one-third of IBM's business and employing 75,000 people, responsible for plans and results for products, marketing and service of IBM's medium and large-scale information products and services through approximately 25,000 marketing and service representatives.

Vice President, Business Plans, IBM Europe/Middle East/Africa—Paris

Responsible in this unit for:
(1) long and short term revenue and profit plans integrated with IBM's worldwide product plans.
(2) appropriate recruiting/training/use/movement of key executive resources.
(3) appropriate organization structure and systems for decision-making, planning, and control.
(4) serving as Secretary to the Committee managing this unit.

Secretary—IBM Corporate Management Committee

Responsible to Committee's Chairman, IBM's Board Chairman, for work flow, prioritization, and decision follow-through of IBM's senior decision-making body.

IBM Director of Organization

Responsible for appropriate corporate-wide organization structure, decision-making systems, and planning/control systems.

Administrative Assistant to IBM Board Chairman

Responsible for assisting in management of the Office of the Chairman.

Various Positions—IBM Data Processing Division (U.S. Computer Marketing)

Director of Business Practices; Manager of Sales Training; Branch Manager; and Sales Representative.

Non-IBM Positions—Executive Vice President—Lombard Industries—1963–1961; Assistant Administrative Officer—Center for International Studies—MIT—1954–1952.

Education—Dartmouth College—A.B.—1952; Tuck School of Business Administration; Various IBM internal and external executive education programs.

Other Organizations—Various elected, appointed, and volunteer positions in ten communities of residence in last 12 years. Board of Education, Arts Council, Youth Agencies, etc. Vice Chairman—Organization Section—National Conference Board.

Personal: Age 49; Married, 4 children.

References: L. M. Branscomb—IBM Vice President and Chief Scientist, Former Director, Bureau of Standards; F. T. Cary—IBM Chairman; N. de B. Katzenbach—IBM Senior Vice President and General Counsel, Former U.S. Attorney General; J. G. Maisonrouge—IBM Senior Vice President, Chairman IBM Europe/Middle East/Africa; D. P. Phypers—IBM Senior Vice President, Finance and Planning; A. L. Singer—Vice President, Sloan Foundation; T. J. Watson, Jr.—Retired IBM Chairman, Ambassador to U.S.S.R.

ROBERT HARRIS

BACKGROUND SUMMARY

Extensive and varied experience in general management, policy development, research, negotiation, planning, budgeting, personnel and financial adminstration. Successful record, both as an executive and analyst. Experienced public speaker and writer.

EDUCATION

A.B., Columbia College, 1957; M.B.A., Columbia Graduate School of Business, 1959; M. Phil. (Economics), Columbia University, 1961.

MAJOR RESPONSIBILITIES AND ACCOMPLISHMENTS

Responsible for management, program planning and development, marketing, budgeting and client relations for The Urban Institute, a private policy research firm with 300 employees. Developed successful new research programs, improved financial management and personnel systems, and managed the Institute's transition from an organization funded by sole-source grants and contracts to one which currently raises over half of its revenues from competitive bidding. As Executive Vice President have served as general manager and chief operating officer for 2½ years. (1972-present)

As President of the Council of Co-Owners of the Colonnade Condominium and Chairman of the Board of Directors, served as chief executive officer of a 285-unit luxury high-rise apartment complex. Held increases in fees below the rate of inflation while undertaking major plant improvements, and resolved several major legal disputes with the developers. (1977–1980)

Responsible for program planning and budgeting for the N.Y.C. Health Services Administration, a billion-dollar agency. Organized a new Office of Program Analysis and Planning, and directed the agency Budget Office. Reviewed operations and budgets of all activities to implement new initiatives with higher potential payoff. Directed reviews of New York City health facility needs to rationalize and control capital spending. (1970–1971)

Recruited, organized, and managed staff to support deliberations of 21-member President's Commission on Income Maintenance Programs. Directed analytic studies and conducted extensive field hearings evaluating all Federal programs designed to increase incomes of the poor. Directed studies which provided much of the basis for the welfare reform efforts of the 1970s, including legislative proposals put forward by Presidents Nixon and Carter. (1968–1970)

EMPLOYMENT HISTORY

Executive Vice President, The Urban Institute, June 1978 to present; Senior Vice President, July 1973 to June 1978; Vice President, July 1972 to June 1973; Senior Research Associate and Program Director, October 1971 to June 1972.

Budget Coordinator, Carter-Mondale Transition Planning Group, November 1976 to January 1977 (on leave from The Urban Institute).

Deputy Administrator, Program Analysis, Planning, and Budgeting, New York City Health Services Administration, March 1970 to July 1971.

Executive Director, President's Commission on Income Maintenance Programs, March 1968 to February 1970.

Educational Systems Analyst, IBM Corporation September 1967 to February 1968.

Deputy Director, Income and Benefit Programs (Acting Director), Office of Secretary of Health, Education, and Welfare, December 1965 to August 1967.

Senior Staff Scientist, State-Local Finance Project, George Washington University, July 1964 to November 1965.

Research Associate, Advisory Commission on Intergovernmental Relations, January 1964 to November 1965.

Operations Research Analyst, Office of the Secretary of Defense, February 1963 to December 1963.
Consultant in Public Finance, New York State Department of Audit and Control, May 1962 to February 1963.
Consultant, Public Affairs Planning and Research, General Electric Company, May 1961 to April 1962 (part-time as graduate student).
Lecturer in Statistics, Columbia University, 1956–1961 (part-time as graduate student).

OTHER PROFESSIONAL ACTIVITIES

Chairman, Economic Independence Section, National Conference on Social Welfare, 1979–80; Vice-Chairman, 1978–79.
Member, Task Force on Principles for an Income Security System for the United States, National Conference on Social Welfare, 1976.
Delegate, Health, Education and Welfare Panel, White House Conference on Inflation, 1974.
Member, Community Development Panel, National Academy of Engineering Study of National Needs and Research Priorities, conducted for the National Science Foundation, 1972.
Member, Committee for Assessment of University Based Institutes for Research on Poverty, National Academy of Sciences, 1970–71.
Panel Member, White House Conference on Food, Nutrition, and Health, 1969.

PUBLICATIONS

Many publications on public finance issues, policy analysis, and social welfare policy in professional literature and government reports.

PERSONAL BACKGROUND

Born: Wilkes-Barre, Pa. December 16, 1935; Married, three children.

ROBERT T. BLAKELY

The Vice President and Chief Financial Officer is responsible for financial analysis, structuring and negotiations leading to recommendations for financial assistance by the Corporation.
Experience: Prior employment with Morgan Stanley & Co., Inc., from 1970 to 1980, most recently as a Managing Director with special emphasis in the firm's energy activities. These activities included advisory assignments on major energy projects and capital raising for both energy companies and energy projects. Included in this experience was a significant amount of U.S. Title XI government guaranteed ship financing.
Education: 1970—Ph. D.—Massachusetts Institute of Technology, specialty in applied mathematics and psychology thesis in Markov Chain Theory and mathematical statistics funded by Sloan Fellowship. 1965—MBA—Cornell University, specialty in computer systems and operations research funded by research assistantship Dean's List. 1964—BME—Cornell University.

LEONARD C. AXELROD

Born: June 4, 1919. Married.
Education: University of California, Berkeley, 1941, B.S. Chemistry (Honors)
Employment: 1945 to Present—Engineering Contractor Company serving petroleum, petrochemical, chemical, energy industries.
1975 to Present—Sr. Vice President, Research & Development
1972 to 1975—Vice President General Engineering, Houston Operations
1969 to 1972—Director Process Engineering Department
1961 to 1969—Manager Inorganic Process Division
Other Positions include: Process Engineer, Piping Systems Engineer, Project Engineer, Rocket Test Engineer
1942 to 1945—Explosives Research Laboratory.

Mr. YATES. Who is the Vice President for Project Development?
Mr. MCATEE. That is Commander Lukins who is not actually a Vice President. He is on loan to us from the Department of Defense; he retires in June.

Mr. YATES. He is Acting?

Mr. MCATEE. Yes.

Mr. YATES. Who is the General Counsel?

Mr. MCATEE. I am Senior Vice President and General Counsel.

Mr. YATES. You are also Chairman and CEO.

Mr. MCATEE. Yes. Under the bylaws they designate a person as a second person in command in the event that the first person is unavailable. I was the person, Senior Vice President.

Mr. YATES. Who is the Vice President for Finance?

Mr. MCATEE. That is Bob Blakely who was a partner in Morgan Stanley.

Mr. YATES. All right. Who is the Vice President for Technology and Engineering?

Mr. MCATEE. That is Len Axelrod who was an officer of Pullman, Kellogg.

Mr. YATES. You have the top brackets filled. Now what about the lower brackets, is there an Assistant Vice President position for each of these boxes?

Mr. MCATEE. We have various Assistant Vice Presidents and Assistant General Counsels such as my friend Pierre.

Mr. YATES. Pierre is Assistant General Counsel?

Mr. MCATEE. Yes. We have two Assistant General Counsels.

Mr. YATES. All right.

Mr. MCATEE. Pierre de Saint Phalle.

Mr. YATES. What about the other boxes?

Mr. MCATEE. That has filled all the boxes.

Mr. YATES. The boxes are filled with the top ranking person. How far down under these boxes do you go?

Mr. MCATEE. Well, we have a mandate in the statute to not exceed 300 professionals. We don't believe we need that many professionals.

Mr. YATES. How many do you have on board?

Mr. MCATEE. We have about 90 people total and perhaps you would categorize half of those as professionals.

Mr. YATES. Would you give the committee a breakdown of where you have assigned the 90?

Mr. MCATEE. We can supply that.

Mr. WIECKING. Do you want that for the record or do you want me to read it out?

Mr. YATES. Will you give us a copy for the record?

Mr. WIECKING. Yes.

[The information follows:]

UNITED STATES SYNTHETIC FUELS CORPORATION—STAFFING REPORT—MAR. 23, 1981

	Exempt	Non-exempt	Total
Office of the Chairman		3	3
Administration	11	17	28
Finance	4	1	5
General Counsel	7	4	11
Government Relations & Public Affairs	5	5	10
Inspector General		1	1
Planning	4	3	7
Project Development	15	7	22

UNITED STATES SYNTHETIC FUELS CORPORATION—STAFFING REPORT—MAR. 23, 1981—Continued

	Exempt	Nonexempt	Total
Technology and Engineering	1	1	2 rn,s
Total	47	42	89

ROUTING APPLICATIONS

Mr. YATES. Who has the task of examining the applications for assistance in the first instance? Where do the applications for assistance go first?

Mr. MCATEE. They go into Project Development and Project Development immediately communicates the substance of these to the General Counsel.

Mr. YATES. Wait a minute. Where is Project Development? Is that under Technology?

The mail room brings them to Project Development.

Mr. MCATEE. The mail room brings in 10 copies and Project Development with all the security and so forth distributes them to the Vice President of Finance, the General Counsel and the Vice President of Technology. Then there is a Management Committee which is not on here, it is an informal committee pursuant to resolutions adopted by the board.

I am chairman of the Management Committee. The Management Committee consists of the Vice Presidents of Project Development and Technology and Finance.

Mr. YATES. All right, three people.

Mr. MCATEE. Four, counting myself as Senior Vice President and General Counsel.

Mr. YATES. That is the Management Committee, and what do they do? What happens there?

Mr. MCATEE. The responsibility of the Management Committee—remember that we are in the initial phases—is to police the negotiations and development of the projects through the various phases, to make sure that they are staffed and to make sure that the information flow is proper. Project Development has the responsibility of tracking everything. At the appropriate time if it is a legal issue or a financial issue or a technology issue, input from those departments will be given to the group that is working on the particular project.

Mr. YATES. The 10 copies of the application are distributed. Then do you have a Management Committee meeting to consider the applications? Will the Management Committee have the applications with the recommendations of the departments to whom the mail room has distributed them?

Mr. MCATEE. Since the Management Committee really consists of the heads of those departments, I think the answer is yes.

Mr. YATES. Are there applications that will not reach the Management Committee because one or more of those who received them decide that they are not appropriate or will the Management Committee consider all the applications that are submitted?

Mr. McATEE. I think in effect that the Management Committee is going to end up considering all of them. We don't know how many applications there are going to be but if someone comes in with a biomass one and it obviously does not qualify, that is not a big decision. Project Development probably on their own might check with a lawyer or somebody who would come to that conclusion. The Management Committee would be aware of it but it might not come up to the Management Committee for any real discussion.

Mr. YATES. Would there be an application that does not fit within the framework of your jurisdiction?

Mr. McATEE. That is right.

Mr. YATES. What about the applications that do? The Management Committee meets and will you consider all the applications? How many did you say you have on file?

Mr. McATEE. Well, there are seven now.

SIZE OF APPLICATIONS

Mr. YATES. You have seven so there is no problem there. How thick are they? How big is an application?

Mr. McATEE. They can be very thick. We are in Phase one. In Phase two the information will be voluminous. In Phase one we are trying to keep it brief because we want them to tell us what they think is relevant. We are going to assume that most of it is correct and analyze it on that basis. As we move down the road we are going to be testing the information and perhaps be requesting much greater volumes of information. This is routine, it is just like a bank that does the same thing.

Mr. YATES. Banks have regulations. Are you going to have regulations?

Mr. McATEE. Yes—procedures.

Mr. YATES. Not regulations?

Mr. McATEE. It is all procedures, yes, sir.

Mr. YATES. All right. The administration is anti-regulation.

Mr. McATEE. Yes.

DEADLINE FOR FILING APPLICATIONS

Mr. YATES. So you are going to have procedures for the second phase. The first phase you are just reading the first application, right, until March 31?

Mr. McATEE. No, we start after March 31. See, we are not really there yet because they are not in yet.

Mr. YATES. Are you going to have a deadline?

Mr. McATEE. A deadline for what?

Mr. YATES. For the submission of applications.

Mr. McATEE. Yes, March 31.

Mr. YATES. Then you will have all your applications in by March 31?

Mr. McATEE. That is right.

Mr. YATES. You have seven to date and you will have others.

Mr. McATEE. Yes.

Mr. YATES. What do you do with one that is filed late, do you do anything about that?

Mr. McATEE. Well, that is a good question because obviously we wanted to have none that were filed late. We haven't decided what we will do with one that is filed late, but we will figure out a way so we don't have to disregard it. We may need the board to extend the March 31 date. I mean, it just doesn't make any sense if the best one is filed late and you don't take it into consideration.

Mr. McDADE. I thought we had that colloquy. You are not going to close the window on March 31.

Mr. McATEE. That is right.

Mr. YATES. When are you going to close the window?

Mr. McATEE. Never. Why close the window?

Mr. YATES. Why have a window then? Why have a deadline? Why have any kind of a deadline?

Mr. McATEE. So people realize that we are going to go to work on the information in-house, and that is what we are going to do. We are going to give them enough time so that they can come in and be treated along with everyone else. We will go to work and we are going to fast track everyone along. But we don't want to just then disregard what comes in later. I mean we are looking towards the national goals.

Mr. YATES. Joe, what is the 31st?

Mr. McDADE. I beg your pardon?

Mr. YATES. If we don't have a deadline.

Mr. McDADE. It's my wedding anniversary.

Mr. McATEE. Congressman, at the present time the 31st is the end of the time period.

Mr. YATES. But it isn't though. Your answer to Mr. McDade was that you were going to close the window.

Mr. McATEE. We are going to recommend to the board that there be a way, either through additional solicitations or an extension of the March 31 date, that it again open up; but the board will have to make that decision.

Mr. YATES. I would hope so. I would hope that there would be an ongoing way. That is why I don't understand why you have this deadline. I don't know quite what you mean by deadline. Is this an expressed hope that some companies will submit their applications by this date?

Mr. McATEE. The procedure that was adopted on December 2 was an initial solicitation that set March 31 as a deadline so that people had three months to get in their information. We don't have really much more than that. I think that after giving everyone a chance to get in on March 31, then we can in fairness go on with the processing. I think that is what it all boils down to.

REVIEWING THE APPLICATIONS

Mr. YATES. We have a quorum call. That is just the second bell so we have about three more minutes.

So now we have these seven applications plus whatever else comes in in the hands of the Management Committee presumably with or without the approvals of the Vice Presidents. The approvals are not needed because the pertinent Vice Presidents are members of the Management Committee and presumably the Vice Presidents have read the applications and are in a position to

discuss them. I assume the Vice Presidents have given them to staff to review.

Mr. McATEE. Absolutely.

Mr. YATES. So staff has reviewed them and has made recommendations to the Vice President. Does each of the staffs of the four boxes review them?

Mr. McATEE. I think so, yes, sir. I think each one of these projects——

Mr. YATES. You have no procedures yet is what you are saying.

Mr. McATEE. Each staff is going to review them.

Mr. YATES. Each staff will review them.

Mr. McATEE. The legal staff is not going to be worrying about the technology.

Mr. YATES. What is the legal staff going to be worrying about?

Mr. McATEE. The form of the assistance, they will be worried about documenting the decisions of the corporation.

Mr. YATES. Has a form of application been approved yet? Suppose I want to get into the bidding, I am the Tennessee X Corporation. Do I come into your office and pick up a copy of the application?

Mr. McATEE. No.

Mr. YATES. How do I go about submitting an application?

Mr. McATEE. You submit it from Phase one, tell us about your project. We don't have forms. No forms. We don't want to have forms.

Mr. YATES. How do they know what information to submit to you then?

Mr. McATEE. In our initial solicitation we set forth what information to submit in general terms.

Mr. YATES. I see. If they submit their application in general terms, they will not be considered?

Mr. McATEE. No, sir. We are going to consider all the applications on general terms.

Mr. YATES. What is a general term?

Mr. McATEE. Let me get a copy of the solicitation.

Mr. YATES. Maybe the solicitation is much more specific than I contemplated. No?

Mr. McATEE. Probably not because it asks them to do such things as tell us about where you stand on the regulations, tell us about how much water you are going to use.

Mr. YATES. I will read from page 1.

In Phase one, which will open November 1, 1980, and close March 31, 1981, interested parties are invited to present proposals for all types of synthetic fuel projects for basic evaluation by the Corporation. Applicants should adequately describe their financial resources and expertise for the project; their proposed project, including the technology and plant input and output; their scheduling timetable and risks with respect to completion; the availability of water to meet project needs and water quality impacts . . .

You are specific——

. . . on other users; their availability to deal with environmental considerations and regulatory requirements; socioeconomic impacts; and their financing plan.

That is going to take some consideration.

We are going to answer the quorum call and we will be back.

Mr. McATEE. Thank you, sir.

Mr. YATES. I am sorry for this delay, gentlemen.

We better put in the record the other people who will be dealing with the applications and how they would be dealing with them.

[The information follows:]

PROCESSING PROPOSALS

The Corporation is operating at the present time under a organizational concept adopted by the former Board of Directors; one which may be substantially changed by the Board nominated by President Reagan. However, certain functions will almost necessarily remain the same, without regard to the organizational arrangements.

Under current plans, processing of proposals received from prospective project sponsors will be initially received, logged in, secured, and undergo initial Phase I processing in the Project Development unit, under the general direction of the individual acting as Vice President for Project Development, assisted by an Assistant Vice President and a staff currently composed of 13 professional (exempt) exmployees and supporting non-exempt employees. Common support personnel (accounting, messenger, duplicating, etc.) of the Vice President for Administration will be called upon as needed.

Proposals will also be routed to the Vice President for Finance, Vice President for Technology and Engineering and the General Counsel for preliminary review to determine general acceptability under the provisions of the statute; e.g., is the proposal generally acceptable as constituting a synthetic fuels project proposal? Those proposals which clearly do not fall within the Corporation's purview will be identified for the Management Committee and will be turned down and not given further consideration at the present time.

Subsequently, each proposal that has been found to be acceptable will be subject to evaluation by the Finance Staff (as to financial viability, appropriateness of type of financial assistance requested), the Legal Staff (as to form of financial assistance and necessary legal safeguards, as well as general business terms), and the Engineering and Technological Staff (as to feasibility of the specific process envisioned, resource requirements, and probability of ultimate success). Evaluations performed by each of these staffs will be brought to the Management Committee and subsequently to the Board of Directors for rejection or for approval under Phase I or continued intensive review and processing with additional information under Phase II. It is also anticipated that a number of proposals will remain in Phase I until they are sufficiently mature to be considered as Phase II candidates. No project proposal will be moved from Phase I to Phase II without specific approval of the Board of Directors.

In Phase II a more extensive analysis will be undertaken, requiring the submission of detailed information by the sponsors, with interaction between the project proposer and the Corporation to resolve differences and to clarify significant aspects of each proposal. During this Phase it is anticipated that representatives of Project Development, Finance, Technology and Engineering and the General Counsel will be assigned to each project. Following intensive Phase II evaluation, each project proposal will again be considered by the Management Committee and by the Board of Directors for final review and decision.

RESCISSION FOR SRC–I

Mr. YATES. Now among the rescissions with which this subcommittee has to deal is the rescission for SRC–I and the justification for the rescission as stated by the documents presented by the administration. It calls for a rescission of $157,500,000 and it talks about the SRC–I demonstration plant utilizing a direct lift in process.

The justification says:

The SRC–I project was initiated on July 10, 1978, with an award of a multi-phased contract to design, construct, and operate the plant at Newman, Kentucky. The nature of this demonstration and the technical risks are such that it could qualify for support by the SFC.

An orderly closeout of this project is possible by using the design work to date to provide a definite mechanical configuration and packaging it for record and for use in an application to the SFC. This, in turn, will be the basis for a definitive cost estimate which would be completed by July 1981, in conjunction with finalizing the

EIS by April 1981. These materials will be made available to industry if it chooses to pursue this technology to commercialization and will be sufficient to merit consideration for financial assistance by the SFC. Unobligated prior year funding should be ample for the accomplishment of this closeout. Therefore, fiscal year 1981 funds in the amount of $157,500,000 are proposed for rescission.

Now you represent to this committee that you are in the position to consider the SRC–I proposal if, as and when it would be submitted to the SFC so that it would compete with all other projects under the terms of your procedures and in accordance with them, is that correct?

Mr. McATEE. We have not examined SRC–I closely but as a general matter that is correct, Mr. Chairman.

Mr. YATES. Does this mean that Mr. Stockman has not examined it closely either?

Mr. McATEE. No, I don't say that.

Mr. YATES. Would he not have consulted with you on this before he made his decision?

Mr. McATEE. I think that the Department of Energy is intimately familiar with SRC–I and has probably consulted with them.

Mr. YATES. I will ask the Department of Energy when it appears before us but I would have thought that they would have asked you, too, as to whether or not this was the kind of a project that would qualify for your procedure before they made the recommendation.

Mr. McATEE. As a general matter we believe it is.

Mr. YATES. As a general matter you believe it is.

If we were to comply with the rescission, thereby terminating rather abruptly the financing for the project, it would not be thrown out by your group on the grounds that it does not qualify, would it?

Mr. McATEE. But it would have to compete with other projects.

Mr. YATES. It might be thrown out by SFC on the grounds that you found other projects that were much more suitable for the purposes of your competition.

Mr. McATEE. That is correct, Mr. Chairman.

Mr. YATES. Sir, I think I interrupted you.

Mr. McATEE. I believe that SRC–I has an amount of Government funding in excess of that which we are allowed to give. We have a maximum of 60 percent under the joint venture authority.

Mr. YATES. Then that is the lowest priority, isn't it, the joint venture?

Mr. McATEE. We could give loan guarantees of up to 75 percent.

Mr. YATES. Are the contractors likely to be delighted with that prospect?

Mr. McATEE. Prospects?

Mr. YATES. Yes.

Mr. McATEE. I don't know. My guess is that they wouldn't. Given what I believe, they are up to 90 percent in the Department of Energy.

Mr. YATES. We are supposed to cooperate with the administration, aren't we?

Mr. McATEE. Well, we have some insulation.

Mr. YATES. You have some insulation.

Mr. McATEE. Theoretically. We are looking towards commercial viability by 1991.

Mr. YATES. And you are the agency that is supposed to determine the commercial viability of this project, aren't you?

Mr. MCATEE. Yes, sir.

Mr. YATES. We already determined it because we gave them the money but the administration said our determination was not adequate and they wanted you to do it.

Mr. MCATEE. We don't have as much money.

Mr. YATES. Well, you may have if we approve this rescission.

RESCISSION FOR SRC–II

What about SRC–II, you still don't have that for consideration, do you? Excuse me. You don't even have SRC–I for consideration yet. SRC–II has not been sent down by Mr. Stockman. Could you tell us whether or not Mr. Stockman proposes to send down SRC–II for rescission? Has he talked to you about it?

Mr. MCATEE. No, sir.

Mr. YATES. He has not. Has he talked to anybody in your shop about it, do you know?

Mr. MCATEE. Well, I have talked to people at OMB about the availability of the SFC to——

Mr. YATES. We are talking about SRC.

Mr. MCATEE [continuing]. The ability of the corporation to accept all of the demonstration projects.

APPLICATIONS FROM FOREIGN INVESTORS

Mr. YATES. Are you allowed to accept applications by foreign investors?

Mr. MCATEE. We believe so. They come within the definitions of persons in our statute.

Mr. YATES. That is interesting all of a sudden. What happens if the holding company that was owned by the Saudi Arabian Government, for example, were to apply in competition with American companies? Could you approve that?

Mr. MCATEE. I doubt if our directors would be too interested in that. A concern which may file means any person or any foreign government or agency thereof when participating in joint ventures with any entity described above—which would be someone else.

Mr. YATES. Well, I don't suppose Saudi Arabia would be interested in the amount of money you make available.

Mr. MCATEE. Peanuts.

Mr. YATES. By the amounts that they have available.

Mr. MCATEE. I think that is correct.

Mr. YATES. But inasmuch as they already have control of natural oil products, why would they not also be interested in controlling synthetic oil which is alleged would be competitive at some time in the future so that there would be no competition? Why would they not be interested? It is conceivable they might be interested, isn't it?

Mr. MCATEE. Well, nobody has come in and talked to us about it from Saudi Arabia.

Mr. YATES. Nor talked to the Congress about it.

Mr. MCATEE. We have the coal and the oil shale in the United States which are so much greater in energy reserves than what

Saudi Arabia has that if we can just turn it into a consumable form——

Mr. YATES. I can understand why Saudi Arabia would want to take it over.

Mr. MCATEE. Perhaps they would.

Mr. YATES. If you were in charge of the Saudi Arabia energy program, it is conceivable you would look for other places to invest than merely Saudi Arabia.

Mr. MCATEE. Yes.

Mr. YATES. Maybe we ought to consider that.

Okay. What else do we have to talk to you about on rescissions? Do we have to talk to you about the high Btu demonstration plants? I guess we do. That would be considered competing for synfuel, would it not?

Mr. MCATEE. Which one do you mean?

Mr. YATES. The one in Ohio and southern Illinois.

Mr. MCATEE. Yes. The Illinois coal gasification group, the five gas utilities?

Mr. YATES. Yes.

Mr. MCATEE. They are one of the five demos. Again, I think that if they desire they could file for consideration by our board.

Mr. YATES. I am sure they would rather have appropriations though, would they not?

Mr. MCATEE. I would think so.

Mr. YATES. I would think so, too.

Is my memory right, did CONOCO pull out of the——

Mr. MCATEE. There was an announcement that they pulled out of——

Mr. YATES. Ohio. So they are not going to be in competition and apparently they are not going to ask for further appropriations either as I understand it.

Mr. MCATEE. That is my understanding also.

Mr. YATES. So that leaves just Illinois.

What else do we have to take up?

Well, I would assume that SRC–II would not be the subject for a rescission then, if it has not been submitted to Congress by this time?

Mr. MCATEE. I would not know, Mr. Chairman.

Mr. YATES. Perhaps their deadline is as flexible as yours, the window is open.

Mr. MCATEE. Our window is open.

Mr. YATES. DOE is now negotiating a loan guarantee to the Great Plains gasification plant in North Dakota.

Mr. MCATEE. Yes, sir. This is what we refer to as ANR, American Natural Resources.

Mr. YATES. Under your procedures then ANR ought to be applying to you to complete with the others rather than remaining in the Department of Energy?

Mr. MCATEE. ANR is different than these other five demos because the other five demos have commitments from the Department of Energy under the Nonnuclear Act and are not part of the Fast Start program. American Natural Resources, the Great Plains, is applying for a commitment under the Nonnuclear Act provision that is part of the Fast Start program and would be

transferred over to us. We are in constant meetings with them along with the Department of Energy.

We are very familiar with the American Natural Resources project. If a commitment is entered into on that project, and Secretary Edwards has announced that was the goal of the Department of Energy, we will be very much aware of it and we will be fully briefed by the Department of Energy in order to insure a smooth transition. That is in the same category.

Mr. YATES. Suppose DOE negotiations are not complete by June 30.

Mr. MCATEE. Then we will take over where they left off.

Mr. YATES. What about so-called Nonnuclear Act incentives which DOE is currently evaluating? What would happen if no commitments were made by DOE to these projects by June 30?

Mr. MCATEE. They would also come over essentially. They are relatively premature.

Mr. YATES. Is the number of your vice presidents limited by statute?

Mr. MCATEE. No, Mr. Chairman,

Mr. YATES. The $2 million limitation on the Inspector General's operations, is that part of your $35 million overall limitation?

Mr. WIECKING. Yes, sir.

OVERSIGHT REVIEW OF THE PROJECTS

Mr. YATES. What is the nature, if there is any, of any oversight review which you will be giving to the projects for which you will accrue financial assistance? Will there be any oversight?

Mr. MCATEE. Well, there will be the monitoring, there will be oversight. We will negotiate. When we make the commitment we will negotiate at that time exactly what type of follow-up rights we have. We will also be auditing the performance of the projects. There could be a difference in degree that we negotiate depending upon the type of financial assistance, as we said. For instance, if the private sector is going to lose money each inch along the way, even though we are exposed also, it may mean that we have to spend less time tracking them than if it was a joint venture module where we have a direct investment in which we will be much more closely exposed and perhaps would spend much greater efforts.

Mr. YATES. How important do you conceive this oversight responsibility to be?

Mr. MCATEE. I think it is very important, but I don't think that we want to get carried away with it so much that we bog down the project sponsors responding to us and not allow them to get on with their work. We don't want it to be on the critical path.

Mr. YATES. Well, it is going to be a very delicate path that you follow then.

Mr. MCATEE. Yes, sir.

Mr. YATES. Kind of like a tightrope walker.

Will you be able within your employee ceiling of 300 to have employees carry on the oversight?

Mr. MCATEE. We believe so.

Mr. YATES. Will you be doing any outside contracting of this work?

Mr. McATEE. We have that authority and that is quite possible.

Mr. YATES. You don't know yet what that cost is likely to be?

Mr. McATEE. We don't know yet what it is likely to be. It could be significant.

Mr. YATES. Are you required to submit a comprehensive plan respecting the operation by the corporation of a function or are you in existence and operating on your own?

Mr. McATEE. We are of limited duration, we go out of existence in 12 to 17 years depending on—

Mr. YATES. That is not so limited, is it?

Mr. McATEE. No. We have this comprehensive plan coming back to you in connection with the additional $68 billion. That is a major effort already. Mr. Haskell's primary task is to focus on that because that is such an important task. That will be very comprehensive.

Then we have financial reports which are filed. We have the Inspector General. We have the general principles. Our first principle is to respond continuously to Congress.

REVIEW OF ADMINISTRATIVE EXPENSES

Mr. YATES. Are you required to come before this committee for review of your administrative expenses?

Mr. WIECKING. The statute, it seems to me, Mr. Chairman, is very unclear on that. I would think the corporation would want to come to the committee annually so you would know what we are doing. What action you would want to take is another question.

Mr. YATES. Are you required to report to OMB, too?

Mr. WIECKING. We are not required to report to OMB. We treat them gingerly.

Mr. YATES. I am sure they will do the same for you.

Would you also place in the record a schedule of the salaries of your top officers and officials?

Mr. McATEE. Yes, sir. That is in already, Mr. Chairman.

Mr. YATES. All right.

Do all of your officers receive the same benefits that the President does, the right on determination of contracts and so forth?

Mr. McATEE. I believe it has been submitted. At the present time I believe everybody with the one exception voluntarily, subject to approval by the board, is receiving the benefits under the general plan for all employees.

Mr. YATES. Will your salaries and whatever other perquisites and benefits you have be subject to revision by the incoming board at such time as it is approved?

Mr. McATEE. All the officers except for one have voluntarily reduced their salaries to the Level I and are not taking any fringes other than the fringes that are applicable to all employees, subject to review by the incoming board.

Mr. YATES. Who is that one? You said all except one have done that.

Mr. McATEE. There is one who would prefer to talk to the incoming board directly on this subject.

Mr. YATES. Off the record.

[Discussion off the record.]

Mr. YATES. Are there implied contributions for retirement and medical benefits, insurance, life insurance, long-term disability and funded plans?

Mr. WIECKING. The employee contributions differ depending on which part of the fringe benefits you are talking about, Mr. Chairman. The retirement plan has not been formally implemented, although adopted by the board, so it would be difficult to say. The proposal made to the board by our consultants was that it be noncontributory but no final action has been taken on that yet.

COMMITTEE NOTE: At its December 22, 1980 meeting, the then board of Directors adopted a recommended retirement plan as part of a complete package of recommendations on employee benefits and directed the Chairman to obtain employee benefits consistent with the benefit study presented to the Board of Directors. Except for the retirement benefits, the package has been put into effect; the retirement benefits plan has *not* been put into effect and all action to procure a retirement plan was suspended when the members of the Board resigned on January 31. The incoming Board may, of course, decide to rescind the action of the previous Board.

Mr. YATES. Why would it not be contributory?

Mr. WIECKING. Of course everybody gets Social Security. My understanding with respect to the retirement plan itself was that it was an attempt to arrive at a plan which was reasonably consonant with what was available to these kinds of people in private industry. With respect to the other benefits it would depend on the life insurance, what the amount of the coverage was. The first level is funded by the corporation, the additional levels would be shared with the employees. The health insurance is funded by the corporation for the individual himself, family coverage is optional and is shared with the employee.

Mr. YATES. Would you place in the record a description of what the funded plans provide and what opportunities and options are given to your officials and employees?

Mr. WIECKING. Certainly.

[The information follows:]

UNITED STATES SYNTHETIC FUELS CORPORATION
EMPLOYEE BENEFITS

Benefit	Eligibility	Amount/Value	Status & Notes
VACATION (none during first 6 months then credited with 1/2 yr. equiv.)	Regular Employees by level of experience in their field-not salary; i.e., SFC position level: 1st year 2nd year 3rd year	Weeks per year Entry Med. Sr. 2 3 4 3 4 4	Approved by Board 12/22/80 Detailed procedures to be developed, i.e., specific grades go with which level
HOLIDAYS	all regular employees	10 days per year (8 set; 1 SFC option; 1 employee option)	Approved by Board 12/22/80 and being implemented
SICK LEAVE (short-term	Regular employees service related with 0-1 year service graduated up to 6 years service	1 week full pay + up to 25 weeks at 60% pay up to 26 weeks full pay	Approved by Board 12/22/80 Detailed procedures to be developed.

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UNITED STATES SYNTHETIC FUELS CORPORATION
EMPLOYEE BENEFITS

Benefit	Eligibility	Amount/Value	Status & Notes
HEALTH INSURANCE	Regular employees and families Hospital and medical Major medical	Basic maximum of $250,000; zero cost for employee; $20/mo. cost for dependents	Approved by Board 12/22/80 Permanent plan implemented in February
LONG-TERM DISABILITY	Regular employees (after 30 day waiting period	(After 6 months) 60% of 1st $60,000 annual salary plus 40% of excess up to $100,000 (less Social Security-part)	Approved by Board 12/22/80 In effect as of January 1, 1981 (cost .43 per $1,000 of salary up to salary of $8,333/mo.)
INSURANCE	Regular employees		Approved by Board 12/22/80
Life	2 x salary up to $300,000	SFC pays 100%	Implemented 2/1/81 Enrollment complete 2/28/81
	+2 x salary up to $300,000	SFC pays 75%	
	+2 x salary up to $300,000	SFC pays 50%	
Accidental death and dismemberment.....	+2 x salary up to $300,000	SFC pays 100%	

UNITED STATES SYNTHETIC FUELS CORPORATION
EMPLOYEE BENEFITS

Benefit	Eligibility	Amount/Value	Status & Notes
		Non-contributory	Approved in Principle by Board 12/22/80
basic	All employees, service:		
	up to 5 years	4% of salary per yr.	
	5 - 17 years	+2% of salary per yr.	
	less Social Security(part)		
RETIREMENT	age (normal)	62	Implementation deferred; selection of trustee deferred; detailed features still to be developed.
	early retirement	55 with 5 years	
	reduction	5% per year	
vesting	2 years	50% high 5 years	
	3 years	75% high 5 years	
	4 years	100% high 5 years	
(Statutory Benefits) WORKERS COMPENSATION FICA UNEMPLOYMENT INS.	All Employees	Standard	Implemented Nov. 1, 1980

Mr. YATES. Will you be paying Social Security?
Mr. WIECKING. Yes, sir.
Mr. YATES. Workmen's compensation?
Mr. WIECKING. Yes, sir.
Mr. YATES. Unemployment compensation?
Mr. WIECKING. Yes, sir.
Mr. YATES. Also place in the record what your proposals are for short-term disability, vacation, holidays, all the plans.
Mr. WIECKING. Yes, sir.

TRAVEL EXPENSES

Mr. YATES. Why will your travel expenses be greater than travel allowances for government agencies?
Mr. WIECKING. Well, based upon the estimates that are available to us right now, much of the resource base is in western states and it costs more to go out there and come back. The estimate that we have here may be high and it may be low. At this point I am guessing.
Mr. YATES. Who do you think will be going out there, all your officers or just——
Mr. WIECKING. I think it would be very rare that the officers were going out.
Mr. YATES. This is just for employee and staff travel?
Mr. WIECKING. Yes.
Mr. YATES. Will you have services that are rendered by other Government agencies?
Mr. MCATEE. That is quite possible.

SFC CONSULTANTS

Mr. YATES. You also show an expense for per diem consultants, $51,584. Do you already have those consultants?
Mr. WIECKING. We have a number of per diem consultants at the moment, Mr. Chairman, yes.
Mr. YATES. Can you place in the record a list of your per diem consultants and what they receive?
Mr. WIECKING. Yes.
[The information follows:]

PER DIEM CONSULTANTS

The table below shows the names, organization unit, per-diem rate, and actual payments made to per-diem consultants of the United States Synthetic Fuels Corporation during the second fiscal quarter as of March 27, 1981. These payments are in addition to payments reported together with the Corporation's quarterly report pursuant to section 177(c) of the Energy Security Act transmitted to the Speaker of the House of Representatives on February 13, 1981. Inasmuch as the Corporation's pay periods close on the 15th and the last day of each month, the figures below will not include payments not yet made with respect to the month of March.

SFC CONSULTANTS AT MARCH 27, 1981

Name	Rate	Actual payment
Office of the Chairman: Reichl, Eric	$15,000/6 months	$2,819.50
Office of the Vice President—Administration and Treasurer: Brodsky, Margaret	$125/day	4,316.12

SFC CONSULTANTS AT MARCH 27, 1981—Continued

Name	Rate	Actual payment
Dean, Alan	$300/day	2,472.85
Gambino, Robert W.	do	900.00
Hutchison, Karen	$75/day	2,925.00
Light, Christine	$125/day	6,625.00
Pennacchia, Rina	$300/day	1,950.00
Office of the Vice President—Finance: Beatty, John	do	
Office of the General Counsel: Reed, John	do	
Office of the Vice President—Government Relations and Public Affairs:		
Ihara, Randal H.	$200/day	$6,226.30
Jacobs, Steven	$3,000/month	9,012.00
Mathews, Graham	$210/day	6,090.00
Office of the Inspector General:		
Seltzer, Joseph	$300/day	12,045.00
Bowie, Robert C.	$270/day	1,504.45
Fritz, Curtis L.	$240/day	6,960.00
Mower, Jack H.	$200/day	10,220.15
Pollack, Irving	$270/day	814.95
Seiden, Manfred	do	4,304.45
Storch, Laurence	$250/day	9,538.08
Wall, David	$100/day	5,870.55
Office of Project Development:		
Smith, C. Branson	$250/day	
Strauss, Myra	$25/hour	
Office of Technology and Engineering		
Barry, Martin J.	$600/day	1,869.15
Skaperdas, George	$500/day	

Mr. YATES. Fifty-one thousand dollars was spent for consultants as of December 31, 1980. You are going to put in a list of those consultants and what they receive the money for and how much they receive and so forth.

Mr. WIECKING. Yes.

Mr. YATES. All right.

Mr. MCDADE. I have no questions, Mr. Chairman.

Mr. YATES. That is it. Thank you very much.

Mr. MCATEE. Thank you, Mr. Chairman.

May I introduce these into the record? This is the press release not extending the March 31 date and explaining that it might be retroactively extended.

Mr. YATES. Not extending March 31?

Mr. MCATEE. Not extending, that is right.

Mr. YATES. What happens to your answer to Mr. McDade then about extending it?

Mr. MCATEE. We are going to make recommendations to the new board to get that window open.

Mr. YATES. That may go into the record.

[The information follows:]

SYNTHETIC FUELS CORPORATION PROPOSAL DEADLINE NOT EXTENDED

John J. McAtee, Jr., Acting Chairman of the Board of the United States Synthetic Fuels Corporation, today announced that the March 31 deadline for filing proposals for financial assistance referred to in the Corporation's initial solicitation would not be waived, extended, or otherwise modified. The deadline was established by the Corporation's previous Board of Directors last November. Mr. McAtee stated, "Information received in connection with the solicitation will form the basis for important staff work that needs to be undertaken promptly in order to meet the goals of the Energy Security Act to accelerate the development by the private sector of a

commercially viable synthetic fuels industry." He emphasized, however, that commitments with respect to financial assistance would be made only by the Board of Directors to be nominated by the President and confirmed by the Senate. Mr. McAtee also stated that the March 31 deadline might be retroactively modified after the new Board of Directors is confirmed.

"We expect that most of the proposals submitted to the Corporation prior to March 31 will be relatively brief and that the proposals will be similar in content and form to those that might be provided in an offering memorandum submitted to private lenders", McAtee said.

Mr. MCATEE. Secondly, we are testifying shortly before the Subcommittee on Fossil and Synthetic Fuels and we have prepared testimony on the emerging selection criteria and on the authority of the SFC to assist in the synthetic fuels demonstration projects. It goes into some detail and perhaps you would like to have that.

Mr. YATES. That may be received in the record. Yes, we will want that.

[The information follows:]

Statement Submitted By

John J. McAtee, Jr.
Acting Chairman
United States Synthetic Fuels Corporation

Good afternoon Mr. Chairman and Members of the Subcommittee. I am John J. McAtee, Jr., Acting Chairman of the United States Synthetic Fuels Corporation. With me this afternoon are Leonard Axelrod, Vice President for Technology and Engineering, and Pierre de Saint Phalle, an Assistant General Counsel of the Corporation.

This is our first appearance before this Subcommittee. It is a pleasure to be here to report to you generally on the progress made since the Corporation's inception and to address, more specifically, the questions raised in your March 17, 1981 letter relating to our current view as to our authority to consider assisting the demonstration projects now being financed by the Department of Energy, the funding priorities contained in the Energy Security Act, our emerging project selection criteria and the effect of assuming the demonstration projects on the goals set for the Corporation in the Energy Security Act and on the organization structure of the Corporation.

Mr. Chairman, we are a new entity. The Congress passed the Energy Security Act in June of last year. Last fall, the President appointed a Chairman and four members of the Board who immediately set about the task of responding to the congressional mandate that the Corporation's initial solicitations for synthetic fuels proposals be issued no later than December 31, 1980.

In addition, all of the tasks normally associated with starting-up any new operation had to be performed: obtaining space; assembling staff; adopting by-laws; approving a system of organization; and obtaining funding and arranging banking facilities in cooperation with the Treasury Department.

During the past five and a half months, we have completed our senior executive staffing requirements and have begun the process of interpreting certain provisions of our statute and refining the selection process to implement the mandate of our statute.

In addition, in order to acquaint the public and the Congress with our program we have met with members of Congress and their staffs and we have had numerous meetings with governors and other local officials, industry representatives, prospective project sponsors, environmentalists and other interested groups to receive their recommendations.

Also, we have played a role, under the leadership of the Department of Energy, in the negotiations with sponsors of three major synthetic fuels projects selected by the Department of Energy under the Defense Production Act and are currently participating with the Department of Energy in reviewing the Great Plains Project in North Dakota and 10 other projects submitted to the Department of Energy pursuant to the Department's "Fast Start" program under the Non-Nuclear Act.

The Corporation has developed initial principles to guide it in carrying out its functions and in implementing the provisions of its enabling statute. These principles are designed to ensure that, as mandated by the Energy Security Act, the paramount role of private enterprise is preserved and that private companies -- not the Corporation -- make the basic technical and

business judgments as to which technologies to employ, where to locate facilities, how to market the products, etc.. These principles are also designed to ensure that the Corporation is a highly professional organization, able to quickly, effectively and efficiently negotiate financial assistance agreements with the private sector and able to carefully expose the credit of the United States to accelerate the development by the private sector of a commercially viable synthetic fuels industry.

Some of our present principles are:

(1) Recognizing its enormous public responsibility, the Corporation will endeavor to make itself available to interested parties to provide information about the Corporation and will endeavor to keep the Congress fully informed as to its activities.

(2) The Synthetic Fuels Corporation will be a small organization with a highly specialized professional staff. While the Act authorizes the Corporation to hire up to 300 professionals, we will endeavor to operate with fewer people. At this time our total staff, including support personnel, consists of approximately 90 people.

(3) The Corporation will recruit its professional staff to a large extent from the private sector and will compensate staff at levels required to hire and retain the specialized professionals needed to analyze large, complicated, first-of-a-kind projects and to negotiate financial assistance agreements specially tailored to the particular requirements of the individual transactions, recognizing that to the maximum extent practicable, employees should be compensated within the ranges set forth in the federal schedules.

(4) The Corporation will operate along the lines of a private banking institution and use the flexibility afforded by its statute to expedite, simplify and streamline its operating procedures as much as possible.

(5) The Corporation will maintain a continuous and active dialogue with project sponsors and other interested parties, including state and local government officials. The Corporation recognizes that regulatory delays can be a source of large cost overruns and will work with sponsors and government officials to expedite regulatory reviews and minimize such delays.

(6) The Corporation will give priority to contingent forms of financial assistance such as loan guarantees, price guarantees and purchase agreements over other forms of financial assistance. This means that funding for the Corporation may never be spent if the output from an on-line synthetic fuels industry can sell at competitive prices in the marketplace and provide an adequate return to the sponsors or unless and until there is a default under a contingent liability financial assistance agreement. Other forms of assistance such as loans or joint ventures will be provided where necessary to advance the purposes of the Act.

With these principles as our groundwork, we have begun carrying out the provisions of the Energy Security Act. At its initial meeting on October 8, 1980, the Board discussed in general terms the Corporation's initial solicitation of project proposals.

As required by the Act, the initital solicitation is broad enough to encompass a diversity of technologies for each potential domestic resource and to encompass all of the forms of assistance authorized by Subtitle D of the Act, including joint venture financing.

As you know, Mr. Chairman, the solicitation is structured in two phases. We hope to encourage innovative synthetic fuel proposals and the submission of the broadest range of synfuel concepts and hope to encourage maximum open and free competition. As intended by the House-Senate Conferees, the Corporation stated that in Phase I it was "not requiring proposals to meet detailed specifications" because it wished "to have the benefit of the experience and expertise of project sponsors" and to "remain flexible in maintaining a synthetic fuels assistance program." Promising proposals will then be considered for further evaluation in Phase II by means of an invitation from the Corporation to submit more detailed technical, business and financial information. A more detailed discussion of the solicitation and selection process is contained later in my statement.

As of this time we have asked companies to give us their general plans for development of synthetic fuels projects by March 31, 1981, the initial deadline established by the Corporation's first Board of Directors. Information received in response to the solicitation will, however, form the basis for important staff work that needs to be undertaken promptly in order to meet the goal of the Act to accelerate the development by the private sector of a commercially viable synthetic fuels industry. Of course, commitments for financial assistance will be made only by the Board of Directors to be nominated by the President and confirmed by the Senate.

Before turning more specifically to the questions you have raised in your March 17 letter, I would like to make two important points.

First of all, the Energy Security Act provides that, like private sector Corporations, the powers of the Synthetic Fuels Corporation are vested in the Board of Directors while the Chairman is responsible for the management and direction of the Corporation. We have interpreted these provisions to mean that only the Board of Directors has the power to establish the policies of the Corporation within the framework of the Act. Therefore, while we are attempting to respond to the questions you have asked us to consider, our answers have to be viewed as recommendations of the staff of the Corporation which will have to be reviewed and possibly modified by the new Board of Directors. The policies may then be published for public comment before they are finally adopted as policies of the Corporation.

Secondly, we currently consider ourselves as implementers of policies set by the Administration and the Congress, not as an organization which itself establishes policy. Nor, without a Board of Directors, do we feel that we can make policy

recommendations either to the Administration or to the Congress. To date, our mandate is contained in the Energy Security Act. We are happy with that mandate and understand that the Administration has no present intention to change it. We are working hard to be in a position to brief our new Board of Directors. We want to ensure that the Corporation can continue its important task of accelerating the development by the private sector of a synthetic fuels industry so that the United States will be less dependent on foreign sources of energy.

Now turning to your specific questions.

1. The Corporation's authority to assist demonstration projects.

We assume that the basic purpose of this question is to determine whether the Corporation is aware of any legal impediments which might preclude it from awarding financial assistance to so-called "demonstration" projects currently being funded by the Department of Energy under the Non-Nuclear Act. As you know, these projects are not part of the Department's "Fast Start" alternative fuels program. No provision has been made in the Energy Security Act or in any of the relevant appropriations acts for the transfer of these projects to the Corporation.

It is clear that the Congress did not intend for the Corporation to go into the business of Research and Development. But "demonstration" of a technology is typically considered a stage separate from and subsequent to research and development. The definition of the term "demonstration" is imprecise both in law and in fact. Our Act does not define the term "demonstration" project. Rather, other than for joint venture projects, it limits funding by the Corporation to "synthetic fuel projects" as defined in Section 112(18). While that section requires a project funded by the Corporation to be "for the purpose of commercial production of synthetic fuel," it does not define "commercial production." In our judgment, the question of whether a facility is for commercial production depends on a number of factors which, when considered in combination, satisfy the Corporation that the principal purpose of the facility is to produce a sufficient quantity of marketable products. The fact that a project may have been labeled a "demonstration" project for purposes of receiving funding from the Department of Energy under the Non-Nuclear Act is not determinative of whether such a project might be able to qualify for funding from the Corporation as a "synthetic fuel project". Nor will it prejudice the applicant's chances for receiving assistance. Rather, in each case the merits of a proposed project will be judged objectively against various evaluation criteria established by the Corporation under our Act.

It should also be noted that of particular relevance to one or more of the "demonstration" projects may be the Corporation's authority to enter into a "joint venture" with an applicant for financial assistance, pursuant to Section 136 of our Act which permits the Corporation to finance up to 60 percent of the total costs of synthetic fuels project modules. A synthetic fuels project module includes any domestic facility that

(i) is of a size smaller than a synthetic fuel project;
(ii) will, if successful, demonstrate the technical and economic feasibility of the commercial production of synthetic fuels; and
(iii) can eventually be expanded at the same site into a synthetic fuel project.

Thus, even if a "demonstration" project is unable to qualify for assistance as a "synthetic fuel project," it still may qualify for joint venture assistance as a "synthetic fuel project module," provided it meets the special criteria for joint venture financing contained in Section 136 of our Act.

By this mention of joint ventures, the Corporation does not intend to suggest that any of the "demonstration" projects would be relegated to this or any other type of assistance if the projects were to submit a proposal to the Corporation. Indeed, we do not view our Act as creating any sharp distinctions among the types of assistance available to particular types of projects, with the only significant exception being that joint venture assistance may be awarded only to a project that meets the definitional requirements of a "synthetic fuel project module" in Section 136 after the Board of Directors has determined that neither price guarantees, purchase agreements or loan guarantees will adequately support the construction and operation of the project on a fair basis. Rather, the Act establishes a continuum of available assistance, ranging in priority from relatively low-risk price and loan guarantees and purchase commitments to higher-risk joint ventures.

Because the question posed by the Subcommittee could be read to imply that the President has "proposed" that the Corporation "accept responsibility" for the "demonstration" projects, we feel it is important to clarify that the only current procedure by which the Corporation could "accept responsibility" for any of these projects is if the sponsors apply for and receive financial assistance in response to a solicitation by the Corporation.

Since the Corporation's solicitation process is competitive in nature, none of the "demonstration" projects would be entitled to receive special consideration or treatment if any apply to the Corporation for financial assistance. Each would have to compete against all other applicants for the limited amount of assistance available from the Corporation and be selected by the Board for assistance.

The Corporation's first solicitation was issued on November 21, 1980 and published in the Federal Register on December 2, 1980. To date, none of the five "demonstration" projects has submitted a proposal. Since the deadline for filing applications has not yet expired, and since the application process is competitive in nature, it would be inappropriate for the Corporation to comment in any way on the relative merits of any of the DOE "demonstration" projects.

It is, however, appropriate to note that the current solicitation is designed as a two-phase procedure and that, during Phase I, all potentially interested parties are invited to submit proposals for all types of synthetic fuel projects for basic evaluation by the Corporation. Moveover, as stated in the Corporation's

initial solicitation, the requirements for filing an application in Phase I are not burdensome; they do not require proposals to meet detailed specifications. As more fully discussed below, such detailed specifications will be established by the Corporation and applied during Phase II of the current solicitation.

2. Funding priorities.

As I have already stated, the Energy Security Act of 1980 created the Corporation to accelerate the development by the private sector of a diversified synthetic fuels industry by providing financial assistance to synthetic fuels projects. The Act establishes national synthetic fuel production goals from domestic resources of at least 500,000 barrels per day of crude oil by 1987 and at least 2,000,000 barrels per day by 1992. The Board of Directors is required to select proposals which in its judgment are most advantageous in meeting such goals, giving preference to proposals which represent the least commitment of financial assistance by the Corporation and the lowest unit production cost within a given technological process.

As initially conceived and ultimately enacted, the Act divides the Corporation's activities into two stages: the period prior to the submission by the Corporation to Congress of a comprehensive strategy to achieve the national production goals and the period following the submission. (The date fixed by the Act for submission of the comprehensive strategy is June 30, 1984, although the date may be extended for up to one year.) The objectives of the Corporation in the first stage are both to attain the breadth of knowledge and experience necessary to develop the comprehensive strategy and to begin to achieve the national production goals. In the second stage, achievement of the national production goals becomes more important. These changes in program emphasis require that the statutory criteria for project selection in each stage also be somewhat different.

The Corporation is directed to select projects which (i) utilize a diversity of technologies and resources and (ii) offer the potential to produce synthetic fuels in quantities which will meet the national production goals. In determining the commitment of the Corporation, the Act sets forth the following priorities, in decreasing order of priority:

(i) price guarantees, purchase agreements or loan guarantees;
(ii) loans; and
(iii) joint ventures.

Price guarantees and purchase agreements would be most helpful to projects in which the private sector is able to assume the risk of completing the project and need only be protected against the risk that future product market prices will be artificially low or the risk that markets will change and no one will purchase the product produced. Loan guarantees and loans would be most helpful where the private sector must ask the Corporation to share the completion risk of a project which, when operating, will have a reasonable chance of developing the cash flow necessary to service and repay the debt. Finally, the joint venture authority is applicable to synthetic fuel project modules which demonstrate the commercial feasibility of a technology for the production of synthetic

fuel from a significant domestic resource that offers potential for achieving the national production goals and which can, at the same site, be expanded into a commercial project.

While the joint venture authority is the lowest priority in Subtitle D of our Act, the authority does provide the Corporation with the flexibility to assist project modules which, while not initially "commercial" in an economic sense, demonstrate the commercial viability of various technologies. The joint venture authority thus gives the Corporation the ability to develop a diversity of technologies and resource bases.

Significantly, the Corporation cannot enter into joint ventures after approval of the comprehensive strategy.

Thus, it is clear that production must be balanced with diversity in developing project selection criteria prior to approval of the comprehensive strategy. The Board is also directed to consider the potential cost per barrel or unit of production of synthetic fuel, the overall production potential of the technology including its potential for replication, the extent and geographical distribution of the resource, the potential end use of the fuel and the potential of the technology for complying with applicable regulatory requirements.

The diversity requirement, however, need not necessarily supercede production as a criterion. By choosing those with the greatest productive promise, the Corporation may be able to achieve diversity and yet enhance rather than diminish the production capability of the industry.

3. The Corporation's Policies for Project Selection.

The Corporation's approach to project selection will reflect both the requirements of the Energy Security Act and the judgments of the Corporation's Board. While the Corporation will have many of the attributes of a private lending institution, it has a fundamentally different charter from that of a private corporation. Most important, the Corporation is endowed with the public's tax dollars. Also, the Corporation is intended to supplement rather than supplant conventional financial markets. Accordingly, the Corporation will tend to assist projects that have merit but which are unable to obtain conventional financing on reasonable terms and conditions. Finally, in developing its objectives and operations the Corporation will be guided by its Act.

The staff believes that the selection process will include many different analyses, including the following:

- o an analysis of whether the project satisfies certain statutory eligibility criteria such as the definition of a synthetic fuels project or a synthetic fuels project module,
- o an analysis of the technical merit of the proposal including a review of the project's technological soundness and its replicability and learning potential,

- an analysis of economic and financial merit in terms of project viability and the marketability of the product produced, the sponsor's financial capability and financial commitment to the project and the amount, type and cost to the Corporation of the financial assistance sought by the sponsor,

- an analysis of the management capabilities of the individuals and companies which have the responsibility to manage and operate the project, and

- an analysis of certain external factors such as environmental and regulatory acceptability, socio-economic impact and water availability.

The Corporation will give preference to projects that "represent the least commitment of financial assistance by the Corporation." This does not mean that the Corporation wants sponsors to scale down projects to uneconomic size; but it does mean that, subject to the program objectives of diversity and production, the Corporation may favor projects that:

- are inherently more economical and hence need less Corporate assistance; or

- have sponsors and lenders willing to take larger equity and risk positions; or

- have other characteristics that advance the Corporation's objectives and the nation's production goals with minimal commitment of Corporation resources.

Once each project submitted to the Corporation has been examined to ensure that it meets the statutory eligibility requirements, it will be evaluated in terms of its individual technical and economic merit within the context of the Corporation's statutory criteria and objectives, including: (i) the establishment of a comprehensive strategy to achieve the national production goals, (ii) the encouragement of a technological diversity of processes, methods and techniques for each domestic resource that offers significant potential for use as a synthetic fuel feedstock; and (iii) assisting projects that offer the greatest potential for achieving the national production goals.

While the Corporation's financial assistance authority is large in dollar terms, the Corporation does not expect to be able to provide all the assistance that will be requested for qualified projects (and, in fact, the Act limits the amount of assistance that can be granted to any one project or sponsor to 15 percent of the Corporation's total obligational authority, or $3 billion). Thus, an important element in project evaluation will be the extent to which the several program objectives can be advanced per dollar of Corporate financial assistance required. Because different projects will advance the program objectives in different combinations and degrees, the Corporation will probably have to evaluate each proposed project in comparison to and in combination with other ongoing,

proposed and potential projects, whether or not assisted by the Corporation. In this way, the Corporation will assemble a portfolio of projects which, in combination with other projects, effectively advances the Corporation's program objectives and the national production goals.

This portfolio approach to project evaluation means that the Corporation may assist a project that is less effective in promoting one objective (e.g., short-term production) than other projects, because that project is more effective in advancing another objective (e.g., developing a resource or technology with longer-term production potential). It also means that the Corporation may initially decide not to assist some viable projects in order to have resources available to assist future projects that may offer significant advantages. And finally, it means that the Corporation may provide financial assistance in different amounts and forms to projects of different types, if this is necessary to stimulate the diversity required by our Act, or to generate information needed for the comprehensive strategy.

In applying these and other emerging selection criteria, the Corporation will employ a two phase process as generally set forth in the Corporation's initial solicitation.

Phase I

The first phase of the Corporation's review will probably consist of applying basic statutory criteria in a general way to all proposals received. Further screening will become progressively more specific until it has been determined that a project is ready for a detailed examination with the attendant submission of additional information and a satisfaction of specified requirements of the Corporation. The purpose of this evaluation is to identify those proposals which justify an in-depth evaluation by the Corporation and the development by the sponsor of extensive supporting information. The narrowing process will be based on evaluating the projects against specific criteria and on a determination of whether the proposed project has reached a state of sufficiently advanced development to be ready for award of financial assistance by the time an initial round of Phase II award decisions are expected to be made.

The process is designed to establish a competition among all the proposals in Phase I. Each proposal will be assessed individually and relative to the others so that only the strongest and most mature projects advance to Phase II. There is no certainty, however, that at a given time any projects will be advanced to Phase II if their quality or state of development do not yet justify such action. It should again be noted that on grounds of achieving diversity and program objectives that a project in one resource or technology area that is ranked somewhat lower than a project in another resource or technology area may be preferred because of a difference in resource or technology. Thus, while projects will compete with all other projects, they will also compete in smaller groupings according to such factors as geographic location, technology and resource base.

At the conclusion of each project's evaluation, a determination will be made as to whether the project should either:

- o Not be considered further because of serious weaknesses, such as excessive marginal or negative economics, unacceptably risky technology, relatively inexperienced management team, substantial drawbacks to the proposed environmental and socioeconomic approach, little significant production contribution or potential, insufficiently developed in concept or in maturity, or mismatch with program objectives for the development of a diversified synthetic fuels industry.

- o Be retained in a pending (introduction) status to be considered more fully later after the project has achieved some further planning and development milestones. In this case, the project may be judged to have significant potential, but it may not yet be sufficiently mature.

- o Be selected for Phase II on the basis of being judged a superior project both in an absolute sense as well as in relation to competing projects. In addition to being evaluated as intrinsically strong, the selected projects would probably be judged advanced in their development; e.g., engineering design, cost definition, permitting status and other pacing factors. In effect, the Corporation would want to be able to predict successful project completion (pending availability of assistance) and the ability of the sponsors to begin construction expeditiously upon receiving the necessary financial assistance.

During Phase I the Corporation will reach these judgments on the basis of Phase I proposals, supplemented by other requested information and by appropriate discussions with projects sponsors. Given that Phase I proposals necessarily will not be thorough and complete, the Corporation will tend to assume that assertions and references as stated are correct unless they are contrary to information of which the Corporation is aware or the judgments of reviewing officials of the Corporation. During Phase II, however, the salient characteristics of the project will have to be verified in detail.

The specific projects in competition during the Phase I evaluation will be a function of the solicitation process. For example, all proposals received by the initial March 31, 1981 closing date will be considered as a group. A decision will thereafter be made as to whether this date will be retroactively extended or otherwise modified or a new solicitation initiated.

Finally, the Corporation will probably hold some projects in the Phase I category after evaluation, if their state of development makes that desirable, and would then allow projects to come up for reconsideration after initial evaluation upon the occurance of new developments. Accordingly, proposals received under a new or extended solicitation could be in competition with proposals already in the Phase I evaluation process and may pass into Phase II and compete with the projects already in Phase II.

The staff does not believe that many projects submitted to the Corporation by March 31 will be initially selected for Phase II analysis, although some of these projects may be selected as Phase II candidates at a later date.

Phase II

The Phase II process will consist of in-depth project evaluations and discussions of specific requirements with project sponsors and other interested parties.

The Phase II evaluations will be specifically tailored to each project based on the results of the Phase I analysis. Project-specific requests for in-depth information will be prepared by the Corporation and transmitted to the project sponsors. The subsequent evaluation of the detailed information will basically serve two purposes: (a) to validate the conclusions reached in Phase I as to the project's strengths and development status (that is, against the same evaluation criteria considered during Phase I); and (b) to identify key factors and risks which should be reflected in the terms of financial assistance. The principal determinations of the Phase II evaluation could result in one of the following dispositions:

- The project should not be considered further because the in-depth investigations did not support the strengths asserted during Phase I. (Projects could, however, modify their approach and then move forward.)

- The project should be required to complete specific key milestones in its own development schedule to ensure sufficient project maturity before beginning final discussions.

- The project should continue negotiations with the Corporation to attempt to reach final agreement on financial assistance.

It is assumed that the amount of a project's requested assistance might vary considerably as a result of discussions and, therefore, a project should not be penalized in its competition with other projects until it is clear that a "final" offer by the sponsor has been made under well defined circumstances.

In Phase II when the award of financial assistance is determined to depend on identified remaining questions, all remaining proposals might be invited to submit their final terms. Phase II will conclude with the making of awards of financial assistance by the Board of Directors on a competitive basis with the selection being made among competing proposals based on the determinations by the Corporation and its Board of Directors required by the Act.

Again, I would like to stress that the foregoing discussion is based on the analysis of the Corporation's staff and is subject to change by the Corporation's new Board of Directors.

4. The effect of assuming responsibility for assisting demonstration plants on the Corporation's ability to meet production goals, other objectives and goals and the current organizational structure of the Corporation.

It is extremely difficult to analyze the effect of assuming responsibility for assisting the "demonstration" plants presently being assisted by the Department of Energy. We have not analyzed these proposals; nor do we know which proposals will be discontinued at the request of the sponsors, which proposals will be submitted to the Corporation under its current solicitation and which proposals may be submitted later under a new solicitation.

It is the Corporation's opinion that all of these projects could be considered for assistance in accordance with the Corporation's existing statutory authorities. To do so might require certain modifications to the proposals so that the projects are established on a more commercial basis.

Under this approach, it is assumed that the projects would submit a proposal in response to the Corporation's solicitations and that the proposals would conform to the requirements of the Act. In this event, there would presumably be little impact on achieving the Corporation's statutory goals because these projects, if assisted, would have been determined to be among the most attractive candidates for achieving such goals. Likewise, there should be little impact on the Corporation's principles, organization and policy goals. It is, however, not possible to predict in advance how such projects would fare in competition with others or whether the Board of Directors would select these proposals for assistance.

An alternative approach, which does not seem feasible under current statutory authorities, would be the direct transfer of the "demonstration" projects to the Corporation by means of a non-competitive arrangement arrived at with or without a solicitation process.

If the Corporation assumes responsibility for the projects as they are now constituted, some modifications of the Corporation's organizational structure might be required. Technical information generation would be of higher importance and it would probably make sense to have an office with stronger technical orientation to be responsible for the tracking of these projects.

Further, the Corporation would be required to reexamine its principles as set forth in the beginning of my statement. Those principles subsume our current competitive process and our emphasis on the management and financial strengths of successful project sponsors and their economic stake in the projects selected for assistance. Since the sponsor will be economically penalized every time he makes a wrong decision, the Corporation can act much like a financial institution in monitoring the construction and operation of the project. If the Corporation is required to automatically assume these "demonstration" projects, the Corporation would have to reexamine its principles and the assumptions underlying those principles, goals, objectives.

But again, we are implementers of the policies established by the Administration and the Congress; we should not be viewed as establishing or espousing particular

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policies, especially without a Board of Directors. We will continue our efforts under the current statutory framework, until that framework is changed. In either event, we will continue to do our best to help create an energy self-sufficient America, an America in the forefront of developing energy technologies and an America that feels it can once again depend on itself.

That concludes my formal statement, Mr. Chairman. I will be pleased to try to answer any questions you or other members of the Subcommittee might have.

Mr. YATES. Thank you very much, gentlemen.
Mr. MCATEE. Thank you, Mr. Chairman.

THURSDAY, MARCH 26, 1981

DEPARTMENT OF ENERGY

SECRETARY OF ENERGY

WITNESSES

JAMES B. EDWARDS, SECRETARY
ROGER W. A. LE GASSIE, ACTING DIRECTOR, OFFICE OF POLICY, PLANNING AND ANALYSIS
AARON EDMONDSON, BUDGET OFFICER

Mr. YATES. The hearing will come to order.

This is the hearing for fiscal year 1982 for the appropriations for the Department of Energy. Appearing for the Department is its Secretary, Governor James B. Edwards.

Governor, should we all be wearing black armbands for this hearing?

Secretary EDWARDS. No, sir, I do not think so.

Mr. YATES. I have the impression, from what I can see from the rescissions and from the table of organization, and its vacancies, that you have succeeded with your campaign promise and that the Department of Energy has indeed come to an end or is coming to an end.

Secretary EDWARDS. We will make some recommendations to you in January, Mr. Chairman, along those lines.

Mr. YATES. Which January?

Secretary EDWARDS. January 15, 1982. Under the law that Congress has written, the law that created the Department, we are required to come back with a status report on the Department of Energy at that time.

Mr. YATES. Well, that is what we are here today for, to get a status report, really.

You have a statement, I am sure, and without objection that may go into the record at this point together with your biography.

[The statement and biography material follow:]

Statement of James B. Edwards
Secretary of Energy
Before the
Committee on Approprations
Subcommittee on Interior and Related Agencies
House of Representatives
March 26, 1981

Mr. Chairman, Members of the Committee, I appreciate the opportunity to discuss with you the FY 1982 budget request for the Department of Energy. This budget fully reflects the Reagan Administration's energy and defense priorities as well as its view of the proper role of the Federal Government in energy.

BUDGET OVERVIEW

The Department of Energy's FY 1982 budget request totals $13.8 billion in budget authority. This represents a 13 percent increase over the funding estimates for FY 1981, as adjusted for proposed supplementals and rescissions.

Outlays for FY 1982 are estimated to be approximately $13.1 billion, less than 5 percent greater than the estimate for FY 1981.

Before discussing the budget request in detail, I would like to describe the framework upon which the FY 1982 budget is built.

THE FRAMEWORK FOR THE BUDGET

Two major factors have been considered in formulating the budget. The first is the need to bring the runaway Federal budget under control to assist in overcoming inflation and economic stagnation, rather than contributing to it. The second is a very different philosophy of the proper role of the Federal government in the energy field. I will discuss these factors in turn.

A vitally important theme underlying all decisions on the Department's budget for FY 1982 is the imperative need to control Federal spending in order to begin to bring inflation under control and restore vitality to the economy. Inflation cannot be controlled if the Federal government continues to spend far in excess of its revenues. The Department of Energy programs have been examined very carefully to reduce the rate of growth in Federal spending. However, the reductions apparent in this budget are not simply the result of an unfocused exercise in budget cutting; rather, they reflect the other determining factor in this budget, which is the Administration's energy policy and its views regarding the proper role of government in the development and deployment of energy technologies.

The Administration's energy policy has been formulated around the realities of the Nation's energy situation--taking "next steps" in areas where we have made progress and making fundamental changes in others. This energy policy framework is comprised of:

- A realistic energy pricing policy which decontrols oil prices and allows prices to reach world market levels. This policy recognizes the resourcefulness of the American people, delegates to them decisions on how energy can be produced and saved most effectively, and rewards them accordingly.

- Recognition that energy is an international issue, requiring clear-sighted understanding of the problems and opportunities that this entails, including support for oil stockpiles to deal with disruptions in world markets.

- Elimination of extensive subsidies for domestic energy production, which buys us little additional security and diverts capital, workers and initiative from more productive uses elsewhere in the economy.

- Prompt resolution of the regulatory and institutional problems inhibiting the use of nuclear power. Nuclear power is and will continue to be an integral part of the energy mix in this country. Utilities should not be subject to uncertainties in federal regulations that essentially eliminate nuclear power from consideration as an energy source.

- Reformed regulatory policies for other energy resources, particularly coal, which reconcile energy, environmental and other national objectives. The Nation's ample coal resources should be used cost-effectively.

- Refocusing the government's role in energy research and development in many areas to emphasize long-term, generic and high-risk, but potentially high payoff, activities.

Production and conservation of energy must be increased, consistent with the principles I have just listed. President Reagan's decision to end oil price controls is the first major step in this direction. In addition, the President's commitment to regulatory improvement should lead to increased domestic production of energy.

What this country must have, and what the Administration is committed to, is a more cost-effective and balanced approach to energy coupled with a firm resolve to increase energy production of all types, as determined by market forces. The FY 1982 budget is a clear expression of that commitment.

BUDGET SUMMARY

As previously indicated, the Department is requesting FY 1982 budget authority of $13.8 billion, with associated outlays of $13.1 billion. The major areas of budget growth are in funding for Defense Activities and the Strategic Petroleum Reserve, which show increases of 36 and 17 percent respectively. The energy functions of the Department, which represent 30 percent of the budget, show an 8 percent decline over the FY 1981 funding, due principally to the redirection of the fossil, conservation, and renewable resource programs away from demonstration and commercialization activities. The Department's General Science activities, which encompass basic research on the fundamental structure and behavior of matter, will increase almost 13 percent from FY 1981. Funding for Departmental Administration activities shows a modest 4 percent growth, which is largely attributable to the impact of inflation on a reduced level of support services.

In order to align the Department's ongoing programs properly with the FY 1982 funding request, FY 1981 supplementals of $1.4 billion and rescissions of $1.1 billion are being proposed.

The principal supplementals are $51 million for Defense activities and $1.3 billion for the Strategic Petroleum Reserve. Rescission requests are more numerous and affect various programs within the Department's energy function.

I would now like to highlight certain major elements of the Department's FY 1982 budget request.

SYNTHETIC FUELS PROGRAM

The President is committed to ensuring the efficient development of a commercial synthetic fuels industry than can produce competitively priced domestic fuels using our abundant resources of coal, oil shale, tar sands, and renewable materials.

By shifting the focus of Government synfuels programs to the newly-created Synthetic Fuels Corporation, the President's approach permits elimination of duplicative synfuels programs at the Department of Energy that will cost the taxpayer billions of dollars over the next five years. Encouraging synthetic fuels production through the Synthetic Fuels Corporation instead of through the Department of Energy, therefore reduces the likelihood that synthetic fuels promotion will become a major budget or economic burden in the future. This change in policy is reflected in our budget and rescission proposals for the Fossil Energy Research and Development and Construction appropriation accounts, and in our rescission proposals for FY 1980 funds appropriated to the Department from the Energy Security Reserve. The effect on the Department's Fossil

Energy accounts is described below. Rescission of funds for alternative fuel activities include $300 million for a second round of cooperative agreements and feasibility studies under the Alternative Fuels Production Appropriation, and the unobligated balance of the $745 million derived from the Energy Security Reserve for financial assistance to alcohol fuels, other biomass, and municipal waste activities. Tax credits to stimulate alcohol fuels production will continue, and should result in tax expenditues of $4.3 billion over the 1981-1986 period. The tax credit results in a subsidy of over $18 per barrel, which, together with the removal of price controls from domestic crude oil will make alcohol fuels more competitive and eliminate the need for additional incentives.

FOSSIL ENERGY

Consistent with the movement away from Federal involvement in commercialization activities, the Department of Energy will end its program of major technical demonstrations, transfer the interim alternative fuels funding program tc the Synthetic Fuels Corporation at the appropriate time, and focus on supporting longer range related research and development. The proposed transfer of projects that involve international cooperation will be carried out in a manner that provides for continuity of DOE funding pending consultations with cooperating partners that are required under our agreements with them.

As a result of this change, current arrangements for direct Government funding of coal liquefaction and gasification demonstration projects will be terminated. The President intends to have the Corporation consider these and other projects either as full-sized synthetic fuels projects or as less than commercial joint-ventures.

In conjunction with the restructuring of the synthetic fuels program, the Administration plans to revamp fossil energy research and development and terminate fossil energy commercialization activities in the Department of Energy. This will allow substantial reduction in outlays while continuing effective support for longer-term research with higher potential returns to the Nation.

Substantial budget savings will result from the adoption of this policy, as funding for design and operation of major fossil energy pilot and demonstration plants is reduced or eliminated and reductions made in the near-term and company specific research and development work in coal. Deregulation will also provide sufficient incentives for the private sector to undertake many of the activities currently funded in the petroleum and gas research and development programs. Because of the proposed changes in the regulatory and tax areas, it is expected that technology development will not be slowed down because many of the activities now supported by the Government will be continued by the private sector.

To achieve this change in policy, some contracts will be terminated and a Fossil Energy budget of $441 million will be proposed for FY 1982. This is $1,131 million less than the January request. The Administration will also propose $320 million in rescissions for 1981.

SOLAR ENERGY

By placing greater emphasis on the private sector in developing and marketing solar products, and by eliminating price controls that have put the solar industry at a competitive disadvantage, Department of Energy Solar spending can be reduced by more than 60 percent in 1982 to $193 million, with cumulative savings of approximately $1.9 billion by the end of 1986. This can be accomplished without affecting the Federal government's support for longer-term research on emerging solar technologies. These budget changes will have little effect on solar energy use, which will continue a healthy rate of increase over time as solar tax incentives and rising conventional energy prices stimulate the demand for solar products.

Total Federal support for solar energy will remain extremely high under the President's proposal due to continuation of the solar tax credits, which are expected to reduce taxes for residential and business investors in solar energy systems by $2.6 billion between 1981 and 1986. Tax credits for alcohol fuels and biomass will provide an additional tax expenditure of $4.3 billion over the same time period.

The Administration will continue direct Government support for solar programs focused on advanced research concepts and exploratory development, but assumes that the private sector will be responsible for developing marketable systems once technical feasibility is established.

The Administration will also propose deferring construction of a permanent facility for the Solar Energy Research Institute until the mission of the organization is better defined and an appropriate staffing level agreed upon.

The Department is also proposing reductions of $101 million in FY 1981 consistent with the proposed policy thrust in the new FY 1982 budget.

OTHER ENERGY SUPPLY PROGRAMS

The Administration will propose a 34 percent reduction in energy supply programs in geothermal, energy storage, electric energy systems, environmental studies, and hydropower as part of the general effort to employ market forces instead of bureaucratically-administered programs to achieve national energy goals. These reductions will:

- terminate geothermal loan guarantees that serve merely to reallocate capital from more productive investments;
- eliminate funding for additional Government-supported commercialization of geothermal technologies that can and should be supported by the private sector;
- eliminate development and demonstration programs in electric energy systems and energy storage that can and should be supported by the private sector;
- terminate environmental studies that duplicate efforts of the Environmental Protection Agency and other Federal agencies;
- terminate subsidies for all additional small hydro-power demonstrations since sufficient incentives are already provided through a 21 percent investment tax credit and through credit programs in the Department of Agriculture.

The Department will propose rescissions in these programs of $69 million in FY 1981 funds and reduce its request for FY 1982 appropriations by $145 million.

ENERGY CONSERVATION PROGRAMS

Motivated by rising energy costs and substantial Federal tax credits, individuals, businesses and other institutions are undertaking major conservation efforts. Decontrol of oil prices and continuation of tax credits can be expected to accelerate these trends.

Some Federal conservation programs are, therefore, no longer necessary, while others may impede private initiative by imposing too great a regulatory burden on the public. Selected, long-term research and development activities are needed, however, as is assistance to schools and hospitals.

By eliminating unnecessary conservation programs and by better targeting remaining efforts, Department of Energy program outlays can be reduced by nearly 10% from the current base in 1981, by nearly 40% in 1982, and by a total of nearly $2.4 billion by the end of 1986.

Program reductions are proposed for the three types of conservation programs conducted by the Department: technology development, regulation and information, and financial assistance to State and local governments. Technology development projects that can be commercially viable without Federal assistance will be terminated. These projects include work on energy from urban waste, consumer products, advanced automotive engine design, electric and hybrid vehicles, and industrial processes. Other high potential projects that are unlikely to be supported by the private sector alone because they are high risk and long term, or apply to many industries, will be retained.

Regulatory programs mandating building and appliance efficiency standards and utility conservation services would impose massive regulatory burdens on the private sector and would be a nightmare to administer and enforce. Therefore, these programs are also eliminated. Consumers already are demanding and manufacturers are producing more energy efficient products and buildings without Federal standards. The Federal government's internal conservation efforts and certain information programs will be retained.

Total conservation research and development funding for FY 1982 is $88 million. Reductions totaling $138 million are proposed which will reduce FY 1981 funding to $212 million.

Financial assistance to State and local government conservation programs will be reduced and restructured. Grants for State energy offices and public outreach programs will be eliminated. Grants for conservation investments in public and non-profit schools and hospitals will continue at a reduced rate of approximately $100 million. These grants have proved their value in financing cost-effective conservation improvements in public facilities not eligible for tax incentives. Finally, the Energy Department's low-income weatherization assistance grant program will be incorporated into the Department of Housing and Urban Development's community development block grant program.

In order to accommodate this restructuring of the Department's grant activities, reductions totaling $117 million are proposed, which will reduce FY 1981 grant program funding to $336 million.

Also, the energy impact assistance grant program will not be funded in FY 1982, and a reduction of $52 million is proposed for FY 1981. These grants duplicate other programs and assume responsibility for activities that are more appropriately taken by State and local governments.

ENERGY REGULATION AND INFORMATION

The President's commitment to ending unnecessary Government regulatory programs will permit a sizeable reduction in spending and the removal of large numbers of Federal employees from Government payrolls. Oil decontrol has enabled

the President to eliminate a substantial part of the Department's regulatory activities. Department of Energy programs such as the price and allocation regulatory functions of the Economic Regulatory Administration, interventions in State public utility proceedings, mandatory fuel-use restrictions, and the cumbersome coupon rationing system will be completely eliminated or replaced by streamlined programs relying on market forces.

The proposed reductions total $159 million, or a reduction of 59 percent from the January 1982 budget request. In addition, consistent with the FY 1982 request, a rescission of $33 million from the FY 1981 appropriations for the Economic Regulatory Administration is being proposed and an FY 1981 Supplemental request of $72 million for gas rationing is being withdrawn.

As part of the effort to reduce burdensome information gathering activities, the Administration plans a significant reorientation and reduction in the data and analytic services of the Energy Information Administration (EIA) in the Department of Energy. The FY 1982 budget request is $80 million, a $47 million decrease from the January budget request. A rescission of $13 million from the EIA's FY 1981 Appropriation is also being requested in order to make current information activities consistent with those proposed for FY 1982.

DEPARTMENTAL ADMINISTRATION

Various department-wide support and administrative functions carried in the Departmental Administration Appropriation will be cut back consistent with diminished activity elsewhere in the Department. The total appropriation request will show a small increase over the revised FY 1981 funding level. The 4 percent increase primarily reflects the impact of inflation on the reduced level of support services.

Energy Department overhead activities are proposed to be cut back largely to complement reductions proposed for other areas of the Department. Other proposed decreases occur in department-wide functions such as policy analysis, international energy activities, public information and other programs consistent with the need to reduce the cost of the government.

To achieve these results, the President will propose appropriate budget amendments as well as any legislation needed to reduce data requirements written into law.

NUCLEAR ENERGY

Our U.S. nuclear energy policies and programs can enhance U.S. national security by:

- realizing both the current promise and future potential of nuclear power for our national energy needs and for the needs of other countries.

- supporting the key role of the U.S. in international nulcear affairs thereby furthering U.S. nonproliferation goals and other nuclear policy objectives.

The FY 1982 budget for nuclear energy activities is $1,247 million, a slight increase over FY 1981 funding levels. Approximately 60 percent of the request is for Breeder Reactor Systems, which highlights the Administration's efforts to maintain breeder reactors as viable energy options for meeting future energy needs with domestic energy supplies. The Department intends to continue the Clinch River Breeder Reactor demonstration plant program, and continue the Water Cooled Breeder program.

Our budget request includes $299 million for our commercial nuclear waste program. This increase of $52 million is necessary to accelerate our identification of suitable sites for nuclear waste repositories, including a small scale R&D facility for operation by 1990. This also provides funding for the West Valley Demonstration Project and for the remedial action programs at uranium mill tailing sites at previously used Government sites.

The budget also includes $86 million to continue the advanced Isotope Separation Technology program, which is designed to develop a more economical technology for uranium enrichment, and $70 million to improve the safety, reliability, and economy of conventional reactor systems. Included within this request are funds for the continued examination and data collection on the Three Mile Island reactor.

DIRECT ENERGY PRODUCTION

The production activity is comprised of three components: the Power Marketing Administrations (PMA), Uranium Enrichment Activities, and the Naval Petroleum Reserve (NPR). Estimated gross revenues for FY 1982 are $5.7 billion. The Power Marketing Administrations sell electricity generated by Federal hydropower projects. The Department remains dedicated to the objective of operating the PMAs in a manner which will provide adequate and reliable electric energy and the FY 1982 budget request will accomplish this.

The Department enriches uranium in the U.S. to meet domestic, foreign and U.S Government reqirements for uranium enrichment services. Sales are projected at 13.9 million Separative Work Units (SWU) in FY 1982, resulting in revenues of $1.8 billion. The FY 1982 budget will support the continued production of enriched uranium from the existing gaseous diffusion plants and provide for the continued contruction of the centrifuge plant.

The legislatively mandated purpose of the Naval Petroleum Reserves is to produce the reserves at the maximum efficient rate of production. The budget request will provide the funding necessary to carry out this mission. It is estimated that the Federal share of production for FY 1982 will be approximately $2.5 billion in gross revenues.

STRATEGIC PETROLEUM RESERVE

The Administration is committed to an effective strategic petroleum reserve program. The Reagan budget provides for development of 750 million barrels of government-owned storage by 1989, in a secure and reliable system capable of a crude oil withdrawal of up to 4.5 million barrels per day. The FY 1982 budget request is $3,883 million, which includes $248 million in additional direct appropriation to offset the estimated loss due to decontrol of entitlement receipts projected for FY 1982.

The new Administration is taking an aggressive attitude toward filling the SPR as quickly as practicable. To accomplish this, the Administration is submitting an FY 1981 supplemental request of $1,305 million to offset the loss of entitlements under deregulation. Further, we are actively reviewing approaches which will accelerate the availability of storage capacity.

GENERAL SCIENCE

As part of its overall policy of reducing funding levels to assist in resolving the Nation's fiscal and economic crisis, the Administration proposes a reduction of $40 million from the January budget in the Department of Energy's general science programs in life sciences and nuclear medicine, high energy physics, and nuclear physics. This reduction to $568 million will still provide an increase over FY 1981 to cover anticipated inflation, in recognition of the importance of basic research in these and other fields of the natural sciences as an investment in the Nation's future.

DEFENSE ACTIVITIES

The budget request for Defense Activities is $5,000 million, an increase of $1,326 over FY 1981 funding. This budget provides increases in funding for weapons research, development, and production, testing, nuclear materials production, and upgrading of the DOE defense complex. These increases are needed to deal adequately with long standing problems within the DOE defense complex, and to enable the DOE to meet future Defense Department requirements for nuclear weapons.

The Defense Waste Management funding request of $390 million is 30% higher than the current year budget. This program provides for continuation of the waste operations program, the upgrading of waste handling and storage, and long term technology R&D efforts. The request includes funds for the terminal storage program at the Waste Isolation Pilot Plant (WIPP) Project.

The research program includes $180 million for inertial fusion, R&D, with potential applications for nuclear weapons technology and for commercial power.

Mr. Chairman, this Administration is fully aware of the depth and seriousness of the energy challenges facing our nation. The budget I am presenting to you today is intended to put the Department of Energy on a course which will deal with these problems resolutely and in a manner which recognizes that meeting these challenges requires the full cooperation and involvement of industry, commerce, individual citizens, and the Congress of the United States.

BIOGRAPHY OF JAMES BURROWS EDWARDS

James Burrows Edwards was sworn in as Secretary of Energy on January 23, 1981. He was nominated by President Reagan on December 22, 1980, and confirmed by the United States Senate on January 22, 1981.

Dr. Edwards served as Governor of South Carolina from 1975 to 1979. During his administration as Governor, Dr. Edwards created the South Carolina Energy Research Institute to study energy resource options. He served as Chairman of the National Governors' Association Subcommittee on Nuclear Energy in 1978 and as Chairman of the Southern Governors' Conference in the same year.

In 1964 Dr. Edwards was elected Chairman of the Charleston County Republican Party, a post he held until 1969. He served as a member of the South Carolina State Senate from 1972 to 1974.

A practicing oral and maxillofacial surgeon in Charleston, Dr. Edwards received a B.S. degree from the College of Charleston in 1950 and a D.M.D. degree from the University of Louisville School of Dentistry in 1955. Dr. Edwards is the recipient of five honorary degrees.

Dr. Edwards is a member of the American Dental Association, a Diplomate of the American Board of Oral and Maxillofacial Surgery since 1963, and a Fellow in the American College of Dentistry and the International College of Dentists. He is also a member of Omicron Delta Kappa, a national honorary leadership fraternity and of Phi Delta, an honorary dental fraternity. Dr. Edwards served on the Board of Trustees of Baker Hospital in Charleston and on the Board of Trustees of the College of Charleston Foundation.

During World War II, Dr. Edwards served with the U.S. Maritime Service. He was on active duty with the U.S. Navy from 1955 to 1957 and remained in the Naval Reserve until 1967, holding the rank of Lieutenant Commander upon discharge.

A native of Florida, Dr. Edwards was born on June 24, 1927. He is married to the former Ann Norris Darlington and they have two children, James B. Edwards, Jr. and Catharine Darlington Edwards.

Secretary EDWARDS. Thank you, Mr. Chairman.

We have a written statement that is rather long.

Mr. YATES. I say that is in the record.

Secretary EDWARDS. All right.

Mr. YATES. Just tell us in your own words what the state of the Department of Energy is.

Secretary EDWARDS. We have a little outline here, if you will permit me.

Mr. YATES. You are permitted.

OVERVIEW OF BUDGET

Secretary EDWARDS. DOE's fiscal year 1982 budget request totals $13.8 billion in authority and this is a 13 percent increase over the current fiscal year 1981, as adjusted by $1.4 billion for proposed supplementals, and rescissions of $1.1 billion. Outlays for 1982 are estimated at $13.1 billion, less than 5 percent greater than the estimate for 1981.

The major policy theme, Mr. Chairman, is: We must bring Federal spending under control in order to dampen inflation and restore vitality to the Nation's economy. A realistic energy pricing policy will permit the marketplace to allocate resources more efficiently and effectively than Government. The department will focus on long-term, high-risk research and development and leave near-term commercialization activities to private industry.

The major thrust: We must restore our atomic energy defense activities to meet the current and future nuclear weapons and materials production requirements for our national security. We will pursue an aggressive expansion of the Strategic Petroleum Reserve in both physical capacity and storage and fill rates.

We will continue strong support for the basic and supporting research programs conducted by the Department. We intend to revitalize the Nation's nuclear industry through extended research and development initiatives on existing and future nuclear technologies.

We are sharply curtailing DOE activities in near-term commercialization and demonstration projects. Major areas of growth are in funding for defense activities, which is up 36 percent over the current year funding levels to $5 billion in fiscal year 1982, and the Strategic Petroleum Reserve which is up 17 percent to almost $3.9 billion in fiscal year 1982.

Energy functions show a decline from fiscal year 1981 funding of $4.7 billion to slightly less than $4.1 billion in 1982, principally due to the redirection of the fossil conservation and renewable resources programs away from demonstration and commercialization activities, and due to the curtailment of regulation and information programs.

The department's general science programs, which encompass basic research in the fundamental structure and behavior of matter, increase by 13 percent from $504 million in the current year to $568 million in fiscal year 1982.

Funding for departmental administration shows minor growth of 4 percent from $262 million to $273 million in 1982, attributable to the impact of inflation on a reduced level of support services.

SYNTHETIC FUELS PROGRAMS

The synthetic fuels program: The focus of Federal Government efforts to develop a synthetic fuels industry will shift to the Synthetic Fuels Corporation. The department will propose a rescission of fiscal year 1980 funds made available to the department from the Energy Security Reserve.

Rescissions include $300 million for a second round of cooperative agreements and feasibility studies, and the unobligated balance of $745 million for financial assistance for alcohol fuels, other biomass and municipal waste activities. Tax credits for alcohol fuel production will continue and should result in tax expenditures of $4.3 billion over the 1981–1986 period.

FOSSIL ENERGY

Fossil energy research and development: The fossil program will focus on long-term, high-risk research and development. Funding for design and operation of major fossil energy pilot and demonstration plants will be reduced or terminated. Funding for near-term and company-specific research and development will be reduced.

These changes produce a revised budget of $441 million, a reduction of $1,131 million from the January request. We are also proposing $313 million in rescissions for the current year.

In the area of solar energy, heavier reliance on the private sector will enable the Department of Energy to limit its request for funding solar energy R&D to $193 million. We intend to reduce solar-related funding in the current year by $101 million. Total

Federal spending remains significant, with solar tax credits estimated to reach $2.6 billion from 1981 through 1986.

Other energy supply programs: A 34 percent reduction in geothermal, energy storage, electric energy systems, energy impact assistance, environment studies, uranium resource assessments and hydropower. The department will propose reductions in funding for these programs of $69 million in fiscal year 1981 and reduce its request for fiscal year 1982 appropriations by $145 million.

Under energy regulation, the President's commitment to do away with unnecessary regulatory burdens is reflected in reductions totaling $159 million from the January budget authority level for department regulatory activities.

In energy information, this administration and DOE will undergo a reorientation and reduction in data gathering and analytical services, resulting in a decrease of $47 million from the January budget request.

In the area of departmental administration, overhead activities will decrease in almost every area for the department. The small increase, 4 percent, as I said before reflects the impact of inflation on the reduced level of support services.

CONSERVATION

Rising energy prices and Federal conservation tax credits are bringing about impressive amounts of conservation. Decontrol and continuation of tax credits should accelerate this trend. fiscal year 1982 funding for conservation R&D will be limited to $88 million for long-term work on building energy sciences, advanced fuel-efficient propulsion systems, electric and hybrid vehicle components and materials, and energy conversion and utilization technologies.

State and local government grants programs are reduced to $107 million in fiscal year 1982, principally related to the schools and hospitals program. For alcohol fuels and biomass, the unobligated balance of $745 million from the Treasury's Energy Security Reserve is proposed for rescission. Alcohol fuels already enjoy substantial tax credit subsidies and decontrol will make alcohol fuels even more competitive.

Direct energy production: Estimated gross revenues of $5.8 billion in fiscal year 1982 will require a new budget authority of $674 million. The Power Marketing Administration is committed to provide adequate and reliable electrical energy in those areas served.

Uranium enrichment: We expect revenues of $1.8 billion and the budget will continue centrifuge construction.

The Naval Petroleum Reserve gross revenues approximate $2.5 billion, and the Government's share of production is to be 158,000 barrels per day in fiscal year 1982.

In the area of nuclear energy, the 1982 budget for nuclear energy activities, $1,247 million, is intended to revitalize the nuclear industry. Funding for breeder reactor systems is $737 million, including $254 million for construction of the Clinch River Breeder Reactor demo project. Funding for commercial waste management is $299 million, including funds for an early experiment with actual emplacement of radioactive material in an R&D facility before 1990.

An additional $27 million is provided for R&D related to the Three Mile Island cleanup.

In the area of magnetic fusion, the request for $460 million provides for completion of construction of the Tokomak Fusion Test Reactor and to continue construction in the Mirror Fusion Test Facility B, the large coil test facility, and the Elmo Bumpy Torus proof-of-principle facility.

STRATEGIC PETROLEUM RESERVE

As far as the Strategic Petroleum Reserve is concerned, the fiscal year 1982 budget request is $3.8 billion, which includes $248 million in additional direct appropriation to offset the loss of entitlement that we will see due to decontrol. It supports a fill rate of 200,000 barrels a day in fiscal year 1981 and 230,000 barrels a day in fiscal year 1982.

We are requesting a fiscal year 1981 supplemental appropriation of $1.3 billion to offset the loss in entitlements during fiscal year 1981. The total goal is 750 million barrels of Government-owned storage by 1989.

In the general sciences, our National Trust activities, that is, high-energy physics, nuclear physics, and life science and nuclear medicine, the budget is increased by 13 percent to $568 million in 1982.

In the area of defense activities, total funding increases to $5 billion in fiscal year 1982. This addresses long-standing problems within the labs and plants of the DOE research and production complex, and addresses future Defense Department requirements for nuclear weapons. Defense waste management funding is 30 percent higher in fiscal year 1982 than the current year and includes funds for the waste isolation pilot plant consistent with congressional directions.

Mr. Chairman, in concluding, the administration is fully aware of the seriousness of the energy problem. This budget will attack problems resolutely. Cooperation from industry, individuals and Congress will be required if we are going to be successful.

Mr. Chairman, that concludes the remarks to summarize the rather extensive written testimony. At this time I will be happy to answer any questions you may have.

Mr. YATES. Thank you, Mr. Secretary.

DOE ORGANIZATION

Mr. Secretary, do you have a copy of the table of the organization of your department with you?

Secretary EDWARDS. Yes, sir, I have.

Mr. YATES. May we go over it together?

Secretary EDWARDS. Yes, sir.

Mr. YATES. As I understand it, it shows that the Office of the Secretary is filled, and that is evident this afternoon when you came here. Is the Deputy Secretary on board, too?

Secretary EDWARDS. We have not had any of these candidates confirmed yet, Mr. Chairman. His name has been sent over from the White House to the Senate for confirmation. He is on board, yes, sir.

Mr. YATES. Is that Mr. Davis?

Secretary EDWARDS. Yes, sir, Mr. Ken Davis.

Mr. YATES. The General Counsel is Mr. Johnson?

Secretary EDWARDS. Mr. Tenney Johnson, yes, sir.

Mr. YATES. You have a certain number of offices. Is the Assistant Secretary for Management and Administration position, vacant or filled?

Secretary EDWARDS. It is filled, yes, sir.

Mr. YATES. Who is the appointee?

Secretary EDWARDS. When I say it is filled, his name has been sent over from the White House.

Mr. YATES. Can you tell us his name?

Secretary EDWARDS. It is Mr. Heffelfinger. Management and Administration.

Mr. YATES. Management and Administration?

Secretary EDWARDS. Yes, sir.

Mr. YATES. It is Mr. Heffelfinger who is Assistant Secretary for Management and Administration, Acting, until he is confirmed is that right?

Secretary EDWARDS. Yes.

Mr. YATES. The Under Secretary, is there one?

Secretary EDWARDS. We have been keeping that open, Mr. Chairman, to see who else we got on board and to see if we could get a management person. We would like to have that job filled by a strong manager.

We have approached several people, Mr. Chairman, and we are about to settle on one. We have not settled on him yet.

Mr. YATES. Is that position vacant at the present time?

Secretary EDWARDS. Yes, sir.

Mr. YATES. You have Mr. Odle as the Assistant Secretary for——

Secretary EDWARDS. Congressional/Intergovernmental Affairs, yes, sir.

Mr. YATES. Is there a Director of the Office of Policy, Planning and Analysis?

Secretary EDWARDS. That job is open.

Mr. YATES. That is open?

Secretary EDWARDS. Yes. We are recruiting someone there.

Mr. YATES. Do you have an Inspector General?

Secretary EDWARDS. We have a man that will be announced shortly for that job.

Mr. YATES. Is it still vacant at the present time?

Secretary EDWARDS. That is right.

Mr. YATES. Is there a Director of the Economic Regulatory Administration?

Secretary EDWARDS. We have a man that will be announced shortly for that position.

Mr. YATES. Is it still vacant at the present time?

Secretary EDWARDS. At the present time, open, yes.

Mr. YATES. Is there a Director of Energy Information Administration?

Secretary EDWARDS. We are still looking at some people for that position.

Mr. YATES. So that is vacant. Do you have an Assistant Secretary for International Affairs?

Secretary EDWARDS. We have a man who is in that job as Acting Director, doing a very good job but it is basically open, yes.

Mr. YATES. Who do you have acting there?

Secretary EDWARDS. Mr. Peter Borré, who was second in command there when we came aboard.

Mr. YATES. Do you have an Assistant Secretary for Nuclear Energy?

Secretary EDWARDS. We have him announced, yes.

Mr. YATES. He has been announced?

Secretary EDWARDS. Or will be announced very shortly, yes.

Mr. YATES. Is it vacant at the present time or do you have somebody out there?

Secretary EDWARDS. We have a name there, yes.

Mr. YATES. Can you give us the name?

Secretary EDWARDS. General Mahlon Gates is acting in that job but we do have a man who——

Mr. YATES. When you say you do have a man, does that mean his name has been sent up to the Senate?

Secretary EDWARDS. From the White House, yes, sir.

Mr. YATES. It has been? All right.

Is there an Assistant Secretary for Fossil Energy?

Secretary EDWARDS. Mr. Chairman, on the designee for Assistant Secretary for Nuclear Energy, if it is not over there yet it will be sent over very shortly. We have decided on a name and whether that name has really been sent over or not, I am not sure.

Mr. YATES. Okay.

Secretary EDWARDS. We have decided on a name for Assistant Secretary for Fossil Fuels. He will be announced, yes.

Mr. YATES. You do not have that name at present?

Secretary EDWARDS. We have it but I would prefer that the White House announce these names, Mr. Chairman, if you do not mind.

Mr. YATES. I do not mind.

Do you have an Assistant Secretary for Conservation and Renewable Energy?

Secretary EDWARDS. Mr. Tribble. He has already been announced.

Mr. YATES. Mr. Tribble. All right.

Is there a Director of Operations Office?

Secretary EDWARDS. The Operations Office comes under the Under Secretary. That is a box that all these operations offices are listed under. We do not have anybody there.

Mr. YATES. Is there an Assistant Secretary for Defense Programs?

Secretary EDWARDS. We have a man that will be named shortly.

Mr. YATES. It is just vacant temporarily.

Do you have a Director of the Office of Energy Research?

Secretary EDWARDS. That job is still open. We are looking at three or four people there. We are still interviewing.

Mr. YATES. All right.

Do you have an Assistant Secretary for Environmental Protection, Safety and Emergency Preparedness?

Secretary EDWARDS. We have decided on a man there who will be named shortly.

Mr. YATES. That position is still vacant at the present time, then?

Secretary EDWARDS. Yes, sir.

STAFFING DIFFICULTIES

Mr. YATES. How can you keep going if you do not have a staff, Governor?

Secretary EDWARDS. Mr. Yates, I must admit it has been very difficult.

Mr. YATES. Yes, I am sure it has been. Has that been your fault or the fault of the people who have to clear these names? How has that happened?

Secretary EDWARDS. Mr. Yates, the White House has been careful. They have gone over these positions extremely carefully. They have had a big job to do, and when you consider that the personnel people over there have the job of selecting the executives to run this big corporation we call the United States Government in just a few days or a few weeks—when you think of the magnitude of that job it is really unbelievable.

They are doing it very carefully. I am impressed with the quality of the people that we are getting when they finally make that decision. They are top quality people. I think it is a little slow in getting started, Mr. Chairman, but I think it will pay off in the long run.

FUTURE OF DOE

Mr. YATES. Well, this New York Times article from March 18th says that Mr. Edwards himself, when picked for the job, said he hoped to close the Department of Energy down and "work myself out of a job." However, then it goes on to say, "Both he and the administration have since retreated from that position."

Are both of those statements right?

Secretary EDWARDS. Mr. Chairman, I would think that somewhere between those two statements is where the truth lies. Certainly during the campaign the President discussed that he would like to see the Department of Energy closed down.

I think that what he means is that we are going to close down a lot of the regulatory aspects of this department, try to streamline it, try to bring it under better management. Then, as you know and as I said earlier, by January 15, 1982 there is a mandate within the law that requires that we come back with a status report to the Congress on the Department of Energy.

At that time, Mr. Chairman, I think the President through the Secretary will make some recommendations and we will have a final determination as to what we feel should happen to the Department of Energy.

Mr. YATES. What will we do during 1981? What will happen during the balance of this year? Will you be marking time?

PERSONNEL REDUCTIONS

Secretary EDWARDS. Mr. Chairman, we will try to improve the management and give you over here in the Congress a little better service out of that department than you have had heretofore, and give the people of America a little better return on their invest-

ment. As you know, we have deregulated oil and the regulatory aspects of this portion of the department will be done away with after we have completed the work of that element of the department, which will mean that we will decrease the number of personnel by about 990-some-odd people this year, 1981. As we continue to clean up the work of that office and to close down the regulatory aspects of the department, we will decrease the number of people in those jobs during the following year by about 1,500 people.

In the meantime, we hope to be able to solve some problems that need to be solved so far as energy is concerned.

Mr. YATES. What programs will remain if you eliminated the jobs of 900-some people? That is almost a thousand people. How many people remain and to what purposes will they be used?

Secretary EDWARDS. Well, Mr. Chairman, as you know we have about 20,244 people who are directly employed by the Department of Energy, and in addition to that we have about 125,000 who are on contract to the Department of Energy.

The regulatory aspects of this department will be closed down as a result of those reductions but the remaining portions of the department will certainly continue to operate and function.

Mr. MURTHA. Is that all that is in the regulatory agency?

Secretary EDWARDS. At the end of fiscal year 1982 there will be about 17,000 people, Mr. Chairman.

Mr. MURTHA. You only have a thousand in the regulatory agency?

Secretary EDWARDS. No, we have a little more than that. We have about close to 2,000 in ERA.

MINING R&D

Mr. YATES. I assume we got this revised budget from your office. Can we direct your attention to the page on fossil energy which is the principal concern of this committee?

Secretary EDWARDS. Mr. Chairman, might I introduce Aaron Edmondson, who is my budget specialist.

Mr. YATES. Hello, Mr. Edmondson.

Let's take up coal first. What will happen to mining research and development? There was $48 million appropriated for fiscal year 1981. You propose to rescind roughly $7.8 million, which would leave $40,169,000 as the total for 1981.

Then for 1982 you propose to cut that almost in half again so that the amount available for mining research and development would be cut from a $48 million figure for this year down to $21 million.

Is that a correct interpretation?

Secretary EDWARDS. Yes, sir, that is correct.

Mr. YATES. What programs do you propose to eliminate?

Secretary EDWARDS. Can I refer that to my budget analyst here?

Mr. YATES. Sure, you may.

Mr. EDMONDSON. It would be more or less a general reduction, sir, with no fical year 1982 funding proposed for surface mining R&D and further reductions in underground mining and coal preparation programs.

Mr. YATES. Can you specify the programs for Mr. Murtha and Mr. McDade? They have a very great interest in those programs.

Mr. MURTHA. Mr. Chairman, while he is looking up those specific answers, I might add that the coal industry in this country is really in a sad state of affairs. Last year we had 600-some-odd mines close in the State of Kentucky alone. We have about 20,000 miners out of work.

HELPING THE COAL INDUSTRY

Secretary EDWARDS. The best thing we can do to help the coal industry is not throw these millions of dollars at them from the Government but to do several things that will help the coal industry and help this country solve its energy problems and help the world.

Mr. YATES. Would you tell Mr. Murtha what you specifically have in mind there? I am sure he wants to put those miners back to work if he can, but he wants to know just what you are talking about.

Mr. MURTHA. We have 3,000 miners unemployed. That is without a strike, and if we do not have a strike it is probably because if the demands go up there would be a lot more unemployed.

Secretary EDWARDS. Mr. Murtha, we have to do about four or five things to help the coal industry in this country. Number one, we have to allow them to mine the coal a little easier and relax some of these excessive environmental regulations. I am not talking about eliminating all the environmental laws that cover coal mining, but we should relax them enough to make it easier to mine coal. That is number one.

Mr. YATES. What mining law or mining regulation would you want to eliminate?

Secretary EDWARDS. Well, we have some staff working on that very subject, Mr. Chairman.

For example, I grew up over in Eastern Kentucky so I can talk about a little area that I know about. I used to go up there and work on my grandfather's farm in the summer time. Over in that part of the country, Mr. Chairman, one of the most valuable things is a little piece of flat land somewhere that you might play baseball on or football, or build a shopping center, or even farm and growing some crops.

However, the laws require that after these strip miners go in there and mine it, they do not have to restore the land to a flat contour. They have to restore the land to its original contour. Therefore, if you take down a piece of the mountainside or flatten out a hill, thus putting it in a position where it could really be useful to a municipality, for example, in those areas or to an individual, the laws make the miners restore the land to its original contour.

That makes it extremely expensive. The consumer has to pay the price in the end for the coal. It makes it almost impossible for the companies to go in there and do strip mining, and then the cost of restoration is almost more than the coal is worth.

Mr. YATES. Are your remarks intended exclusively for strip mining or do you have some amendments to the deep mining activities?

Secretary EDWARDS. I think that we can have some recommendations for all of them when we review the rules and regulations. Of

course, this involves other departments. EPA, Interior, and Labor are where most of these rules come into being but we are looking at them and we would like to come back with some recommendations then.

Mr. YATES. Are you changing any of the safety requirements for miners?

Secretary EDWARDS. No, sir, not that I know of. We certainly want to keep the mines safe, and that is not the kind of thing I am talking about.

Mr. YATES. Are you talking about environmental standards exclusively, now?

Secretary EDWARDS. For the most part, yes, sir. The rules and regulations that restrict the capacity to mine coal by the coal miners.

Mr. MURTHA. Mr. Secretary, let me give you an example of a problem we have in Pennsylvania. We have a good environmental law and we think that they can mine safely and with little damage to the ground. Of course, we had years and years of tremendous damage to the ground.

Secretary EDWARDS. Yes. We do not want that. I want to go on record as being against that type of thing but reasonable restoration is what we want.

Mr. MURTHA. Now we have a different problem. We do not have the hillsides, the mountains, and the steep inclines that they have in West Virginia and Kentucky and in some of those other States but we do have a tremendous problem with silt.

We have in one area stringent strip mine regulations that keep the silt from going into the stream. We have a factory right there that needs clean water and there are 400 people employed in that factory, and we need some environmental standards.

Secretary EDWARDS. This is one of the reasonable things that I was talking about. You want to keep the reasonable ones, yes.

Mr. MURTHA. That is right.

Secretary EDWARDS. The second thing we need to do is in some way help build an infrastructure to get the coal from where it is mined to where it is going to be burned. We need to stimulate that some way.

Another thing we need to do is relax the specifications somewhat so that we can allow these companies to burn coal more economically.

Mr. YATES. That is EPA, and not you.

Secretary EDWARDS. That is right, but we are working with them and trying to get that put together.

Mr. YATES. We were trying to find out what you are doing in mining research or what regulations are being changed.

I do not understand. As I understood your previous answer, you are doing these things to increase coal production. The figures show that coal production has moved up significantly in the last three or four years, apparently these regulations are not that onerous if these statistics are right.

Secretary EDWARDS. Coal production is not a problem. Getting the chance to use the coal is the problem, in our utilities and our factories around this country.

Mr. YATES. But that is not this; that is EPA.

Secretary EDWARDS. It all ties together. These are the things that I say we can help in achieving.

Mr. YATES. Not in your budget however.

Secretary EDWARDS. Not in the budget, no.

MINING R&D BUDGET

Mr. YATES. We are trying to find out what happened to mining research and development.

Mr. EDMONDSON. The breakdown I have with me here, Mr. Chairman. We may have to provide you with more information for the record on the detailed activities.

Mr. YATES. Tell Mr. Murtha and Mr. McDade what could happen.

Mr. EDMONDSON. There is $15 million in the budget in fiscal year 1982 for deep mining R&D and there is $6 million out of the $21 million for coal preparation.

Mr. YATES. That is exactly the program that you were particularly interested in, wasn't it Mr. Murtha?

Mr. MURTHA. Yes, we have been interested over the years in this particular program. One of the concerns we have is the black lung problem. That costs almost a billion dollars a year. Because of Government research, we have been able to reduce the amount of dust in the air and it has been very beneficial. We believe that over the long run it could not only save substantial amounts of money for the Government and for the country because we are reducing the monetary expense, but also it could relieve those miners from the tremendous disability caused by black lung.

Now I do not know if this particular program would affect that but it sounds like it could. It could be long wall mining but I would certainly like to know the details of what you are cutting out of this program.

Secretary EDWARDS. Mr. Murtha, we will get these details and put them together for you and give you a report on what we recommend, and we will be glad to discuss it with you in detail when we have our staff available that can do this for us.

Mr. YATES. Why doesn't your budget officer have the detail of that with him today in order that we can understand why it is being reduced from $48 million to $21 million for fiscal year 1982?

Mr. EDMONDSON. The detailed budget justifications for that, sir, have been provided. I did not bring them up here with me. They go into quite a bit of specific detail of what is and what is not going to be done.

Mr. YATES. This is the revised one. We just got these.

Mr. MURTHA. We just got it today, Mr. Chairman. That is why we have not had a chance to look at it.

Mr. MCDADE. We have not had an opportunity to look at them either. When did they come up?

Mr. YATES. They just came up today.

Secretary EDWARDS. I think they just came off the press, if I am not mistaken.

Mr. YATES. Is that true for each of the items under coal, for example, coal liquefaction and advanced research and technology and advanced environmental controls? You do not have the breakdown of each of those?

Mr. EDMONDSON. I have more numbers, sir, but the details of what each one of the programs make up are in that justification and you will, of course, have the Assistant Secretary for Fossil Energy up here to testify before you who will be able to give you very specific details.

OFFICE OF ANTHRACITE COAL

Mr. MCDADE. Where is the Office of Anthracite Coal these days?

Mr. EDMONDSON. I do not know the answer to that, Mr. McDade.

Mr. YATES. Do you, Mr. Secretary?

Secretary EDWARDS. The Office of Anthracite Coal? We were going to do away with that office. The importance of its function has been brought to my attention and we are going to assign the duties of that office to someone closer to the Assistant Secretary for Fossil Energy.

Mr. MCDADE. Can you tell me if the budget level is the same?

Secretary EDWARDS. No, the budget level will not be the same.

Mr. MCDADE. What was the budget last year and what are you proposing this year.

Secretary EDWARDS. Do you have that detail? It is not a big item.

Mr. MCDADE. I know it is not. That is one of the reasons I am interested. It was $110,000 or $120,000. You do not know what it is?

Secretary EDWARDS. No, sir. We will get that information for you.

Mr. MCDADE. I would like to have it.

[The information follows:]

ANTHRACITE PROGRAM

The fiscal year 1981 Budget for the Anthracite program provided funds only for staff support to continue the program's implementation of the earlier task force recommendations and to complete both the assessment and evaluations of market/distribution factors to the Northeast U.S. Additionally, the office undertook the lead role this winter in handling the public inquiries concerning the shortage of residential grade anthracite coal. No contract funding was involved in these activities, and the staff support funding was drawn from the total Program Direction funds under the Domestic Energy Supply item in the DOE budget.

The fiscal year 1982 Budget proposal does not contain a funding request for the office as a distinct budget item. Much of the lead responsibility involving the production of anthracite coal will, in the future, reside in the states under the philosophy of the Administration, although the Department will continue to maintain a liaison function with the anthracite community to advise them of emerging technologies and other matters. In addition, certain R&D activities conducted under the Assistant Secretary for Fossil Energy particularly in the mining area are applicable to the problems of anthracite.

Mr. YATES. Would it serve any useful purpose, then, to go down this list and ask you about each of these items, or will we receive the same answer?

Secretary EDWARDS. Mr. Chairman, if you want the in-depth details, we can prepare that separately. We did not prepare that for you today.

When you talk to the Assistant Secretary for Fossil Energy, he will be able to give you the in-depth details.

Mr. YATES. We do not know who he is yet, do we?

Secretary EDWARDS. Not yet. He will be announced very shortly. We do have an Acting Assistant Secretary who is fulfilling this function.

Mr. YATES. We do have testimony by Acting Assistant Secretaries who come up to the Hill and testify. It is unfortunate that the Acting Assistant Secretary could not come up with you.

Secretary EDWARDS. Mr. LeGassie is here and we will get him to come up to the table.

Mr. YATES. Where is he?

Secretary EDWARDS. No, he is not here. I say he is on board as our Acting Assistant and we will be glad to have him appear before you.

He is testifying before another subcommittee, Mr. Chairman. He will be here shortly.

Mr. YATES. I see.

RECRUITING DIFFICULTIES

Mr. MURTHA. Mr. Secretary, is this period of reorganization causing you a lot of problems in getting people? Is the fact that the Department of Energy may be phased out or phased down causing you some real problems?

Secretary EDWARDS. Mr. Murtha, that really is not causing us the problems. The real problems are in the conflict-of-interest laws. We have gotten 8 or 10 or 12 good people who were excited about donating a little time to Government, and people who knew something about their various specialties within the Department of Energy, people who we really needed, the type of people we really need to get aboard.

Most of the people who are capable and willing to do that are people who have just retired from some company or retired from their own business. As we discuss bringing them aboard they go home and make peace with their wives, and they decide they will give a year or two or three to their Government.

Then they come up here and they discover the conflict-of-interest rules. Most of them have a retirement portfolio that they are depending to live on in their old age, and most of them find that it would cost them a couple of hundred thousand dollars by doing away with the stocks that they have.

Particularly if somebody has been in the energy field, they usually invest their money in some company that is energy-oriented, and it requires them to divest themselves of these stocks so that they will be qualified to serve. It really is a hardship on the individual, and for most of them, the time of the dollar-a-year man serving in Government is a thing of the past. Apparently, they cannot afford it.

Mr. MURTHA. Mr. Secretary, you have said there are going to be at least 17,000 people in the Department of Energy by this time next year so it seems you are not doing away with the department. If there is anybody that has this concern, they can be reassured.

Secretary EDWARDS. The problem has not been the possibility of doing away with the department because everybody realizes, I think, that certain parts of the department will be done away with and the rest may be redistributed. That is not the problem. The conflict-of-interest laws are the real problems in getting quality people, who know something about the field that we are talking about. It is almost impossible.

FISCAL YEAR 1981 RESCISSIONS

Mr. YATES. Let's look at your rescissions. That is one of the most immediate issues we have to deal with.

The first rescission is Mining Research and Development for $7,831,000. On page 59 of the supplement submitted by the administration for the department it says this:

In fiscal year 1981 the administration is proposing rescissions in the coal preparation and analysis project, cutting back $2 million, the underground coal mining project, $3 million, the surface coal mining project, $3 million, totaling $8 million in the Mining R&D program.

Coal preparation and analysis work will develop the processes needed so that raw coal, which contains impurities such as sulfur, ash and trace elements is cleaned into a saleable product, thereby increasing the amount of coal available for direct use. The objective of both the underground and surface mining projects is to increase the direct use of coal.

In keeping with the new administration's policy of focusing Federal R&D support on longer-range, high-risk technologies, leaving industry to demonstrate the feasibility of near-term technologies, the mining R&D program has been refocused. Hardware demonstration activities and near-term technology development will be terminated and an orderly phase-out of cost-shared field testing and demonstrations will begin.

The new program will be committed to developing a technology base that encompasses longer-range, high-risk projects which offer the potential for significantly improving mining technology and productivity.

That is high-sounding language, isn't it? What does this mean in terms of existing projects? How much of the $7.8 million is to rescind ongoing projects? How much of that is not yet committed or is all of that not committed yet?

Mr. EDMONDSON. No, sir, all of that is not committed.

Mr. YATES. It is or it is not?

Mr. EDMONDSON. None of that has been committed, sir.

Mr. YATES. Has any of it been obligated?

Mr. EDMONDSON. No, sir.

Mr. YATES. It is neither obligated nor committed.

Is any of it part of an ongoing program?

Mr. EDMONDSON. Yes, sir. The program as submitted in the Carter budget for fiscal year 1981 included these activities, and this budget proposes that some of that money be rescinded. It would be part of an overall program on Mining R&D.

Mr. YATES. Can you tell us how many individual projects, which this account would fund, are affected?

Mr. EDMONDSON. How many individual projects?

Mr. YATES. Yes.

Mr. EDMONDSON. No, sir. I do not have that here. We can, again, provide that but it is part of an overall program in Mining R&D that is being substantially reduced.

Mr. YATES. That should be provided.

[The information follows:]

RECISSION IN MINING R. & D. TOTALS $8 MILLION

The following is a list of projects that are scheduled to be terminated if the $8 million rescission in Mining R. & D. is accepted by Congress.

Low temperature chlorine analysis project with NASA for $200,000 will be cancelled. This project is in the coal preparation and analysis subactivity.

Surface Miner with impact breaker project with Foster Miller for $200,000 will be terminated. This project is in the Surface Coal Mining subactivity.

Multiple Seam Dragline Operation project with Flour Mining for $195,000 would be terminated. This project is also in the Surface Coal Mining subactivity.

In keeping with the new Administration's policy of focusing Federal R. & D. support on longer range, high risk technologies leaving industry to demonstrate the feasibility of near term technologies, the Mining R. & D. program has been refocused. Hardware demonstration activities and near term technology development will be terminated and an orderly phaseout of cost-shared field testing and demonstration will begin. The new program will be committed to developing a technology base that encompasses longer range, high risk projects which offer the potential for significantly improving mining technology and productivity.

Therefore, the projects listed above will be terminated. New starts and reductions to ongoing projects associated with the proposed rescission were not listed.

REVISED BUDGET - FY 1981 AND FY 1982

	FY 1981 Enacted Comparable	Proposed Supplementals	Pay Supplementals	Rescission (Including Offsets)	Total FY 1981	FY 1982 Carter	FY 1982 Amendment	FY 1982 Reagan
Atomic Energy Defense Activities - OE								
Naval Reactors	250,350	-	-	-	250,350	279,500	-	279,500
Weapons	1,920,323	41,000	3,281	-	1,964,604	2,439,000	+15,300	2,454,300
Verification and Control Technology	38,591	-	135	-	38,726	48,900	-	48,900
Materials Production	458,600	-	106	-	458,706	599,250	+16,950	616,200
Defense Waste	227,155	-	149	-	227,304	261,816	+212	262,028
Nuclear Materials	43,304	-	476	-	43,780	44,300	-	44,300
Security Investigations	15,012	-	500	-	15,512	23,600	-	23,600
General Reduction	-1,000	-	-	-	-1,000	-	-	-
Total, Operating Expenses	2,952,335	41,000	4,647	-	2,997,982	3,696,366	+32,462	3,728,828
Atomic Energy Defense Activities - PACE								
Naval Reactors	53,000	-	-	-	53,000	67,000	+15,000	82,000
Weapons	358,000	10,000	-	-	368,000	610,100	+132,000	742,100
Verification and Control Technology	800	-	-	-	800	1,000	-	1,100
Materials Production	207,100	-	-	-	207,100	237,700	+76,800	314,500
Defense Waste	73,005	-	-	-	73,005	88,261	+39,711	127,972
Nuclear Materials	3,400	-	-	-	3,400	3,700	-	3,700
General Reduction	-30,000	-	-	-	-30,000	-	-	-
Total, Plant and Capital Equipment	665,305	10,000	-	-	675,305	1,007,861	+263,511	1,271,372
Total, Atomic Energy Defense Activities	3,617,640	51,000	4,647	-	3,673,287	4,704,227	+295,973	5,000,200

	FY 1981 Enacted Comparable	Proposed Supplementals	Pay Supplementals	Rescission (Including Offsets)	Total FY 1981	FY 1982 Carter	FY 1982 Amendment	FY 1982 Reagan
General Science - OE								
Life Sciences and Nuclear Medicine	44,000	-	-	-	44,000	50,710	-2,410	48,300
High Energy Physics	243,380	-	-	-	243,380	292,850	-2,450	290,400
Nuclear Physics	89,500	-	-	-	89,500	100,100	-1,000	99,100
HEP and NP Program Direction	1,135	-	-	-	1,135	1,360	-	1,360
Total, Operating Expenses	378,015	-	-	-	378,015	445,020	-5,860	439,160
General Science - PACE								
Life Sciences and Nuclear Medicine	1,900	-	-	-	1,900	3,100	-900	2,200
High Energy Physics	108,800	-	-	-	108,800	122,800	-20,500	102,300
Nuclear Physics	20,700	-	-	-	20,700	36,400	-12,600	23,800
HEP and NP Program Direction	-5,000	-	-	-	-5,000	-	-	-
Total, Plant and Capital Equipment ..	126,400	-	-	-	126,400	162,300	-34,000	128,300
Total, General Science	504,415	-	-	-	504,415	607,320	-39,860	567,460

	FY 1981 Enacted Comparable	Proposed Supplementals	Pay Supplementals	Rescission (Including Offsets)	Total FY 1981	FY 1982 Carter	FY 1982 Amendment	FY 1982 Reagan
Energy Supply Research and Development - OE								
Solar	542,936	-	-	-91,698	451,238	529,960	-346,910	183,050
Geothermal	135,800	-	-	-9,500	126,300	66,976	-23,340	43,636
Hydropower	21,800	-	-	-24,546	-2,746	3,200	-3,200	-
Nuclear - HTGR	38,000	-	-	-21,026	16,974	-	-	-
Other Nuclear	842,194	-	-	+50,464	892,658	722,261	+330,600	1,052,861
Magnetic Fusion	258,817	-	-	+5,197	264,014	316,870	-6,170	310,700
Electric Energy Systems	38,423	-	-	-4,115	34,308	38,500	-29,000	9,500
Energy Storage Systems	70,100	-	-	-19,333	50,767	57,600	-19,700	37,900
Environment	215,654	-	-	-8,979	206,675	258,200	-451,100	213,100
Basic Energy Sciences	220,994	-	-	+124	221,118	278,100	-22,600	255,500
Technical Assessment Projects	12,500	-	-	-3,000	9,500	19,800	-16,800	3,000
University Research Support	7,800	-	-		7,800	12,500	-1,900	10,600
Advisory and Oversight P.D.	2,841	-	-	+130	2,971	3,050	+261	3,311
General Reduction	-30,871	-	-		-30,871	-	-	-
Total, Operating Expenses	2,376,988	-	-	-126,282	2,250,706	2,307,017	-183,859	2,123,158
Energy Supply - PACE								
Solar	55,900	-	-	-3,450	52,450	46,000	-35,750	10,250
Geothermal	20,221	-	-	-4,000	16,221	24,599	-19,860	4,739
Nuclear - HTGR	2,000	-	-	-1,150	850	-	-	-
Other Nuclear	125,326	-	-	+18,000	143,326	90,492	+7,400	97,892
Magnetic Fusion	135,300	-	-	-16,000	119,300	189,300	-40,000	149,300
Electric Energy Systems	1,500	-	-	-767	733	400	-	400
Energy Storage Systems	1,700	-	-	-600	1,100	1,900	-800	1,100
Environment	20,140	-	-		20,140	21,900	-4,200	17,700
Basic Energy Sciences	18,500	-	-		18,500	32,900	-11,900	21,000
Multi-Program Facilities	25,000	-	-		25,000	50,000	-10,000	40,000
General Reduction	-8,000	-	-		-8,000	-	-	-
Total, Plant and Capital Equipment	397,587	-	-	-7,967	389,620	457,491	-115,110	342,381
Total, Energy Supply	2,774,575	-	-	-134,249	2,640,326	2,764,508	-298,969	2,465,539

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	FY 1981 Enacted Comparable	Proposed Supplementals	Pay Supplementals	Rescission (Including Offsets)	Total FY 1981	FY 1982 Carter	FY 1982 Amendment	FY 1982 Reagan
Uranium Enrichment - OE								
Uranium Enrichment Activities	915,286	-	17	-	915,303	1,269,200	-206,000	1,063,200
Uranium Resource Assessment	29,455	-	-	-	29,455	23,900	-14,200	9,700
Advanced Isotope Separation Technology	64,299	-	-	-	64,299	85,292	-5,000	80,292
Revenues	-979,585	-	-	-	-979,585	-1,269,200	+206,000	1,063,200
Total, Operating Expenses	29,455	-	17	-	29,472	109,192	-19,200	89,992
Uranium Enrichment - PACE								
Uranium Enrichment Activities	444,515	-	-	-	444,515	809,800	-	809,800
Uranium Resource Assessment	1,300	-	-	-	1,300	1,100	-800	300
Advanced Isotope Separation Technology	15,945	-	-	-	15,945	35,650	-29,500	6,150
Revenues	-274,460	-	-	-	-274,460	-386,800	355,000	-741,800
General Reduction	-185,000	-	-	-	-185,000	-	-	-
Total, Plant and Capital Equipment	2,300	-	-	-	2,300	459,750	-385,300	74,450
Total, Uranium Enrichment	31,755	-	17	-	31,772	568,942	-404,500	164,442

	FY 1981 Enacted Comparable	Proposed Supplementals	Pay Supplementals	Rescission (Including Offsets)	Total FY 1981	FY 1982 Carter	FY 1982 Amendment	FY 1982 Reagan
Federal Energy Regulatory Commission								
Oil Regulation	5,955	-	140	-	6,096	8,101	-	8,101
Gas Regulation	38,655	-	1,098	-	39,752	43,066	-	43,066
Hydro Regulation	13,220	-	364	-	13,584	16,602	-3,722	12,880
Multi Resource	16,544	-	429	-	16,973	18,126	-	18,126
Total, Federal Energy Regulatory Commission	74,374	-	2,031	-	76,405	85,895	-3,722	82,173
Geothermal Resources Development Fund	1,284	-		-22,066	-20,782	5,574	-5,374	200

	FY 1981 Enacted Comparable	Proposed Supplementals	Pay Supplementals	Rescission (Including Offsets)	Total FY 1981	FY 1982 Carter	FY 1982 Amendment	FY 1982 Reagan
Power Marketing Administrations								
Alaska	3,069	-	150	-	3,219	3,538	-	3,538
Bonneville	-	-	-	-	-	136,180	-	136,180
Southeastern	1,552	-	95	-	1,647	7,237	-	7,237
Southwestern	28,208	-	320	-	28,528	21,269	-	21,269
SW - Continuing Fund	-	-	-	-	-	300	-	300
Western	138,502	-	2,900	-	141,402	210,774	-	210,774
Western - Emergency Fund	200	-	-	-	200	500	-	500
Colorado River Basins	3,548	-	80	-	3,628	-	-	-
Total, Power Marketing Administrations	175,079	-	3,545	-	178,624	397,798	-	379,798
Departmental Administration								
Salaries and Expenses	4,892	-	-	-	4,892			
General Administration	188,111	41,000	4,240	-	226,851			
Plant and Capital Equipment	38,065	-	-	-11,500	26,565			
Total, Departmental Administration	231,068	41,000	4,240	-11,500	264,808	401,692	-128,661	273,031
Total, Energy and Water Development	7,410,190	92,000	14,480	-167,815	7,348,855	9,517,956	-585,113	8,932,843

	FY 1981 Enacted Comparable	Proposed Supplementals	Pay Supplementals	Rescission (Including Offsets)	Total FY 1981	FY 1982 Carter	FY 1982 Amendment	FY 1982 Reagan
Fossil Energy								
Coal								
Mining Research and Development	48,000	-	-	-7,831	40,169	32,000	-11,000	21,000
Coal Liquefaction	193,200	-	-	-9,703	183,497	257,800	-152,600	105,200
Surface gasification	75,000	-	-	-9,796	65,204	747,670	-21,230	53,440
In situ	9,900	-	-	+60	9,960	10,500	-2,200	8,300
Advance Research and Technology	51,361	-	-	+122	51,483	63,100	-3,000	60,100
Advance Environmental Control	37,000	-	-	-2,913	34,087	37,300	-10,900	26,400
Heat Engines and Heat Recovery	36,400	-	-	-4,932	31,468	29,000	-13,400	15,600
Combustion Systems	56,200	-	-	-20,332	35,868	65,700	-37,900	27,800
Fuel Cells	32,000	-	-	+12	32,012	28,600	-	28,600
Magnetohydrodynamics	66,500	-	-	-5,967	60,533	60,000	-60,000	-
Capial Equipment	4,600	-	-	-	4,600	3,800	-	3,800
Program Direction - Coal	10,818	-	-	-	10,818	12,520	-	12,520
Subtotal, Coal	620,979	-	-	-61,280	559,699	674,990	-312,230	362,760
Petroleum	59,493	-	-	-1,702	57,791	57,820	-13,900	43,920
Gas	30,963	-	-	-2,950	28,013	28,660	-18,000	10,660
Total, Fossil Energy Research and Development	711,435	-	-	-65,932	645,503	761,470	-344,130	417,340
Fossil Energy Construction								
Coal Liquifaction	327,500	-	-	-157,500	170,000	628,500	-628,500	-
Surface Coal Gasification	89,400	-	-	-89,400	-	141,700	-141,700	-
Advanced Research and Technology	6,400	-	-	-	6,400	9,000	-2,000	7,000
Combustion Systems	-	-	-	-	-	11,000	-	11,000
Total, Fossil Construction	423,300	-	-	-246,900	176,400	790,200	-772,200	18,000
Total, Fossil Energy	1,134,735	-	-	-312,832	821,903	1,551,670	-1,116,330	435,340

	FY 1981 Enacted Comparable	Proposed Supplementals	Pay Supplementals	Rescission (Including Offsets)	Total FY 1981	FY 1982 Carter	FY 1982 Amendment	FY 1982 Reagan
Energy Production, Demonstration and Distribution								
Domestic Energy Supply	11,873	-	-	-7,076	4,797	12,000	-12,000	-
Petroleum Reserves	197,974	-	-	+272	198,246	225,903	-	225,903
Naval Oil Shale	3,900	-	-	-	3,900	2,560	-	2,560
Solar	8,540	-	-	-5,445	3,095	7,490	-7,490	-
Leasing	2,775	-	-	-400	2,375	3,489	-3,489	-
Program Direction	1,000	-	-	-	1,000	2,500	-	2,500
Total, Energy Production, Demonstration and Distribution	226,062	-	-	-12,649	213,413	253,942	-22,979	230,963

	FY 1981 Enacted Comparable	Proposed Supplementals	Pay Supplementals	Rescission (Including Offsets)	Total FY 1981	FY 1982 Carter	FY 1982 Amendment	FY 1982 Reagan
Energy Conservation								
Buildings and Commercial Systems	113,770	-	-	-51,770	62,000	130,555	-99,455	31,100
Industrial	89,700	-	-	-46,700	43,000	51,618	-50,653	965
Transportation	119,650	-	-	-38,650	81,000	121,691	-83,411	38,280
State and Local	452,887	-	-	-116,925	335,962	538,593	-431,628	106,965
Multi-Sector	26,500	-	-	-	26,500	31,651	-13,961	17,690
Impact Assistance	62,000	-	-	-52,000	10,000	47,550	-47,550	-
	864,507	-	-	-306,045	558,462	921,658	-726,658	195,000
Alternative Fuels Production	-	-	-	-300,000	-300,000	-	-	-
Strategic Petroleum Reserve	1,485,000	1,305,000	507	-	2,790,507	3,650,408	+233,000	3,883,408
Entitlements	540,168	-	-	-	540,168	248,000	-248,000	-
Total, Strategic Petroleum Reserve	2,025,168	1,305,000	507	-	3,330,675	3,898,408	-15,000	3,883,408
Energy Information Administration								
Energy Applied Analysis	10,600	-	-	-830	9,770	15,702	-7,702	8,000
Collection Production and Distribution	47,180	-	-	-6,605	40,575	60,089	-21,704	38,385
Information Validation	14,199	-	-	-14,199	-	14,091	-14,091	-
Data Information Services	32,138	-	-	+8,191	40,329	37,296	-3,681	33,615
	104,117	-	-	-13,443	90,674	127,178	-47,178	80,000

	FY 1981 Enacted Comparable	Proposed Supplementals	Pay Supplementals	Rescission (Including Offsets)	Total FY 1981	FY 1982 Carter	FY 1982 Amendment	FY 1982 Reagan
Economic Regulation								
Economic Regulatory Administration								
Fuels Conversion	23,738	-	-	+645	24,383	30,687	-30,687	-
Utility Programs and Regulation Intervention	17,460	-	-	+384	17,844	25,605	-20,605	5,000
Compliance	67,336	-	-	+3,583	70,919	51,919	-40,019	11,900
Petroleum Operations	13,235	-	-	+782	14,017	10,509	-6,909	3,600
Emergency Preparedness	1,000	-	-	+159	1,159	19,328	-17,328	2,000
Program Administration	3,509	-	-	+114	3,623	3,034	-1,534	1,500
Total, Economic Regulatory	126,278	-	-	+5,667	131,945	141,082	-117,082	24,000
Gasoline Rationing	42,667	-	-	-39,167	3,500	35,336	-35,336	-
Hearings and Appeals	7,922	-	-	+345	8,267	7,708	-3,208	4,500
Total, Economic Regulation	176,867	-	-	-33,155	143,712	184,126	-155,626	28,500
Total, Interior	4,531,456	1,305,000	507	-978,124	4,858,839	6,936,982	-2,083,771	4,853,211
Payments to States	85	-	-	-	85	85	-	85
Total, Department of Energy	11,941,731	1,397,000	14,987	-1,145,939	12,207,779	16,455,023	-2,668,884	13,786,139

Secretary EDWARDS. Mr. Chairman, this preparation of coal is a technology that is in place and that is used by many of the mines. I am sure there is always room for improvement in technologies but this is a proven technology that the private sector has been using for a good many years in the preparation of coal, where they blend and wash coal.

I think that the administration feels that the private sector can handle this area pretty well and are handling it pretty well, as you know.

Mr. YATES. Why did we put money into the budget for it if private industry can handle it?

Mr. MURTHA. Mr. Chairman, I will tell you the problem in the past has been that the coal industry has really had a tough time making this transition. As the Secretary said, we have had 600 operators go out of business and we have not had adequate money in R. & D. in many areas, of any kind, either for long-range or short-term R. & D. except from the very large corporations. Even for the large corporations because of the steel situation, where they mine metallurgical coal, funding is down and they are having problems.

If we are going to increase the production as we would like to see it increase, we need to continue some of these programs. I think the Secretary agrees that that is the way to reduce our dependence on foreign oil. I think we have to continue some of these programs. I think we have to look at these closely.

Mr. YATES. The question that comes to mind is whether things will happen as the Secretary and the Administration say it will happen. Will the coal mining industry which did not do this research and development in the past, do it as a result of the Government cutting out their funds?

Secretary EDWARDS. Mr. Chairman, I think they have done this work in the past. We have washers, we have blenders. This is a whole new thing that has come on board since the time of the restrictive environmental laws where the environmentalists said you had to use, say, a coal that was 1.2 to 1.4 percent sulfur, or lower.

These miners have gone out and first developed seams of coal that were low-sulfur coal. That was about the only thing in demand when the environmental laws first came out. Then they got the scrubbers and precipitators became required for new utility plants, and they found out that the precipitators did not work unless you had a certain amount of sulfur in the coal.

A different specification coal was then required whereas the coal company has gone out and searched and bought the low-sulfur coal, less than nine-tenths of a percent sulfur.

When the time came, the utilities found their precipitators would not work unless they had a certain amount of sulfur in the coal. They started, when the precipitators got in place, adding back sulfur to the coal so that you would have say 1.2 to 1.5 percent, or 1.2 to 1.3 percent sulfur in the coal.

The coal companies went out and started saying, "How are we going to do that?" The best way to do it is to get a little coal from this seam and a little coal from that seam, put it in the blender

and blend it up, and then you can meet the specifications that the Government requires so the coal can be burned. This adds about $3–$4 to the ton of coal by the time you do that. However, the companies have been responsive. They have done this type of research.

Then they found out that the ash in coal was a problem.

Mr. YATES. What you are saying, Mr. Secretary, is that there is no need for the money that the committee assigned to 1981 for this purpose. Private industry is going to do it.

Secretary EDWARDS. Yes, that is the position that we take, sir. They are doing it already. They are washing coal, washing the ash out.

Mr. MURTHA. There is disagreement about that, Mr. Chairman.

Mr. YATES. Do you mean you do not agree with the Secretary?

Mr. MURTHA. No, I do not, Mr. Chairman.

Mr. YATES. Maybe you ought to compare notes.

Mr. MURTHA. We will have to take a very careful look.

Secretary EDWARDS. We will be glad to get together with you and talk about the projects specifically, if you want to get down to a project-by-project review. There are lots of these little projects that we will be glad to talk with you about and if we have some difference, then we will be glad to discuss it with you.

Mr. YATES. All right.

Secretary EDWARDS. You and I want the same thing. We want to get these coal miners back to work in America and do whatever it takes to get those coal miners back to work, and get us transporting and exporting coal and backing out the need for international crude, that is what I am here to do. If you can convince me, Mr. Murtha, that we need a program that will do that, I will be your biggest supporter.

Mr. YATES. How are you going to convince Mr. Stockman?

Secretary EDWARDS. We can convince Mr. Stockman. Don't worry about that.

Mr. YATES. Would you like to bet on that?

Secretary EDWARDS. He and I are on the same team. We are working together.

Mr. YATES. You cannot be on the same team as Mr. Stockman and be on the same team with Mr. Murtha.

Secretary EDWARDS. I don't know. We have done things like that before.

We want to get the country on the move again. Mr. Murtha has those coal miners over there that are unemployed, and that is what I want to do, get them back employed and get the pressure off imports of crude oil.

Mr. YATES. I do not think the coal miners that are unemployed in his district were busy with mining research and development, were they?

Secretary EDWARDS. That is not the solution to the problem with getting them back to work, Mr. Chairman.

COAL LIQUEFACTION RESCISSION

Mr. YATES. I will leave that to Mr. Murtha.

Now we turn to coal liquefaction, which is the next item. You want to rescind $9,703,000; is that right?

Mr. EDMONDSON. That is broken into pieces, Mr. Chairman.

Mr. YATES. According to this it consists of three pieces.

Mr. EDMONDSON. Yes, sir. What that shows is the operating account. In addition to that there is a proposed rescission of $157 million for the SRC–I demonstration plant construction.

Mr. YATES. SRC–I. Okay. We talked to the Synthetic Fuels Corporation people before you came in, and I must say that I was a little baffled by their testimony respecting SRC–I as to how that qualifies as the kind of a program contemplated by the legislation setting up the corporation.

We all thought it was a demonstration plant and that the legislation was applicable to a commercially viable plant but their interpretation says that "commercially viable" applies as well to demonstration plants.

If that is true, why aren't you rescinding SRC–II as well?

SYNTHETIC FUELS PROGRAM

Secretary EDWARDS. Mr. Chairman, let's start at the beginning.

Mr. YATES. Let's go wherever you want to go.

Secretary EDWARDS. This administration is dedicated to a synthetic fuels program, an alternate fuels program. We have about $20 billion, authorized for the Synthetic Fuels Corporation, and the Synthetic Fuels Corporation, as you know, is similar to a banking facility that loans money.

We hope to get more private equity involved in the projects because if we get more involvement of private equity into them, we are going to have better management. If we have better management there is more chance of success for these projects.

SRC–I is one of those projects that we were going in only one direction in funding it. We have to cut down the cost of Government so we can decrease the deficit and this is——

Mr. YATES. Why don't you do that on SRC–II, then, as well?

Secretary EDWARDS. Well, ultimately we hope to get SRC–II also over in the Synthetic Fuels Corporation, Mr. Chairman. If it is going to be federally assisted we hope that it will be by the Synthetic Fuels Corporation.

Mr. YATES. However, if your reasoning for SRC–I is sound it is equally applicable for SRC–II, is it not? That too has Government participation, and if you want to get it into private hands why shouldn't you also rescind the money for that? I do not understand the rationale for one not being applicable to the other.

Secretary EDWARDS. Mr. Chairman, we do not plan to fund either one of these projects, SRC–I or SRC–II, in fiscal year 1982.

Mr. YATES. In fiscal year 1982?

Secretary EDWARDS. That is right. The Germans and the Japanese are participants in SRC–II.

Mr. YATES. That is right.

Secretary EDWARDS. That is one of the reasons we wanted to keep it on line in fiscal year 1981. Here we are trying to improve our international relationships, and we wanted to keep that project on line until they had an opportunity to apply to the Synthetic Fuels Corporation for support.

Mr. YATES. I see.

Secretary EDWARDS. We are hopeful that we can do that and that was the reason for continuing to fund SRC-II.

DEFERRAL OF FUNDS FOR SRC-II

Mr. YATES. I notice the staff has just shown me a deferral for SRC-II. I was not aware of that. You want to defer SRC-II until next year.

What happens to the German and the Japanese participation?

Secretary EDWARDS. Well, we have been in communication with them.

Mr. YATES. Are you aware of this?

Mr. MCDADE. No, it is the first time I have seen it.

Mr. YATES. Therefore, neither of the two projects is proposed to go ahead, then.

Secretary EDWARDS. Not in the Department in fiscal year 1982.That is right.

Mr. YATES. I am surprised that the synfuels people did not tell us about that when they were in this morning. They totally avoided discussion of SRC-II and limited their discussion to SRC-I. Now they should have told us, too, as well, about SRC-II. They did say that it was still under consideration.

What happens during this period? Do you propose that no further funds be made available for SRC-I because of this rescission? Do you also propose that no funds be made available for SRC-II because of the deferral?

Secretary EDWARDS. We are recommending that we continue the funding of SRC-II through 1981, in hopes that the private sponsors can get that project transferred over to the Synthetic Fuels Corporation. There is some doubt, Mr. Chairman, whether that will be possible or not.

Mr. YATES. Well, if that is true then the amount of money that you want to put in the deferral is wrong because you are going to give a certain amount of money for that project in 1981, aren't you?

Secretary EDWARDS. Yes.

Mr. YATES. Therefore, the amount of the deferral should not be $205 million, should it.

Mr. EDMONDSON. That is correct, sir, it should not.

Secretary EDWARDS. It should not be, yes.

Mr. YATES. That is the amount that you sent up. Will you be sending up an amended deferral, then?

Mr. EDMONDSON. Yes, sir, we will.

Mr. YATES. Do you know for what amount?

Mr. EDMONDSON. No, sir, I do not.

Mr. YATES. When will you know that?

Mr. EDMONDSON. We are in negotiations with the OMB right now, developing the number internally, and I hope to have something up very shortly, sir. I hoped we would have it before we came here this morning.

COST OF SYNFUELS PROJECTS

Mr. LOEFFLER. Mr. Secretary, it is my understanding that the probability of the continuation of SRC–II is not very good at all. Would you like to comment on that?

Secretary EDWARDS. You know, the history of all these projects has been a history of terrific overruns, excessive cost.

Mr. YATES. Which projects?

Secretary EDWARDS. Generally, for all synthetic fuels projects. They have cost a lot more than they started out to cost. We were doing some preliminary analysis of these projects, and looking at these projects with just a cursory glance, it looks like these are very ambitious projects for the amount of money they have involved in them, too.

The Synthetic Fuels Corporation Board, I am sure, is going to take a hard look at these projects when they are requested to. I would prefer to withhold judgment as to whether they are going to accept these projects or not, but I am sure they are going to look hard at them. If I were on the board I would look extremely hard at all these projects.

The capital cost, the historical cost for most synthetic fuels projects that I have reviewed, Mr. Chairman and Congressman Loeffler, is about $60,000 per barrel of daily capacity. Just to put that in perspective, the most expensive crude oil that we get comes from the North Sea, and the capital investment to get a barrel of crude oil per day production out of the North Sea is $10,000 a barrel of daily capacity.

Therefore, you see the synthetic fuel's capital costs run about six times what the most expensive crude oil is. They are expensive projects.

INTERNATIONAL PARTICIPATION IN SRC–II

Mr. LOEFFLER. I understand the cost involved. We are looking at two demonstration projects, one of which I believe is no longer a viable option in the event that funds are available, and that is SRC–II.

Would you agree with that?

Mr. YATES. Would you mind telling us why you do not consider that a viable option?

Mr. LOEFFLER. I believe that the international participants are no longer participants.

Mr. YATES. Is that true, Mr. Secretary.

Secretary EDWARDS. No. They have raised some questions as to whether they can continue to participate, and we have been in touch with the Japanese and the Germans to reassure them that we are not cancelling this project, that we envision them being proposed to the Synthetic Fuels Corporation. We have been in constant contact with the two governments involved at all times, to try to keep them involved as to what we are trying to accomplish. Before we came aboard, there was some talk of one of the participants getting out of the project at one time.

COST OF SYNFUELS PRODUCTION FACILITIES

Mr. MCDADE. Mr. Secretary, you quoted some figures about synthetic fuels. "Production" was the word that you used. The criti-

cism of this committee of the Department of Energy prior to your arrival is that they did not produce anything except pilot plants.

Now you may be looking at a figure that reflects pilot plant costs, first generation experimentation modules. That is what we did around here for years before we ever passed any legislation to try to create such an industry.

I wonder if you would be kind enough to furnish for the record, what figures you are basing that figure on? We have not built any commercial demonstration projects. The first ones that were to be tried was SRC–I and SRC–II. We looked at the question of the high gas projects and a couple of others but that was an effort, and the criticism of your predecessors was that you spent all of this money on pilots, that you never produced any capacity. That was the general feeling that this committee had. You have not built any commercial facilities.

Secretary EDWARDS. There are some foreign countries that have built commercial ventures and these are the estimates that provide the most accurate assessments.

Mr. MCDADE. Are you talking about the South African facilities?

Secretary EDWARDS. The South African facilities are one source of estimates, yes.

Mr. MCDADE. We have testimony in the record from one of your predecessors that the South African process costs $37 a barrel to take coal and create the entire barrel of petroleum, using the old technology developed in World War II, as you know, not upgrading it.

Secretary EDWARDS. Let's get our comparisons straight here. I am talking about the capital investment up front to build the machinery. That investment is $60,000 per barrel a day of production.

Mr. MCDADE. In South Africa?

Secretary EDWARDS. That is my best estimate that I have been told it cost in South Africa. Now I do not know what it costs to produce a barrel of oil beyond that. I do not know whether this price that you are talking about includes the capital investment, and includes the product that goes in——

Mr. MCDADE. I think we had better have the record clearly reflect, though, that if your cost estimate is based on the South African experience it is not based on any production of a commercial nature that the Department of Energy has done because they have done none.

Secretary EDWARDS. No, no.

[The following was provided for the record:]

BASIS FOR ESTIMATE OF $60,000/DAILY BARREL OF PRODUCTION FOR CAPITAL COST OF COMMERCIAL SYNTHETIC FUELS PLANT

The scarcity of data from operating, commercial-scale synthetic fuel facilities limits the accuracy of capital cost projections. Numerous studies have used differing assumptions to estimate such costs. While most have reached conclusions within the same general range, the figures must be treated as preliminary assessments until the first plants are actually constructed in the U.S. and more precise cost data becomes available.

One study which provides cost estimates of this nature is a March 1980 analysis prepared for the Department of Energy by Bechtel National Inc. titled "Production of Synthetic Liquids From Coal: 1980–2000." This study estimated the labor, materials, equipment and other components of total capital cost for two generic 60,000 barrel/day coal liquefaction facilities, one processing coal using "indirect" liquefac-

tion technology, the other using "direct" liquefaction. A summary table of the plant capital cost components is as follows:

PLANT CAPITAL COSTS FOR COAL LIQUIDS PROCESSES

[In millions of dollars]

	Direct process	Indirect process
Technical labor	71	149
Nonmanual nontechnical labor	11	23
Manual labor	305	599
Labor subtotal	387	771
Materials	261	562
Equipment	605	1,227
Other constructor costs	194	395
Construction cost subtotal	1,447	2,955
Land and land rights	3	6
Intangible assets	3	5
Construction start total (1978 dollars)	1,453	2,966
Escalation during construction (7 percent per year for 5-year construction period)	247	505
Interest during construction (cost-of-money assumed to be 12 percent per year)	240	813
Working capital	289	638
Total capital cost	2,229	4,922

Based on these plant capital costs for a 60,000 barrel per day facility, the costs per daily barrel of productive capacity can be calculated to be approximately $37,000 for a direct liquefaction plant and $81,000 for an indirect liquefaction plant. The average of these figures is roughly $59,000 per daily barrel of production.

Other studies, both within DOE and by private firms, tend to confirm the range of these cost estimates. At the 7th Energy Technology Conference in 1980, for example, the Fluor Corporation presented a study which analyzed four projected U.S.-based liquefaction facilities, each using the SASOL indirect liquefaction technology now in existence in South Africa. Three of the facilities were assumed to be identical to the South African SASOL plant, each producing roughly 55,000 barrels per day:

Plant location:	*Billions*
Gulf Coast	$2.50
Southern Illinois	2.75
Wyoming/Colorado/New Mexico	3.20

The fourth plant was assumed to also be located in the Wyoming/Colorado/New Mexico region but modified to meet U.S. requirements. Its projected total cost was found to be approximately $3.6 billion. This latter capital cost estimate results in a figure of roughly $65,000 per daily barrel of production.

Mr. YATES. You used the phrase "cost overruns." Cost overruns of what? There were no commercial plants that were built. How then could there be cost overruns? They were pilot programs leading almost to a demonstration program but nothing commercial which you could say was a cost overrun.

Secretary EDWARDS. Well, we have not built any commercial ventures but there are some commercial ventures being built in the private sector, however, and we will——

Mr. YATES. Where are the cost overruns?

Mr. MCDADE. Are they here in the United States?

Secretary EDWARDS. Yes. There are some gasification plants being planned here but the cost overruns are in the pilot plants, Mr. Chairman. Historically they have always cost more than they started out to cost.

Mr. YATES. That is true of any pilot plant. A pilot plant is built for the purpose of finding out what the costs are. As I understand

the procedure, when you build a pilot plant you do not know what the costs are likely to be. You think you know and you may find out that you are wrong. That is the reason you build a pilot plant.

Therefore, I do not think there can be such a thing as a cost overrun on a pilot plant, can there? Maybe I am wrong. Am I wrong on that?

Mr. MURTHA. You are exactly right, Mr. Chairman. That is what this committee has tried to convince the previous administration. I believe we did, finally. We had four Secretaries of Energy who have been before the committee in this period of time, and we have argued over and over that we are running out of oil at some point, that coal is the resource we have to use and synthetic fuel is the process that can best utilize coal in an economic manner, and yet we still have resistance over at the department.

It is very frustrating to us, Mr. Secretary. In this committee, Chairman Yates and Joe McDade were instrumental in funding the synthetic fuel program before anything happened, and then of course in funding it after we got a Synthetic Fuel Corporation.

Mr. YATES. There is another point that has to be made. If the Secretary is right and it is that expensive, and therefore the Government should not expend funding but let private industry do it, why then should the Government take on the role of a guarantor and say that we will guarantee the costs in this case? If it is going to be so expensive and private industry will not do it because it is obviously expensive, why then should the Government enter as a partner in this?

SYNTHETIC FUELS CORPORATION

Secretary EDWARDS. Mr. Yates, as you know, $17 billion is set aside in the Synthetic Fuels Corporation——

Mr. YATES. I know. As a matter of fact——

Secretary EDWARDS [continuing]. That you all created.

Mr. YATES. That Mr. McDade created all by his lonesome.

Mr. MURTHA. That is right. He was the driving force in it.

Mr. YATES. That is right. Look at him.

Secretary EDWARDS. The administration wants to move the responsibility for stimulating that synthetic fuels industry over to the Synthetic Fuels Corporation, and we want to get greater participation on the part of the private industries that participate in these efforts. $17 billion is a pretty good bit of money to put into the synthetic fuels program.

I would like to see a good synthetic fuels program developed. You said that we had never produced anything in this department. I do not want to defend the department but we have produced some things that are absolutely essential to the country, such as nuclear weapons for the Department of Defense and that type of thing.

We also have produced some research. One of the big complaints I have had from the Congress is that we have never done anything. I hope to turn that around. The Synthetic Fuels Corporation, will require more participation from the private sector. Maybe they can be more productive than we in the department have been in the past in Synthetic Fuels.

Mr. MURTHA. Mr. Secretary, the law is clear that we want commercial projects. We do not want demonstration projects in syn-

thetic fuels. We want you to go forward. We want the Synthetic Fuels Corporation to go forward with commercial-size processes. We put it in there just because of the resistance we have had in the years past to doing anything in the Department of Energy and the administrations.

Secretary EDWARDS. Well, we are in agreement, then. We want to get it over there in the Synthetic Fuels Corporation. Let them handle it.

VIEWS OF PROJECT SPONSORS

Mr. LOEFFLER. Mr. Secretary, have you or your staff had an opportunity to sit down with the two primary sponsors of SRC–I and SRC–II to see if they might be in a position to take on a greater load financially, if they might be able to acquire further financing than had once been anticipated? I feel certain that both of those sponsors are supporters of the program to reduce the growth of Federal spending. There is no question about that.

Have you all had an opportunity to sit down with them and have them say that they will take another look and assume more of the financial burden.

Secretary EDWARDS. Regarding one of these projects, we have talked to the sponsors and they just suggested they would look at it. They did not say that they would absolutely put more of their own resources in it.

One of the sponsors has $20 million in this and the total project is about $1.5 billion. They have, of course, a share in the project but that is not a bad contract, for $20 million to get a $1.5 billion operation that can be expanded into a full commercial industry.

We have talked to them. We hope they will participate with more of their own resources but when it comes down to the wire, I do not know whether they will or not.

Mr. YATES. I do not understand this new development. Mr. Loeffler, I had not known that the governments of Germany and Japan had withdrawn.

Mr. LOEFFLER. Mr. Chairman, I am not saying that they have.

Secretary EDWARDS. Mr. Chairman, they have not withdrawn.

Mr. YATES. What have they done?

Secretary EDWARDS. They have been concerned about moving the financing over to the Synthetic Fuels Corporation. They have expressed their concern. We have replied. We have informed them about what we are trying to do and they have not withdrawn. They are still in the project.

Mr. YATES. Suppose they object to turning it over to Synthetic Fuels? What would you do then?

Secretary EDWARDS. Mr. Chairman, they always have that opportunity, of course.

Mr. YATES. They do not. They are on a contract, aren't they? You are on a contract, too, with them.

Suppose they object to changing that contract? Don't you have to go forward with it?

Secretary EDWARDS. Mr. Chairman, I would have to look at the contract in a little more in detail before I could answer that but we will be glad to get the answer for you.

[The information follows:]

FE DEMOS TRANSFERRED TO THE SFC

The Department's agreements with the Federal Minister for Research and Technology of the Federal Republic of Germany and the Ministry of Internatinal Trade and Industry of the Government of Japan for cooperation on the SRC–II project do not provide for any unilateral changes in the project. Unanimity is required for any significant change to or key decisions in the Baseline Document which details the project and its financial arrangements. As a part of each agreement, the parties executed a Termination Agreement which permits any Government to terminate its participation in the applicable international agreement by providing the other party with written notice. While any of the parties to the international agreement could object to such a termination, it is clear that each party has the unilateral right to withdraw on this basis from the cooperative efforts.

In order to permit the desired change in financing structure for the SRC–II project to occur, it is our intent to terminate DOE's direct financial involvement in the SRC–II project. The timing of DOE's withdrawal is intended to be consistent with the other partners decision and timetable regarding the submission of a new proposal to the SFC. This will require the termination of both international agreements and the DOE contract with SRC International, Inc., the contractor for the SRC–II project. SRC International and the supporting foreign government could then apply to the U.S. Synthetic Fuels Corporation for financial support, presumably on a joint venture basis. Of course, the decision of whether to submit such a proposal will be left to the discretion of these parties. Also, if such a proposal is submitted it will be the responsibility of the Board of Directors of the SFC to determine whether to support this project.

Mr. YATES. That is key, isn't it? I am sure you have a lawyer who has been looking at that. At least, Gulf, when they came in to testify about a month ago before us, said that it was looking at it. I would hope that the Department of Energy had some lawyer looking at it too.

Secretary EDWARDS. Well, we do not have any more in the contract than we have appropriated, so it will depend upon the appropriations.

Mr. YATES. It is even more than that. Mr. Flynn of Gulf testified before us.

Secretary EDWARDS. He has $20 million invested in the contract so far.

Mr. YATES. That is the man you talked to, then.

Secretary EDWARDS. It is a cost-shared contract.

Mr. YATES. That is right, and he was very much concerned when he came in. I am sure that he looked forward to cooperating with the Reagan administration when it was just coming in but I am not so sure he looks forward to it now.

Secretary EDWARDS. He got a pretty good deal out of the last administration, Mr. Chairman, $20 million for a $1.5 billion operation.

Mr. YATES. Are you talking about SRC–I or SRC–II now?

Secretary EDWARDS. SRC–II.

FOREIGN PARTICIPATION IN SRC–II

Mr. YATES. Isn't it advantageous to the Government of the United States that 25 percent of that deal should be taken up by two other governments?

If it is as problematic and as risky as you say it is, why should we take steps that would cause concern by our partners? Why wouldn't we want a 25 percent investment by outside government sources? Does it make sense that they should participate?

Secretary EDWARDS. Mr. Chairman, I think it is good if it is a viable project.

Mr. YATES. Incidentally, I am told that is 25 percent each. They are willing to pay for 50 percent of the total contract, and the Government of the United States, this administration, wants to put that in jeopardy?

Secretary EDWARDS. Mr. Chairman, it is a $1.5 billion contract. $750 million will be paid by this country.

Mr. YATES. $750 million?

Secretary EDWARDS. $750 million will be paid by this country, and Japan and Germany will split the other and so they basically have a 25 percent interest each in the contract as it is figured.

Mr. YATES. Exactly.

Secretary EDWARDS. If it is a viable project it certainly is a good investment on our part, and a better investment on Gulf's part.

Mr. YATES. Mr. Secretary, you just told us a few minutes ago about how risky it all was and about the cost overruns that were undertaken in this project.

Secretary EDWARDS. I was talking generally, Mr. Chairman. Now this is a risky project too, I would say. There is no assurance that this project is going to be completely successful.

Mr. YATES. If it is a risky project then why don't we want 50 percent partners in it to help us share the risk?

Secretary EDWARDS. Mr. Chairman, I think we are interested in this project going forward. It is the way it is financed. We want to move it over into the Synthetic Fuels Corporation.

Mr. YATES. Why do you want to move it over there if in doing so we lose our 50 percent interest partners?

Secretary EDWARDS. I am not sure that we will do that in transferring it, Mr. Chairman. There are some questions raised about it but this is not settled yet.

Mr. YATES. I am sure there are questions raised about it but let me read to you about Mr. Flynn's concern.

He says, "We are not sure that we fit that commercial mold," to the question as to whether or not Synfuels has the power to do it under the legislation.

He says that "It has been proposed that we might get the joint venture mold, which is fifth in the order of priority under the Synfuels legislation, a joint venture which is what it would have to become under the Synfuels legislation, which is the worst of the priorities, not the first but the worst of the priorities. That requires 40 percent private funding.

Secretary EDWARDS. That is what we are hoping that we can do.

Mr. YATES. That is right, that is what you are hoping to get:

Further, it has been suggested the Department of Energy's foreign partners, that is, the government in Germany and the government in Japan, would provide that 40 percent but they regard their partner as the United States Government.

You are now their partner, "you", the Government, and you want to get away from that. You want to give it to the Synfuels Corporation, which is not the Government.

Secretary EDWARDS. Well I look upon the Synfuels Corporation as an arm of the Government, too. It would not be there if the Government were not funding it, Mr. Chairman.

Mr. YATES. That may be but it is a quasi-government organization and Germany and Japan apparently do not agree with you that it is a Government corporation. Certainly it does not have the

full faith and credit of the entire Treasury of the United States back of it. It has its own set-asides, it has its own appropriations, it has its own funds, so it is not the Government of the United States, it is an agency of the Government of the United States.

However, let me continue. Mr. Flynn says:

I think what was signed with the Department of Energy and what was signed by the ambassadors of those two countries is regarded as an international agreement akin to a treaty rather than a contract to us, and for them to provide the money to a private organization is not very attractive to them.

They do not want to put their money up with a private organization, a quasi-public organization. They would rather, as a government, be in partnership with the Government of the United States. Why then are you even thinking about moving it over?

Secretary EDWARDS. Mr. Chairman, we have talked to the Japanese and the German officials and they have not expressed this concern to us. They are concerned about any changes in the financing from directly being financed by the Department of Energy to the Synthetic Fuels Corporation.

Mr. YATES. Have they written to you about their concerns?

Secretary EDWARDS. They have, yes.

Mr. YATES. Would you provide the committee with a copy of their letter showing their concerns?

Secretary EDWARDS. We will be glad to do that.

Mr. YATES. We would like to know what their concerns are so that we have the complete picture on this.

[The information follows:]

JAPANESE/GERMAN CORRESPONDENCE ON ADMINISTRATION'S PROPOSAL TO HAVE SRC-II PROJECT APPLY TO SFC

The Department has no correspondence from the Federal Republic of Germany nor from the Government of Japan concerning the Administration's proposals to have the SRC-II project apply to the Synthetic Fuels Corporation for continued support. We do know, however, that both governments have stated through their representatives that it would be necessary for each government to participate in detailed negotiations with the parties concerned.

RESCISSION REQUEST

Mr. YATES.What would happen if in its wisdom or unwisdom the committee decided that instead of approving the rescission, it disapproved it?

What would your attitude be then? Would you appeal that decision to the Senate, or would you accept it, or would you favor it? What is your own thinking on this, Mr. Secretary?

Secretary EDWARDS. Mr. Chairman, I would hate to see that happen. I would hope that you would see fit to go along with the rescission.

Mr. YATES. Of both SRC-I and SRC-II?

Secretary EDWARDS. Yes, sir, and then let the proposers go to the Synthetic Fuels Corporation if it can be handled that way. If it cannot be handled that way, Mr. Chairman, these two projects may not be strong enough to withstand the close scrutiny that they have gotten as a result of this transfer.

Mr. YATES. Wait a minute. What does that mean, "May not be able to withstand the close strutiny they have gotten as a result of this transfer?" Does that mean that you would end the projects?

Secretary EDWARDS. Well, if the projects were looked at very closely and it was determined that the cost of the projects may not be realistic. That is the kind of scrutiny I am talking about.

Mr. YATES. Has that scrutiny been made?

Secretary EDWARDS. No, sir, it has not been made.

Mr. YATES. Has it been made with respect to SRC–I?

Secretary EDWARDS. No, it has not.

Mr. YATES. Well, why hasn't it? Why go forward with it at all if you haven't made that kind of a scrutiny?

Secretary EDWARDS. Well, the previous administration, I am sure, has scrutinized it this way and the previous——

Mr. YATES. You are not going to rely on the previous administration. You have not done it for anything else; why would you do it for this?

Secretary EDWARDS. That is why I think the new board over at the Synthetic Fuels Corporation will look at the figures on it very closely. We have looked at it in sort of a cursory way, and the figures do not——

Mr. YATES. What happens to companies like Wheelabrator-Frye and Air Products? Are they going to hang in suspension like Mohammed's body between heaven and earth while you make up your mind?

Secretary EDWARDS. Mr. Chairman, we have made up our mind on it. We would like to see it moved over to the Synthetic Fuels Corporation, and if they judge it to be a viable project, to fund it. If they don't feel like it is a viable project, then they would not fund it. We have made up our mind on it.

Mr. YATES. Are you saying you do not think it is a viable project because you want to ship it over to the Synfuels Corporation?

Secretary EDWARDS. No, this is not my position, Mr. Chairman, let's go back to——

Mr. YATES. No, answer my question before we go back. Let's stay here for the moment.

Secretary EDWARDS. We would be glad to.

Mr. YATES. Do you not consider it a viable project? Is that the reason for moving it over there?

Secretary EDWARDS. Mr. Chairman, I have not had the opportunity to do an in-depth cost analysis on this project to say whether it is viable or not, so I would not want to make that decision.

Mr. YATES. If you have not, then why are you shifting it over there? Why are you coming to any decision on it?

Secretary EDWARDS. The reason we are shifting it over is that if we can rescind these monies it will help us cut down the deficit, Mr. Chairman, and this Administration is deeply concerned about inflation. I and the Administration feel that one of the reasons for the runaway inflation is because of the cost of Government and the resulting deficit that we have, and we are determined to try to get control of the deficit so that we can bring the economy under control.

This was an opportunity. We have to come up with $48 billion so that we can reduce the deficit, Mr. Chairman, and in order to do that, we had to find money somewhere.

Mr. MURTHA. That is a good answer.

Mr. YATES. It is not a good answer. You are taking it out of one pocket. What you are saying is, ship it over to Synfuels and we will take it out of the other pocket, because you are proposing that it be a joint venture with the Synfuels Corporation.

In order for it to be a joint venture, you are still going to have to put up as much money as a partner under that kind of an arrangement as you do now under an appropriation. This is an Alice in Wonderland situation. I do not understand what the reasoning is that gave rise to this kind of arrangement.

I must say your attitude on SRC–I is a bewildering thing in itself, and not only because you are going to have to put the money up over at Synfuels. The contractors, Wheelabator-Frye and Air Products, have entered into a contract in full faith and credit with the Department of Energy. What must they think when the Government of the United States says, "No, we do not think we ought to go forward with you on this. We think we ought to shift you over to the Synfuels Corporation." The Synfuels Corporation even testified this morning before this committee that they do not know whether or not they would accept SRC–I and the corporations who are to be their partners. They do not know whether they would accept that in competition with the other projects.

Where does that leave Wheelabrator-Frye and Air Products? They are out in the cold, aren't they? They do not know where they stand.

SRC–I AND SRC–II ACTIVITIES IN FISCAL YEAR 1981

Secretary EDWARDS. Mr. Chairman, there is $40 million left over to clear up these projects, and certainly we want to be fair.

Mr. YATES. What does that mean, Mr. Secretary, that there is $40 million left to clear up these projects? Is that contract termination fees?

Secretary EDWARDS. This is an unobligated balance from fiscal year 1980.

Mr. YATES. What are you going to do with that?

Secretary EDWARDS. We are going to close down the contracts if these are not able to be transferred over to Synthetic Fuels Corporation.

Mr. YATES. Are you going to give them $40 million to terminate the contracts?

Mr. LEGASSIE. No, sir, those are not the termination costs.

Secretary EDWARDS. Mr. Chairman, this is Mr. LeGassie who is our Acting Secretary for Fossil Fuels. I am glad to have him aboard here. He just finished testifying over in another committee.

Mr. LEGASSIE. Yes, sir.

Mr. YATES. What are the $40 million for, Mr. LeGassie?

Mr. LEGASSIE. Most of that money, sir, will support the design teams which are in place in the SRC–I project for the continuation of the preparation of the design of that project. The amount of money necessary to terminate that project, if they do not make a proposal to the SRC, or if they do and are not accepted, is a relatively small sum of money. I have that number somewhere in this pile. I can find it for you.

Mr. YATES. Is the termination of that contract under consideration by the Government?

Mr. LEGASSIE. Sir, we have no funds in our fiscal 1982 budget for any of these five major construction projects. If they do not choose to make a proposal, or if they do make a proposal and are not selected, we will not be supporting them in our budget so it will be necessary——

Mr. YATES. Then, you are not supporting it at all. You are saying it is up to the Synfuels Corporation and you have washed your hands of it.

Mr. LEGASSIE. No, sir. We are supporting them during a period of time in which they may decide to propose and be considered, but you are correct in the fundamental point, that funding for all projects of this magnitude that go to construction, whether they be commercial or near-commercial as are the five we have, the decision to do that and which one should go that way should be determined by the Synthetic Fuels Corporation, rather than simply continue these projects which were started many, many years ago in a number of cases, under different conditions and with a different view of the world.

Rather than have some in the department and some in the corporation, there ought to be a single decisionmaker who is thinking about synthetic fuels and saying, "I really believe this project is important for the future commercialization of the synthetic fuels industry, and therefore I select it, even though it be a demonstration project with Government funding."

Mr. YATES. Mr. LeGassie, why are you putting up $40 million? What is it for?

Mr. LEGASSIE. To ensure that, while that decision is being made, there is not a delay in the project. For example, if it were to be selected we would certainly not want to have it cost more because we had slowed it down during this decision period.

Mr. YATES. Is it a slowdown cost rather than a termination cost?

Mr. LEGASSIE. No, we are not slowing down the activity during this fiscal year. We are keeping that activity moving right along.

Mr. DICKS. In terms of designing the plants?

Mr. LEGASSIE. In terms of designing the plant, that is right.

Mr. YATES. Are you required to put up the $40 million under the existing contract?

Mr. LEGASSIE. Yes, it is our part of the contribution to the activity of the project that would be in place regardless of what fiscal 1982 shows. We are not changing what is happening during this year.

SRC TERMINATION COSTS

Mr. YATES. Why are you putting up that money then if you are not going forward? Do you have an option of not putting up that money?

Mr. LEGASSIE. We could terminate the contract for the convenience of the Government tomorrow.

Mr. YATES. What is the small amount of money you referred to that you would pay?

Mr. LEGASSIE. Give me a moment and I will tell you the termination costs.

Mr. YATES. Okay.

Mr. LEGASSIE. In the case of SRC–I, I have a termination cost of $19 million.

Mr. YATES. It would cost $19 million.

Mr. LEGASSIE. The remaining funds will carry us through to the point of the consideration by the project entity as to whether or not they wish to make the proposal to the Corporation.

Mr. YATES. Why pay the $40 million? You have washed your hands of it, and you say you are not going forward in 1982. Why don't you just pay the $19 million rather than the $40 million?

Mr. LEGASSIE. If we did that, we would probably preclude the possibility of the sponsors being able to make the proposal. If you are not funding this design team they are going to have to turn around and fire everybody, and they are going to scatter to the winds.

Mr. YATES. Therefore, you are giving them $40 million to keep a design team on board.

Mr. LEGASSIE. That is correct, sir.

Secretary EDWARDS. After the design aspects are completed, that would be a good place to terminate it and then it could be picked up later on by the private sector, or by the Synfuels Corporation or by some other entity.

Mr. LEGASSIE. It is the recognition you were asking about earlier, certainly, about whether we have some kind of obligation? We have changed our view midstream. Rather than simply terminate the project, if there is a possibility that the project would be supported by Government funds through the Corporation, we ought to allow the time it takes for that decision to get made. We are providing the funding in the meantime.

Mr. YATES. That is helping the competitive position of the company because it is supposed to compete with other companies before the Synfuels Corporation. If you give them the additional $40 million, it puts them in an advantageous position competitively, doesn't it?

Mr. LEGASSIE. It is assistance to them but it is a continuation of assistance which they had previously earned.

Mr. YATES. That is point one.

The second point, how much would your termination costs be if you terminated SRC–II?

Mr. LEGASSIE. The number I have for that, sir, is $32 million.

Mr. YATES. To whom would that go? Would that go to Gulf?

Mr. LEGASSIE. I presume that goes to a variety of people because the prime contractor is SRC International, which is 50 percent owned by Gulf. There are subcontracts under that which would also have to be terminated, and some of these funds may flow into subcontractor terminations.

FOREIGN SPONSORS OF SRC–II

Mr. YATES. What is your relationship with the governments of Japan and Germany?

Mr. LEGASSIE. They are co-funders of this project. Essentially, laying aside a small private contribution by Gulf of $100 million, the remaining funds of the project are being paid for 50 percent by the United States, 25 percent by Germany and 25 percent by Japan.

Mr. YATES. If you decided to terminate the contract, do you have the consent of Germany and Japan to do it? Do you need their consent?

Mr. LEGASSIE. No, we do not need their consent to terminate the project.

Mr. YATES. You do not? As a matter of comity, do you believe you ought to try to find out what their attitude is in the event you do terminate?

Mr. LEGASSIE. Yes, sir. In fact, there is a meeting of the three Governments which is planned to occur some time next month.

Mr. YATES. Will the meeting be on the question of terminating this contract?

Mr. LEGASSIE. On the question of the future of the SRC–II project. The United States Government, in that meeting, will be indicating what the President's posture is, and we will be seeking the decisions of the other two governments as to whether or not they wish to support the project by making a proposal to the Synthetic Fuels Corporation. Or, if they do not wish to support that action, whether they wish to terminate the project.

In the normal arrangements, decisions made on this project are to be made by the three countries unanimously. Obviously, if the three countries cannot agree then only one country could take a unilateral action, but we are in full discussion with the other two governments. They know where we are and what is happening.

Mr. YATES. Could the other two countries continue with the project with other partners if the Government of the United States withdrew?

Mr. LEGASSIE. Yes, they could, sir.

Mr. YATES. This is part of the decision as well?

Mr. LEGASSIE. That is the decision which any remaining party would have to make if one of the parties withdrew.

RESCISSION OF COOPERATIVE AGREEMENT AND FEASIBILITY STUDY FUNDS

Mr. DICKS. I am concerned also about some of the other decisions that were made by the department which I feel will have a very adverse impact on the development of other alternative energy resources as well.

Can you tell me, Mr. Secretary, why the department wants to rescind the $300 million for feasibility studies and cooperative agreements from the alternative fuels production program?

As I understand it, many small companies have spent substantial resources, particularly under the cooperative agreement program, after the Government accepted their proposals for assistance but before the Government pulled out of the contract. What do you intend to do about these companies?

Secretary EDWARDS. Mr. Dicks, we felt that these feasibility studies were not a good investment when you look at them from the consumer standpoint. We felt that the private sector could handle these projects. For the most part, these are all proven technologies, the conversion of grain or some other resource to alcohol. It is a proven technology, and has been for years. They work all right if they are incorporated into some feedlot cycle where you can feed the byproducts to cattle after you get the alcohol out of it.

We do have some private sector activity in alcohol production. We have about 109 million gallons of alcohol this year, for example, none of which has been subsidized by the Government. It has been projected that about 316 million gallons will be coming off by 1983.

We are subsidizing alcohol fuels through tax incentives at the rate of about $17 a barrel, which is about half the cost of international crude today. We feel that if the private sector cannot develop a viable industry with that type of subsidy, maybe it is impractical to use this as a source of energy.

These are basically the reasons why but, once again, we are looking for that $48 billion to try to cut down the deficit that would be close to $80 or $90 billion this year if we did not do that.

Mr. DICKS. We found out a number of these companies, both those under the loan agreement and those that have come under the cooperative guarantees have come in and said to us, that they were ready to go and that the Government said they wanted them to be involved. Some 16 companies have put up their own money, gone out and raised money, and they were there to produce. Now in comes the new Administration and says that does not make any difference.

Now these are business people. These are not welfare recipients. What I do not understand is why you are taking on these business people who were there ready to produce for the Government, and who have raised money.

One company came in to me with a letter from the banker, Citibank. You have heard of them, haven't you? [Reading:]

> In our opinion, the company has a logical and businesslike plan that, taken to fruition, would result in an economically viable alcohol fuel facility. However, the untried aspects of the gasohol industry in the United States present major risks beyond those normally associated with project lending.
>
> Specifically, commercial-size plants such as the one you propose are unproven as to the gasohol market itself. We would have to be satisfied that repayment of any loan we might make under . . . could be repaid even if the project were to fail.
>
> Considering the national interest in the gasohol program, a United States loan guarantee would appear to be appropriate for new energy to pursue as many energy risks would obviously be ameliorated.

This is from Donald E. Hill, an officer in the Citibank Corporation.

There is a little credibility problem here. You have some major financial institutions in this country who are saying that the Department of Energy is not right and that they are not going to finance these projects unless the Government comes in with loan guarantees.

Now is there a credibility problem here or not?

Secretary EDWARDS. Mr. Dicks, I do not think so. If that was such an outstanding investment, maybe the Citibank should go ahead and fund that project itself. What that letter means to me is, if they do not fund the project, it is a losing proposition and it is not a good investment.

Mr. DICKS. Don't you feel there is some responsibility here with the Federal Government having led these 16 companies right down to the edge of this project, by saying go out, raise money in the private sector? Then you all come in and say you are interested in doing something about energy in the near term. These are the kinds of projects that can produce energy in the near term.

All of the things you have talked about on synthetic fuels are going to take years to develop. These were some near-term projects that could have produced some results for the country, and yet those are the ones that are sacrificed.

It appears to me that your program is out of balance when all the money winds up going to synthetic fuel and very little if any going to conservation and to biomass and to gasohol, and to developing these other promising alternative energy sources. It seems to me that the Administration's program is very narrow in its attempt to only deal with one area of synthetics in terms of coal and those kinds of projects, and large projects.

Mr. YATES. And nuclear.

Mr. DICKS. Yes, and nuclear.

It seems unfair that at a time when we are trying to develop these other technologies or bring them on line and we had the private sector people involved, willing to put up their own money and participate, we pull the rug out from these 16 companies.

Secretary EDWARDS. Mr. Dicks, we have funded a lot of feasibility studies. Most of these feasibility studies are a lot of paper. They don't really produce any energy at all.

We are subsidizing the industry at the rate of about $17 a barrel when we forgive the 4 cents excise tax per gallon of gasohol which it is only 10 percent alcohol.

Mr. DICKS. Mr. Secretary, aren't these loan guarantees that will be paid back, as well? We are not talking about a big grant any more. We are talking about loan guarantees and it isn't even anticipated that very much will ever be called upon in terms of the Government.

However, without this at least the financial institutions that we are talking to say that you are not going to get these kinds of plants on-line. It seems to me it is something we can do in the near term.

Secretary EDWARDS. Mr. Dicks, the position of this Administration is, if this industry cannot survive with a $17 per barrel subsidy with tax incentives then it really may not be or it is not a viable source for us. That is the position of the Administration.

Once again, we were trying to find some money to cut down the deficit and this is an area that we felt was an area that we could bring about the rescissions and really not hurt the energy priorities very much.

Mr. YATES. How does this affect the deficit?

Secretary EDWARDS. Affect the deficit?

Mr. YATES. It does not affect it at all, does it?

Secretary EDWARDS. Oh, yes. The total amount that we rescinded is about $300 million total.

Mr. DICKS. Well, you are concerned about the deficit. Let me ask you a question.

Mr. YATES. No, we are talking about loan guarantees.

Mr. DICKS. Loan guarantees were only going to be a couple of million dollars potentially in outlays. The Majority Leader told us. What was it, $16 million?

Secretary EDWARDS. Mr. Chairman, these loan guarantees, you have to have the money there to guarantee the loan, really.

Mr. YATES. I do not think so.

Mr. DICKS. However, it is not an outlay. That is what makes up the deficit, Mr. Secretary.

Tell us your concern now about the deficit. That leads me to my next question. Mr. Secretary, the proposed budget for the DOE only provides $11.9 million in fiscal 1982 for the Office of Enforcement and the Office of Special Counsel for Compliance. This is about $55 million below the fiscal 1981 funding level.

As you know, these two offices are responsible for collecting some $8.5 billion in overcharges and pricing violations committed by the oil companies during the period of price controls following the 1973 Arab oil embargo. However, DOE officials have testified that this large budget cut means that they will have to delay collecting about $5.5 billion of these overcharges. Some say that these $5 billion in overcharges will, for all intents and purposes, simply be dropped.

My question to you, Mr. Secretary, is if all this money is owed by the oil companies, why are we delaying collections and cutting the compliance staff by 80 percent? Why don't we speed up our collection efforts, collect the overcharges, and then get rid of our compliance program at that point?

Secretary EDWARDS. Mr. Dicks, that is exactly what we plan to do in the department. There are about 2,000 people over there in that part of the department. What we want to do is speed up the collection and settle these claims.

There will be no amnesty for any of the big oil companies or small oil companies in this area. If they have broken the law and overcharged, we are going to get our share of it. The previous administration had a record of collecting about 50 cents on the dollar for their efforts, and we plan to carry it on through.

We have auditors in the field. We plan to have the auditors continue to work, and when the audits are completed then we will reduce our number of personnel we have, particularly auditors. Then we will move the attorneys in and let them bring these cases to court or preferably settle them out of court.

Mr. DICKS. It is interesting that you say that because in the House Energy and Commerce hearing on March 12th, Gordon Harvey, Assistant Administrator for Enforcement of the Energy Regulatory Administration, said he was not sure whether the current overcharge cases would be completed even by the end of 1983.

He said, "I cannot say we can complete it in 1983. I think there are unknowns with 'this budget'. How many people will leave, when they will leave, who leaves is unclear. There are too many unknowns for me to say that in 1983 it would be done."

What it looks like to people who are watching this, Mr. Secretary, is that we are trying to give the oil companies a break. Now you are telling us here today before this committee that that is not so? It sure does not look like it.

Secretary EDWARDS. Mr. Dicks, we certainly are not giving the oil companies a break. We hope to settle it. Any cases that are left over, we will turn over to the Justice Department for their continued prosecution.

Mr. DICKS. It just does not seem to me that you are being tough with them if you are cutting the staff by 80 percent. I just do not

understand how that helps you. Don't you need the people to get this work done?

Secretary EDWARDS. Mr. Dicks, I think we could stretch it out and we could make workload that would last 20 years if we wanted to over there. However, we would like to vigorously move ahead and bring these cases to fruition and settle them and close down that department.

Once we deregulate, there is no need keeping the regulators in place over there. We have to plan a reduction in force through 1982, and by the end of 1982 we hope to have all these cases brought to completion. Those that we do not, we will turn over to the Justice Department for them to take care of.

Mr. DICKS. Just one second.

SRC TERMINATION COSTS

Mr. YATES. While you are waiting, let me ask Mr. LeGassie a question. Mr. LeGassie, you spoke of termination costs of $19 million for SRC–I and $32 million for SRC–II. How did you arrive at those figures?

Mr. LEGASSIE. They are figures given to me by my staff who have analyzed the obligation we have in connection with the budget preparation process, sir.

Mr. YATES. Can you tell us what the basis was for those figures?

Mr. LEGASSIE. Well, I am pretty certain that can be provided for the record.

Mr. YATES. We would like to know that.

[The information follows:]

BASIS FOR CALCULATING TERMINATION COSTS FOR SRC PLANTS

The termination cost estimates of $19 million for the SRC I demonstration project and $32 million for the SRC II demonstration project were derived from rough calculations received from DOE's field offices which have project management responsibility. More precise estimates are expected from contractor input within the next several weeks. The SRC I estimate is based on the following:

	Millions
Termination Winddown (June 1–September 30, 1981)	$12.0
Land acquisition costs (options)	1.0
Fees to subcontractors	1.5
15 percent cost to affiliates for foregone resources	3.5
Cost for termination proposal, and so forth (October 1981–June 1, 1982)	0.8
Rentals, relocation, miscellaneous, and so forth	0.25
Total	19.05

The rough SRC II estimate is based on the following contractor breakdown and provides for deferred charges, closeout salaries, office expenses and foregone fees:

	Millions
SRC International Inc	$16
Stearns-Roger	14
Badger energy	2
Total	32

Mr. YATES. I raise the question certainly with SRC–II. Gulf Oil's profits for the year 1980 were $1.4 billion and I do not know quite why we would have to give them some kind of termination costs in this connection, do you?

Mr. LEGASSIE. Well, I think you must recall, sir, that Gulf as the prime contractor lets contracts to others.

Mr. YATES. Yes.

Mr. LEGASSIE. Therefore, they have incurred obligations in the name of the Government which may not be honored otherwise.

Mr. YATES. Mr. Dicks?

EFFECT OF BUDGET CUTS ON PROSECUTION OF CRIMINAL CASES

Mr. DICKS. The Solicitor of the Special Counsel's office testified on March 12 before a House Energy and Commerce subcommittee that the budget cutbacks could result in DOE dropping some criminal violations involving major oil companies. This is disturbing when one considers The Washington Post article dated March 12 which stated that DOE investigators have recommended that crude oil trading practices of some of the largest oil companies be investigated by a grand jury for possible criminal prosecution, and that some of those illegal activities, according to DOE documents, might have cost consumers an extra $500 million a year in gasoline and other petroleum products on one pipeline alone.

Will you please tell the subcommittee whether any criminal cases at all will be dropped as a result of these funding cutbacks.

Secretary EDWARDS. Absolutely not.

Mr. DICKS. Will any criminal cases not be undertaken as a result of the cutback?

Secretary EDWARDS. Not that we know about.

Mr. DICKS. We would like to know if you decide.

Secretary EDWARDS. Not any that have been brought to our attention at any time. If they are criminal cases, certainly we have investigative people in and out of the department to take care of cases such as this.

Mr. DICKS. Also, do you intend to take criminal action or civil action on any fiscal 1981 audits if such action is warranted?

Secretary EDWARDS. If it is indicated, yes.

OFFICE OF INSPECTOR GENERAL

Mr. DICKS. Have you appointed an Inspector General for the Department of Energy?

Secretary EDWARDS. We have one coming on-line. We have not announced his name yet.

Mr. DICKS. Can you tell us when that will be announced? We have been worried because these Inspectors General have not been named, and we believe it ought to move along.

Secretary EDWARDS. It will be forthcoming, from what I understand over at the White House.

Mr. DICKS. One final point and then I will yield back, Mr. Chairman. I have a note here that a draft budget document from DOE which has been made public said, because of limitations on available resources, new enforcement actions will not be initiated even where substantial violations have been discovered.

This document was later substantially revised. I hope that was at your direction?

Secretary EDWARDS. Mr. Dicks, this is the first I have heard of that.

Mr. DICKS. I will be glad to give you a copy of it.

Secretary EDWARDS. I would like to have a copy of it and I would like to know who wrote it. If you will give me those two items I would appreciate it very much.

Mr. DICKS. Yes, I will get that to you. I will have my staff get that to you after this hearing.

Secretary EDWARDS. That certainly is not the policy of this administration, Mr. Dicks.

Mr. DICKS. This is awfully important.

Secretary EDWARDS. None of this came from anybody that is——

Mr. DICKS. Part of your team?

Secretary EDWARDS. Yes, part of our team.

Mr. DICKS. Thank you, Mr. Secretary.

Secretary EDWARDS. There maybe all sorts of things that arrive over there that do not come from our team.

ALTERNATIVE FUELS

Mr. DICKS. I understand. I hope you will consider that the alternative energy program, to a lot of us in the Congress, is something that we have worked for. We feel very strongly about it.

We wish that in terms of the dollars that you have available. Of the $17 billion for synthetic fuels, $5 billion you have now and the $12.2 billion this committee had provided. We wish that in terms of these dollars that you have available some small amount ought to go to helping develop these alternative energy approaches.

It is not all going to be solved just by the big oil companies. There are a lot of other people in this country who ought to be part of this effort, in my view, and diversifying and getting these other companies involved, these other risk-takers is good for a healthy energy program.

I would like to give you one figure that has been presented to me that I think is rather revealing about the Reagan program versus the Carter program. A summary analysis of the potential synfuels production from the Carter and Reagan budget programs reveals the following estimates. This is in thousands of barrels per day.

By 1990 there would be 900,000 under Carter, 300,000 under Reagan. By 1995, there would be 2.3 million barrels per day under Carter, under Reagan 900,000. By the year 2000 there would be 4.8 million a day versus 1.5 million. Therefore, you can see that there is a substantial difference.

What worries me about inflation, Mr. Secretary, is that if we still have to bring into this country 3.3 million barrels a day of very expensive foreign oil, then we will have not done anything about inflation. We will make inflation worse.

The sooner we try to develop our own domestic resources the better off we are going to be. Saying that the Federal deficit is the cause of inflation does not answer this at all. A major part of this inflation, regardless of whether the administration wants to recognize it or not, is the escalation of foreign energy prices over the years. As I see it, your program is worsening of our effort to develop our domestic resources so that we can reduce those imports.

Secretary EDWARDS. Mr. Dicks, I might remind you that the first Arab embargo took place in 1973.

Mr. DICKS. That is right.

Secretary EDWARDS. The largest price increase took place between 1978 and 1980 when the international price of crude went up 130 percent. If you will plot the rate of inflation in America and the price of international crude up until 1979, they run almost parallel.

I am not saying that inflation is the total reason for the price of international crude but it certainly bears a relationship.

Mr. DICKS. Sure, it does.

Secretary EDWARDS. Certainly the price of energy bears a relationship on our inflation rate. They support each other.

However, if we can get our inflation rate under control, if we can send signals out to the people around the world that we are going to be in command of our economic situation, bring inflation rates down, bring interest rates down, it will send signals all over the world that will strengthen the American dollar.

When the American dollar is strengthened it will stabilize the cost of international crude. This is the thing that this administration is dedicated to.

Mr. DICKS. We share your objectives. We are not quite sure that the way we are going is the way that will get us there. Let me just give you one final figure.

Secretary EDWARDS. Well, Mr. Dicks, the last few years have not worked, so let's try it our way one time.

Mr. DICKS. I am afraid we are going to.

REDUCING DEPENDENCE ON OIL IMPORTS

It is estimated that the U.S. Government will spend between $130 and $150 billion for oil imports in 1983, between $170 and $200 billion for oil imports in 1985. How does the department justify taking the chance on our energy and political future by not funding renewable resources at adequate levels, given the immense amount of money that we send overseas for oil every year?

That has an effect on inflation. When we have a tremendous trade deficit because of these imported oil prices, that affects the value of the dollar internationally, doesn't it?

Secretary EDWARDS. That is right. Mr. Dicks, that is why it is sort of foolish for us to lock up our national resources here, locked up on lands that are owned by the Federal Government, where we cannot touch them.

Mr. DICKS. I am with you on that.

Secretary EDWARDS. On the Outer Continental Shelf, it takes 23 months from the time when a company decides to drill a hole in the ground before he can go out there and actually do it, because of the environmental impact statements and the public hearings and all this. If we can unlock these lands and if we can do some of these things that we want to do in this administration, we can produce enough oil and gas in this country to back out 20 or 30 percent of that demand and our destiny will be in our hands rather than in the hands of foreign nations. That is what we are dedicated to.

Mr. DICKS. Why not do the alternatives at the same time?

Secretary EDWARDS. We certainly are interested——

Mr. DICKS. Why are they so terrible?

Secretary EDWARDS. Mr. Dicks, $20 billion for synthetic fuels is not turning your back on the industry.

Mr. DICKS. However, under the Synthetic Fuels Corporation you cannot fund the gasohol program. You cannot fund the biomass program. You cannot fund the conservation program. Am I correct?

Mr. YATES. No, but you can have joint ventures, can't you? You are right.

Mr. DICKS. I am right. What we need, Mr. Secretary, is a balanced effort.

Secretary EDWARDS. That is exactly what we need.

Mr. DICKS. We need a balanced effort, and I think this is tilted too much towards the old boys and not enough towards the young entrepreneurs. We are worried about productivity in taking on this. Let's try all of these things. We are not talking about a lot of money but the risk to the country is terrible.

Secretary EDWARDS. Mr. Dicks, we certainly are in favor of a balanced program.

Mr. DICKS. Could we revise the Synthetic Fuels Corporation to help these people?

Secretary EDWARDS. Mr. Dicks, you wrote the laws to put together Synthetic Fuels Corporation. There is no reason in the world why you cannot revise it.

Mr. DICKS. I thought you were going to provide us with some new leadership. It seems to me that it is back to business as usual.

Secretary EDWARDS. Mr. Dicks, we are not back to business as usual. If we were, I do not believe we would be having this discussion around this table as we are doing today.

Mr. DICKS. I just think those alternatives——

Secretary EDWARDS. Obviously we are not at the business as usual. You know, it upsets me to see that we spend, in one case, $622,000 on a feasibility study to see if you can convert grain to alcohol in somebody's back yard. Mr. Dicks, we have been doing that down my way for years. That is a proven technology. However, it takes almost more energy to do it than you get out of it. Fortunately down in the swamps we had plenty of wood that was pretty cheap that we could use down there. However, when you look at the cost-benefit ratio of these programs it just does not come together, Mr. Dicks.

NATIONAL SECURITY IMPLICATIONS OF OIL DEPENDENCY

Mr. DICKS. Mr. McDade and I both serve on the Defense Subcommittee on Appropriations, and we are worried about the national security implications of being this dependent on foreign energy resources. Mr. Secretary, we may have to pay a little bit more here at home to have energy independence. We may have to subsidize because if we do not there will be a risk to the country. It is the continued dependence on foreign oil, in my judgment, that we have to think about as well.

Therefore, there is a very strong national security argument why we ought to attack this problem and why we ought to pay even a little bit more to develop our own energy resources here at home.

It may well be in our interest from a national defense perspective to be less dependent on the Middle East.

Secretary EDWARDS. It is absolutely essential that we be less dependent on the Middle East. If you will help me break loose these publicly held lands and reduce the barriers created by environmental regulations. For example, on the Federal lands in Alaska, which were frozen in 1966, no one has been allowed to put a well since 1966.

Mr. YATES. That is almost a generation.

Secretary EDWARDS. Drilling has been frozen since 1966. No one has been able to put a well down in those great lands up there since 1966, and they tell me there could be two or three Prudhoe Bays up there just for the asking. That is what we can do to get this country on the move and for national security purposes.

Mr. DICKS. This committee is responsible for permitting the NPRA to move ahead and they have continued some drilling over the years. I did not always agree with that because the oil companies could do it better in this instance.

Secretary EDWARDS. I hope we do not put the Government into the drilling business. I really do. We do not want to do that.

Mr. DICKS. I am glad to hear those words because I am with you on that.

However, it seems to me that a more diversified effort is in the interest of the country in getting other people in this business besides the big oil companies and other big energy companies that have dominated the utilities. It is in our interest to get other people trying to produce energy in this country.

Secretary EDWARDS. Well, this is exactly what I want to do.

Mr. DICKS. You have 16 companies out there ready to go and we pull the rug out from underneath them.

ALCOHOL FUELS

Secretary EDWARDS. It is a little bit different approach to the program, I guess, Mr. Dicks. For example, the Department of Energy between now and 1986 has a subsidy for alcohol fuels in tax credits of $4.3 billion. That is not bad little subsidy for an industry such as alcohol fuels.

In solar energy we have tax credits of $2.6 billion and in conservation, $3.6 billion in tax credits. It is not as though we are insensitive.

Mr. DICKS. What was the time frame for that?

Secretary EDWARDS. Between 1981 and 1986. I guess there is a little difference in the way we do it, instead of through outright gifts to all of our friends around the country——

Mr. DICKS. We do not want gifts. We want loan guarantees that the financial institutions say are necessary in order to finance these projects. I am not asking you for grants. I am asking you to continue a modest program of loan guarantees for these people who are willing to put up their own money. We are going to get this money paid back.

Secretary EDWARDS. If the alcohol fuels industry cannot make it with an $18 or $17 per barrel subsidy—by forgiving the 4-cent excise tax—then I do not believe they can make it, period. That is half the price of a barrel of international crude and that is a pretty

hefty supplement. That is pretty good so far as I am concerned and if the industry cannot make it with that kind of subsidy, then maybe it is not financially reasonable to do.

Mr. DICKS. My other colleagues want to ask questions. I yield back, Mr. Chairman.

Secretary EDWARDS. May I just point out, Mr. Chairman, it is 109 million gallons of annual production. I said 106 a minute ago; 109 million gallons of annual production of alcohol today, and by December 1982, it is projected that we are going to have 316 million gallons of new annual production. That is without any subsidy except the one I am talking about so we do have a viable national alcohol fuels program.

COSTS OF SUBMITTING PROPOSALS FOR FINANCIAL INCENTIVES

Mr. DICKS. Do these people get paid back for the money that they have lost? When we cancelled the SST program a few years ago, I recall we paid Boeing $23 million for the money that they had invested.

Now will these small business people who have invested in some cases $1 or $2 million of their own money, and raised the money because the Government said that we want to go and we want to go fast, get a fast track and you are going to be involved. Are we going to pay those people back for the money that they have lost?

Secretary EDWARDS. If they went out and did this they did it on their own, and we do not subsidize poor business judgments in our department.

Mr. DICKS. Therefore, the poor business judgment was to rely on the word of the Federal Government, the Congress and the Executive Branch. Is that what we call poor business judgment?

Secretary EDWARDS. Mr. Dicks, the feasibility studies in the first round were all paid for, and before we went into any co-op agreements there were no commitments as to the money that was forthcoming. If they spent any money it was in anticipation of getting an approval.

Mr. DICKS. The answer is we are not going to pay them back for the monies they risked.

Secretary EDWARDS. We are not in the business of restoring people's losses.

Mr. YATES. Did you yield back your time?

Mr. DICKS. I did yield back but I just took——

Mr. YATES. Kind of like Madam Pavlova's farewell appearance, isn't it?

Mr. DICKS. I never left.

Mr. MCDADE. Would you yield, sir?

Mr. YATES. Mr. McDade.

STATUS OF ANR PROJECT

Mr. MCDADE. Mr. Secretary, what is the status of the ANR process? You have given them a loan guarantee, I believe, haven't you?

Secretary EDWARDS. We hope to proceed with that project and to see it come to fruition.

Mr. MCDADE. Is your loan guarantee in product buy?

Secretary EDWARDS. My budget man says we have not reached a final decision but we hope to go ahead and fund this. We anticipate funding it.

Mr. LEGASSIE. It is a program that comes inside my part of the department, of which I have some current knowledge. We are expecting to receive a revised proposal from ANR within days. We expect that to be for a loan guarantee of about $1.8 billion.

Mr. MCDADE. What is the leverage on that one?

Mr. LEGASSIE. Well, under the Act I believe there is a 3 to 1 provision.

Mr. MCDADE. What will be the total cost of that project?

Mr. LEGASSIE. Well, the Government funds that must be set aside to support $1.8 billion would be $600 million.

Mr. MCDADE. Therefore you are telling me, Mr. LeGassie, that you are contemplating receipt of a request for a loan guarantee of $600 million leveraging $1.8 billion for the ANR process, coal to gas?

Mr. LEGASSIE. That is correct, sir. That has to be funded, it is funded and supported by the department, out of the $2 billion under the authority of the Nonnuclear Act.

Mr. MCDADE. Yes. In addition to that, Mr. Secretary, and I do not know if this is your shop——

Secretary EDWARDS. If it is details we will let one of these two men answer it.

Mr. MCDADE. You are the generalist.

Secretary EDWARDS. They are closer to this project than I am. I have been testifying so much I have not been able to get as acquainted with it as they have been over the years.

SHALE OIL PROJECTS

Mr. MCDADE. Where is the Union oil shale project?

Mr. LEGASSIE. That is a proposal under the Defense Production Act. There are three proposed projects. There is $3 billion available and we are actively negotiating with TOSCO, Union, and Tennessee Synfuels. They have been selected for negotiation and the negotiations are ongoing.

Mr. MCDADE. Are you working in concert with the people over at the SFC?

Secretary EDWARDS. Yes. Representatives of the Synthetic Fuels Corporation are members of those negotiating teams so that if we come to a conclusion of negotiations, those projects would then be able to transfer to the Corporation and would be agreeably received there because the Corporation people will have been full participants in the negotiation process.

Mr. MCDADE. Even absent the board?

Secretary EDWARDS. Yes, sir.

Mr. MCDADE. Tell me what is the amount, if you will, in each individual case? What is the loan guarantee for Union, if it is a loan guarantee? Is that the procedure?

Mr. LEGASSIE. I believe I have some data on what they requested, sir.

Mr. MCDADE. Yes. What I want is current status.

Mr. LEGASSIE. However, in terms of the progress of the negotiations, we are leaving that to the negotiating team.

Mr. McDade. I understand that. What I want to do is get a feel for what is happening under the authorities that we gave you.

Mr. LeGassie. I think I would like to provide the specifics of their proposal for the record, sir, because they have not revealed all of these details publicly.

Mr. McDade. All right.

[The information follows:]

Details of Proposals Selected Under Defense Production Act Authority

The following information is extracted from the Public Summaries which were required to be submitted as part of the formal proposal:

TOSCO OIL SHALE PROJECT

The Oil Shale Corporation, a wholly owned subsidiary of Tosco Corporation, has submitted a proposal for a loan guarantee covering 75 percent of its share of the costs in the Colony Shale Oil Project. Tosco organized the Colony Project in 1964 and is proprietor of the TOSCO II retorting technology which will be used in Colony.

Tosco will participate in the project through its subsidiary, making available its expertise and experience. Exxon Corporation, which owns a 60-percent interest in the project, is not seeking financial assistance for its share of project costs.

The Colony owners plan to build and operate a 48,300 barrel per stream day commercial shale oil complex on their own oil shale lands in Garfield County, Colorado. The complex, which will be located approximately 15 miles north of the town of Parachute, will employ underground room-and-pillar mining, surface crushing and retorting, and onsite hydrotreating of raw shale oil. The principal product of the project would be hydrotreated shale oil, a premium refinery feedstock for direct processing into jet fuel, high octane unleaded gasoline, diesel fuel and other light products. It can also be used without further processing as a fuel for stationary turbines for power generation or other similar uses.

All major critical tasks preceding field construction of the Colony Project have been completed and construction has commenced. Detailed design and cost estimates for the commercial-scale Colony plant were prepared by C. F. Braun & Co. in 1974 at a cost of more than $12 million and were last updated by C. F. Braun & Co. in 1979. The project has received a final Environmental Impact Statement from the U.S. Department of the Interior and all critical Federal and state permits necessary to commence construction.

Approximately 1,200 to 1,600 acre-feet per year of water will be required for construction. Approximately 660 gallons per minute will be used during mining operations, and water needs for operation of the plant complex total approximately 5600 gallons per minute. The Colony Project will use less than one percent of the average water flow in the Colorado River at Parachute, Colorado. Total employment associated with the Colony Project will peak at 3,325 persons in June of 1984. The permanent operational work force for mine and plant facilities will number 1,205 persons throughout the project life.

UNION OIL SHALE PROJECT

Union Oil Company of California has submitted a proposal to DOE to construct a shale oil production facility near Parachute Creek, Garfield County, Colorado.

The facility will include an underground mine, retorts for extracting oil from shale, processing facilities necessary to convert the shale oil to the equivalent of high grade synthetic crude oil, and a syncrude pipeline. Products will initially be shipped by rail and tank truck.

Union's approach for this proposal has been to schedule construction in two phases, an initial module of 10,000 barrels per day capacity followed by expansion to 50,000 barrels per day. Construction and preproduction excavation in a mine to feed the 50,000 barrel per day plant would require not less than three years, whereas a mine initially sized to feed a 10,000 barrel per day plant can be completed in only 1½ years. All permits necessary for construction of the Phase I mine and retort have been issued.

The work force directly employed in construction will average 2,000 persons for the years 1981 through 1987, with a peak of 4,700 in 1986. A permanent operating crew of 1,100 people will be reached in 1988.

Union has proposed that the U.S. Government assist in financing the construction of the 50,000 barrel per day shale oil facility through the mechanism of advance payments and purchase commitments for Defense Department fuel purchases. The

contract would provide the government approximately 52 million barrels of military fuels for the Defense Department, in return for advance payments and/or "premium" payments above the market price of those fuels. The fuels would be delivered over a period of 10 years.

TENNESSEE SYNFUELS COAL LIQUEFACTION PROJECT

Koppers Company, Inc. of Pittsburgh, Pennsylvania, has organized a group which plans to build and operate a major synfuels plant near Oak Ridge, Tenn. The initial plant will be designed to produce approximately 140 million gallons of gasoline from 2 million tons of coal (per year). With future additions, a total of 700 million gallons of gasoline would be produced from 10 million tons of coal (per year).

The technology that will be employed to convert Tennessee coal to gasoline consists of KBW gasification, Pullman Kellogg methanol synthesis, and Mobil's MTG catalytic process to convert the methanol to gasoline.

The projected work force calls for hundreds of engineers to complete the design phase, and over 2,000 construction forces required during peak building periods. The facility will require about 250 employees for operation of the initial plant. Also it is predicted that over 700 additional jobs will be created to support the coal mining and hauling activities.

The group organized to finance, build, and operate this major synfuels facility has the following equity partners: Koppers Company, Inc., Cities Service Co., and the Continental Group, Inc. This group has filed an application for loan guarantees and purchase commitments/price guarantees with the DOE.

Mr. McDADE. When we cover the range, we are talking about ANR, Union, TOSCO and Tennessee Synfuels.

Mr. LEGASSIE. Yes, and Tennessee Synfuels. Let me just say it again. There is $3 billion under the Defense Production Act and three companies who are being negotiated with, Union, TOSCO, and Tennessee Synfuels. There is $2 billion under the Nonnuclear Act, and ANR is a potential claimant on a portion of that. In addition to that there are 10 other proposals that have been received and are being evaluated.

Mr. McDADE. They are in the department now.

Mr. LEGASSIE. They are in the department. None of these have been selected for negotiation. It is a step ahead of that. We are examining these 10 proposals.

Mr. McDADE. Put the 10 into the record, will you?

Mr. LEGASSIE. Yes, I will do that also, sir.

[The information follows:]

LIST OF PROPOSALS QUALIFYING UNDER FEDERAL NONNUCLEAR ENERGY R. & D. ACT

Fifteen proposals were received pursuant to the Federal Non-Nuclear Energy Research & Development Act. Five were disqualified, under initial screening, for a variety of reasons (such as failure to meet basic criteria):

Great Basin Hydrocarbons Inc.—tar sands.
Aarian Development Inc.—tar sands.
Stockyard Energy Associates—waste heat-electricity.
hampshire Energy—coal liquefaction.
Shale Development Corp.—shale oil.

Ten proposals qualified for detailed evaluations. These are:

Paraho Development Corp.—shale oil.
TOSCO (The Oil Shale Corp.)—shale oil.
Cathedral Bluffs Shale Oil Co.—shale oil.
Great National Corp.—tar sands.
Energy Transition Corp.—peat.
Banklick Corp.—coal-oil mixtures.
CoaLiquid, Inc.—coal-oil mixtures.
WycoalGas, Inc.—coal gasification.
Fusion Energies Corp.—electrolysis.
Westken Petroleum Corp.—tar sands.

Mr. LEGASSIE. That is the full set of such activities. All of these are real projects which are committed to go to construction if we sign an arrangement, as opposed to feasibility studies which are paper or cooperative agreements which do not contain commitments to construct.

AUTHORITIES AVAILABLE TO SFC

Mr. MCDADE. Okay.

Mr. Secretary, on these there is a lot of movement by the department. We have been back and forth on SRC–I and SRC–II. You have before us some recommendations by the department in both instances.

It is recognized that the function of the Synthetic Fuels Corporation is to act as a bank, and we heard that term expressed this morning. Recognizing that these projects are very high-risk demonstration projects at a commercial-type stage, how can we possibly expect that they would be funded if they were to be looked at, for example, by the attitude of someone who was a banker and who was going to look at a first-time construction start on a project that had never been built before?

Secretary EDWARDS. Well, I think, as I understand it the Synthetic Fuels Corporation has a little more flexibility than a bank because they can underwrite projects in a variety of different ways.

Roger, what are the different ways? You can go with loan guarantees.

Mr. LEGASSIE. Price supports.

Secretary EDWARDS. You can go with price supports, that type of thing, and a bank does not have that flexibility so this is one of the things that was, I think correctly so, built into the Synthetic Fuels Corporation to give them more flexibility than a bank.

Mr. LEGASSIE. They do indeed have not only the——

Secretary EDWARDS. Joint ventures.

Mr. LEGASSIE [continuing]. Capability for a joint contract but the congressional language that lays behind that, and I do not happen to have the conference report in front of me, talks about the idea that the Corporation is authorized to undertake joint ventures for synthetic fuel project modules. These are defined to be demonstration projects of a size smaller than a synthetic fuel project which can eventually be expanded at the same site into a full-scale commercial synthetic fuel project.

Therefore, it appears that Congress has provided, in addition to the main-line activity of the Corporation, which is support for commercial plants, that the Corporation does have the power to deal with demonstration projects of a size smaller than that. These might represent a module as opposed to a full-scale plant. A number of the new projects I think adequately fall within that definition.

Mr. MCDADE. As I read the statute, portions of it, it says:

> The corporation shall not award assistance in the form of loans or joint ventures unless the board determines that these price guarantees, purchase agreements and loan guarantees will not adequately support the construction and operation of a synthetic fuel project or will restrict the available participants for such a project.

Mr. LEGASSIE. That is very pertinent language and I think it is very clear that in the case of something like one of the SRC plants,

that definition would easily be met. It is really not conceivable to think of such a project being funded by a loan guarantee or a price support, and the finding the board would have to make under that paragraph I think would be relatively straightforward. It would get them down to the joint venture decision.

Mr. McDade. Our concern is with joint ventures, for which this is a candidate. They are the lowest priority that the congressional act, that set up the Corporation, directs. What makes us so interested in these projects is that they rely upon coal in a conversion process and attempt to substantially upgrade technology in this country. That is the reason we share that common goal to upgrade technology in this country, to use our most abundant resource, which is coal, and try to get it into a form that we can use in the current system, be it pipeline transportation or whatever.

You are not the Corporation and that is what is troublesome. We did get some testimony that the Corporation would be delighted to consider these projects. I have been around the town a long time. "Consideration" is one thing; "commitment" is another.

We had these projects scaled up because we wanted to demonstrate this technology, at a risk pay for the risk of the technology, and put the country in a position where we might be able to replicate it and use coal as a supplement to direct combustion and as a back-out for OPEC oil. It is troublesome to the committee, as you can see from the questions, to think that they will not be funded because of the potential for letting us rely on our own resources.

RISK OF SYNTHETIC FUELS PROJECTS

Mr. LeGassie. There is an element of concern that I have, Mr. McDade, that I would like to share with you. I am concerned that these projects may embody such risk and be of such a size and scale-up that I am wondering whether we indeed can do them at the kind of cost levels that we have indicated.

Both projects, both SRC–I and SRC–II, are incurring internal cost growth at this moment.

Mr. Yates. What kind of growth?

Mr. LeGassie. Internal cost growth. We are seeing an increase in the estimated cost for both of these projects. I am responsible for looking at this. I am concerned about it. We are dealing with projects which are really 95 percent Government-funded. History has told us that one needs to be concerned about that.

Projects that have gone better, have a greater degree of cost sharing. Staying in the coal area, which you know well, the Exxon-donor solvent pilot plant is 50–50 cash shared with a major company. That company put its money up for this, a substantial sum of money. They worked very hard to make that project successful, which indeed it is.

Here, in the SRC projects we have a case where this is mostly Government money.

Mr. McDade. Is it 95 percent SRC money, too?

Mr. LeGassie. Yes, sir.

Mr. McDade. Well, what happened to Germany and Japan?

Mr. LeGassie. Well, we have a cost sharing with the governments of Germany and Japan but those are also governments, and I am saying that the industrial sponsor in each cases, Gulf on the

one hand, Wheelabrator-Frye and Air Products on the other, are contributing $100 million but these projects are a billion and a half.

Mr. YATES. I think that is a valid point.

Mr. MCDADE. Therefore, your argument is that they have not come up with nearly sufficient funds.

COMMERCIAL GASIFIERS

Mr. LEGASSIE. Well, I am concerned. I mean, I would not want to argue that either because it may be that the degree of risk that the projects embody is such that their contribution is appropriate.

What I am trying to say is something slightly different, which is that maybe we are trying to do too much, too fast with these projects. Maybe they are bigger than they ought to be. Maybe they are more ambitious than they ought to be. Maybe we need to attack the objectives you have indicated through some other route, as indeed we are.

There are other projects and other activities which are also directed at trying to ensure that Eastern coal can be utilized for synthetic fuel manufacture: the Texaco gasifier, the Shell gasifier. Texaco is marketing its gasifier commercially. Shell has indicated their intention to commercialize.

Mr. MCDADE. Is that coal to gas?

Mr. LEGASSIE. Yes.

Mr. MCDADE. What kind of gas, high, low, or medium Btu?

Mr. LEGASSIE. It is a medium Btu gasifier.

Mr. MCDADE. Where is that plant?

Mr. LEGASSIE. They have a pilot plant, the location of which escapes me at the moment but it is about a 150 ton a day plant which is operating and has been providing the basis for their marketing activities.

If you look at the proposals that have been made to the Synthetic Fuels Corporation and to us, you will see the Texaco gasifier in a very large number of proposals.

Mr. MCDADE. Is someone going to take that technology and build a plant using a Texaco gasifier?

Mr. LEGASSIE. A number of companies have proposed to build synthetic fuels plants if they can get the support of their corporation, using the Texaco gasifier.

Mr. MCDADE. Would you indicate for the record which ones they are?

Mr. LEGASSIE. Yes. We see them in the feasibility studies and cooperative agreements of both round one and round two where there are a large number——

Mr. MCDADE. I was more interested in the people who are going to do it.

Mr. LEGASSIE. Well, I have some of that here and could find that but perhaps it is easier to submit it for the record.

Mr. MCDADE. Yes. We could put it in the record.

[The information follows:]

COMPANIES PROPOSING USE OF TEXACO GASIFIER

Several commercial projects submitted to the Department of Energy under the interim Alternative Fuels program propose the use of the Texaco Coal Gasification

Process. The following companies are included (in some cases, the firm indicated that the Texaco gasifier was one of several possible choices):

FIRST ROUND FEASIBILITY STUDIES/COOPERATIVE AGREEMENTS—PROJECTS SELECTED

Central Maine Power, Augusta, Maine.
EG&G, Wellesley, Massachusetts.
Celanese Chemical Co., Dallas, Texas.
Union Carbide, Tonawanda, New York.
Arkansas Power & Light, Little Rock, Arkansas.
Wycoal Gas, Inc., Wyoming (primary gasifier is Lurgi; Texaco gasifier planned for residue and by-products).

SECOND ROUND FEASIBILITY STUDIES/COOPERATIVE AGREEMENTS—PROJECTS SELECTED

Cool Water Coal Gasification Program, White Plains, NY.
Pacific Gas & Electric, San Francisco, CA.
Massachusetts Municipal Wholesale Electric Co., Ludlow, MA.
Midrex Corp., Charlotte, NC.
Ohio Valley Synfuels, Pittsburgh, PA.

PROJECTS SUBMITTED BUT NOT SELECTED

Northwest Pipeline Corporation, C. F. Braun & Co.
Northern Indiana Public Service Co., Buffalo Coal Company.
Cities Service Co., United Synfuels Corp.
Public Service Electric & Gas Co., MAPCO Coals Inc.
United Technologies Research Center, CEI/AECI Joint Venture.
San Diego Gas & Electric Co., Ill. Inst. of Natural Resources.
Environmental Recovery of America, Inc., Northern Synthetic fuels Corp.
Washington Energy Resources, Billings Energy Corp.
General Electric Co., Houston Gas.
Power Authority of the State of NY, Reading Anthracite.
Kaskaskia, American Methanol Fuel Corp.

Two projects being supported by the DOE Office of Fossil Energy make use of the Texaco gasifier: the Solvent-Refined-Coal II demonstration project, in which the system will convert the residual material into hydrogen used in the process; and the W. R. Grace commercial coal-to-gasoline plant design, where the system is the inital step of the indirect liquefaction process. The prime contractor for the SRC-II project is Solvent-Refined-Coal International Inc., which is a joint venture of Pittsburg & Midway Coal Mining Co. (a subsidiary of Gulf Oil), a consortium of five Japanese industries, and a German joint venture composed of Ruhrkohle, A. G. and Veba Oil Co.

COST INCREASES IN SRC PROJECTS

Mr. LEGASSIE. My point is that there are a number of approaches to this same technological solution that are in progress, and I heard you discussing your support for these two projects but I wanted to tell you that there are some concerns now about what these projects are going to cost.

Mr. MCDADE. What kind of a cost increase are you looking at?

Mr. LEGASSIE. Well, I am reluctant to cite a specific number to you because of the fact that the data is still under review.

Mr. MCDADE. Do you mean you have been put on notice by the applicants that it is going to require an additional——

Mr. LEGASSIE. We have had a process that called for a January date, what we call a January base line, on proposed projects, in which we were to be given the latest estimate of costs and schedules for the projects. We have received submittals in both cases. The numbers in those submittals are higher than the current cost estimates and we are trying to first understand why that is so and secondly, ask ourselves whether there are remedies to that situa-

tion in terms of actions that might be taken to reduce cost or hold a project within cost.

We are in the middle of a very intensive examination of all of that and I think we are not certain of our facts or our data until we have sorted out the submissions. Therefore, I would prefer to have a little more time to complete that kind of examination before discussing specific numbers. However, we are seeing these trends and they are concerning us, and I wanted the record to reflect knowledge of that.

Mr. YATES. What is the nature of the trend, if he does not have a number? Why are you concerned?

Mr. MCDADE. He is talking about an upward trend.

Mr. YATES. I know, an upward trend but of what magnitude?

Mr. LEGASSIE. Several hundred million dollars.

Mr. YATES. Of which the Government is supposed to pay nine-tenths and Gulf one-tenth?

Mr. LEGASSIE. In both cases, since the growth is in both projects. They have a common technological base and generically are very similar in many respects, although they make different products. What we are seeing does not seem to be a function of one particular project versus another project, but is a phenomenon that is occurring in both projects.

Mr. MCDADE. Okay. Thank you.

HIGH BTU GAS DEMONSTRATION PLANT

Mr. YATES. Is that trend pertinent, too, in connection with the high gas project in Perry County, Illinois?

Mr. LEGASSIE. The high Btu plant, the Ohio plant?

Mr. YATES. Yes. The Ohio plant is dead, as I understand it. The sponsors have withdrawn. I read in the paper that Conoco withdrew from the competition.

Mr. LEGASSIE. Conoco, yes, that is my understanding also.

Mr. YATES. Therefore we only have one remaining.

Mr. LEGASSIE. The remaining one is the Illinois plant, ICGG's. That project has had several increases in cost from its initial estimate. In terms of a final estimate of cost, that will not be available now and there is no revision to that number until we complete the final design, which is scheduled for June or July of this year.

At that time there will be, a cost estimate based on having a final design. I cannot tell you whether than number will or will not be higher than the current estimate for the project.

Mr. YATES. Is that the reason that no funds were put in the 1982 budget?

Mr. LEGASSIE. No, sir. Again, in that case, that project could be proposed to the Corporation and the position that was taken on all five demonstration projects was that, if built, they should be supported in the same place as other large synthetic fuels projects, and that should be the Corporation.

Mr. YATES. This is as far removed from commercial viability as the SRCs, isn't it? Isn't it still an incipient demonstration plant?

Mr. LEGASSIE. Well, I believe that the Conoco project had some greater aspects of commercial viability associated with it than the Illinois Coal Gasification Group project but again, that project was

proposed to us in a demonstration mode. That same technology could be proposed in a commercial mode if the sponsors felt that was appropriate. I mean, it does not have to be the identical thing. It could be reconfigured, and if you want to talk about a successful case, it appears that the Memphis project, for example, is as I understand it moving vigorously to submit a proposal to the Corporation by March 31 of a character that the Corporation can indeed consider. In my judgment, that project should have a very good chance to be selected.

Mr. YATES. Do you know whether the project in Illinois is ICGG?

Mr. LEGASSIE. ICGG, Illinois Coal Gasification Group.

Mr. YATES. Do you know whether or not they are contemplating applying to the Corporation?

Mr. LEGASSIE. I have had several direct conversations with them, and at this moment they have not determined to make such an application. I think they view it as a difficult matter and as far as I know they are still considering it. They have been in to talk to us about those questions.

Mr. YATES. As far as the Government is concerned, it would still have to occupy a position in a joint venture with such a company and have to put up its share of the funds, wouldn't it?

Mr. LEGASSIE. Yes. They would come in under the joint venture authority. They could ask for 60 percent funding from the Corporation. They would have to provide 40 percent.

Mr. YATES. Do you remember what the total cost is predicted to be for that?

Mr. LEGASSIE. It is $1 billion in round numbers.

Mr. YATES. Therefore, they would have to put up about $400 million.

Mr. LEGASSIE. That is right.

Mr. YATES. That is a goodly sum.

Mr. LEGASSIE. Yes, but certainly not beyond the capability of a consortium of companies in the private sector to raise.

Mr. YATES. Of that kind?

Mr. LEGASSIE. Well, the present partners are utilities, and that kind of money is difficult for utilities to raise but if the technology is good, they could seek the assistance of other corporations, and they have had this kind of conversation. $400 million is not a number that is beyond the capability of the private sector to raise. Look at ANR with its——

Mr. YATES. What is the status of your conversations with them? Are they to call you back, or are you to call them back?

Mr. LEGASSIE. If there is further action, they will be contacting me. I have had several meetings and several discussions with them, in some cases along with congressional supporters, as you might expect. We have discussed the nature of the situation. We have offered them any assistance that they want to seek from us of any character that is appropriate for us to give, and they indicated that they were going to go away and think about the problem, and that they might be back in touch with us. That is where it is.

Mr. MCDADE. You were going to say how much they had on the table. How much do they have on the table?

Mr. LEGASSIE. Well, I was saying that up to 40 percent, I mean, if it is a billion dollar project then a 40 percent share under the

corporation would mean that they would have to then raise $400 million.

Mr. McDade. For the joint venture?

Mr. LeGassie. For the joint venture support of a demonstration module.

Mr. Yates. This is the only way it can be done under Synfuels funding, as I understand it. Is that correct?

Mr. LeGassie. That is correct.

Mr. Yates. It is a legislative condition.

Mr. McDade. Are we talking about ANR?

Mr. LeGassie. No. We are talking about the Illinois Coal Gasification Group. No, no, I was not talking about ANR.

Mr. McDade. All right. I thought you were talking about ANR.

Mr. LeGassie. ANR is going through a loan guarantee.

Mr. McDade. When you were referring to the $400 million you were beginning to say how much ANR had up.

Mr. LeGassie. Yes. What I was thinking of, what was running through my head was the fact that ANR is able to get financing sources, obviously, for $1.8 billion with a loan guarantee.

Mr. McDade. Yes. The loan guarantee is the catalyst.

Mr. LeGassie. The loan guarantee is the catalyst.

Mr. Yates. That option is not open to the ICGG group?

Mr. LeGassie. The analysis we have in hand, sir, says that that project could not continue to operate and sell its product at commercial prices and recover its cost, which is really the situation you have to be in if you are going for a loan guarantee.

Mr. Yates. It has to be commercial, in other words.

MEMPHIS GASIFICATION PROJECT

Mr. LeGassie. Yes, sir. Now the Memphis situation is different. Memphis could possibly come in and request a loan guarantee rather than go through a joint venture route because Memphis has always intended, even in the arrangements with us, to continue to operate the plant as a stable supply of fuel gas for some 25-year period which would be the operating life of the plant, and it is therefore already a commercial size.

I think their projection of what gas prices are going to be and so on, suggests that they would or could indeed be a commercial venture. Therefore, I am not sure whether Memphis will come in and request a loan guarantee or whether Memphis will——

Mr. McDade. As I recall, they had agreed to pay it back.

Mr. LeGassie. Yes. They were going to repay us for our front-end service. They might be able to go either way and I am not certain which way they are going to propose or what their detailed analysis is but they have visited the Corporation a large number of times already, and have indicated both to us and to the Corporation their intent to submit a proposal by March 31.

ICGG DEMONSTRATION PLANT

Mr. Yates. How much money is involved in the construction of the plant in Illinois?

Mr. LeGassie. Well, that is the——

Mr. Yates. It is $1 billion total.

Mr. LEGASSIE. ICGG is $1 billion total, yes.

Mr. YATES. What rescission is proposed in the Carter budget for 1982?

Mr. LEGASSIE. The funding for 1982? I think it was zero because there were existing carryover funds which were adequate to——

Mr. YATES. How much would have been the funding?

Mr. LEGASSIE. Oh, I am sorry. I remember now. The scenario of the Carter budget proposal was that we had two projects, Conoco and ICGG, both of which could be funded through the completion of designs.

Then it was anticipated that there would be a selection, and the fact that there was zero in the 1982 budget had behind it the unspoken or perhaps spoken assumption that the department would be obligated to come to Congress with a supplemental request once it had selected a contractor and ask for the money necessary to proceed with the construction. Therefore, our estimate was that this was an unfunded obligation that lay in that budget request for over $100 million.

Mr. YATES. For 1982?

Mr. LEGASSIE. Yes. Of course, we also had money in 1981 which would have taken us through that selection process.

Mr. YATES. Is that being rescinded now?

Mr. LEGASSIE. Yes. We are recommending the rescission of some $44 million that is in the 1981 budget.

Mr. YATES. Which would have provided the design.

Mr. LEGASSIE. Well, which really is unnecessary in the sense that we have an adequate amount of carryover from 1980 into 1981 to fund that, too.

URBAN CONSORTIUM

Mr. YATES. Let me change the subject here for a moment and talk about something that is close to the hearts of some of the cities in the country.

What about the Urban Consortium, Mr. Secretary, is there any reason why that should not be funded? It works out very well in cities such as Chicago and others.

Secretary EDWARDS. Mr. Chairman, as you know this was a $2 million program. It was a single grant and it was late getting in. Probably it would have been approved if it had gotten in earlier.

We are willing to look at this grant. Most of the projects included are not really moving in the direction of the adminstration but there are several programs that I would certainly be willing to take a look at and fund those projects, with the understanding that some changes be made in the projects to make them more in line with what we want to accomplish.

Mr. YATES. Can you tell me what those are?

Secretary EDWARDS. There are several projects there, I think.

Mr. YATES. I do not mean the projects themselves. What do you mean by "changes"?

Secretary EDWARDS. Well, there are some educational projects and that type of thing.

Mr. YATES. That ought to be deleted?

Secretary EDWARDS. No. I think we can work with these projects and change them around and fund them for 1981. I would prefer not to make any funding in 1982 but in 1981 we could go ahead and

fund these projects. I understand there is a lot of support for them and there is some good that will come out of it, and help some people.

SYNTHETIC FUELS INDUSTRY

Mr. YATES. Well, good. I am glad we are funding something that is good.

We have been funding something that is bad, apparently, because you have your termination costs all prepared for the SRCs.

There is one thing that concerns me, and of course I assume it concerns my friend, Mr. McDade. What happens to the synfuels industry? The philosophy of the committee in providing the funding for the SRCs was that it was very important to move ahead quickly for alternate fuels because of the plight in which we find ourselves, being so dependent upon foreign sources of energy.

The Reagan administration apparently believes that the synthetic fuels industry will still be able to move forward if handled through this new arrangement with the Synthetic Fuels Corporation, at the same speed and at the same pace. What is your impression of that?

Secretary EDWARDS. Mr. Chairman, I think the administration feels that with the price of energy today that the private sector is going to be moving into this area. However, as you know we have about $20 billion that we will devote to this. We would like the private participation, and if we get that I think surely it is going to move along very vigorously, for two reasons, because of the underwriting of these projects and also because of the cost of energy today. I think that we will definitely move forward in this area and we are in favor of it.

Mr. YATES. This committee finds itself in somewhat of a predicament, though. You have asked us to rescind the appropriation for SRC–I. You have not asked us to rescind the appropriation for SRC–II. I assume you are going forward with SRC–II for $32 million, as I remember.

Mr. LEGASSIE. The situation is really similar between the two projects but the reason they are treated differently is because of the international arrangements around SRC–II where decisions need to be made on several levels.

Mr. YATES. Returning to the predicament this committee finds itself in, if we approved the rescissions and funds are stopped, what happens if the companies cannot find a basis for agreement with the Synfuels Corporation?

Mr. LEGASSIE. Then one waits until another time and another sponsor.

Mr. YATES. That is a very direct and candid answer. We appreciate that answer. In other words, we just have to wait and let that work out.

Do you know what the prospects are, as a result of your talks with the SRC corporations and with Synfuels? Would that be an unfair question to ask you in view of the fact that they have to compete with others?

Secretary EDWARDS. Mr. Chairman, if I might answer, I think it is a little premature because we do not have the new Board at the Synthetic Fuels Corporation. I think the staff is going to be waiting

to take direction from the new Board and they are not on board yet.

Mr. YATES. Do you know when they will come be on board?

Secretary EDWARDS. We hope very shortly, Mr. Chairman.

Mr. YATES. Yes, but we have to act on the rescission. It is going to be a very difficult decision to make. However, that is our decision, isn't it?

Secretary EDWARDS. I would like to plead with you that before you act on that decision, that you take another look at the financial aspects of this.

Mr. YATES. We do not have that, and that is why we want to get the financial aspects.

Secretary EDWARDS. Roger, can we get——

Mr. YATES. Roger just told us about the trends rather than giving Mr. McDade the direct answer. You said you did not have the numbers yet but you are very concerned with the trend of it. I assume you are very concerned about the relationship between the contracting parties, with the Government having to contribute nine-tenths of the additional costs.

Mr. LEGASSIE. That could be cured if the requirement of the corporation is that it does not allow——

Mr. YATES. Yes, of course.

Mr. LEGASSIE. I believe, sir, that there is a hearing scheduled for April 2 when you and I will have a longer opportunity to talk about this.

Mr. YATES. I think that is probably going to be a more fortuitous, happier occasion than now because I must say there are not many people at home in your shop right now except those that have been there a long time. You do not have the chiefs on board except for Mr. LeGassie, whose contribution today I think has been quite valuable.

Secretary EDWARDS. Mr. Chairman, we have some mighty good people over there that we have found in the department that are in an acting capacity, such as these two gentlemen here. We are moving ahead we will have our upper management on board soon.

Of course, as you know in this field you are only so good as your staff is.

Mr. YATES. I know. You do not have a staff. I do not want that to reflect on you, Mr. Secretary, but you do not have a staff.

I want to ask you about some things. You are scheduled to come in tomorrow morning. You would rather do some other work, I am sure. Let us take another 15 or 20 minutes.

Secretary EDWARDS. Any time that you can give to work on getting my staff together, I would appreciate, Mr. Chairman.

CONSERVATION

Mr. YATES. I want to talk to you about conservation. I am very much concerned and upset by the cutback of $700 million.

Secretary EDWARDS. Yes, it is about that.

Mr. YATES. That to me may be the most wasteful kind of economy. I can understand Mr. LeGassie's concern about the trend of costs and the ratio of contribution by contractors and governments but this seems to me to be the height of unwisdom because conservation, as I understand it based on the testimony and opinions I

have read of all experts, is the single best short-term investment we can make. Why, then, are we cutting back $700 million?

Secretary EDWARDS. Mr. Chairman, we feel, and I think rightly so, that the things that we do in this department or the things that Government can do are really not as effective as the price mechanism. Energy has reached such a level in the last four or five years that the price is driving everybody to conservation.

I think that the only thing that made me move to a smaller automobile and a diesel-powered automobile, and the only thing that made me get up in my attic and insulate it and put those weatherstrips on the doors, was the bill I got from different companies to pay for my energy use. Therefore, we feel that the marketplace is a driving, motivating force and it has worked, and there is proof that it has worked.

APPLIANCE EFFICIENCY LABELING

Mr. YATES. Let's take one of the items being cut back, the question of conservation that would come through Government aid for appliance information. That is right, isn't it?

Secretary EDWARDS. Yes, labeling.

Mr. YATES. Would you in conference with Mr. Stockman reconsider something like that and possibly the other items? I am going to point to a statement that Mr. Stockman made which appears in the legislative history for the 95th Congress, January 1979, page 8922.

Mr. Stockman said:

> Now that consumers are faced with a sharply-rising cost of electricity, the central policy choice for Congress is whether to rely on market forces alone.

You just got through telling me that you are going to rely on market forces.

Secretary EDWARDS. For the most part. We do have some money in conservation, however.

Mr. YATES. I know. You have $200 million left. That is right. However, here is what Mr. Stockman says about the market forces that you are talking about:

> There is some reason to doubt that market forces alone will bring about the needed shift to more efficient appliances. Numerous witnesses appearing before the subcommittee testified that the average consumer looks for a payback from higher purchase prices within three years. In the case of an appliance with a useful life of 10 years, this short payback horizon severely limits the amount of higher purchase price the consumer will accept in choosing a more efficient product over a cheaper, less efficient product.
>
> A second reason to doubt the efficacy of higher electric prices in changing consumer appliance buying habits is a lack of information that would enable consumers to judge the relative efficiency of competing products, as well as a widespread lack of understanding of the little information that is available.
>
> A third reason that would support a regulatory approach is that the appliances in many new residential units are not purchased by the user but are purchased by the builder who will continue to seek applicances with the lowest initial cost without regard to increasing electric rates.
>
> In the face of these factors inhibiting the operation of market forces in the consumer appliance sector, a regulatory program designed to impose—to impose, sir—life cycle cost purchasing on the consumer appears justified.

Now that is Mr. Stockman, who has been leading the charge against such kinds of regulations.

Secretary EDWARDS. Mr. Chairman, that is an area that Mr. Stockman and I are not in agreement on. I just happened to buy a refrigerator the other day, Mr. Chairman. Right on the front was a big yellow label and it had the cost basis of so much per kilowatt hour, and how much it would cost to operate that particular refrigerator for a year.

Mr. YATES. Weren't you glad to have that?

Secretary EDWARDS. It was a pretty good thing.

Mr. YATES. The reason you have it is because that was required by the Congress. Now you do not want to enforce that.

Secretary EDWARDS. However, you said the information was not there, and the information happened to be on there but it was put out by the company.

Mr. YATES. It will not be there if your reduction goes through. Within the $700 million being cut, one of the items is from the department or bureau that is responsible for requiring that information to be put on that refrigerator.

Secretary EDWARDS. Mr. Chairman, we feel and I feel that the private sector would continue that operation so that the people would know which one was best. It is a good sales promotion. That is the thing that made my wife go over there and look at it and buy that particular one.

Mr. YATES. Your wife was absolutely right and the best thing you did was to marry her.

Secretary EDWARDS. Mr. Chairman, for the record, I want that underlined.

Secretary EDWARDS. She has put up with me for 30 years in all sorts of new jobs that I have taken on.

Mr. YATES. I know. You should have stayed in the dentist racket, shouldn't you?

INDUSTRIAL ENERGY CONSERVATION

Mr. YATES. At any rate, the point I am making is that it seemed to me that that conservation program was very effective. I have great trouble with the desire to cut back the funding for what everybody says is a useful operation.

Now another item that is cut back is Mr. Harvey's industrial conservation application. I must say I sat and listened to Mr. Harvey testify before the committee and I was impressed with what Mr. Harvey was telling us about how the Government and industry were combining in innovative practices and techniques that were really going to save energy.

You say industry will take that up but industry does not. It does not take it up because it is looking for ways to save money and to get the Government to put a little money with which to do it. I hope industry does take it up.

Secretary EDWARDS. Mr. Chairman, industry is taking it up. There is evidence that industry is taking it up and it is the financial officer down there who is having to pay those bills in that business that is the driving force to make these people move into new conservation technologies. Industry is in fact doing a super job of reducing their need to use energy.

Most of the industries in this country were created back in a time when we had cheap energy and we really did not address

ourselves to the energy problem but since the recent increases in the price of energy over the last three or four years, that financial officer is really putting a lot of pressures on the managers to move into energy conservation. There is lots of evidence available to show that the marketplace is providing that driving force.

Mr. YATES. That is the marketplace working when regulations are going to be withdrawn. I hope that industry does continue it.

Secretary EDWARDS. Mr. Chairman, I have great faith that they will continue it, and I think that is most effective. All the dictums we can hand out from over at the Forrestall Building in a year's time will not do what the price of that energy bill is coming into that company's financial officer.

Mr. YATES. I wonder whether the company would have put that sign on your new refrigerator if that program had not been started. I believe that they would not have.

Secretary EDWARDS. Well, I think they probably would have. If I were in the manufacturing business I would put those labels out front as a sales promotion.

COMPLIANCE PROGRAM

Mr. YATES. We wanted them to do it for the first five years of the program and they never did it. It was only when the Government moved in that they decided to do it. At any rate, we will go into the question of conservation when your conservation people are up here.

I must say, too, I am troubled with what the administration proposes to do with your Compliance Division. I listened to Mr. Dicks' questions, and I respect your responses but they still do not make sense to me because you have $11.4 billion in violations that have not yet been litigated or settled. You are cutting back the number of persons who will be engaged in trying to support the Government's position on this. It will decrease from a 500-member Special Counsel's Office to a skeleton force.

Secretary EDWARDS. There is about a thousand, Mr. Chairman, in that program.

Mr. YATES. How many people are you going to have to handle this program now?

Mr. EDMONDSON. I think the number in fiscal year 1982, I believe is down to 235 in the Compliance Office.

Secretary EDWARDS. Two hundred and thirty-five at the end of 1982.

Mr. YATES. The total of ERA is dropping from 1,982 to 399 at year-end.

Secretary EDWARDS. Mr. Chairman, once again, we want the auditors to go and do the auditing and after that is over we do not see any reason for keeping an awful lot of them around. We will then have the attorneys come in and prosecute the cases.

Mr. YATES. Don't you need the auditors to help the attorneys prosecute the cases?

Secretary EDWARDS. Well, once the audit has been done we will need some auditors but we will not need as many as we have on board right now, Mr. Chairman.

Mr. YATES. Yes, but you are cutting them back, you are cutting back 80 percent plus a 12-month deadline to complete pending

audits and lawsuits against the oil companies. Why do you establish a deadline?

Secretary EDWARDS. Mr. Chairman, we want to do away with the regulatory aspects and any cases left over we are going to turn over to the Justice Department and let the Justice Department take care of those. There will be no amnesty for any oil companies during my term.

Mr. YATES. But my dear friend, the former Governor of the State of South Carolina, how are you going to finish by the deadline with a skeleton staff?

Secretary EDWARDS. Mr. Chairman, we are vigorously moving ahead to prosecute these cases now and bring them to a settlement.

Mr. YATES. Mr. Secretary, doesn't it make more sense if you have a deadline to put more people on so that you can complete it by the deadline?

Secretary EDWARDS. Mr. Chairman, we have to get some money to help decrease the deficit so we can get this inflationary spiral under control.

Mr. YATES. You have an overcharge of $11.4 billion, a pool of money that is going to go down the drain. The oil companies are not going to pay it voluntarily.

Secretary EDWARDS. Mr. Chairman, there is a record of collecting 50 cents on the dollar. We are going to put pressures on the oil companies to settle these as rapidly as we can and we are moving vigorously in that area.

Mr. YATES. Mr. Secretary, I will bet you that the oil companies are going to put pressure right back on you. If you have established a deadline and if you have cut back your people, they are going to do everything they can to delay the proceedings until past the deadline. Then they will say, "Take us to court," and you are not going to be able to take them to court.

Secretary EDWARDS. Mr. Chairman, the Justice Department can take them to court. That is certainly within their right to take them to court. We will turn these cases over to the Justice Department and if we need a supplemental appropriation to handle it, we will be coming back to you at the end of 1982 to ask for that.

Mr. YATES. You are going to turn the cases over to the Justice Department and they are going to try to negotiate with the oil companies without having the material with which to try to settle a case.

Secretary EDWARDS. Mr. Chairman, there is no reason why we cannot transfer them. We hope to settle these before we turn them over to the Justice Department, and if later on we need a supplemental appropriation to help with the enforcement aspects we will come back and ask you for it in 1982.

Mr. YATES. Suppose the committee were to disagree with you on this and tell you to keep the people you have and work harder in order to dispose of your settlements and your cases? Doesn't that make sense?

Secretary EDWARDS. Mr. Chairman, I would like to see the whole section defunded and a close-out that is a responsible way to close it out.

Mr. YATES. However, you have $11.4 billion in cases of overcharge. From what I gather, Mr. Secretary, it is not only an amnesty, it is really a slamming of the door against possible negotiation.

If I were an oil company executive, in the face of that kind of an announcement I would say, "Delay, delay, delay, we are not going to pay this back."

Secretary EDWARDS. Mr. Chairman, we have $11.9 million in that compliance section. We have $24 million in ERA totally so it is not as though we do not have any funds to work with. Certainly we are going to have to decrease it and we have a schedule for decreasing it.

Mr. YATES. You are going to give me the same kind of argument that the administrators have given me who came in and said, "We are going to streamline our departments."

I said, "Well, you are going to be cut back almost in half. Is that what you call streamlining?"

He said, "Yes, sir."

I said, "Well, how are you going to operate your department?"

He said, "We are going to have to become very much smarter, Mr. Chairman."

Will Mr. LeGassie have to become smarter than he is, do you think, in order to operate within the defunding?

Secretary EDWARDS. Mr. Chairman, he is going to have to be much more creative. There is no question about that. He is a good, creative man.

Mr. YATES. Look how drawn and haggard he is now. How much worse do you want him to look?

Secretary EDWARDS. I thought he looked pretty good, Mr. Chairman.

Mr. YATES. I am not talking about that. I am talking about his being drawn and haggard. You should have seen him last year. He was positively blooming last year before this administration came in.

Secretary EDWARDS. I guess that money does help our staff.

Mr. YATES. Indeed it does help your staff.

Secretary EDWARDS. Mr. Chairman, I would prefer if you would, to help us in this.

Mr. YATES. We are going to help you but we are going to help you in ways I do not think you want to be helped.

Secretary EDWARDS. Mr. Chairman, I beg of you, don't throw money at us. I know this is a new approach in Washington for me to come here and say, "Mr. Chairman, please cut our budget."

Mr. YATES. No. I want you to know that I have done that before. This is going back many, many years. I think it was with IRS. I was on another subcommittee then.

Secretary EDWARDS. You mean one other time in history there has been somebody who came in and asked for a cutback?

Mr. YATES. They asked for less money and I said, "I do not think you are smart at all." IRS returns $12 for every dollar we invest in it. Now why do you want a reduction? It seems to me the taxpayers of the country get more for $12 if we invest another dollar in it.

That is pretty good. If you had an investment that would pay you that, you would invest it, wouldn't you, if it paid you $12 for every $1? My goodness, just think, now, how much money are you likely

to get for your investment in this $11.4 billion? You are liable to lose the whole thing.

Secretary EDWARDS. Well, we are spending $11.9 million.

Mr. YATES. As opposed to overcharges of $11.4 billion.

Secretary EDWARDS. We have a budget of $11.9 million and we are going after $11.4 billion but the history shows that you are going to only collect 50 percent.

Anyway, give us a chance, Mr. Chairman. Do it my way and then we may have to come back and ask for a supplemental appropriation if we feel like we are running out of personnel over there.

Mr. YATES. We do not like supplemental appropriations around here.

Secretary EDWARDS. If we had 25 cases to do I think that group over there would probably make it last for four or five years. If you have 1,000 cases and you tell them you have a certain time period, I think they will prosecute those cases more vigorously and get it done. Maybe I am an idealist.

Mr. YATES. I used to have a law firm, and the more work we received we found that we were unable to handle it more and more.

What did you do when you had a patient load? You had them sitting out in the office, didn't you? How many people could you put in one chair?

Secretary EDWARDS. Mr. Chairman, I have been so involved in this political game for the last eight years I have not had that problem as often as I did before I got involved in it.

Mr. YATES. I remember I had a dentist in Chicago who had eight chairs, eight different rooms, and he would put patients in each one of those chairs and they just sat there and sat there and sat there because he could only handle so many.

There are dentists as well as eye doctors who do that, today. You have people with 50 people waiting out there to see an eye doctor.

You do not think it is an applicable comparison?

Secretary EDWARDS. Not as applicable today as it was 10 years ago because we have gotten a lot more young people in the professions now.

Mr. YATES. Who are stronger and can work faster?

Secretary EDWARDS. No, no. We have spread the workload a lot more. We have spread the workload. We can get you an appointment this afternoon.

Mr. YATES. You are making my argument for me. You are spreading the workload and you want to delete the workload. You are saying the reason that you do not have to worry about that is because you have more people to share the burden. Now you are taking those people away.

We have had enough, Mr. Secretary.

Secretary EDWARDS. Mr. Chairman, before you close, give me a chance to do it my way. If it doesn't work, at the end of the term if anybody goes unprosecuted we will come back and ask for a supplemental appropriation.

Mr. YATES. It is too late then. You have a dealine there.

At any rate, we will be back. I am sure you would like to come back the next time that we have. We will go into these questions again. We will see.

Thank you, Mr. Secretary. I know that you have come here with a very heavy burden and a heavy load. I have not had a chance to ask you yet about the Strategic Petroleum Reserve. I know you want to put more money in for that but I do not know how you propose to do it. Do you want to answer that question for the record? Tell us how you propose to do that.

[The information follows:]

STRATEGIC PETROLEUM RESERVE BUDGET REQUEST

The Strategic Petroleum Reserve fiscal year 1981 Budget requirements are estimated to be approximately 3.3 billion dollars. Of this amount, a little more than $3.2 billion is for the acquisition of crude oil and associated transportation costs; $82.8 million is for continued oil facilities development, expansion of storage capacity and operations (primarily Phase II); $8.0 million is for support for planning and studies related to major program issues; and $11.4 million is for salaries and other support necessary to manage the Strategic Petroleum Reserve.

A fiscal year 1981 supplemental of $1.3 billion and approximately $540 million in entitlements receipts are assumed to be available to execute the fiscal years 1981 and 1982 programs as planned.

The fiscal year 1982 Budget requirements are estimated to be nearly $3.9 billion. Of this amount, almost $3.7 billion is for crude oil acquisition and transportation; $178.5 million is for the continuing activities, associated with Phase II, necessary to expand storage capacity at existing sites, and for initiation of new efforts, associated with Phase III, to expand existing sites and acquire and construct a new site; $9.0 million is required for the continuing support for planning and studies related to program issues; and $11.9 million is for salaries and other support costs.

RATIONING PLAN

Mr. YATES. Secondly, you are not having a rationing program. You are just eliminating that entirely. What happens if you have an emergency?

Secretary EDWARDS. Mr. Chairman, we are working on a contingency plan. I do not like the rationing program. You and I probably remember World War II. I am a lot older than you are. You probably do not remember it but I remember World War II and the rationing program.

Mr. YATES. Mr. Secretary, I remember World War I, and you do not remember that.

Secretary EDWARDS. You remember the rationing program, for $1.50 you could buy all the gas rationing coupons you wanted.

Mr. YATES. That is all right. At least you had a rationing program.

Secretary EDWARDS. The bureaucracy would spiral, skyrocket. I would like to find some alternate way. Of course, under the law.

Mr. YATES. Congress worked for five or six years looking for an alternate way to rationing. They did not like rationing but it is similar to Mr. Churchill's definition of democracy, you know. It is a bad system of Government until you compare it with the other systems of Government; then it becomes the best. They felt that way about this rationing system.

I am aware of the bureaucracy and I am aware of the cost, and so is the Congress, but what do you do if all of a sudden you are in short supply in this country? You are slowing down the alternate fuels program, you are cutting back on conservation.

Secretary EDWARDS. We are increasing conservation. The American people are conserving more, Mr. Chairman, and they will continue to conserve more. Just because we are cutting back on the

money we throw at this program does not mean that the American people are going to stop conserving. I promise you the conservation in the future will be greater than it has been in the past.

NEW SOURCES OF ENERGY

Mr. YATES. I do not think there is any question about that. As oil prices go up and as gasoline prices go up, people are going to use less and less of it. That is not because of what your agency has done. The problem is, as it goes up more and more you have to find other sources of energy.

Secretary EDWARDS. That is right.

Mr. YATES. However, you are not going to find them. Where are you going to find other sources of energy? You are moving to nuclear.

Secretary EDWARDS. Mr. Chairman, that is just one of the little blocks I am moving to. I am moving to increase the production of oil and gas in these areas that are locked up.

Mr. YATES. What areas are these?

Secretary EDWARDS. Out in the federally-owned lands, out on the Outer Continental Shelf. Let's speed up the process.

Mr. YATES. Well, that is not you. That is Mr. Watt.

Secretary EDWARDS. Mr. Chairman, it is a combination, it is as a team that we are going to bring this about. That is one of the key issues. Certainly we are going to move into nuclear power, too. We are going to take advantage of every source of energy we have. We can knock coal loose.

Mr. YATES. That is not true, though. You are cutting back on geothermal, you are cutting back on solar, you are cutting back on biomass. Isn't that right?

Secretary EDWARDS. We are cutting back on the money we are spending on these but the market will certainly——

Mr. YATES. On biomass?

Secretary EDWARDS. On biomass.

Mr. YATES. On solar?

Secretary EDWARDS. Solar——

Mr. YATES. You are not trying to tell me that the market is ready for solar?

Secretary EDWARDS. No, I am not trying to tell you that solar will be used. The trouble with solar is that it is a rich man's energy source, Mr. Chairman. You have to be rich to afford it.

Mr. YATES. This administration likes rich men.

Secretary EDWARDS. No, sir. Mr. Chairman, the administration likes a rich country.

Mr. YATES. I see.

Secretary EDWARDS. We can debate that all evening.

Mr. YATES. Mr. Secretary, we have enjoyed having you before our committee. Mr. Long and Mr. AuCoin have questions they would like you to answer for the record.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY CONGRESSMAN CLARENCE D. LONG

BUDGET CUTS AND SCHOOLS AND HOSPITALS

Question. What criteria did you use in selecting cuts for individual programs? For example, a recent GAO study found that the energy conservation program for

schools and hospitals "is among the highest in cost, yet among the lowest in yielding energy savings"—and it was largely spared from the budget ax. Why did you retain this program and cut the more promising ones?

Answer. The Administration's approach to the conservation budget decisions was to keep programs which provide long-term, generic, high-risk research and development of the type the private sector will not undertake at this time. Accordingly, the proposed cuts terminate or greatly reduce programs which provided near-term R&D, demonstrations, market development, and commercialization activities. The Administration believes that consumers, business, and industry are already interested in energy efficient products and services. Therefore, the private sector will now provide those products and services. Regulatory programs were also eliminated. The cuts were made on the grounds that the regulatory programs interfere with the workings of the marketplace, impose a massive burden on the private sector, and would be nightmares to administer and enforce.

The Schools and Hospitals Program is a grant program which was not terminated. However, the funding levels were reduced by half over the previous Administration's recommended levels. The Administration proposes to continue the Schools and Hospitals Program at this lower level because market forces are slow to affect this sector of the economy since most operating funds for public and non-profit schools and hospitals come from local, State and Federal tax revenues (property taxes, medicare, medicaid, etc.) and these institutions do not benefit from tax incentives. Historically, schools have experienced severe capital formation problems in undertaking projects of this nature. Hospitals generally have lacked the incentive to conserve energy since their operating costs, including energy costs, are passed through to third-party reimbursers such as medicare and medicaid. For example, a recent American Hospitals Association study found that energy costs accounted for over $1 billion of these reimbursement requests in 1979 alone. Assistance to non-profit schools and hospitals helps provide incentives for them to undertake further energy conservation efforts on their own.

Question. What energy program, in your opinion, promises the "biggest bang for the buck" in either energy production or savings? What energy program if successfully developed will have the greatest return in tax dollars to the federal government?

Answer. I do not believe that we have been in a position to single out a particular energy program that provides the "biggest bang for the buck" of the greatest return in tax dollars. Many analytical studies have been undertaken by various public and private sector groups who claim that any number of energy programs has the highest payoff. Considering the methods, assumptions, and biases involved in such studies, this result is not surprising.

If we are to achieve our goal of energy security, I believe that:

We must pursue all of our energy supply and efficiency options that appear to promise a payoff;

The higher payoffs will always accrue to energy programs commercialized by the private sector in a stable marketplace; and

The best tax dollar returns will result from this country's economic recovery, which will be supported by strong and expanding energy availability.

CUTS IN CONSERVATION PROGRAMS

Question. What hard evidence do you have that the private sector will pick up on energy conservation programs that DOE cuts?

Answer. Quantitatively, the bulk of the cuts were made in the areas of assistance to state and local governments. We felt that in many cases these funds were not or would not be used effectively on energy conservation. In these cases, then, there may be no important function for someone else to pick up. In other program areas, such as near-term R&D, commercialization, and information dissemination, we believe that the combination of rising energy costs, the availability of Federal tax credits for conservation, and a generally improved investment climate will induce the private sector to do what is needed to achieve higher levels of energy efficiency.

Given the many sectors of the economy which are involved, a detailed review of them is not feasible here. In the industrial area, for example, we see no reason why the capital markets will not support porjects for which risks are adequately balanced by potential financial benefits. We expect both manufacturers and users of new technologies to undertake innovative projects, often through joint efforts to develop both equipment and processes which are more energy-efficient.

In the building area, recent surveys have indicated that energy efficiency has become an important consideration when consumers decide what kind of home to buy. Despite certain market imperfections in the buildings sector, such as the lack of incentives for tenants or apartment owners to invest in apartment house conser-

vation options, rising energy prices and tax incentives have induced many building owners to engage in conservation activities. These same market forces are also encouraging builders and appliance manufacturers to develop more efficient products.

SERI CONSERVATION SOLAR STUDY

Question. According to a recent DOE report, the U.S. could cut its energy consumption almost 25 percent by the end of the century without sacrificing economic growth through heavy investments in energy efficiency and the use of renewable resources. The study was put out by the Solar Energy Research Institute. Why did you choose to ignore this study in making your budget recommendations?

Answer. The Department received a draft review copy of the Solar Energy Research Institute (SERI) report, "A New Prosperity: Building a Sustainable Energy Future," on March 10th—the same day that the revised budget was submitted to the Congress. Therefore, the draft report was not available when this Administration was developing the budget revisions which were submitted on March 10, 1981.

The study is currently under review within the Department. Only after a very careful review of the report—and to the extent possible, the supporting analysis—will we be in a position to determine its value. However, based on a preliminary review, it appears that the major divergence between the philosophy of this Administration, which I fully endorse, and that used in the SERI study is the appropriate role of the Federal Government in achieving the potentials for conservation and renewable resources which are outlined in the study. The explicit assumption of the SERI report is that everything which can be achieved in a cost-effective manner with conservation and renewables should be achieved. SERI then proposes a very costly set of government programs to "push" the market toward what the SERI analysis determines to be these potentials. We believe that such proposals for massive government intervention are unjustified, and are confident that those conservation and renewable resource measures that are cost-effective will be implemented if we allow the market to function effectively.

EMERGENCY PREPAREDNESS

Question. When will you have administrative procedures in place to deal with import disruptions?

Answer. The Department is now undertaking in cooperation with other agencies a comprehensive review of options for reducing the cost of oil supply disruptions. This review should be complete within the next few months. DOE will consult with Congress on whatever additional legislative authorities may be necessary in order to implement this strategy over the next few months. We would hope to have the major policy decisions made before the Ottawa summit meeting this summer and to have whatever legislative authorities are necessary in place by October.

COKE PELLET PROCESS

Question. I have been advised by the Bethlehem Steel Corporation that it has withdrawn its proposal for the development of the coke pellet process at the Sparrows Point Pilot Plant. I am disturbed that Bethlehem Steel—and not the Department of Energy—informed me of the withdrawal, even though the Department is well aware of my interest in this process. But more importantly, I am concerned about the continued problems of coke shortages, our potentially dangerous dependence on foreign coke imports, the energy-inefficient and out-moded status of most U.S. coke oven batteries and the lack of an administration policy to deal with these problems.

Both the General Accounting Office and the Office of Technology Assessment in recent reports on the steel industry and technology, stressed the need for expansion and improvements in domestic coke batteries and technologies.

The Department of Energy has been less than enthusiastic about funding coke pellet and formcoke processes—despite its own studies that the new coking technologies can reduce worker exposure to toxic chemicals, enhance air quality, use greater amounts and wider varieties of U.S. coal in the coking process, reduce coke imports and, at least with the coke pellet process—SAVE ENERGY.

Have you given any consideration to this problem?

Answer. Yes. The Department of Energy has spent considerable time reviewing and analyzing the problems with coke and coke processes in the United States as well as proposals for coke pellet processes and formcoke. The Department submitted recommendations to the Congress that if the Congress decided to approve the projects the Department would conduct them. As a matter of fact, regarding the less costly coke pellet proposal, contract negotiations were in process and near comple-

tion and Bethlehem has been granted authority for precontract cost incurrence when Bethlehem Steel unexpected withdrew the proposal. Meanwhile, funding added by Congress for pellet coke and formcoke processes has been proposed for rescission by the Reagan Administration as it had been by the Carter Administration previously.

Question. How is this consideration reflected in your budget?

Answer. The fiscal year 1982 budget for the Industrial Energy Conservation Program—where the coke projects rested—contains only funds for Program Direction to terminate all activities in that program. Decontrol of oil prices as a result of the President's January 28th announcement and increasing natural gas prices permitted under the Natural Gas Policy Act of 1978 coupled with conservation investment tax credits, accelerated depreciation and removal of unnecessary regulatory burdens will improve industry's capital formation and provide the necessary means for high priority investments. Under these conditions, it is no longer necessary to have a Federal program of Research, Development and Demonstration of near term industrial technologies.

Question. If you believe that coking technologies are not within your jurisdiction, who should be responsible?

Answer. The Administration believes that new technologies for industry-specific applications such as coke processes are not the responsibility of the Federal government and that the private sector should be responsible for developing them.

SMALL GRANTS PROGRAM

I notice that you zero out funding for the Appropriate Technology Small Grants Program, but continue funding for the Inventor's Program.

Question. What are the achievements of the Inventor's Program?

Answer. The Inventor's Program provides funding for invention evaluation and direct support to inventors. Public Law 93-577 directs the National Bureau of Standards (NBS) to evaluate inventions and to refer the most promising inventions to DOE for consideration of direct support.

NBS has processed approximately 16,000 invention evaluation requests, and has recommended 153 of the most promising to the DOE-Inventions Division for consideration of direct support.

The DOE Inventions Division has awarded $6 million to 86 grantees, provided support other than direct financial assistance to 5 inventors, found no feasible way to support 11 others, and is negotiating methods of support with the remaining 51 inventors.

In addition, the DOE and NBS offer combined services to inventors in the form of educational workshops, and specialized patent information retrieval services.

Question. Have any of the inventions funded been commericialized?

Answer. The most noteworthy inventions to have achieved commercial success are: Solaroll, a solar collector by M. Zinn; Heat Extractor—an industrial heat recuperator by Daniel Ben-Shmuel; Industrial Water-Heater by Harry Woods, which has now been licensed to A-O Smith Corporation; and U-Form Technology, a technique for erecting energy efficient buildings by M. Sachs. These four grantees have created jobs for approximately 200 people and are generating sales in excess of $20 million for a one-time outlay of approximately $360 thousand in Federal grant assistance. The June/July 1980 issue of MIT Technology Review provides a very favorable analysis of the cost effectiveness and energy conservation potential of these few inventions.

Question. How many projects funded under the Small Grants Program have been commercialized?

Answer. The Appropriate Technology Small Grants Program was not established specifically for purposes of commercialization. Pursuant to the requirements of Public Law 95-93, this program was established to provide a coordinated effort for the development, demonstration and dissemination of information with respect to energy-related systems and supporting technologies appropriate to:

(1) The needs of local communities and the enhancement of community self-reliance;

(2) The use of renewable resources and the conservation of non-renewable resources;

(3) The use of existing technologies applied to novel situations;

(4) Applications which are energy-conserving, environmentally sound, small scale, durable and low cost; and

(5) Applications which demonstrate simplicity of installation, operation and maintenance.

Early in the program it was recognized that funded projects could not only provide results which could be replicated on a regional or national scale, but certain projects could also have the potential for development into small businesses.

The first national cycle for the program occurred in fiscal year 1979, and because most projects require two years for completion, it is not possible to reliably estimate the percentage of Appropriate Technology projects that have a business potential rather than a replication potential. Final reports have been received only on about 10 percent of the projects funded. Some business successes have begun to surface, however, such as:

Emily and Frank Chiavello of Sioux City, Iowa were given a $5,977 grant thru the Appropriate Technology Program to demonstrate that any home can incorporate solar heating and cooling regardless of age, style or size, for a low initial investment. Their demonstration was so successful and public response so great that they developed a small business which manufactures solar collectors for commercial application.

Sierra Nevada College was given a $13,800 grant to develop a combination solar/wood burning heating system. The wood burning stove for this system proved so successful that full scale manufacturing was initiated and the stove is now marketed by its designers own new business, the Phalen Thompson Stove Co.

Question. How many requests for funding under the Small Grants Program did you receive last year? What was the total amount requested?

Answer. In fiscal year 1980, approximately 19,600 proposals were received for a total of over $494 million, the proposals received and funded were distributed as follows:

[Dollars in thousands]

Region	Number of proposals received	Number of proposals funded	Amount of funding requested	Amount funded
I	1,649	81	$34,246	$759
II	2,048	79	60,268	48
III	2,000	66	54,312	792
IV	2,111	119	58,047	1,149
V	1,571	46	40,670	1,221
VI	1,979	64	53,212	844
VII	2,351	78	48,841	898
VIII	899	56	21,896	486
IX	1,052	44	26,076	790
X	3,989	223	97,000	1,419
Total	19,649	856	494,567	9,306

PEAT GASIFICATION

Question. As you may be aware, the Congress directed the Department of Energy three years ago to institute a program to make use of one of the nation's largest untapped energy resources—peat. The Department has put together a comprehensive program to develop the technology to gasify peat to produce clean burning substitute natural gas. Please explain in detail the Department's plans for continued development by DOE of peat.

Answer. The Department of Energy recognizes that peat may be a potentially valuable energy resource, especially on a regional basis. We plan to continue the peat program addressing technical, social and environmental issues associated with peat utilization. Although a large part of the substantive technology development to date has been in the area of high-Btu gasification, these efforts will be expanded to include other peat conversion and utilization options such as direct burning, solid enhancement, and liquids production. In addition, parallel work will be continued in harvesting, dewatering, resource estimation, and environmental and socio-economic impact assessment.

STATUS OF HYGAS PILOT PLANT

Question. What is the current status of the modification of the HYGAS pilot plant to run on peat?

Answer. The modification of the HYGAS facility to operate with a peat feedstock includes a dual lockhopper feed system, a dryer-grinder, and reactor alterations. At

present, approximately 85 percent of the work has been accomplished. It should be noted that the modification was funded from fiscal year 1979 and fiscal year 1980 appropriations.

FUTURE PLANS FOR THE PEAT GAS PILOT PLANT

Question. Research and development work on energy from peat through gasification is almost complete. The critical step remaining is the operation of the federally-owned pilot gasification plant in Chicago. The operation of the pilot plant is essential to developing the technology needed for private enterprise to determine the cost-effectiveness of the technology and possibly to expand to commercial scale operations. There have been rumors that the Department is considering abandoning the program and scrapping the pilot plant. What evidence do you have that the Institute for Gas Technology or other firms will take up the project with their own funds at this stage?

Answer. At the current time, we have no indication that the Institute for Gas Technology or any other industrial entity would be willing to underwrite any or all of the cost associated with operating the PEATGAS facility. However, this does not preclude the private sector from pursuing the development of this technology in the future with private capital or from seeking support from the Synthetic Fuels Corporation.

PEAT GASIFICATION

Question. On page 61 of the fiscal year 1981 Revised Request to the Congress for supplementals, rescissions and deferrals you state "Near term R&D will continue only where the government has a unique resource or facility which is necessary to the development and commercialization of first-of-a-kind technologies by the private sector."

Does peat gasification fit into this criteria? If not, why not?

Answer. Peat gasification does not fit into the criteria for conducting near term R&D. It has been sufficiently demonstrated that peat is an ideal feedstock for conversion to high-Btu gas and fluidized bed gasifiers can be easily modified to accept peat as a feedstock. Therefore, the HYGAS pilot plant cannot be considered as a unique resource or facility. However, we intend to continue to investigate the fundamentals of peat gasification as part of a well-rounded departmental peat program which will consider direct burning, solid enhancement, liquids production, environmental and socio-economic impact assessment, harvesting, resource estimation, and dewatering.

PEAT GASIFICATION

Question. Isn't there a false economy in scrapping a project before testing has been initiated?

Answer. In our judgment, the scrapping of PEATGAS does not constitute a false economy. It is much more cost effective to utilize available funds for meaningful development of direct burning, solid enhancement and liquid production from peat, as well as for reducing the risks associated with harvesting, dewatering, and environmental considerations. This is in contrast to utilizing funds for completion of pilot plant modifications and conducting a test program focused only on the objective of gasifying peat.

IMPACT OF RESCISSION ON THE PEAT PROGRAM

Question. Is a rescission requested for fiscal year 1981 and if so, is this rescission targeted at one aspect of the peat program?

Answer. DOE has recommended a $5 million rescission from the fiscal year 1981 peat program which primarily impacts the PEATGAS pilot plant. The rescission has been proposed because it is believed that an extensive data base exists for peat gasification and further activity at the pilot plant scale should be the responsibility of the private sector. However, generic R&D will continue in peat R&D that focuses on long term and high risk issues.

Questions Submitted by Congressman Les AuCoin

BONNEVILLE'S HIRING

Question. Mr. Secretary, I wrote you on February 6th regarding the hiring freeze and the effect it has and will have on the implementation of the Northwest Regional Energy Act. Yesterday, after nearly two months, I received a response. The response was general and vague. Specifically, how may people has Bonneville been allowed to hire in fiscal year 1981 and fiscal year 1982?

Answer. Bonneville's budgeted full-time permanent employment ceiling has been raised by 34, from 3,083 to 3,117, for fiscal year 1981, and by an additional 83 for a total of 3,200 for fiscal year 1982.

Question. Bonneville estimated that it would take 181 additional personnel in fiscal year 1982 to implement the Act. Will the personnel additions approved by Office of Management and Budget be enough to implement the Act? Please provide for the record a breakdown of those functions which will either be eliminated or "streamlined" by the reduction in personnel from the original Bonneville request.

Answer. Bonneville expects to able to implement Public Law 96-501 within the staffing authorization provided. However, adequately performing the functions required for implementation, without the full staffing increment originally requested, could result in some reductions to Bonneville's ability to meet certain responsibilities existing before the Act was passed. Among the most likely impacts may be the following:

The number of manned substations may be reduced.

Activities related to in-house development and repair of test and measurement equipment may be reduced.

Critical construction projects such as the Okanogan Area Service Project, the Franklin-Kennewick-Badger-Highlands 115-kW reconductoring, and the Goshen-Swan Valley Project may be delayed.

Preliminary engineering efforts in fiscal year 1981 required for fiscal year 1982 projects may be delayed.

Certain contract administration activities, improvements to financial control systems, and development or revision of major ADP systems may be adversely affected.

Question. Can you give me an idea of who the new BPA head will be and when that person might be chosen?

Answer. We are unable to provide a name at this time, as no final decision has been made on a nominee for this position. The Department is very anxious to get as much of the staff on board as quickly as possible. The process has been somewhat slow so far, due in part to the heavy workload involved in making so many selections at one time, and in part to the difficulties of finding candidates who can meet stringent conflict of interest requirements as well as possessing the technical background and experience necessary to qualify for such responsible positions. But we hope to move on most of our nominations in the very near future and will provide you the information requested as soon as possible.

Question. Is BPA to be moved again—this time back to Interior?

Answer. Under the sunset provisions of the Department of Energy Act we are required to address all activities of the Department, including the power marketing administration, and to make recommendations on the continuation or transfer of these administrations. This review is underway now, with results due to the Congress in January, 1982. Since this review has just gotten underway, we are unable to prejudge its conclusions at this time. Certainly, the review will include an assessment of the power marketing function, its accomplishments, plans and possible locations. The Department would prefer to withhold judgment until this review is completed.

CONSERVATION AND RENEWABLES

Question. The floor debate on the Regional Energy bill in the House left no doubt that the intent of the legislation was to develop regional energy planning based on the twin foundations of conservation and renewables. What steps does the Department of Energy intend to take to insure that is, in fact, what happens?

Answer. Conservation and renewable resources will be given priority over all other nonrenewable resources. the Regional Power Act requires this priority of resource development and the Department of Energy, including Bonneville, is firmly committed to it as well. Bonneville has already moved quickly to fulfill the mandate under the Act that it acquire resources to meet the energy needs of the region giving first priority to conservation, second to renewable resources, third to generating resources utilizing waste heat or generating resources of high fuel conversion efficiency, and fourth to all others.

FUNDING ALLOCATION FOR DEPARTMENT OF ENERGY PROGRAMS

Question. Please provide for the record, by percentages, the funding allocation for DOE programs in nuclear, solar, hydro, wind, geothermal, and other energy sources.

Answer. Fiscal year 1982 funding for the energy programs supported by the Department expressed as a percent of total energy research and development is as follows:

Program:	Percent
Nuclear	39
Solar	5
Hydro	0
Wind	1
Geothermal	2
Conservation	6
Fossil	14
Fusion	14
Other Supporting Research	19
Total	100

Other supporting research is comprised of research and development activities applicable to more than one energy technology.

APPROPRIATE EMPHASIS ON ENERGY SOURCES

Question. Most experts agree that the most efficient energy source at hand is conservation. Why is the Administration placing greater emphasis on technologies like nuclear? Isn't this contradictory to what is generally accepted?

Answer. The major policy determinations inherent in President Reagan's "A Program for Economic Recovery" that shaped the Department of Energy program were budget reform to cut the rate of growth in Federal Spending, a program of regulatory relief, and a return to the marketplace for commercialization decisions on energy choices.

Within this framework, the Department is not abandoning any form of energy supply or efficiency improvement. Instead, we are simply refocusing the role of Government in the energy arena.

The appropriate place for demonstration and commercialization of near-term energy options is the private sector. The removal of price controls on oil and the continuation of selected tax credits and subsidies provide greater incentives for short-term technologies like solar and conservation than any other government initiated action. Major conservation efforts are being undertaken and can be expected to accelerate with tax credits. Some Federal conservation programs are, therefore, no longer necessary.

The proper government spending role is R&D to develop our long-term technologies so that this country will have additional options in the next decades. We will emphasize long-term, high-risk, high potential payoff technologies.

Our increased spending on nuclear technology is for advanced reactor and fuel cycle R&D that are not sufficiently developed to be considered commercially viable and are separable from the current commercial nuclear enterprise.

These energy policy shifts are logical and efficient extensions of the President's Economic Recovery Program.

CONSERVATION/RENEWABLES AND REDUCTION OF OIL IMPORTS

Question. Aren't conservation and renewables the cheapest and most immediate way to unshackle ourselves from OPEC reliance?

Answer. Conservation and renewables are indeed important near-term approaches to increased energy security. However, decontrolled prices and tax credits are much more effective incentives for near-term deployment of such measures than direct Federal funding. Further, economic recovery and reduced interest rates will accelerate energy users' responses to the attractive investment opportunities which now exist in this area.

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

Question. Are you familiar with the Washington Public Power Supply System project in the State of Washington? What will Department of Energy's position be if Washington Public Power Supply System comes to the Congress and/or the Administration for some sort of bailout or refinancing? (Project was originally estimated to cost $4 billion—cost now is estimated at $17 billion.)

Answer. The Department of Energy is not aware of any proposal or intention of the Washington Public Power Supply System to apply to Congress or the Administration for a "bailout or refinancing." In the absence of an opportunity to review such a proposal and the justification therefor it would appear to be premature to pass judgment on the proposal. However it is only fair to say that any such proposal would be met with an initial negative reaction and would require the utmost in justification to overcome this initial reaction.

LOW-INCOME WEATHERIZATION

Question. You argue that higher energy prices combined with existing tax credits will encourage conservation and make Federal spending for conservation and weatherization unnecessary. However, I understand that in Oregon over 50 percent of home weatherization is for low-income senior citizens.

Clearly, higher energy prices or tax credits will not enable other low-income seniors to weatherize their homes? Mr. Secretary, considering the national security ramifications of importing large amounts of oil from an unstable region of the world, do you believe that reducing consumption in our society is in the national interest? If so, and to the extent that these low-income seniors are now consuming more energy than they might, and thus increasing the amount of energy we consume in the aggregate, do you not believe that the Federal government should assist these persons in weatherizing their homes?

Answer. The Administration agrees that improving the energy efficiency of the Nation's economy and reducing dependence on unreliable energy supplies are highly desirable goals. The Administration's economic policies—reducing Federal spending and regulation, reducing the budget deficit and interest rates, and creating a favorable investment climate—combined with rising energy prices and carefully selected government-sponsored research, development and information programs, will achieve these goals.

The Administration recognizes that some citizens, especially low-income senior citizens, will not be effectively aided by tax credits for conservation and will be unable to make conservation investments in response to rising energy prices. We recognize the need to provide assistance, both weatherization and cash and emergency assistance, to these people.

This is why the Administration proposes to continue both the Department of Health and Human Service's program of cash and emergency assistance and Federally financed weatherization. We are proposing that the weatherization program formerly run by DOE be folded into the Department of Housing and Urban Development's Community Development Support Assistance block grant program. By incorporating weatherization into this block grant program, we will allow communities to better tailor weatherization to local needs and priorities, unhindered by restrictive Federal regulations.

SOLAR ASSISTANCE FOR LOW-INCOME PERSONS

Question. Similarily you argue that higher energy prices and existing tax credits will encourage persons to develop alternative sources of energy for their homes, such as solar. However, these circumstances will not encourage low income persons—the very people who are least able to afford higher energy prices—to make the capital investment necessary in switching to solar heating. Do you not believe that our society has a stake in helping these persons to use less oil, electricity, or gas in heating their homes? Is there not a legitimate role for the federal government in assisting these people to install solar systems, either through direct assistance or low-interest loans?

Answer. We believe that the most effective method of assisting low income persons to reduce their use of oil, electricity, or gas in heating their homes is by combining the DOE weatherization program with the community development block grants. Block grant funds can be used for solar energy, but we have found that solar energy systems are usually far down the list of cost-effective methods of reducing conventional energy use in the homes of low income people. Through community development block grants, communities will be able to determine the combination of conservation and solar measures which is most appropriate to their needs and circumstances.

FEDERAL INFORMATION AND TECHNICAL ASSISTANCE PROGRAMS

Question. I have received comments from my constituents—both in public sector and private business—that Federal information and technical assistance programs are very important in allowing them to exploit the energy conservation and development technologies available. Have you any evidence to suggest that these programs are not effective in assisting persons in reducing energy consumption, or in developing alternative sources of energy?

Answer. Some Federal information and technical assistance programs can be effective in encouraging energy conservation. The Department has underway a study to analyze the effects of Federal information programs and technical assistance. The results of this study and other information and technical assistance evaluations indicate that successful consumer information programs are those which provide personalized services tailored to specific client needs. In contrast we

have discovered that unsuccessful information and technical assistance programs are those which deal in generalities and do not provide sufficient information for informed decision making.

USE OF BLOCK GRANT FUNDS FOR CONSERVATION AND WEATHERIZATION

Question. You state in your fiscal year 1982 budget revisions that states will be able to fund energy conservation and weatherization programs from the Housing and Urban Development block grant. Have you consulted with the states to see to what extent those funds will be used for those purposes? Isn't the total amount of money that is likely to be channeled to these kinds of programs significantly less than the total amount now being spent on these programs? Upon what facts and sources do you base your conclusions? Considering our dependence on imported oil, and the fact that some studies indicate that about 40 percent of the increase in our cost of living over the past decade has been due to the rising cost of energy, how do you justify such a decrease in funding for energy conservation? Do you not believe that these monies should be spent specifically on energy conservation and weatherization?

Answer. One of the fundamental principles of this Administration's policy is to provide resources, responsibility and flexibility to the appropriate levels of government to deal with their problems. The amount of resources that will actually be devoted to the activities you mention will depend on the decisions made by state and local governments on the basis of their needs and priorities. We have not polled state and local governments to determine how they intend to spend funds next year.

We are continuing to provide financial assistance for convseration for those parts of the economy that cannot respond effectively to rising energy prices and the substantial tax incentives available for conservation and renewable resources. We are, for example, continuing funding for the schools and hospitals grant program, and for low-income weatherization. We are proposing, however, that this latter program, formerly run by DOE, be folded into the Department of Housing and Urban Development's Community Development Support Assistance block grant program. This will give communities both resources and much-needed flexibility in dealing with the need for this kind of assistance.

We do not believe that "earmarking" or placing addtional restrictions on the way state and local governments can spend block grant funds is necessary; such restrictions would be contrary to the philosophy of flexibility in dealing with local problems underlying the concept of block grants.

BLOCK GRANTS TO LOCAL GOVERNMENTS

Question. Mr. Secretary, your Administration has expressed a preference for block grants over categorical grants, when Federal assistance is required, in order to allow more local flexibility and initiative. Considering the reasons cited above for making conservation of energy and reduced reliance on imported oil a national priority, have you considered the idea of providing block grants to local governments to assist and encourage them in developing their own energy conservation and planning schemes? If not, what do you think of the idea? Have you considered providing block grants to local governments to help them in implementing local energy conservation and planning programs?

Answer. The Administration is reviewing various approaches for encouraging energy conservation planning and implementation by local governments. We do not now plan to propose new legislation for a local energy conservation planning block grant program. Rather we will encourage local communities to apply funds from the HUD community block grant program to energy conservation planning and implementation. Through this vehicle local governments will be able to continue those activities which are useful to their unique situations and will be able to design programs which are tailored to local needs and requirements. There are various other Federal programs, such as revenue sharing, and state government resources that can accommodate local energy planning. Consistent with the Administration policy to decentralize, it is more appropriate for state and local governments to determine the type of program they need and the best source of funds.

Secretary EDWARDS. Mr. Yates, it has been a challenge, and fun. Thank you.

MONDAY, MARCH 30, 1981.

ENERGY INFORMATION ADMINISTRATION

WITNESS

ALBERT H. LINDEN, JR., ACTING ADMINISTRATOR

Mr. YATES. This is the hearing of the fiscal year 1982 on the budget for the Energy Information Administration, Department of Energy, and also the proposed rescissions for fiscal year 1981 for that agency.

Judging by the figures, somebody downtown does not like you very much, do they?

Mr. LINDEN. I think we can still do a very adequate job, Mr. Chairman.

Mr. YATES. Would another cut make you do a more adequate job?

Mr. LINDEN. We propose some significant legislative changes, too, as you are well aware.

Mr. YATES. All right.

Mr. LINDEN. We have a good program.

FISCAL YEAR 1981 RESCISSIONS

Mr. YATES. Tell us about it. Let's talk about the rescissions first. The rescission of $830,000 in Applied Analysis, how badly will that hurt you?

Mr. LINDEN. It will not have a significant impact.

Mr. YATES. Where will you apply the cuts?

Mr. LINDEN. Mainly in the state level forecasting area.

Mr. YATES. In what area?

Mr. LINDEN. In the state level forecasts for the Emergency Energy Conservation Act. That law requires us to do state level forecasts of supply and demand.

Mr. YATES. That keeps company with the other withdrawals of emergency action, does it not? We have done away with rationing, excuse me, it is not that we have done away with it. The administration proposes to do away with funding for the rationing program which terminates that. When Secretary Edwards was before us last week I asked him about other programs for taking care of emergency situations and he had none in mind. Do you have any in mind for taking care of an emergency situation?

Mr. LINDEN. I am not in the policy area, but I think we have an adequate data base, and an information and analysis capability to provide those services in case of an emergency.

Mr. YATES. You do have?

Mr. LINDEN. Yes. For example, we have produced the weekly petroleum status report for a little over a year. Our data systems are much more accessible and I think that this, coupled with our

capabilities that we developed over the past several years has put us in fine shape.

Mr. YATES. It is also recommended that $6,605,000 be rescinded from your Collection, Production and Dissemination program.

USEFULNESS OF STATE LEVEL DATA

Mr. LINDEN. Yes. Again that is in 1981. That is primarily in the area of the EECA legislation and not collect detailed, very burdensome data state level.

Mr. YATES. This will not hurt you?

Mr. LINDEN. In my judgment, no, I have stated before the Congress that the collection of data at that level of detail would be very burdensome and very expensive.

Mr. YATES. What is your opinion as to whether the information would be useful?

Mr. LINDEN. I still hold that the utility of that data, given the burden and the cost, would be questionable. I would give you an example of that in the case of middle distillates. We would have to provide information at the State level in order to monitor middle distillates. The markets are not always State oriented. In the petroleum industry your markets do not necessarily conform to a political boundary. They are more oriented toward a particular location or accessibility of transportation or other factors which do not necessarily conform to state boundaries. It would be very difficult to do that.

ADEQUACY OF INFORMATION

Mr. YATES. Here is a letter from Princeton University containing an article prepared by the author of the letter whose name is Margaret F. Fels, a Research Scientist, complaining about failure of information and she says there is not enough information to manage a crisis well, particularly in an era of increased reliance on market mechanisms. She says they should have information in order to make intelligent energy choices. Her article is dated March 6, 1981, and it is entitled "Are We Headed for an Energy Information Shortage?" and the first sentence reads, "Reliable, comprehensive, accessible energy information is needed to ensure the success of any energy policy."

Mr. LINDEN. I would agree with that statement.

Mr. YATES. Well, I would, too. In fact, that assumes that you have an energy policy. But what if you don't have an energy policy; you don't need information then, do you?

Mr. LINDEN. No, I would not say that, either. I think that for many years this country has collected energy information including basic statistics on oil, basic statistics on gas, basic statistics on coal, and basic statistics on electricity. I think that that is a proper role for the Federal Government and it should continue.

[The letter and article follow:]

PRINCETON UNIVERSITY, SCHOOL OF ENGINEERING/APPLIED SCIENCE,
CENTER FOR ENERGY AND ENVIRONMENTAL STUDIES,
Princeton, N.J., March 6, 1981.

Congressman SIDNEY YATES,
Subcommittee on the Interior,
House of Representatives, Washington, D.C.

DEAR CONGRESSMAN YATES: As architect of the New Jersey Energy Data System and one who lives with energy data every workday, I am professionally concerned about the effect of the proposed cuts in the budget for energy information, and I appeal to you in your capacity as Chairman of the Subcommittee on the Interior. Reliable energy information is crucial for 1) crisis management in energy shortage situations, 2) identification of opportunities for conservation investments, 3) monitoring the effectiveness of prices in curbing energy demand, and 4) assessing the need for new energy facilities. If, as is proposed, energy use management is shifted from federal to state agencies and a market-oriented approach is adopted for curbing energy demand, the need for energy information is especially great.

Considering its high value, energy information is relatively cheap. For less than 10 percent of the cost of a new coal or nuclear power plant, funding of EIA can be sustained at its current level. Since the proposed EIA budget cuts will drastically reduce several critical programs, these cuts should be approached with caution to avoid the risk of being penny-wise and pound-foolish.

I am aware that your concern is your constituents, and budget cuts in some areas will serve them will. Yet any budget cut which guarantees that our next energy crisis will impact these constitutents more severely than necessary, because there is not adequate information to manage the crisis well, can hardly be said to serve them. Nor should any budget cut, particularly in an era of increased reliance on market mechanisms, be permitted to decrease the ability of states to make intelligent energy choices concerning new energy facilities or energy efficiency investments.

For the sake of your constituents and the state you represent as well as for the national interest, I urge you to take the time to read the attached comments on the threatened "energy information shortage." Let me point out that I write to you as an energy information specialist who is not funded by federal dollars. Thank you for your attention

Yours sincerely,

MARGARET F. FELS,
Research Scientist.

ARE WE HEADED FOR AN ENERGY INFORMATION SHORTAGE?

(By Margaret F. Fels)

Reliable, comprehensive, accessible energy information is needed to ensure the success of any energy policy. Such information is especially important to the success of the proposed Program for Economic Recovery, since a market-oriented energy policy can succeed only if market decisions at all levels are based on good information. Specifically, good information is need to identify opportunities for sound conservation investments as well as to monitor progress in energy conservation programs. It is needed for effective planning to avoid energy emergency situations, as well as for crisis management if a sudden fuel shortage is unavoidable. Detailed information on trends in energy consumption is needed for the determination of whether new energy facilities are needed, to meet future demands without making expensive mistakes: economic recovery will in no way be promoted by the building of unneeded billion-dollar power plants.

Considering its high value, energy information is relatively cheap. From one perspective, EIA's current budget of $104 million represents only 10 percent of the cost of a new coal or nuclear power plant. The New Jersey Data system, as one of the more sophisticated state systems in the country, is now costing a mere $250,000 a year for continued development and maintenance. Since the proposed EIA budget cuts will drastically reduce several critical programs, these cuts should be approached with caution to avoid the risk of being penny-wise and pound-foolish.

Energy information is not sexy. To many, it contains boring detail of seemingly little value. To those not directly involved in the gathering or use of energy data, the time requirements and difficulties of designing, collecting and maintaining the data are not appreciated. Consequently, OMB's current recommendation to slash the budget for energy information is no doubt receiving little attention. Yet, the implications of this budget cut are potentially more serious than many of the others which are aimed at more visible energy programs.

The information needed for energy policy is of two types: (1) a detailed supply picture, from a national perspective but at the state level, and (2) a detailed

understanding of energy consumption patterns: how much energy of what type is consumed, for what purposes, in various types of housing or businesses, and in all parts of the country. At a time when energy management is being shifted from federal to state agencies, detailed information at the state level is essential. However, since the supply flow picture has no meaning for isolated states, supply data must be gathered and managed federally, by EIA. Consumption information is potentially collectable by states, but not without federal assistance in funding, data collection and coordination. The few states such as California, Minnesota and New Jersey which have sophisticated energy data systems rely on EIA for supply data, and a large number of other states cannot realistically be expected to develop their own systems without increased state data activities within EIA.

Other information besides energy data is needed. If the market-oriented approach professed by the administration is to work well, decisions must be based on good energy and price information. In particular, wholesale energy prices and retail fuel and electricity price date by region and consumer goup are essential, both for an understanding of the effect of price changes on demand and for assessing impacts of higher prices on various consumer groups.

One of the most compelling needs for energy data is for crisis management. Yet, at a time when the nation is not experiencing an energy shortage, it is easy to dismiss energy data as nonessential. Since internationally we are in a precarious position of energy dependence, the capability to manage an energy shortfall well is essential to our national security. Come the next energy crisis, extensive energy information will be needed and, without adequate preparation, impossible to obtain in any usable form.

For crisis management, we need timely, frequent energy data on supply availability, as well as an understanding of energy requirements, to help foresee a shortage as well as to manage it when it comes. While good energy information by itself obviously cannot avert or subdue an energy crisis situation, we learned the hard way that the lack of needed information only enhances the crisis' severity. Without good data as support for any crisis management program, government—state or federal—has no way of determining how best to mitigate the impacts of supply shortfalls and monitor the success of its crisis management efforts.

Within EIA, the Emergency Energy Management Information System (EEMIS) has successfully begun to pull together pieces of numerous EIA data series into an interactive computerized data system which will make timely information immediately available in an energy emergency. Just the beginning stages of this have taken over two years to develop. It must be encouraged to expand to meet more complex emergency needs and integrate more complicated data bases currently collected by EIA. Energy shortages, such as those caused by the 1973-74 oil embargo and the 1979 Iranian shortages, approach with little warning. Energy information needed as support in crisis management and the mechanics to use it must be in place well in advance of a shortage. Ironically, then, development of emergency-response systems such as EEMIS must take place in a crisis-free environment, when concern for energy problems is minimal and the temptation to treat such a system as low priority is prevalent.

Another compelling need for energy data is for monitoring energy consumption patterns, for scorekeeping in energy conservation and planning for energy investments. (The same information is needed in crisis management as well). A detailed understanding of energy use patterns can be developed largely through clever statistical sampling. This is the technique adopted by EIA's Office of the Consumption Data System. With a sample of only 4,000 homes, EIA's National Interim Energy Consumption Survey is teaching us a tremendous amount about energy use for housing throughout the U.S.—at low cost. With the new Residential Energy Conservation survey, as well as new commercial and industrial surveys being designed by the same Office, we are for the first time beginning to understand energy use patterns in the U.S. to an extent that can be useful for monitoring consumption changes. These surveys are excellent. And the value of these surveys relative to their cost is extraordinarily high. (Compare this, for example, with the costly U.S. Census program which requires 100% sampling for basic data, and samples of millions of homes for detailed surveys.) Yet, EIA's consumption data program is one of the programs within EIA which will be particularly hard hit by the proposed cuts.

With modest funding, EIA's progress in improving the nation's energy information, both in supply and demand, has been impressive. When EIA was created, in recognition of the urgent need for better energy information, existing data were scattered, and much needed data were not being collected. Coordination of hundreds of energy data bases, inherited from several disparate federal agencies, began. Publications summarizing these data, hitherto helter-skelter, were pulled together

in a set of well-organized, periodical EIA publications. Validation of the data bases, to ensure their accuracy and to resolve inconsistencies between them, for the first time received significant attention. In addition, many of the data bases have become more widely useful, with easy-to-use computerization and—for the first time—adequate documentation. Some specific programs, earmarked for drastic budget cuts, are creating (largely from valuable historical data series) comprehensive new data bases which are potentially of great use to the states as well as the federal government.

The National Energy Information System (NEIS), which was mandated by the 1976 Energy Conservation and Production Act, is one example of such a data base. Faced with the overwhelming responsibility of combining essentially all of EIA's separate, then uncoordinated, data bases, NEIS has made a significant contribution in organizing and documenting several of EIA's petroleum data bases into integrated reporting systems. Currently, NEIS is serving as an essential coordinating arm of EIA and DOE, and is beginning to coordinate its activities with state data needs.

Given the time and money already invested in improving this country's energy data, any break in the continuity of data series which go back many years and are currently more reliable than ever before would be a tragic blunder. Even more important, slowing of progress to improve our understanding of energy supply and demand in the U.S. is unconscionable. It is essential from a long-range perspective that support of energy information development and validation be sustained, at least to the current level of funding (in constant dollars).

In summary, our understanding of energy supply and demand in this country has improved enormously, and EIA is making great strides forward in producing accurate data of direct value to crisis management and energy demand monitoring. While budget cuts are inevitable, it is essential to sustain EIA's data collection and validation programs and to increase, where possible, the development of its state-focused and price-oriented data bases. The funding required is minimal compared with the available benefits.

ENERGY POLICY

Mr. YATES. Does this administration have an energy policy?

Mr. LINDEN. Yes, sir, but I am not a policy official of the Department of Energy, nor am I a policy official with this Administration, so I cannot answer that question.

Mr. YATES. Well, ordinarily are you not required to gather information in support of an energy policy?

Mr. LINDEN. Yes, sir.

Mr. YATES. What is the energy policy with which you are concerned as far as gathering your information?

Mr. LINDEN. I think that our existing data base which provides the information both on a weekly, a monthly, a quarterly and an annual basis, provides an adequate base for energy decision making.

Mr. YATES. For any policy, no matter what it is?

Mr. LINDEN. I would say in general that we feel that our information is adequate for energy policy making. We have made tremendous strides in the last four or five years in improving and expanding our data base to a place where we think it is now adequate to meet most of these needs.

Mr. YATES. I guess when Secretary Edwards was before us on Friday I should have asked him that question but he probably would have said the same thing that you have, he is not at the policy-making level.

I have a letter from Congressman Railsback who says:

I am writing to express my concern about possible changes within the Energy Information Administration made as a result of the administration's proposed budget cuts.

He says:

State level information must be maintained. The State level data collected by EIA is crucial for tracking the regional and State impact of energy policies.

You are not going to do that, are you?

EXISTING STATE LEVEL DATA SYSTEMS

Mr. LINDEN. Not to the extent that is required by EECA. But we do have State level data systems. Some of those State level data systems will continue—in the case of oil and coal production, in the case of an annual report on the use of petroleum. These systems as well as coal reserves and coal production systems have been in place for many years and they will continue to remain in place.

Mr. YATES. Why don't I give you Congressman Railsback's letter which may go into the record and ask you to reply to the record and let the committee know whether there remains sufficient funding under your proposal to take care of Congressman Railsback's concerns.

Mr. LINDEN. I would be glad to do that for the record, sir.

[The information follows:]

TOM RAILSBACK
17th District, Illinois

COUNTIES:
CARROLL — MCDONOUGH
FULTON — MERCER
HANCOCK — ROCK ISLAND
HENDERSON — WARREN
HENRY — WHITESIDE
ADAMS (CWNS, MCKEE AND LIMA TWPS. ONLY)
BUREAU (PLANFIELD, GOLD, CLEPHANE AND WHEATLAND TWPS. ONLY)
LEE (EAST GROVE, HAMILTON, WARREN, WILKEN, PALMYRA AND SOUTH GROVE TWPS. ONLY)

JUDICIARY COMMITTEE
SELECT COMMITTEE ON NARCOTICS ABUSE AND CONTROL

Congress of the United States
House of Representatives
Washington, D.C. 20515

Room 2104
Rayburn House Office Building
Washington, D.C. 20515
Area 202-225-5905

Room 228
Federal Building
211-19th Street
Rock Island, Illinois 61201
Area 309-793-5760

Room 25
205 S. Randolph Street
Macomb, Illinois 61455
Area 309-833-2231

March 27, 1981

Honorable Tom Loeffler
Subcommittee on Interior
Committee on Appropriations
1212 Longworth House Office Building
Washington, D.C. 20515

Dear Tom:

I am writing to express my concern about possible changes within the Energy Information Administration (EIA), made as a result of the Administration's proposed budget cuts. As a member of the Northeast-Midwest Congressional Coalition Steering Committee, I view some proposed changes as an important issue for the Coalition, and I intend to bring the matter up with Coalition Members. At this time, I am requesting that you consider the following recommendations and pursue the issues while questioning witnesses during Subcommittee hearings on March 30.

I understand that all agencies must be streamlined. However, I would like to recommend that the Committee, working within the proposed budget framework, reevaluate some of the EIA's proposals. Specifically, I feel that EIA must be the central energy data bank; that state level information must be at, minimum, maintained and if possible improved; and that a data base on small and medium-sized wholesalers (jobbers) and dealers must be further developed.

EIA Must Remain the Central Energy Data Bank

EIA is generally considered a reputable source of energy information. It conducts its own surveys and has developed a consistent methodology. The Department of Energy Organization Act and amendments have granted EIA authority to collect data so that a reliable, central source of information would be available. I feel this function must be maintained.

State Level Information Must Be Maintained

The state level data collected by EIA is crucial for tracking the regional and state impact of energy policies. It is information required for informed policy decisions for many energy programs, including low income energy assistance and low income weatherization. EIA has the most complete energy consumption and price level data on a comparative basis for

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states. The data allows the Coalition to develop comparisons. It is imperative that EIA maintain and even improve state level data collection and publication, which is currently not available from any other source.

The Jobber and Dealer Data Base Must Be Further Developed

Many consumers in the Northeast and Midwest are served by small and medium-sized jobbers and dealers. Statistics on these businesses are sketchy at best. Price and market share information is important since Members of Congress need the ability to assess the impact of decontrol on our constituents and to compare price impact with that of other regions.

Statistics on the major, integrated oil companies and large refiners are not difficult to acquire because the data base is relatively small and records are kept by several private and public organizations. However, the data base on jobbers and dealers runs into the thousands and is potentially expensive to collect. I understand that EIA has begun to survey jobbers and dealers, but that, after conducting a cost-benefit analysit it is proposing to place more reliance on industry and other government sources for collection of information pertaining to jobbers and dealers.

I question that approach. The information is incomplete and diffused. For instance, EIA's "Petroleum Market Shares," which reports on retail sale of gasoline relies on Census Bureau figures for branded and nonbranded independents who supply most of the gasoline to consumers. The data includes firms receiving at least 50% of their revenue from gas sales. So, operations such as car washes, establishments primarily servicing automobiles, and convenience stores are excluded. Another weak point in the information is the fact that it is not broken down by state or region.

Without solid jobber and dealer information, the Northeast, especially, is at a disadvantage because a majority of homes are heated by home heating fuel. According to EIA's November 1980 report on sales of refined petroleum products, 50.5% of all #2 middle distillate oil, which includes heating fuel, is sold by Refiner-Marketers. The rest is sold by branded and nonbranded independent marketers. Since almost 50% of the nation's diesel and home heating fuel is sold by jobbers and dealers, I am concerned by the fact that EIA plans to use other agency figures which may not be complete, which use different collection and processing methods than EIA, and which are not under EIA control.

I am, of course, sensitive to the fact that small businesses do not need additional paperwork. So, I assume that if EIA were to develop a jobber and dealer data base and survey, the survey would be very simple and not require unnecessary or duplicative data.

In addition to the Northeast-Midwest Congressional Coalition concerns, I would like to bring up another topic of special interest to me, namely the Financial Reporting System (FRS). I feel it must not be eliminated. The FRS will be helpful to all Members of Congress now that decontrol is a reality. The financial status of the oil industry is of interest to Congress and consumers, since we assumed Congress, with EIA information, could monitor price and supply of oil and oil products, as well as company profits and holdings. Without this information we cannot protect consumers.

In summary, I feel the above programs within the Energy Information Administration are crucial. When the Subcommittee considers the Energy Information Adminstration budget on March 30, I would urge you to bring up these concerns if at all possible. If you or a member of your staff has questions, please feel free to contact me or Anne Porowski at X55905.

Sincerely,

Tom

Tom Railsback
Member of Congress

TFR/ap

RESPONSE TO CONGRESSMAN RAILSBACK'S LETTER

The EIA will continue to be the central source of energy information although our efforts will be streamlined to focus on essential information. The proposals that the Administration will be submitting will eliminate data requirements that EIA has contended for some time, are not necessary in achieving a sound information base for energy policy decisionmaking. The proposals will not negatively impact on EIA's authority to collect energy data, but rather, eliminate those items that can be considered information luxuries. EIA will continue to provide the most thorough and timely picture of the nation's energy relationships.

Further, our efforts of the past several years in validation have allowed EIA to ascertain that our data is sound and subsequently removed the quality/credibility issue from the debate on energy issues so that decisionmakers may focus upon the substantive issues. In other words, EIA has been able to build quality assurance into our data collection efforts, thus ensuring the reliability of future information we publish.

The EIA has several efforts underway and is planning to assist the States with determining their energy data needs, and to provide the States with guidelines on collection procedures. These include:

-- a project being conducted by Oak Ridge National Laboratory in conjunction with the Southern States Energy Board to determine current State energy data requirements based on existing laws, publications and activities;

-- the development, by EIA, of a suggested basic core of State-level energy information which is needed by the Federal Government in order to develop a sound base of reliable information about energy; and

-- the development of a manual containing guidelines for States on how to determine data user requirements, conduct data collections, and set up systems to process the data.

These efforts will help to standardize data collection activities conducted by the States and will reduce the imposition of duplicative Federal and State reporting requirements on respondents.

The EIA will continue to provide valuable State-level statistical information in certain energy areas; however, we hope that the efforts described will enable the States to assume much of the responsibility for future collections of State-level information, and that the Federal role will become one of establishing an overall framework for the State's efforts.

In view of the proposed budget cuts and the President's order to immediately decontrol prices of crude oil and refined petroleum, the Energy Information Administration is currently analyzing its requirements for the collection of statistical and contingency planning information. A special effort is being made to significantly reduce respondent burden while, at the same time, collect more consolidated, integrated and relevant statistical information.

Secretary Edwards, on March 30, 1981, signed a Federal Register notice outlining the forms to be modified, eliminated or continued "as is", as a result of the President's decontrol order. This notice constitutes EIA's proposal for the elimination of information no longer needed to support the regulatory requirement of the EPAA. It should be noted, however, that the EIA has included its statistical needs within a number of the regulatory forms so as to minimize duplication. It should also be noted that the Federal Register notice does not propose the elimination of all State-level information. The EIA will continue to collect certain basic, or primary data, at the State level and some of these data will be useful in identifying and addressing several of Congressman Railsback's issues. For example, EIA will continue to collect residential heating oil price data from key States through cooperative efforts with those States. These data will be collected by approximately fifteen States during the heating season and will be available to the States themselves for monitoring price movements. Also, some first sales into States of refined petroleum products data, as well as bulk terminal stock and pipeline passthrough data, will be maintained. These data will be collected at a State level and will provide some information concerning the marketing and distribution of petroleum products by the major companies or suppliers. Further, EIA will continue to collect all fuel reserves and production data and utility data at the State level.

EIA is also soliciting, from industry representatives, State energy officials, and members of Congress, viewpoints on EIA's post-decontrol energy data collection efforts. The results of these discussions will enable us to better meet the needs of all parties in a coordinated program.

In the case of jobber and dealer data, there is currently sufficient information in the No. 2 heating oil wholesaler and dealer data base to aid decisionmakers in the Northeast should a short supply situation arise. This data base is up-to-date. A new sample has been selected using probability methods from the latest available DOE dealer universe, much as Mr. Railsback suggests in his letter. The data is being collected from a monthly mail survey of approximately 1800 respondents. We are looking at this system to ascertain what can be done to extend the wholesaler/prime supplier data base.

As Mr. Railsback accurately states, we do not have a wholesaler and dealer data base for gasoline prices. Currently, EIA utilizes data collection by the Lundberg Survey and the Bureau of Labor Statistics. We have reviewed these systems and found them to be relatively reliable and consistent.

There appears to be some misunderstanding concerning EIA's plans for future data collection efforts. Wherever EIA feels it necessary, such as in the area of the EIA-25, "Prime Supplier's Monthly Report," wholesalers/distributors will be surveyed and relevant data obtained so that decisionmakers will have sufficient information for making timely and informed policy choices.

INFORMATION ON COAL RESERVES

Mr. YATES. Did I understand you to say you are going to continue to collect information on the extent, characteristics and the productive capacity of coal reserves or are you not going to do that?

Mr. LINDEN. We will be collecting information on coal production, weekly as well as monthly and annually, and publishing that information. The area I think that you may be referring to is part of the rescission. There is a requirement in one of the recently passed laws that required us to do a very extensive in-depth detailed coal reserves study and provide the information. We are in the process right now of finishing that study. Since there appears to be an adequate supply of coal reserves in this country for the foreseeable future, we are not recommending that continued funds be expended in that area to collect even more detailed and burdensome data.

Mr. Chairman, may I enter my detailed statement for the record?

Mr. YATES. Certainly you may. I did not know you had one prepared.

Mr. LINDEN. Yes

Mr. YATES. Of course you may.

[The statement follows:]

STATEMENT OF ALBERT H. LINDEN, JR.
ACTING ADMINISTRATOR, ENERGY INFORMATION ADMINISTRATION
DEPARTMENT OF ENERGY
COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON INTERIOR AND RELATED AGENCIES

Mr. Chairman, Members of the Committee, I am pleased to be here today to present the Administration's proposed Fiscal Year 1982 budget for the Energy Information Administration. In the past, agency heads have come before you to explain why it was essential that their budgets be increased. I am pleased to be able to come before you this year explaining how we can operate efficiently to provide essential services with less money. My main purpose today will be to dispel any concerns you may have over the impacts that these cuts will have on the ability of the Energy Information Administration to provide essential energy statistics and analysis in Fiscal Year 1982.

The Fiscal Year 1982 request for the Energy Information Administration is $80 million, which is $10.7 million less than the revised request for FY 1981. EIA has submitted a request for rescission of $13.4 million of FY 1981 funds. Of necessity, this budget request requires a major restructuring and refocusing of our priorities. While the EIA has grown substantially over the past few years, programs supporting energy policy will continue at essentially the present level, but programs designed to support detailed government energy planning or regulatory functions are being discontinued.

Before I discuss the specific details of this year's budget request, I would like briefly to describe for you the proposed legislative changes that this budget assumes. EIA's main statutory responsibilities are to provide objective and verifiable information on historical energy trends, forecast future trends, and respond to the information and analytical needs of the Executive Branch, Congress, and the public. These functions will continue in FY 1982, but will be modified as necessary to provide the best information in the most efficient fashion.

We believe that in order to operate effectively and efficiently it will be necessary to eliminate several reports that have placed excessive reporting burdens on the private sector. we believe some reporting requirements are unnecessary given the availability of existing information in other reports which we disseminate. We are proposing that Congress assist us in eliminating these requirements. Further, it is our hope that Congress will assist us in our efforts to increase responsiveness and to operate more efficiently by providing for an increased measure of confidentiality for statistical information.

After careful review of our programs it appears that nearly $14.1 million could be saved in FY 1982 by the elimination of three reporting requirements. The first report that we believe should be eliminated presently requires development of a middle distillate monitoring system at the State level. This program is inconsistent with our intention of moving away from State-level reporting which is costly to collect and provides, at best, only marginal additional information. We question the overall usefulness of this program particularly due to its high cost and reporting burden. We will, of course, continue to collect middle distillate pricing data on a national level, and our past experience indicates that this will allow us to meet the needs of policy makers.

The second reporting requirement that we would eliminate is the Financial Reporting System (FRS). The availability of related information from sources within and outside of government coupled with the extensive burden associated with the FRS reporting form call for the ending of this program.

The EIA also is interested in eliminating the requirement for quarterly reports on energy data contained in other EIA reports. It appears that the format of the information provided to Congress is little used and is time-consuming and expensive for EIA to compile. By allowing the Administrator the discretion to publish this report on an annual rather than quarterly basis, reporting costs and burden would be cut considerably. Since the data is available in other EIA reports, we believe the quarterly reports are unnecessarily duplicative and not a good use of taxpayers' dollars.

In addition, we will be making every effort to streamline our systems wherever possible.

As another means of improving our operational efficiency, we are preparing legislation to provide increased confidentiality for statistical information to the EIA's efforts in meeting the new budgetary constraints. Under our proposal, the EIA would be enabled to obtain statistical information from another Federal agency and to assure that agency that the information would not be disclosed outside of the EIA. Given this assurance, other agencies will be more willing to provide EIA with statistical information than in the past, when the prospect of the use of statistical information for regulatory purposes has made agencies reluctant to share statistical information with EIA. Increased interagency sharing of information with agencies such as the Bureau of Labor Statistics will be crucial to EIA in its efforts to operate within its anticipated budget level of $80 million. If we can assure other agencies that data provided to EIA will remain confidential, we will not need to go out and collect the information again, which will have two beneficial results: first, the burden on the public of a duplicate data collection will be avoided; second, the cost to EIA of preparing the survey and collecting and analyzing the data will be avoided. In addition, there will be the less quantifiable, but equally

important benefit of enhancement of the integrity and credibility of EIA statistical information. We are also proposing that EIA be allowed to provide assurance to respondents that information gathered for statistical purposes will not be used for compliance or enforcement purposes. The transition from data gathering for regulatory purposes to data gathering for statistical purposes means that fewer reporting burdens will be placed on industry and that EIA can make greater use of sampling rather than requiring 100 percent reporting. Fairness calls for this policy. It would be unfair to a sampled respondent to provide his response to regulatory body while similarly situated businesses avoid the regulators' scrutiny because they were not part of the sample. In addition, data collection costs can and should be reduced by greater use of sampling techniques and a reduced need to enforce reporting requirements because of increased cooperation from respondents. I hope that you will give careful consideration to these requested legislative changes.

Before I discuss the details of this budget request, I would like to highlight for you some of our recent accomplishments.

In the four years of its existence, the EIA has made great progress in meeting the goal of unquestioned quality in its energy data and analyses. Last year EIA's Office of Energy Applied Analysis prepared Volume III of the EIA Annual Report, which is EIA's forecast volume, produced for the first time quarterly short-term forecasts of energy supply and demand; completed over 20 special analyses of energy issues upon request; and completed the Energy Policy Study which compares current energy policy to a scenario of reduced Government intervention and describes the manner in which Government energy programs complement or offset one another.

The programs in Collection, Production and Dissemination have published the Weekly Petroleum Status Report, gathered data on oil and gas reserves, exploration patterns, and production in the United States, eliminating EIA's dependence on API and AGA data in order to produce independent statistics; completed the collection of comprehensive financial data from 26 major energy companies; responded to over 100,000 requests for information from the public; and completed interim energy consumption surveys in the residential and commerical sectors. The accomplishments in the area of Data Information Services include developing 15 data systems for FERC; leading the Federal Government in reducing the paperwork burden on the private sector in the area of time-consuming and redundant reporting requirements; improving EIA's computer processing and support by having a highly responsive computer facility; developing, implementing and publishing in the Federal Register

the monthly Alternative Fuel Price Ceiling required by the NGPA; and assuring that the data collected is reasonable and credible by having a viable quality control effort; and validating requirements for five energy subject areas and seven existing data collection systems.

I would now like to highlight some of the details of the FY 1982 budget request. As I stated, EIA's request is for $80 million. This represents $10.7 million less than our 1981 revised request. I will now discuss how the various programs of the EIA are impacted by the new budgetary thrust.

The 1982 request for Energy Applied Analysis is $8.0 million. This is $1.8 million less than the 1981 revised request. With this level of funding Energy Applied Analysis will continue to prepare forecasts and analyses to show energy production, consumption, transportation and prices under alternative scenarios for the EIA Annual Report to Congress, which, in turn, will be streamlined. We also will continue to prepare analyses at the request of Congress, the White House, and other parts of the Executive Branch, that will be relevant and timely, but we anticipate fewer such requests, in view of the general policy calling for less government intervention in the economy, and for establishing stable policies which do not require continual "fine tuning." Further, we will continue to publish quarterly short-term forecasts. Program changes include: elimination of State-level demand forecasts called for in the Emergency Energy Conservation Act; scheduling model updates, documentation, and simplification over a longer time period; and limiting the scope of long-term forecasts. In order to accomplish this analytical agenda, Energy Applied Analysis will continue to develop, maintain and update models on which these forecasts are based, and analyze the most relevant energy issues.

The 1982 request for Collection, Production and Dissemination is $38.4 million, $2.2 million less than the 1981 revised request. At this level of funding, EIA will continue to collect, assemble, interpret and disseminate accurate, timely, credible and unified data that is relevant to energy resources, energy reserves, energy production, demand, and technology. The primary thrust of this effort will be the preparation of basic data series for oil, gas, coal, and utilities at the national level.

There are no funds requested in FY 1982 for the Financial Reporting System, for the reasons mentioned earlier regarding the FRS. The program will cease with the publication of the report based on 1980 financial and operating information.

The Oil and Gas Information System will continue to collect estimates of oil and gas reserves and resources, but will drop data about individual fields. Other basic petroleum and natural gas information will continue to be provided, including support to FERC at essentially the present level. Several existing and proposed new petroleum systems will be eliminated, including the State-level Middle Distillate Monitoring System called for in the Emergency Energy Conservation Act. Energy Information Services will continue to publish and disseminate data produced by EIA programs. Basic data series on coal production, transportation and consumption and the electric utility industry will be maintained with only minor changes reducing the amount of State level electricity consumption information. Data on various emerging energy sources will be collected only when they represent a meaningful contribution to total energy supply. The recently established residential energy consumption survey will be limited to national level statistics only.

Current funding for the Energy Emergency Information Management System which provides rapid access to information to be used during emergencies will be reduced sharply. In the event of an emergency situation, priorities will be reordered to provide, in a timely fashion, needed information that is generally available through other data systems. Also support to other DOE offices, including ERA will be eliminated, and support to the Office of Conservation and Renewable Energy, and Environmental Protection, Safety and Emergency Prepardness will be reduced, consistent with their revised requirements.

The 1982 request for Data Information Services is $33.6 million, $6.7 million below the 1981 revised request. This level of funding will allow Data Information Services to provide adequate ADP computer and attendant services through maintenance of the Department's major energy ADP facility, including performance of all operational, planning and service functions associated with the facility. Services provided to other parts of DOE generally will be provided on a cost reimbursable basis. Data Information Services will continue to design, develop and implement energy systems in support of FERC, while other DOE organizations will receive a reduced level of support consistent with reductions in their programs. Data development activities in the areas of petroleum, natural gas, coal, electric power and emerging energy sources will be initiated only if needed for an emergency situation, to support a new DOE program requirement, or to fill a critical gap in basic energy data series.

The functions of the National Energy Information System and of Information Validation will be transferred into Data Information Services. The National Energy Information System will be limited to the development and maintenance of a comprehensive classification scheme and directory of all EIA forms, systems, models, publications

and data elements. This directory will enable users to organize, identify, and gain access to energy data on a wide range of energy issues.

The validation effort will be scaled down to a quality assurance level. This independent quality assessment function will continue to ensure that the EIA energy data and analysis programs provide sufficient, meaningful, and accurate information. Through the validation efforts of the past three years, the quality of EIA data has been proven and maintained with the adoption of sound quality assurance practices throughout the organization. I believe that these practices have become a standard operating procedure. It is an appropriate step, therefore, to scale down validation to an oversight function.

The development of energy data survey forms and instructions and the management of the forms clearance process will be maintained with a continued effort to reduce the respondent paperwork burden.

Again, let me assure you that this budget of $80 million provides EIA with an opportunity to reorder its priorities, and to address the perennial question; "How much information is enough?" I feel confident that a new streamlined EIA will be able to continue to provide essential information and analyses to the Congress, to policy-makers in the Executive Branch, and to the public and other users.

I will be happy to answer any questions you may have.

Mr. LINDEN. I would like, if I could, at this time to summarize some of the key points because I think it may answer some questions.

Mr. YATES. Proceed.

SUMMARY STATEMENT

Mr. LINDEN. Agency heads have often come here explaining why their budget should be increased. I am pleased to be able to explain today how the Energy Information Administration can provide essential but fewer services and still maintain its past high standards of presenting quality data for less money than in the past. In fiscal year 1982 the EIA is requesting $80 million, which is $10.7 million less than the revised 1981 request.

In accordance with the new approach EIA has proposed a rescission of $13.4 million in fiscal year 1981. Of necessity this budget reflects a major restructuring and refocusing of EIA's priorities. EIA will continue to provide information to policy makers just as it now does. However, in accordance with President Reagan's Program For Economic Recovery, the EIA will, and I quote from the words from that report: "reverse the trend toward even more detailed statistics and assessments and provide faster, more relevant analysis and eliminate duplication."

This streamlining will provide timely, relevant information and at the same time it will decrease the reporting burden placed on the public and industry. For example, with the decontrol of crude oil and products the EIA has been reviewing the data being collected in the petroleum area. Although this review is still underway, we expect to eliminate more than 700,000 hours of burden while improving the usefulness of our data. Further, as part of our continuing efforts to decrease the burden on respondents, we have been reviewing all data collection efforts to find where significant economies can be realized.

Other proposed changes in our data collection will include the elimination of the Financial Reporting System, decreased emphasis on new energy sources and limiting consumption surveys primarily to the residential sector. After three years of information validation we now know that EIA's data is basically sound. Further, we are able to build in a sound quality assurance through practices throughout EIA; thus we will scale back our validation function to one of an oversight role.

To support our streamlining, the administration will be requesting legislation that will decrease duplicative collection by allowing us to assure other agencies that any information that they have provided to us will be used solely for statistical purposes and not for regulatory purposes. Thus, the prime concern that has impeded data sharing in the Federal Government and resulted in redundant information gathering will be eliminated. As a final part of our streamlining efforts we will focus much of our analytical attention on anticipating major energy issues and providing timely analysis addressing those issues.

I would like to underscore that we are striving to decrease the burden and cost in every possible instance while still producing quality products such as our Weekly Petroleum Status Report, our Monthly Energy Review, our Short-Term Energy Outlook and our

annual reports. Overall I am confident that the streamlined EIA will continue to provide essential information and analysis to the Congress, the executive branch and the public.

Thank you, sir. I would be glad to answer any further questions you may have.

INFORMATION ABOUT OIL PRODUCTION

Mr. YATES. Will you be getting your information respecting the condition of the production of oil, from the oil companies?

Mr. LINDEN. Yes, that is currently where we get the information.

Mr. YATES. That does not relate to your rescission then.

Mr. LINDEN. Yes, it does. You are talking about the Financial Reporting System.

Mr. YATES. Yes.

Mr. LINDEN. We feel that there are adequate public sources coupled with other Government agencies such as the Securities and Exchange Form 10-K. Given the respondent burden of this form it is our assessment that the benefit is not consistent with our role as the statistical agency to provide information.

Just as an interesting point on the Financial Reporting System, it ranks first among all DOE forms in terms of burden per respondent. It takes 4,000 hours per respondent, that is, almost two staff years, for every respondent to fill it out. The total burden is about 100,000 staff hours. We have had only 77 congressional requests for this data in the last three years. This program costs about $2.4 million and it represents three percent of our budget.

WINDFALL PROFITS TAX

Mr. YATES. Have you had enough experience with the windfall profits tax to determine what effect it has had on the oil industry?

Mr. LINDEN. No, not at this time. In cooperation with the IRS we have been gathering information along those lines but we are not able to assess its value at this time. I would imagine that within six or eight months we would have enough information and we would be able to do a good analysis of it.

TERMINATION OF THE FINANCIAL REPORTING SYSTEM

Mr. YATES. Are you terminating the Financial Reporting System?

Mr. LINDEN. We are proposing that, yes, sir.

Mr. YATES. Why was it proposed in the first instance? Why did you want it originally if you don't want it now?

Mr. LINDEN. We didn't propose it; the Congress directed us to do that.

Mr. YATES. Oh. Why did the Congress want you to do it?

Mr. LINDEN. I think the major reason that Congress wanted us to do it was that they had some concern at that time about the financial status of the various oil companies and they wanted us to do an in-depth look.

Mr. YATES. Do you think Congress no longer has that concern?

Mr. LINDEN. I am not sure.

Mr. YATES. Well, have they repealed it?

Mr. LINDEN. No. The Administration is recommending that it be repealed because of its burden.

Mr. YATES. Have you completed the data collection for your 1980 report on financial and operating information?

Mr. LINDEN. No; in fact, I think the form is still at OMB for clearance and it will be mailed out very shortly to get the information. Normally, that information comes in after the books of the individual companies are closed and after they have submitted their Internal Revenue Service reports.

Mr. YATES. When will the 1980 information be published?

Mr. LINDEN. October of this year is our target at this time.

Mr. YATES. What kind of information was the system designed to gather?

Mr. LINDEN. It gathers segmented, detailed data. It basically requires companies to set up another set of financial books in order to meet our definitional requirements. It has them structure their accounts in such a fashion as to segment them in the areas of exploration, development, refining, marketing, so that one could get a look at those various segments of their operation, both costs and sales. There were about 7,000 elements of information on the form.

MOST RELEVANT ENERGY ISSUES

Mr. YATES. Well, let's look at your budget on page 145. You say:

EIA will produce less detailed data focusing on basic national level energy statistics. Analytical reports will necessarily be fewer but will focus on the most relevant energy issues in a timely manner.

Mr. LINDEN. Yes.

Mr. YATES. What are the most relevant energy issues?

Mr. LINDEN. Well, for example, some of them are currently gathering information and analyzing the natural gas situation to see if there should be any changes to the National Gas Policy Act. There have been some requests on the Senate side to look at that, also to look at whether there should be any follow-on or proposed legislation to the Emergency Petroleum Allocation Act which expires in September of this year. We have done some preliminary work in that area.

We have done work on how fast the Strategic Petroleum Reserve should be filled and on the possible impacts, just to name a few of the areas that we have looked at and we will be looking at in the future.

Mr. YATES. I wish you would expand your answer to include all the most relevant energy issues that you can think of that you will be examining.

Mr. LINDEN. I will be glad to provide that for the record.

[The information follows:]

ANALYSIS OF ENERGY ISSUES

Relevant energy issues which EIA intends to analyze in anticipation of policy debate include:

Alternative ways to deregulate natural gas prior to the timeframe of the Natural Gas Policy Act (NGPA);

Issues affecting natural gas supply, 1981–85;

Price elasticities in petroleum products;

Impacts of using natural gas as a substitute for oil;

Estimation of oil and gas finding rates;

Incentives for enhanced oil recovery;
Analysis of world oil markets in the 1980s;
Coal related analysis on coal transportation rates and factors influencing production costs and the financial state of the industry;
Analysis of the feasibility of financing domestic energy development, 1980–1990;
Analysis of price sensitivity of industrial energy use; and
Analysis of capital requirements for transportation of energy material, 1980–1990.

FREEDOM FROM INDUSTRY SOURCES

Mr. YATES. Dr. Moses told us last year that with the appropriation he looked forward to being free from relying on data from the American Petroleum Institute, that you would have an independent source of energy information.

Mr. LINDEN. That has been accomplished.

Mr. YATES. It has been?

Mr. LINDEN. Yes. Our Weekly Petroleum Status Report now includes, as it relates to petroleum, all the information that is collected by the American Petroleum Institute.

Mr. YATES. What nongovernmental sources will you use?

Mr. LINDEN. In regard to what?

Mr. YATES. Data sources.

Mr. LINDEN. Well, for example, in the area of petroleum finances we would use Chase Manhattan Compustat. We compare our data with information from the American Gas Association on gas production in some of its end use. These are just a few of the nongovernmental sources that we use. I would add there that many of the sources like the American Petroleum Institute, the Edison Electric Institute, and the National Coal Association actually use our information and have for many, many years as the basis for their information. They revise their figures monthly based upon our monthly data.

Mr. YATES. Will that be reversed? Will you be relying on theirs now?

Mr. LINDEN. No, that will not be reversed. We will still provide basic energy statistics.

IN-HOUSE STAFF VERSUS CONTRACTORS

Mr. YATES. Are you going to rely on in-house staff or on contractors?

Mr. LINDEN. Well, we will have about the same mix of in-house versus contractors that exists in our current budget and that is in the 60 percent area; 61, 62 percent.

Mr. YATES. Will your staff be reduced by 43 percent?

Mr. LINDEN. It will be reduced from 705 to 520.

Mr. YATES. Is that 43 percent?

Mr. LINDEN. It is 43 percent from the Carter request of 910, but I normally think in terms of a third from our on-board strength. We currently have on board about 760 people and would be going to 520 people by the end of 1982.

LEGISLATIVE PROPOSALS

Mr. YATES. Are there legislative proposals being transmitted to Congress respecting termination of required reporting activities?

Mr. LINDEN. That is my understanding. I know they have left the Department.

Mr. YATES. They have?

Mr. LINDEN. Yes.

Mr. YATES. As far as you know then they are already referred to Congress?

Mr. LINDEN. No, they have left the Department. I am not sure if OMB has submitted them or not, but they have been approved by the Department and, of course, our budget has been approved.

Mr. YATES. Will any of your activities expire with the termination of EPAA?

Mr. LINDEN. Yes. Some of that 700,000 hours of respondent burden that I referred to in my opening statement will result from the elimination of about 23 forms that we have identified. Five more will be extensively modified, and we are looking at a significant number of other forms in the petroleum area. These were mainly regulatory forms and they will not significantly affect our basic statistical program.

IMPACT OF DECONTROL

Mr. YATES. Were any of your activities terminated as a result of the decontrol of gasoline?

Mr. LINDEN. EIA's forms were not affected other than some detailed data that we would have collected for the regulators.

FORECAST OF OIL IMPORTS

Mr. YATES. What is your estimate as to what our oil imports will be by March of 1982?

Mr. LINDEN. By March of 1982?

Mr. YATES. Yes.

Mr. LINDEN. I would like to supply that for the record if I may. I don't recall that off the top of my head.

Mr. YATES. Put it in for 1982 and also for 1985.

Mr. LINDEN. I will be glad to do that.

[The information follows:]

PETROLEUM IMPORTS IN 1982 AND 1985

Our short-term forecast shows net imports of crude oil and refined products for the first quarter of 1982 ranging from 5.4 to 6.9 million barrels per day, depending upon the world oil price. For the intermediate case, in which world oil prices remain constant in real terms, net imports are forecast to be 6.3 mmbd.

By 1985 we forecast that net oil imports will have fallen to between 4.7 and 6.0 mmbd, again depending upon world oil price. The intermediate value, representing the case where oil prices increase only with U.S. inflation, is about 5.3 mmbd.

Mr. YATES. How do your forecasts compare with those of forecasters like Exxon, Irving Trust and Chase Manhattan and the API?

Mr. LINDEN. In Volume 3 of our Annual Report we compare those. Normally we have been more optimistic in the past four or five years about the production of resources, particularly petroleum and natural gas, than industry forecasts have been. Our estimates have been about in the same general area for consumption but we have normally been a year ahead in terms of the decrease and total amount of energy that is being consumed. The others seem to

be coming down near to our level but apparently they follow us by about a year.

SUPPORT TO CONSERVATION

Mr. YATES. What support have you provided the conservation program that you will no longer provide?

Mr. LINDEN. Much of the information that was to be provided under EECA was support for conservation and solar and that will no longer be provided. That was our major support.

RESPONSE TO REQUESTS

Mr. YATES. What percentage of requests for information studies have you been able to respond to?

Mr. LINDEN. We have been able to respond to most of the data requests with the information we currently have. I would say we have responded to well over 70 percent. Don't hold me to a number more exact than that. We have been reducing our analytical support and that has been a limiting factor.

Mr. YATES. Will you be able to maintain the same level next year?

Mr. LINDEN. Well, it depends on how many requests we get. If we get more requests, obviously we will not be able to respond to them all; but if you assume about the same level of requests, I think we will be able to adequately respond to them in about the same fashion. We are focusing our analytical agenda on those that we feel will be most relevant so that we can address the relevant questions rather than looking at some that are more futuristic.

Mr. YATES. How do you decide which requests you are going to answer?

Mr. LINDEN. We give priorities to requests made by the Congress and made by chairmen of the various congressional committees first. We then give priority to internal requests of the Department. We would give the next priority to requests from outside the Federal Government. In fact, we have responded to the Texas Energy Advisory Commission, and have actually done a significant amount of work with them. They have a copy of our mid-term model now and we have been working very closely with them, so we have adequately supported them.

MINERAL FUELS

Mr. YATES. What mineral fuels does your program cover?

Mr. LINDEN. Mineral fuels would include coal, primarily the main area that we deal in.

Mr. YATES. What information do you collect with respect to coal?

Mr. LINDEN. We get weekly railroad carloadings and we make an estimate which is published in our weekly report of domestic coal production. We have statistics on the monthly use of coal, use at the utilities, use of coal in industry. We have made some significant improvements in our coal use data in the area of updating the frame and collecting more reliable data. We make annual estimates of coal reserves. I think we have a pretty comprehensive coal program.

Mr. YATES. What percentage of our coal production capacity comes from use of the long wall mine?

Mr. LINDEN. I would like to respond to that one for the record. I don't know right off the top of my head.

Mr. YATES. All right.

[The information follows:]

MINERAL FUELS REPORTS

In 1978 five percent of underground coal was mined using longwall mining machines.

Mr. YATES. Do you have a forecast for coal supply and demand through calendar 1981?

Mr. LINDEN. Yes, we do.

Mr. YATES. Do you want to put that in the record?

Mr. LINDEN. Yes. I think it grows by something like four percent or five percent over this year which is the number. We are very optimistic on our coal use and our coal production.

[The information follows:]

COAL SUPPLY AND DEMAND

In our February *Short Term Energy Outlook* we forecast coal production in 1981 to be 850 million tons, in the absence of a prolonged strike. Total domestic consumption is forecast as 746 million tons.

Mr. YATES. Do you have an estimate of the U.S. coal reserves?

Mr. LINDEN. Yes. We will be updating that estimate in the next several months in response to the legislative mandate. We will be coming out with a book and I don't have the preliminary numbers nor are they available to me but they will be within the next 60 days. I would rather answer that one for the record if I could.

[The information follows:]

COAL RESERVES

Coal in the United States determined by the Energy Information Administration to fall under certain criteria of minability is termed The Demonstrated Reserve Base. These resources totaled 474,565 million short tons as of January 1, 1979.

LEGISLATIVE REQUIREMENTS FOR COAL DATA

Mr. YATES. Do you know what the new legislative requirements will be for coal data?

Mr. LINDEN. In current legislation or in proposed congressional? I am not familiar with what Congress is proposing in the way of future legislation. I am familiar with what currently exists in the way of legislative requirements for coal and I think we are adequately addressing those.

OIL AND GAS INFORMATION SYSTEM

Mr. YATES. How much will you be reducing your oil and gas information systems in the next fiscal year?

Mr. LINDEN. We will not be reducing the systems that we have for oil and gas at all.

Mr. YATES. What will you give up as a result of the reduction then?

Mr. LINDEN. I am sorry. I didn't understand your question.

Mr. YATES. The January budget indicates that the EIA Coal and Gas Information System was the only source of information on reserves, on reserve additions and production.

Mr. LINDEN. Okay, I understand your question now.

Mr. YATES. All right.

Mr. LINDEN. The only thing we will be giving up there is field level data. We will still continue to collect national level data on oil and gas reserves and we are studying State level data.

Mr. YATES. Is there no industry data to take its place?

Mr. LINDEN. That is right.

Mr. YATES. The data you are giving up then has no use for you?

Mr. LINDEN. In the oil and gas area on reserves the only thing we are giving up would be the field level data and currently those are estimates that have been made in the past by API, but we will still maintain the national oil and gas reserves numbers.

Mr. YATES. Are trade associations going to get back into this area?

Mr. LINDEN. I would rather doubt it, at least immediately.

Mr. YATES. Are your estimates of oil and gas reserves about the same as those of industry?

Mr. LINDEN. They have been historically a little bit higher than have been the trade association forecasts. I think roughly somewhere about seven percent higher. I think that is well within the range given the accuracy of the information we are talking about here in terms of future ability to produce.

Mr. YATES. Your Annual Report indicates that since 1970 production has exceeded the level of new discoveries plus increases in the proved reserve estimates at known reserves for 1978.

Mr. LINDEN. Right.

Mr. YATES. What about your estimates for 1979 and 1980, do they show the same thing?

Mr. LINDEN. I think 1979 will show us closing the gap and the 1980 data we have not yet collected but it may close the gap further.

Mr. YATES. What is your assessment as to whether additions to reserves will exceed production in 1981 to 1985?

Mr. LINDEN. I would guess that they will probably break even; in other words, that somewhere the net additions will approximately be offset by domestic production. That is a very optimistic outlook by most because that will stop the trend that has been going on since, I believe, 1970.

NATIONAL ENERGY INFORMATION SYSTEM

Mr. YATES. Will the National Energy Information System be hurt by the reductions?

Mr. LINDEN. No, because we have been working on developing and getting our data more accessible by integrating our information for the past several years and we think that with the funds that have been provided in the development of this in our other data systems that they are now very accessible. In fact, we have available in public some 700-plus data series that, each month, allow you to get a tape.

That is the first step in our National Energy Information System.

ELECTRIC UTILITY DATA REQUIREMENTS

Mr. YATES. What are the new legislative requirements for electric utility data?

Mr. LINDEN. The ones that I am aware of would be those in the Fuel Use Act.

Mr. YATES. Are you going to meet the requirements?

Mr. LINDEN. No. Our plan in that particular area is to basically continue with existing data systems and to improve the timeliness of those.

Mr. YATES. You are cutting back on electric utility data. What information will be lost as a result of the cutback?

Mr. LINDEN. Very little will be lost because of improved efficiencies, and as I said, we have had a program for the last several years in the development of data systems to make them more responsive. When we first took that program over from the old Federal Power Commission a lot of that information was added manually. There were not any automated systems, and over the last several years we have been able to automate those systems. I signed off, last week on the second electricity monthly report and that was all computer generated.

Mr. YATES. Can you tell us how the revised reduction relates to the $513,000 reduction mentioned in the January budget on page 285?

Mr. LINDEN. I don't understand your question.

Mr. YATES. Your revised budget shows a reduction of $1,028,000 as a result of eliminating emergency energy conservation data and then on page 285 of the January budget it was cut back by $513,000 and now it is cut back some more. I wondered what the effect of that will be in terms of the provision of the data. You have two reductions instead of one, one in the original budget and one in the revised budget? What will the effect of the two reductions be?

Mr. LINDEN. You are talking about the collection, production and dissemination.

Mr. YATES. Yes.

Mr. LINDEN. In which program?

Mr. YATES. Emergency Energy Conservation Act electric utility data.

Mr. LINDEN. Yes.

Mr. YATES. Now that was cut back by $513,000 in January. You want to cut it back some more in your revised budget.

Mr. LINDEN. I will have to answer that for the record because I am missing the question here.

Mr. YATES. Your assistant just gave you something.

Put your answer in the record.

Mr. LINDEN. I will submit that for the record. I am not understanding the question.

Mr. YATES. All right.

[The information follows:]

REDUCTION IN ELECTRIC UTILITIES

The January budget for Electric Utilities proposed a reduction of $513,000 offset by increases for pay raise an inflation for a net reduction of $263,000 from the 1981 appropriation. Increased efficiencies such as the automation of publications, termination of collection of state level data on the consumption of electric power by the residential, industrial and commercial sectors accounted for the decrease.

The revised budget eliminated the 1982 cost of the October 1980 pay raise and inflation estimates in the contract budget as well as any remaining funds for state level data. To absorb these reductions, plans were made to further consolidate and automate existing publications so that redesigned surveys will be more efficient and less burdensome.

INFORMATION DURING EMERGENCIES

Mr. YATES. In light of these reductions are you going to be able to supply information for electric utilities during emergencies?

Mr. LINDEN. Yes, we are. In fact, we already have in the field a stand-by data collection instrument. On the 21st of March the major coal-burning utilities provided us with their current status. We have the capability for continual monitoring but we will not exercise that capability other than for this one time base line report unless the President declares an emergency as it relates to the current coal situation. We have the capability to generate that information in an emergency and we are fully prepared to support any kind of emergency.

ENERGY INFORMATION SERVICES

Mr. YATES. Why is it necessary to increase the energy information services budget beyond the 1981 level?

Mr. LINDEN. There is a slight increase in this program because we are getting a lot more requests for information. We have almost doubled the use of the National Energy Information Center in the last year. If that continues we will need adequate resources to support that activity since our job is to provide information to the public.

BURDENSOME REPORTING

Mr. YATES. Now you say that obtaining petroleum and natural gas data was extraordinarily costly and burdensome. To whom was it costly and burdensome?

Mr. LINDEN. I think you are referring to the Financial Reporting System again.

Mr. YATES. Yes.

Mr. LINDEN. It was very costly and burdensome to the 27 companies that had to support that. As I said, that was ranked first among all of our forms in terms of burden per respondent.

Mr. YATES. What about the Emergency Energy Conservation Act information on petroleum and natural gas data? That is the data you say is extraordinarily costly and burdensome and I am trying to find out to whom was it costly and burdensome.

Mr. LINDEN. As I said earlier and I have said even when that particular bill was in conference, the costliness to the government comes from trying to collect about 50 times the information that one would normally need because you have to go to each State level. For example, we requested in the 1980 supplemental $20 million and 45 positions just to support that activity. We found that even as we get into it these resources were not adequate. We think that before we proceed any further that consideration should be given to the little payoff that results from collecting State level data.

DECREASES IN REPORTING BURDEN

Mr. LOEFFLER. Mr. Linden, along these lines you noted a decrease in the level of reporting burden on the industry and the public and predict savings in this action. To what degree are you going to decrease the reporting burden there? Can you further specify that for the committee?

Mr. LINDEN. Yes, I would be glad to do that.

First of all, within the next week we are going to reduce by over 700,000 hours and eliminate 23 forms as they related to the control of crude oil and products. In addition to that, we will be revising our information collection budget in terms of burden hours from something like 20 million hours down to about 15 million hours as a result of legislative changes that we are proposing to the Congress along with this budget.

Mr. LOEFFLER. That reduction from 20 million to 15 million hours is private sector reduction in the burden?

Mr. LINDEN. Yes.

Mr. LOEFFLER. What do you project will be the cost savings? Is there any guesstimate?

Mr. LINDEN. No, we have not tried to quantify it in terms of dollars that would be saved in the industry but we have quantified it in terms of the savings in Federal spending, is primarily the difference between our earlier budget and this budget.

Mr. LOEFFLER. Thank you, Mr. Chairman.

Mr. YATES. Yes.

PETROLEUM AND NATURAL GAS DATA

The overall fiscal year 1982 request for petroleum and natural gas data is increased over the fiscal year 1981 level, and it is the same as the January budget.

Mr. LINDEN. Yes.

Mr. YATES. Since the revised budget indicates no EECA information will be collected, what are you going to do with the money that was in the original 1982 budget for EECA?

Mr. LINDEN. In the natural gas area, we feel that as a result of decontrol we are switching some of our systems from universal reporting to a statistical sampling frame. In 1982 the revision of these systems particularly as they relate to price of petroleum would have been done in either case.

Mr. YATES. What will the increase over the 1981 level provide?

Mr. LINDEN. It will allow us to go from a large number of regulatory forms which I talked about eliminating in the price area into a statistical sampling method to reduce burden but yet provide essential information in the petroleum pricing area. It will also help us integrate our petroleum systems as they relate to oil imports.

STAFFING LEVELS

Mr. YATES. The January budget says that "EIA's ability to reliably inform the legislative and executive branches of the ability of the public to withstand fuel supply interruptions may be delayed due to in-house staffing constraints."

What does that mean? What are in-house staffing constraints?

Mr. LINDEN. During the time of the 2 for 1 freeze our staffing efforts were constrained. In fact, I think we never did fully staff up to what we were actually appropriated for this year, authorized in the previous year.

Mr. YATES. Does the revised budget help you in that respect?

Mr. LINDEN. It helps us in that we don't have to worry about staffing up. We have to worry about staffing down.

Mr. YATES. How important was the staffing?

Mr. LINDEN. Well, as I said in my opening remarks, it is a different program.

Mr. YATES. You have no luxuries in this program?

Mr. LINDEN. That is exactly right; this is bare bones basic information, information that the Federal Government has been collecting for many, many years. We are doing relevant analysis and we are refocusing the entire program. I think it is very difficult to compare what it was with what we are doing other than to say that it is going to be less detailed information and we are going to focus back on basic statistical programs. We can do that very successfully.

Mr. YATES. Do you prefer relying on your in-house staff rather than on outside contractors?

Mr. LINDEN. Of course, to an extent. However, certain things such as key punching and the operation of computers and some of those more repetitive tasks can be done just as well by contractors. But where it comes to relying upon the analytical capabilities, understanding the data that we are collecting and doing our forecasts, then I think in-house people are very important. That is where we are focusing and will be focusing our in-house people. However, in the new budget this will be much less than we currently have on board.

Mr. YATES. How much money will you save as a result of these reductions? Won't you be required to spend money that you save from reductions in staff for outside contracting?

Mr. LINDEN. We are cutting back. As I said, we have eliminated 23 forms already and we are looking at other forms and other data. There is a lot of what I would call cost avoidance here. We have been gearing up for the EECA program in terms of much more data collection, costing almost to $20 million. We feel that if the rescissions and budget reductions that the Administration is proposing are carried out, we will see a 25 percent reduction in the forms coming in the door.

CONSUMPTION SURVEYS

Mr. YATES. Tell me why you are continuing the residential survey but not the commercial and industrial surveys.

Mr. LINDEN. We have the residental survey underway very successfully. We have actually gone through several cycles that have proved to be very satisfactory. We have had very few burden complaints about doing the survey in the commercial and industrial sector where we are still feeling and running our way. We have had one interim commercial survey in the industrial sector. We had one survey where we received only eight percent of the responses and OMB cancelled the form.

Mr. YATES. What are you going to lose by dropping the commercial and the industrial surveys?

Mr. LINDEN. By dropping the industrial survey we will lose some in-depth understanding of how energy is used in the industrial sector but we are scaling those back. Only in 1982 have we proposed not to collect anything. We still have some funds in our budget in the consumption area to be able to study the industrial and the commercial sector to see what ought to be a more relevant program there.

ENERGY EMERGENCY MANAGEMENT INFORMATION SYSTEM

Mr. YATES. Why does the budget level for the Energy Emergency Management Information System drop so precipitously in 1982?

Mr. LINDEN. Because we have been developing the system now for about three years. The data system is now up and running and the communications are in place. We feel that the money that we have retained in that budget, about a million dollars, is all that it takes to operate the system.

Mr. YATES. How would the EEMIS system be of use during a coal strike?

Mr. LINDEN. It would provide a communications link with the various State energy offices that are hooked up to it. It would provide them with the summary information on a weekly basis that we would be collecting. It would be used as a communications link to keep them posted and also it would have the list of people in the various sectors that we could contact if need be.

Mr. YATES. What special data collection did you carry out in support of EEMIS?

Mr. LINDEN. We had only two forms and they were in the natural gas area. But the purpose of the sytem is primarily to get much more rapid access to our existing data, presenting it in a fashion where we can use it more rapidly. We are also developing a data base that has the names of the people that you would contact; for example, electric utility executives, people in the coal fields and in the coal production area, people at the State level. Now we will just maintain and update the list of contacts. We have also established a message capability so that we can provide the State energy offices with the most up-to-date and the latest information we have available and also query them as to what problems might be going on in their particular region.

Mr. YATES. Where will this system be placed in your new organization?

Mr. LINDEN. It will still reside within the Energy Information Administration.

Mr. YATES. It will?

Mr. LINDEN. Yes, sir.

Mr. YATES. But where specifically?

Mr. LINDEN. Well, it will probably reside either in the group called the Statistical Services group or in our Data Information Services group.

Mr. YATES. Why would it not go to the emergency preparedness area?

Mr. LINDEN. EIA has been the single source of information for the Department of Energy. If you reside a data system in another

part of the Department, there is always the opportunity to have multiple numbers. It has been my judgement, having been in the emergency energy business since 1973, that this is not a good thing for the Federal Government to do; that is, to put out multiple numbers. It is better to have one reliable source of numbers for the Federal Government to use; otherwise, people tend to get very, very confused and they don't know what the difference is between EIA or ERA or some emergency group. I think it is very important in my judgment, in the last six or seven emergency energy situations that I have been involved in, that a single source of information be maintained.

INFORMATION VALIDATION

Mr. YATES. It looks like you are really being cut in information validation even though the professional audit review team found that the previous validation efforts were very much limited. They said as a result of validation limitation your energy information is undetermined or questionable. Why should there be such a big cut in this?

Mr. LINDEN. After three years of experience we know our data is basically sound and accurate. With regards to the PART team, we have accomplished much since that report has been published. At the time that they published their report we had only reviewed the petroleum area. Since that time we have reviewed the coal and the natural gas area. PART's criticism mainly dealt with the validation methodology; yet we were complimented by several well-known statisticians for our approach. So there is some question as to whose methodology was really best.

Mr. YATES. Did you lose anything by losing the validation?

Mr. LINDEN. No, I don't think so. I have been involved in this since the beginning. We have looked at a lot of our data systems over the past three years. We have now built quality assurance into our basic data systems including such things as edit checks and range checks. Much of the work that they did in looking at our various data systems and recommendations for improvements has been incorporated into all of our basic systems. From that perspective we feel that a much reduced program is in order. We will not do away with the program totally. We will want to do spot checks of our systems; it is just that we won't have to look at them every three or four years as it was previously envisioned.

Mr. YATES. What is going to happen to the validation people?

Mr. LINDEN. They will be used in other parts of the organization. Many of them have gained great expertise in coal, natural gas, the petroleum areas and they will be used in those areas.

Mr. YATES. Do you mean by private enterprise?

Mr. LINDEN. No, it is my understanding that everybody basically goes into a pool. There are personnel requirements to meet if you have to go through a reduction in force. I think some of the more senior people with lots of experience will be retained in other areas.

DATA INFORMATION SERVICES

Mr. YATES. Let's turn to the Data Information Services. Who are the customers for your services?

Mr. LINDEN. The customers for our services are the Federal Energy Regulatory Commission, the Economic Regulatory Administration, the Congress of the United States and other parts of the Department.

Mr. YATES. To what extent have you previously provided services on the reimbursable basis?

Mr. LINDEN. Basically we have provided very little. We have provided some support to the Strategic Petroleum Reserve and a little bit to some other parts of the Department in our analytical area as well as some limited support in the data area. This has been limited to joint funding of a contract or something of that nature or rental of a piece of equipment that they needed for their capability.

APPLIED ANALYSIS STATE LEVEL FORECASTS

Mr. YATES. Have you completed any work in applied analysis toward the requirement of the Emergency Energy Conservation Act for State level forecasting?

Mr. LINDEN. We have looked at it and we have determined it to be a very burdensome, very detailed thing. That is one of the reasons that we are recommending that that be rescinded.

Mr. YATES. Entirely?

Mr. LINDEN. Yes.

Mr. YATES. What capability do the States have to collect and forecast energy data?

Mr. LINDEN. I think that varies from State to State. Some States have a very good capability. We are working right now with the State of New Mexico which is trying to develop a comprehensive energy information system. We have been working very closely with them. They are unique in several ways in that they are producers of a wide range of energy as well as users of most types of energy. It varies from State to State all the way from some pretty sophisticated things as you would find in States like California and New Jersey to very, very limited capabilities in some of the other States.

FINANCIAL REPORTING SYSTEM

Mr. YATES. How do you plan to phase out the Financial Reporting System?

Mr. LINDEN. We plan to phase that out after the 1980 data is sent in and we have reported that data.

Mr. YATES. Will the number of reports and publications be scaled down?

Mr. LINDEN. In some of the other areas, yes, mainly analytical works that are not relevant may be scaled back.

Mr. YATES. Well, you have had data series prepared by the Bureau of Mines for many, many years. Are they going to be as a series and is the research on long-term data going to be broken with the budget reduction?

Mr. LINDEN. No. In fact, we have improved those systems significantly in many areas as I have described earlier.

Mr. YATES. What activities are you giving up as a result of the decision of $3 million per information validation?

Mr. LINDEN. Well, some of our validation studies are in three or four of our systems which are not our basic systems but some of the regulatory systems that are no longer needed and no longer being used. We will be giving that up.

Mr. YATES. Well, we have a number of questions for the record that we would like you to answer.

[The questions and answers follow:]

ADDITIONAL COMMITTEE QUESTIONS

Energy Information Gaps

Question: The Administrator's message in the 1980 Annual Report to Congress discusses the need for "continued development and maintenance of major new statistical programs to fill gaps that we know exist in the energy information base."

-- Please tell the Committee what these gaps in energy information are.

-- How does the budget request we have before us address these gaps?

Answer: As stated, one function of EIA has been to identify areas where existing information is simply inadequate for analysis of important energy issues and to take steps to fill the gaps with minimum reporting burden. Methods of filling information gaps can vary from minor modification of existing data collection systems to extensive planning, design, and implementation of major new systems. In the past, EIA has undertaken steps to identify gaps, and they are now filled.

Under the Budget request of $80 million, the prime focus of our efforts will be to continue reviewing our systems to ascertain where there are still gaps in energy information. Major attention will be payed to those gaps of greatest importance, which in turn require the least cost to fill, both in terms of degree of system modification required and level of reporting burden necessary to fill the gap.

Some examples of gaps that have been filled in the past include a significant gap in EIA's petroleum data collection system that was filled by the Crude Oil Ownership Reporting System (COORS). This system, for the first time, obtains data on ownership, rather than custody, of crude oil stocks including those held on the high seas. Prior to COORS, DOE had no way of knowing the total stocks under control of any given refiner. COORS also provides data for the first time on the amount of crude oil enroute to the United States, a particularly critical area during emergencies.

Energy consumption is another area where EIA has implemented efforts to fill information gaps. While information on energy use by major sectors has been available for some time, it is typically collected from the suppliers of energy rather than directly from the users, and cannot be readily related to important determinants of energy use such as building and equipment characteristics. The Residential Energy Consumption Survey provides comprehensive data for the first time not only on energy consumption, but also on related characteristics of housing units, vehicles, household appliances, and family characteristics.

Another information gap that has been filled by EIA involves energy resources. Information on proved reserves of oil and gas is now being collected directly from well operators to replace estimates prepared by oil and gas trade associations.

There will always be gaps that could be filled, but we intend to address only those gaps which we find are of most significance in providing essential energy information.

Terminating Legislation

Question: Provide the Committee with a list of programs you are terminating for which there is still a legislative requirement and the cost in FY 1982 for maintaining each of these programs.

Answer: The following are EIA's required legislative changes for FY 1982 and their saving estimates:

-- Repeal Section 242 of EECA eliminates middle distillate monitoring system (savings estimate - $8.6 million)

-- Repeal Section 801 of PIFUA eliminates Coal Reserve Disclosure reporting requirement (savings estimate - $50,000)

-- Repeal Section 205(h) of DOEOA eliminates the FRS requirement (savings estimate $2.4 million)

-- Repeal Section 25 of FEA Act eliminates the coal and oil export reporting requirement (savings estimate - $75,000)

-- Repeal Section 11 of ESECA eliminates one quarterly reporting requirement changes another to discretionary annual (savings estimate - $50,000)

-- Amend Section 58 of FEA Act, Sections 205(f) and 407 of the DOEOA allowing the Administrator to (a) make it possible to obtain individually identifiable statistical information by guaranteeing non-disclosure for other than statistical purposes, (b) provide for the appropriate use of EIA's statistical information (savings estimate $1.7 million)

Energy Applied Analysis Budget

Question: The revised budget for Energy Applied Analysis goes from $15.7 million to $8.0 million.

-- As part of this reduction, you indicate that you will scale down the EIA Annual Report to Congress. What have you previously provided that will no longer be available?

Answer: The current Annual Report to Congress provides alternative forecasts for energy supply and demand divided in three major sections. These are the mid-term (1985-1995), the long term (2000-2020), and an international energy assessment (1985-1995). Within each of these major sections a number of alternative forecasts, or "sensitivity" analyses are performed using a variety of assumptions. Assumptions are formulated to be in line with anticipated key issues. Examples of these might include the effect of natural gas decontrol or increased enhanced oil recovery over the mid-term period; or the effect of a nuclear power reduction or of varying coal transportation rates over the long term period; or the impact of oil supply disruptions for international energy assessments.

Future Annual Reports to Congress will be reduced to two major sections; one for the mid-term and another for an international energy assessment. The mid-term and international sections will be extended to the year 2000. Forecasts will not be made beyond this date; previously there were approximately 30 alternative forecasts for this period. The number of alternative forecasts in the mid-term will be reduced from approximately 20 to 10. International energy alternative forecasts will be reduced from approximately 17 to 10. The overall reduction in alternative forecasts will decrease the number of alternative assumptions, which are considered in the Annual Report to Congress. However, the basic analytic capability for policy analysis thru the year 2000 remains intact and can be used to support an analysis of alternative assumptions, as requested by the Congress and Executive Branch, as special projects developed apart from the Annual Report to Congress cycle.

Analysis Reports and Service Reports

Question: At page 149, you indicate that you will scale down scheduled and quick response analysis and service reports (-$750,000) while on page 150 you state that the EIA staff will be reoriented to place greater stress on quick response to questions asked by policy makers.

-- How do you reconcile these two apparently conflicting statements.

Answer: The overall reduction in the size of the staff, necessitates a reduction in the number of individuals preparing all types of analytical forecast reports, as well as, a reduction in the absolute number of reports. However, a larger percentage of these resources will be devoted to being as responsive as possible to questions raised by policy makers. This will require a modification in the current analysis process. This modification will require:

-- a greater screening of requests that are made upon our limited resources,
-- combining closely related issues into a single analysis package,
-- a continuation of our efforts to survey policy makers to ascertain relevant energy issues requiring analysis,
-- limiting technical review to those individuals that are most knowledgeable of the subject matter, thus expediting the clearance process, and
-- giving a high priority to analysis requests made by the President and White House policy officials, Congress, DOE policy officials with other requests being filled as our limited resources will allow.

Budget for the Annual Report to Congress and the Short Term Integrated Forecasting System

Question: Provide for the record, the amounts you have budgeted in FY 1981 and FY 1982 from the Annual Report to Congress and the Short Term Integrated Forecasting System.

Answer: The EIA operates several analysis systems; two of these systems encompass most of our work. One of these projects results in the short-term (about one year into the future) while the other projects further into the future. These systems have component parts which can be used separately for special purpose analyses or together for a comprehensive analysis such as that which appears in the Short-Term Forecasts and the Annual Report to Congress Volume III. The resources which are used to develop and maintain these analysis systems allow us to produce our regularly scheduled reports as well as to respond to special requests for information and to produce other one-time analyses. For this reason, it is impossible to break out the amounts budgeted for the Annual Report to Congress or the Short-Term Integrated Forecasting System from the amount budgeted for other mid-term efforts or short-term efforts. In general, in fiscal year 1981, planned costs for short-term efforts are $2,280,000. We expect this to be about the same in FY 1982.

Analytical Services for Energy Applied Analysis

Question: You are requesting $1,328,000 for Analytical Services in Energy Applied Analysis. What are these analytical services for which you are contracting? For the record, please provide a more detailed listing of what you propose to do with the contractual money.

Answer: For example, one current contract provides data input support to operate MATH/CHRDS, a major mid-term residential demand model. This labor intensive activity, performed at the direction of the Energy Information Administration staff, frees up the analysts' time to respond to the requests from the Energy Information Administration's clients. Such assistance on models, in the aggregate, is necessary in the production of reports. Approximately 60 percent of contract funds will be evenly divided among the use, source and midterm areas; 11 percent will be spent on financial studies, macroeconomic analyses and similar economic studies; and the remainder will be spent on the short-term area. All of these funds will be used to maintain and improve the analysis sytems which support Applied Analysis staff in in the conduct of analyses and to assist in production of reports. With few exceptions, such as where an in-house capability does not exist, all analyses are conducted by in-house staff.

Financial Reporting System

Question: If the Financial Reporting System were continued in FY 1981 and FY 1982, what additional data would you be able to provide?

Answer: One objective of the FRS is to be responsive to changing needs and priorities for energy policy analysis. That is, the form and content of the FRS for 1980 would not necessarily be the same for 1981 and 1982. The FRS provides a capability to broadly evaluate most aspects of corporate performance, and we would always endeavor to do this. However, at the present time acquisition activity by the major energy companies is expected to be of particular interest to FRS users. Therefore, the 1981/1982 FRS form and annual report would make a special effort to display and analyze this phenomenon. If the FRS were continued in FY 1982, data from 150 companies would be reported instead of the 26 that are currently reporting.

Specifically, the FRS could examine merger activity in several different ways, such as by firm size, profitability and degree of diversification--on both the parts of the acquiring and acquired firms. An analysis of the sources of funding for the acquisitions could answer such questions as, "how much do profits from petroleum production contribute to non-energy acquisitions?" For example, it is pertinent to note whether funds for such acquisitions came from petroleum profits as opposed to the issuance or exchange of stock. Another possible question is "do companies involved in diversification into non-energy decrease their relative rate of exploration and development activity in petroleum?" These are examples of questions in this area we could address.

Other areas are of particular interest to FRS users at this time. The effects of the windfall profits tax and decontrol of crude could also be the subject of data collection and analysis. With decontrol one would expect to observe changes in profit patterns. This elimination of regulation, particularly as it affects refining/marketing activities, can be expected to cause changes in investment patterns. A detailed examination of firm performance under these changed conditions on a before and after basis would be possible.

In summary then, the FRS could be adapted to respond to new analytical needs as they arise. Interest in the near future will likely center upon diversification by petroleum companies into non-energy and upon the effects of government policies, especially tax policy and decontrol.

Question: The budget justification indicates that the reason for terminating the Financial Reporting System is the availability of related information from sources within and outside of government coupled with the extensive burden associated with the FRS reporting form. What are the other available sources of information?

Answer: If the FRS is terminated, some information on energy industry operations can be obtained from company annual reports and 10-K's, and the Census Bureau's form MA-13-K EIA's Oil and Gas Information System has information on physical reserves and production. The FTC has limited information in its Line of Business report, last published in 1973. FRS has been compiling a review of publicly available oil company information on a quarterly basis and although only a limited number of companies report exploration and development information in their quarterly reports to the SEC, that information tracks accurately with the trends FRS has found through its more extensive collection efforts.

Question: What gaps would remain?

Answer: With the proposed termination of FRS we would have to rely on these sources of information; information which would be lacking would primarily be in the area of segment activities. As stated above FRS has been compiling a review of publicly available oil company information on a quarterly basis, which has confirmed many of the trends established by the more comprehensive and costly FRS results. Further, there are private sources of information such as Compustat, which sums SEC 10-K information, as well as information that is collected by major banks that would serve to fill some gaps depending on the type of information that is desired. Industrywide analysis of financial operations and physical details on production and refining/marketing could therefore be undertaken but not in as comprehensive a fashion as the FRS now does.

Question: How extensive is the reporting burden:

Answer: The OMB filing to obtain clearance to collect the 1979/80 data indicates approximately 4,700 man hours or two and one-half man years average per company. Only four other forms exceed 1,000 hours per respondent and those are all sponsored by FERC. Thus, this form ranks first among Department of Energy forms in terms of burden per respondent.

Question: What complaints have you received from industry?

Answer: In general the companies have indicated that the form still requires a great deal of work. Also, they have vigorously objected to the EIA policy of sharing the data with "other named agencies," i.e., the Attorney General, the Federal Trade Commission, the Secretary of the Interior, and the Comptroller General

Mineral Fuels Reports

Question: What are the variety of weekly, monthly, quarterly, and annual reports about mineral fuels that you will produce?

Answer: The mineral fuels reports that will be produced in FY 1982 are:

Weekly Coal Production Report
Quarterly Coal Distribution Report
Quarterly Coke Report
Coal Quarterly
Annual Coal Production Report
Annual Coke and Coal Chemicals Report
Coal Data: A Reference

Question: For example, do you know what percentage of our coal production capacity comes from use of the longwall miner?

Answer: In 1978 five percent of underground coal was mined using longwall mining machines.

Coal Supply and Demand

Question: What is your forecast for coal supply and demand in calendar 1981? For 1982? What share of this supply and demand is export related?

Answer: In our February Short Term Energy Outlook we forecast coal production in 1981 to be 850 million tons, in the absence of a prolonged strike. Total domestic consumption is forecast as 746 million tons, while exports should be about 97 million tons (about 11% of production).

Our forecasts for calendar year 1982 are not yet finished. We expect to publish complete 1982 forecasts in the May Short Term Energy Outlook.

Coal Reserves

Question: How do you determine what the reserves are? What are your sources?

Answer: The Demonstrated Reserve Base is derived by compiling coal resource data that are considered reliable - termed demonstrated resources - and which include coal that attains or exceeds certain minimum levels of thickness and falls within certain minable depths. These thicknesses vary for different ranks of coal. The depths vary according to method of mining and certain local physical or geologic factors, but are generally about 200 feet maximum for surface mining and about 1000 feet maximum for underground mining.

The Demonstrated Reserve Base is based on published resource studies primarily. Also included are some unpublished file data from U.S. Government and State agency files. A portion of the data is obtained in cooperation with the U.S. Geological Survey. When this channel is not fruitful, data are obtained from best available sources - usually State Geological Survey reports. Occasionally, EIA-sponsored reports have been used as well as limited data supplied by industry on proprietary holdings.

Question: How often do you update coal reserve estimates?

Answer: Congress currently requires the EIA to provide an update of the reserve base on an annual basis.

Question: To what extent do you use Geological Survey information?

Answer: The U.S. Geological Survey coal resource base forms the foundation from which coal reserves are determined.

Demand for Coal Data

Question: The January budget states that there has been a rapid increase in the demand for coal data in response to new legislative acts and increased data requirements from all elements of government and the private sector.

-- What are the new legislative requirements for coal data?

Answer: The new legislative requirements are the Fuels Use Act and the Emergency Energy Conservation Act which have generated a greater demand for data by other parts of the Department of Energy.

Question: Please quantify the increase in demand for coal data that you have described.

Answer: The increase in demand can be described as:

- o Responding to increased ad hoc requests from Congress, Government Agencies and the public;
- o A computerized coal system has been developed to monitor the coal strike and report on its effects in the consuming sector.
- o An updated demonstrated coal reserves report has been developed.
- o Two new publications have been devleoped to respond to questions asked concerning coal.

Oil and Gas Reserves

Question: What are your latest estimates of oil and gas reserves?

Answer: Our most recently published estimates of proved reserves are for the year ending Dcember 31, 1978. They are 31.4 billion barrels of crude oil and 208.0 trillion cubic feet of dry natural gas. A report for 1979 will be provided to the Secretary of Energy later this month. Data collection for 1980 began in March.

Question: Are your estimates in line with those of industry?

Answer: We can best characterize our national estimates as similar to those of the American Petroleum Institute (API) and American Gas Association (AGA). Nationally, the 1978 API and AGA estimates were only 11.3 percent lower than the EIA estimate for crude oil, and 6.0 percent lower for natural gas, which fall within accepted ranges of uncertainty. On the other hand, disaggregated EIA estimates are not entirely in line with the API and AGA estimates. The industry's estimates of 1978 additions to proved reserves were 23 percent lower for crude oil and 42 percent lower for natural gas. Also, individual State proved reserves estimates varied widely. For example the API crude oil estimates for Texas and California were 14 percent and 40 percent lower than the EIA's, respectively. The AGA natural gas proved reserves estimates for Louisiana and Wyoming were 11 percent and 41 percent lower than the EIA's, respectively. Generally differences of magnitude and even the direction of change between the industry and EIA estimates increase dramatically as the level of data aggregation is reduced. The difference between the EIA and the API/AGA estimates are tentatively ascribed to variance in the greater extent of information available to the EIA as opposed to the API/AGA estimation committees and to differences in interpretation of the available information.

National Energy Information System User Survey

Question: To what extent have you relied on user surveys to determine what information to include in the National Energy Information System?

Answer: The EIA solicits the views of potential data users, both formally and informally, with regard to their data needs, for all new data collections and for EIA published reports. The selection of EIA data for inclusion in the initial version of the NEIS was based in part on whether there was a demonstrable need for the data based on actual use. The NEIS is developing standardized user survey techniques for use in EIA data collections. It should be noted that these user surveys are very useful for identifying data which is no longer needed, as well as for identifying potential data needs.

The scaled-down NEIS will catalog existing data elements and data collection forms so that information is more easily accessible to data users. The EIA is also developing public use computer tapes of historical data series.

Demand for Electric Utility Data

Question: How do you propose to meet the new legislative requirements for electric utility data?

Answer: The EIA proposes to meet the legislative requirements through the use of new automation techniques and through increased staff productivity.

Question: Please quantify the increase in demand for electric utility data that you have described.

Answer: The increase in demand can be described as:

- Responding to increased ad hoc requests from Congress, Government Agencies and the public;
- Developed computerized data system to process boiler specific steam, electric plant, air, and water quality control data.
- Processing reports on KRA form 160, monthly electric utility generation and fuel planning report.
- Tracking fuel consumption and switching and monitoring effects of the coal strike on electric utilities.

Question: Why do you expect the increase in data demand to continue into FY 1982?

Answer: EIA expects the increase in data demand to continue into FY 1982 because there will be a continued emphasis on moving away from the consumption of petroleum and natural gas to coal by electric utilities, and increased emphasis on performing pricing and market analyses studies and contingency planning.

Emergency Energy Conservation Act (EECA)

Question: The revised budget shows a reduction of $1,028,000 from the FY 1981 base as a result of the elimination of Emergency Energy Conservation Act electric utilities data collection.

-- As a result of this reduction, what information will we be losing?

Answer: No information, currently collected, will be lost. The Energy Information Administration will not institute new EECA data systems to collect state data on consumption (in kilowatt hours) by residential, commercial and industrial sectors.

Question: How does the revised reduction relate to the $513,000 reduction mentioned at p. 285 of the January budget?

Answer: The reduction of $513,000 reflected savings to be incurred due to the automation and consolidation of publications.

Question: To what extent does the reduction impair your ability to provide information about and for electric utilities during emergencies?

Answer: This should not impair EIA's ability to provide information about and for electric utilities during emergencies.

EECA Information Requirements

Question: How much of petroleum and natural gas data resources in FY 1980 and FY 1981 are devoted to EECA information requirements.

Answer: Beginning in FY 1980, and continuing into FY 1981, support for requirements of the EECA have focused on two areas. The first has been to provide a Middle Distillate Report, on a quarterly basis, to the Congress that would use existing data collected by the Energy Information Administration (EIA) and serve as an interim report until final requirements of the EECA were identified. The second area has been to review these EECA requirements and begin the development or enhancement of programs that would satisfy them. In FY 1980, approximately $1,500,000 were devoted to EECA information requirements. In FY 1981, approximately $1,600,000 are being devoted to EECA in petroleum and natural gas.

Petroleum and Natural Gas Data

Question: What is the reduction in staff in the petroleum and natural gas data area in the revised budget?

Answer: The FY 1981 appropriation authorized 87 positions and the FY 1981 revised budget was for 96 positions. The original FY 1982 budget request was for 107 positions and the revised budget request is for 81 positions. The reduction from the FY 1981 revised budget to the FY 1982 revised budget is 15 positions.

International Energy Agency (IEA) Agreement

Question: What are the United States' responsibilities for energy data collection as part of the International Energy Agency (IEA) Agreement?

Answer: The United States, as a member of the IEA, is bound by the data reporting requirements that are specified in the "Agreement on an International Energy Program" made in 1974 when the IEA was formed. Chapter V of the Agreement establishes an information system that consists of two sections: a general section on the international oil market; and a special section pertaining to the oil emergency activities of the IEA. The general section is described in Article 27 of Chapter V of the Agreement and states that member countries shall make oil company information available to the IEA. Required information includes corporate structure; financial structure, including balance sheets, profit and loss accounts, and taxes paid; capital investments realized; terms of arrangements for access to major types of crude oil; current rates of production and anticipated changes therein; allocations of available crude supplies to affiliates and other customers; stocks; cost of crude oil and oil products; prices, including transfer prices to affiliates; and other subjects, as decided by the Governing Board.

The special (emergency) section is described in Article 33 of Chapter V of the Agreement and states that member countries shall make information available to the IEA on oil consumption and supply; demand restraint measures; levels of emergency reserves; availability and utilization of transportation facilities; current and projected levels of international supply and demand; and other subjects as decided by the Governing Board.

The United States' presently submits a monthly report (Questionnaire B) to the IEA under the special (emergency) section of the Agreement. This report requires oil information on production, imports, exports, bunkers, and stocks on land and at sea. The Questionnaire B is to be used by the IEA as the source of information for allocation rights and obligations upon activation of the IEA's emergency sharing program.

Residential Consumption Findings

Question: What are the most significant findings of the residential consumption surveys that you have completed to date?

Answer: Total consumption of natural gas, electricity, fuel oil (including kerosene), and LPG by U.S. households was 9.74 quadrillion Btu for the 12 month period April 1979 through March 1980. This total consumption is lower than the consumption of 10.56 quadrillion Btu for the preceding 12 month period. Although the difference in consumption between the two time periods may not be statistically significant, it is evident that an increase in consumption has not occurred.

Consumption of energy, was 126 million Btu per household for the period April 1979 through March 1980. This was a decline of 8.7 percent from the preceding 12 months.

Fuel oil was the only household energy source that showed a statistically significant decrease. Total consumption for household use was down 22 percent in 1979 through 1980 from the previous 12 months (1.71 quadrillion Btu in 1979 through 1980, down from 2.19 quadrillion Btu in 1978 through 1979).

Total consumption of natural gas, electricity, and LPG were statistically unchanged, although the estimates for 1979 through 1980 were lower than for the 1978 through 1979 12 month period. In the 1979 through 1980 time period, of the total 9.74 quadrillion Btu consumed, 5.31 quadrillion Btu (55 percent) represent natural gas, 2.42 quadrillion Btu represent electricity (25 percent), 1.71 quadrillion Btu represent fuel oil and kerosene (18 percent), and .31 quadrillion Btu (3 percent) represent LPG. Of the total 10.56 quadrillion Btu consumed from April 1978 through March 1979, 5.58 quadrillion Btu (53 percent) represent natural gas, 2.47 quadrillion Btu (23 percent) represent fuel oil and kerosene, and 0.33 quadrillion Btu (3 percent) represent LPG.

In March 1979 through April 1980, the typical U.S. household expenditures for these fuels was approximately $815 per household, up from $724 for the previous time period.

Total residential energy expenditures for April 1979 through March 1980 were approximately $63.2 billion, up from $55.5 billion for the previous time period.

In the 1978 through 1979 time period, more than half of all residential energy expenditures ($29.9 billion) were spent on electricity which accounted for less than one quarter of the total Btu consumed (electricity was converted at 3,412 Btu/kwh). The data for the 1979 or 1980 time period indicate that households spent $32.6 billion for electricity and this was for just one quarter of the total Btu consumed by all households.

In 1979 through 1980 time period, of the total household expenditures for energy, $17.8 billion was for natural gas; $10.7 billion was for fuel oil and kerosene and $2.1 billion was for LPG.

A majority of households in the United States (55 percent) heated their homes with natural gas, and during the period from April 1978 through March 1979, these households used an average of 128 million Btu. Fuel oil was the second most used heating energy source and electricity was third.

Of the 4 quadrillion Btu of natural gas consumed by single-family detached homes from April 1978 through March 1979, an estimated 72 percent of the gas was used for space heating.

Single-family detached homes used an estimated 0.22 quadrillion Btu of electricity for air conditioning during the summer of 1978 which represents 12 percent of all the electricity consumed during the 12 month period, April 1978 through March 1979.

Estimates appear to indicate that 8 percent of all single-family homes who used fuel oil as their main space-heating fuel in November and December 1979 converted to an alternative heating fuel by August and September 1980. Of these conversions, 5 percent were to wood and 3 percent were to utility gas. (Since this survey does not query households that may have switched from some other fuel to fuel oil, the overall decrease in fuel-oil households may not be as high as eight percent.)

In the late August through early September 1980 time period, the inventory of fuel oil in the tanks of single-family households that use fuel oil as their main space-heating fuel was approximately 52 million barrels. At first glance, this estimate of the residential inventory (i.e., tertiary stocks) is lower than the estimate provided last year which estimated that the total tertiary stocks in single-family tanks was between 57 and 65 million barrels. However, the important fact to note is that the number of single-family fuel oil homes using fuel oil as their main space-heating fuel in August and September 1979, was 10.6 million, whereas our present estimate is approximately 9.5 million. Essentially, households had the same amount of inventory in their tanks, but the number of single-family fuel oil households is rapidly decreasing.

The trend of fuel-oil households to make substantial insulating improvements to their homes is continuing. In the period from November and December 1979 to August and September 1980, 14 percent of the households installed storm windows and storm doors, 13 percent installed roof or ceiling insulation, 34 percent applied weatherstripping and/or caulking to their homes, and 6 percent installed insulation in the outside walls of their home.

Storm doors or windows were added to 6 percent of the dwellings in 1978 and again in 1979. The mean-average cost of these additions was $400 in 1979--$240 when only the window/doors were purchased and $550 when the installation and window/doors were purchased.

Average household energy expenditures generally increased as income increased. Those households with an income less than $5,000 in 1977, consumed approximately 22 percent less energy than the average. Households with an income of $25,000 or more, consumed 28 percent more than the average. Tracking the energy used for the 1979 through 1980 time period, these estimates (income based on 1978) are changed to 20 percent and 24 percent indicating that the difference in energy use between low-income and high-income households is narrowing. This is a result of an energy reduction of 12 percent by high-income households.

Consumption differences between white and black households were not significantly different in 1978 through 1979, but in 1979 through 1980 white households had reduced their energy use, so that black households on average used more energy than white households. Although the difference is small, it is statistically significant and indicates how relative positions can change in a short period of time.

Average consumption increased with the age of the head-of-household up to the "60 and over" group where a sharp decline in consumption occurred. This pattern is unchanged for 1979 through 1980 time period.

Households in structures built in 1939 or earlier consumed significantly more than the average; 158 million Btu compared to 138 million Btu in 1978 through 1979. This pattern is unchanged for 1979 through 1980 time period.

Multiple-family units consumed 7 percent of the total energy. Their consumption of 751 trillion Btu in 1978 through 1979 was broken out as follows (1979 through 1980 figures in parentheses) 42 percent for natural gas (46 percent), 34 percent for fuel oil (27 percent), and 23 percent for electricity (26 percent).

In 1978, households' surveyed had use of a refrigerator and most (98 percent) had an oven. A majority of households had a washing machine (74 percent) and a clothes dryer (59 percent). Fewer had a food freezer (35 percent) and a dishwasher (35 percent). Microwave ovens were found in 8 percent of the households.

In 1978 the largest number of households (55 percent) used natural gas as their main heating fuel. Twenty-two percent used fuel oil or kerosene; 16 percent, electricity; 4 percent, LPG; and 2 percent, wood. One percent used some other fuel or did not use a main heating fuel.

In 1978 natural gas was used for water heating in 55 percent of the households, electricity in 33 percent, fuel oil or kerosene, in 8 percent, and LPG, 4 percent. Eight percent of the households that heat with natural gas used electricity for water heating and 11 percent of the electrically-heated homes used natural gas or LPG for heating water.

Energy consumption in 1978 through 1979 by Census region ranked as follows: North Central, 35 percent of the total; Northest, 27 percent; the South 23 percent; and the West, 15 percent. The average household consumption for the North Central and Northeast regions were significantly higher than the national average. The North Central region consumed 180 million Btu per household in 1978 through 1979 and 168 million Btu per household in 1979 through 1980.

In the Northeast, 180 million Btu per household were consumed in 1978 through 1979 and 145 million Btu per household in 1979 through 1980. The South, had an average of 99 million Btu per household in 1978 through 1979 and 92 million Btu per household in 1979 through 1980. The West had 110 million Btu per household in 1978 through 1979 and 100 million Btu per household in 1979 through 1980. The South and West consumed significantly less than the national average.

In both time periods, the average expenditures of Northeast households were higher than those in any other region, even though these households did not have the highest consumption (the North Central had the highest).

In both time periods almost three-quarters of the energy expenditures in the South were for electricity.

Natural gas was the most prevalent energy source used by households in the North Central region and the West whereas fuel oil ranked first in the Northeast and electricity was first in the South.

In 1978, most households (86 percent) paid their own utility bills directly to the fuel supplier, but this differs greatly by the type of living quarters and whether the household owned or rented. Most renters in single-family detached housing units (95 percent) paid directly, but only 33 percent of those renters in large apartment buildings (5 or more units) paid directly. Fifty-nine percent of the renters in small apartment buildings (2 to 4 units) paid directly.

A large majority of poor households in 1978 paid their fuel bills directly. Of the households earning less than $5,000 in 1977, 76 percent paid directly for their household fuel use.

The 1978 data indicate that the use of air conditioning, one of the fastest growing uses of a major home appliance, occurred in 56 percent of the households. Twenty-three percent had central air conditioning and 33 percent had window units.

In each year from 1977 to 1979, insulation has been added to the attics of 4 to 5 percent of the dwellings (all housing units except large apartment buildings continuing 5 or more units). The average cost for this improvement in 1979 was $400 ($240 when self installed; $560 when installation was also paid for).

Wall insulation has been added to 3 percent of the dwellings in each year from 1977 to 1979. The mean-average cost in 1979 was $200 for households which installed the insulation themselves. The cost for households which paid for installation as well as materials was $1,500.

In 1978, of the estimated 16,919,000 households that used fuel oil or kerosene, 795,000 used natural gas for water heating, 3,360,000 used natural gas for cooking, and 1,425,000 used natural gas for both water heating and cooking. This means 5,580,000 or 33 percent of the fuel oil households already have natural gas hookups. These households would be the most likely ones to switch to natural gas for heating, although in some cases larger-pipes must be installed to accommodate the increased demand.

During the period June 1979 to May 1980, vehicles in the residential sector were driven approximately 1,051 billion miles. This represents approximately 70 percent of the Federal Highway Administration's estimate of 1,510 billion miles driven by all vehicles (residential and commercial) in the United States during the same time period. (Caution must accompany this comparison because the two systems are not strictly comparable.)

The average vehicle (for the entire residential fleet, including vehicles which were not used) was driven approximately 8,637 miles from June 1979 to May 1980, and purchased 598 gallons of fuel at a cost of $629.

The monthly data show that each month a small (from 5.9 percent to 11.6 percent) but significant number of vehicles are not used out of a total vehicle population of approximately 122 million.

During June 1979 to May 1980, residential vehicles averaged approximately 14.5 miles per gallon. Monthly averages for the residential fleet ranged from a low of 13.6 miles per gallon to a high of 15.2 miles per gallon.

There were 72.7 billion gallons of gasoline and diesel fuel purchased for residential vehicles within the United States from June 1979 to May 1980. This represents more petroleum than was used in either the residential/commercial (49.3 billion gallons), Industrial (57 billion gallons), or electric utilities (22.3 billion gallons) sectors. It also represents more than 50 percent of total petroleum consumption in the transportation sector (144.3 billion gallons), and more than 25 percent of all petroleum consumed in the United states (272.9 billion gallons).

The average price per gallon for fuels used by residential vehicles has increased from 87.5 cents per gallon in June 1979 to 121.6 cents per gallon in May 1980.

Energy Emergency Management Information System

Question: Funding for the Energy Emergency Management Information System (EEMIS) goes from $4,829,000 in FY 1981 to $1,048,000 in the revised FY 1982 budget request. Why does the budget level drop so dramatically in FY 1982?

Answer: Resources applied in FY 1979 through FY 1981 covered the EEMIS developmental program, special data collections and supporting analyses. The reduced FY 1982 budget will be used strictly for routine operations and readiness maintenance; no new development or expansion of service will be undertaken.

Question: What are the uses of the Energy Emergency Management Information System in a non-emergency situation?

Answer: The Energy Emergency Management Information System is comprised of four components:

(1) An integrated data file with over one million data elements, retrieving, on-line, EIA's major monthly petroleum and natural gas facility-level data (1978-1981) through a simple-to-use index and users prompt system.

(2) A reference file of people to be contacted in an emergency;

(3) A library of emergency-oriented documents maintained on microfilm, such as contingency plans, maps and statutes; and

(4) A communications network.

The system is maintained by EIA on a continuing basis so that the data can be updated regularly and overall readiness can be maintained; user training can be conducted; and users will be able to retain familiarity with the system functions so that the system can be utilized quickly in the event of an emergency. The communications component of the system is used daily by the system users at both State and Federal levels. This use of the system on a regular basis is intended to enable users to transition into an emergency mode of operations with a minimum of confusion and delay.

Question: How many States participate in the program?

Answer: Currently, 44 States and the District of Columbia participate in the communication network maintained by EEMIS.

Staff Year Distribution

Question: Provide the Committee with a distribution of FY 1981 and FY 1982 staff years for each of the programs in the Collection, Production and Dissemination program.

Answer: The following table is the distribution of FY 1981 and FY 1982 staff years for each of the programs in the Collection, Production and Dissemination:

	FY 1981 1/	FY 1982
Financial Reporting System	17	0
Oil and Gas Information System	15	16
Energy Information Services	25	26
Mineral Fuels	51	55
Electric Utilities	52	55
Petroleum and Natural Gas	96	83
Emerging Energy Sources	32	35
Consumption	25	23
EEMIS	14	13
	327	306

1/ Number of positions are comparable to the EIA 1982 structure which transferred the NEIS to Data Information Services.

Data Information Services

Question: The budget states that "at the reduced funding level requested in FY 1982, many Data Information Services activities will be eliminated or curtailed." Please tell the Committee what activities will be eliminated or curtailed.

Answer: At the reduced funding level requested in FY 1982, the following Data Information Services activities will be eliminated: ADP hardware and facility enhancements; support to ERA; coal data development; EECA data development; contractor supported pre-survey field consultations; and, validation reviews of requirements for data systems. Those activities which will be curtailed are as follows: computer capability and processing; services relative to computer terminals, disk storage, ADP supplies and telecommunications; energy systems design, development and implementation activities in support of DOE with the exception of FERC (FERC will receive at least the same level of support as provided in FY 1981); programmatic activities in each energy source area; alternate fuels data development; systems development in support of the NGPA; the validation effort will be scaled down to a quality assurance level; validation field work; and, statistical reviews of publications.

Support to FERC and ERA

Question: For the record, please provide the FY 1980 and FY 1981 levels of support you are providing to FERC and to ERA.

Answer: In FY 1980, FERC received $3,695,409 and ERA received $2,508,606 in systems analysis and computer processing support. In FY 1981, FERC will receive $4,321,409 and ERA will receive $980,762 in systems analysis and computer processing support.

FY 1981 Rescission

Question: The rescission proposal for Data Information Services terminates all support to Economic Regulatory Administration coal data development. What coal data were you providing to ERA?

Answer: The EIA has not provided any coal data development support to ERA. The intent of the rescission proposal is to eliminate all support to ERA and to eliminate further coal data development activities. Support to ERA is being terminated because, with the elimination of many regulatory requirements and the scaling down of ERA, this support is no longer necessary. With respect to coal data development activities, the FY 1981 budget contained funds for anticipated but unspecified coal data needs. Within the context of the revised DOE budget those needs no longer exist.

Question: What portion of the coal data was provided in support of the Coal Conversion program?

Answer: EIA did not provide data development support to ERA for the Coal Conversion program; however, the ERA did use EIA statistical data.

Question: How does this coal data development relate to the collection effort in the mineral fuels program in the Collection, Production and Dissemination activity?

Answer: The elimination of coal data development efforts will have no impact on the mineral fuels program in Collection, Production and Dissemination.

FY 1981 Rescission Positions

Question: How many FY 1981 positions are included as part of the FY 1981 rescission?

Answer: OMB revised EIA's 1981 end of year employment ceiling from 830 to 705.

1981 FTP Positions and On-Board Levels

Question: Provide for the record the number of FTP positions associated with each of your major budget categories and the on-board levels for each as of March 1, 1981.

Answer: The following table reflects the number of FTP positions associated with each of EIA's major budget categories and the on-board levels for each as of March 1, 1981.

	FTP	FTP On-Board
Energy Applied Analysis	140	163
Collection, Production & Dissemination		
Financial Reporting System	17	18
Oil and Gas Information System	15	17
Energy Information Services	25	25
Mineral Fuels	51	48
Electric Utilities	52	47
Petroleum and Natural Gas	96	96
Emerging Energy Sources	32	32
Consumption Data	25	24
EEMIS	14	18
	327	325
Data Information Services 1/	238	274
TOTAL	705	762

1/ Incorporates the functions of the NEIS and Information Validation to make FY 1981 comparable to the 1982 structure.

List of Consultants

Question: Provide for the record the list of consultants you used in FY 1980 and the amounts paid each. Also provide the amount you have budgeted for consultants in FY 1981 and FY 1982.

Answer: In 1980, EIA hired 35 consultants for a total of $253,789 at an average daily rate of $156. It would be a violation of the Privacy Act to reveal individual names and rates of pay. EIA has budgeted for FY 1981 $271,000 for consultant hired on personnel appointments. This amount incorporates the 15 percent reduction required by OMB in compliance with the OMB Bulletin 81-8. In FY 1982, EIA plans to hire five consultants on personnel appointments with an estimated expenditure of $37,440.

Object Classification

Question: Provide for the record an object class breakout for the rescission proposal for FY 1981 and for the amended FY 1982 budget.

Answer: The following object class schedules reflect EIA's rescission proposal for FY 1981 and for the amended FY 1982 budget.

STANDARD FORM 304
[illegible] Bureau of the Budget
Circular No. A-11, Revised
304-103

ENERGY INFORMATION ADMINISTRATION

OBJECT CLASSIFICATION (in thousands of dollars)

Identification code 89-0216-5-1-276		19 81 ~~1980~~ Presently Available	1981 ~~1980~~ Revised Amount	19 81 ~~1980~~ Proposed Rescission
	Personnel compensation:			
11.1	Permanent positions	21,124	19,076	2,048
11.3	Positions other than permanent	2,054	1,779	275
11.5	Other personnel compensation			
11.8	Special personal services payments			
	Total personnel compensation	23,178	20,855	2,323
	Personnel benefits:			
12.1	Civilian	2,737	2,720	17
13.0	Benefits for former personnel			
21.0	Travel and transportation of persons	600	544	56
22.0	Transportation of things	90	82	8
23.0	Rent, communications, and utilities	4,300	3,940	360
24.0	Printing and reproduction	2,430	2,387	43
25.0	Other services	67,967	57,374	10,593
26.0	Supplies and materials	1,769	1,769	.....
31.0	Equipment	1,046	1,003	43
32.0	Lands and structures			
33.0	Investments and loans			
41.0	Grants, subsidies, and contributions			
42.0	Insurance claims and indemnities			
43.0	Interest and dividends			
44.0	Refunds			
	.....			
	.....			
99.0	Total obligations	104,117	90,674	13,443

STANDARD FORM 304
Management Bureau of the Budget
Circular No. A-11, Revised
5-64-1-3

ENERGY INFORMATION ADMINISTRATION

OBJECT CLASSIFICATION (in thousands of dollars)

Identification code 89-0216-0-1-276	1982 Actual	1982 Estimate	1982 Estimate
	Request Pending	Proposed Amendments	Revised Request
Personnel compensation:			
11.1 Permanent positions	25,894	-7,064	18,830
11.3 Positions other than permanent	1,988	-1,988	....
11.5 Other personnel compensation			
11.8 Special personal services payments			
Total personnel compensation	27,882	-9,052	18,830
Personnel benefits:			
12.1 Civilian	3,261	-861	2,400
13.0 Benefits for former personnel			
21.0 Travel and transportation of persons	600	-200	400
22.0 Transportation of things	100	-36	64
23.0 Rent, communications, and utilities	4,300	-1,371	2,929
24.0 Printing and reproduction	2,638	-500	2,138
25.0 Other services	85,598	-34,303	51,295
26.0 Supplies and materials	1,771	-651	1,120
31.0 Equipment	1,028	-204	824
32.0 Lands and structures			
33.0 Investments and loans			
41.0 Grants, subsidies, and contributions			
42.0 Insurance claims and indemnities			
43.0 Interest and dividends			
44.0 Refunds			
99.0 Total obligations	127,178	-47,178	80,000

DUPLICATION OF DATA SOURCES

Mr. YATES. Mr. Loeffler, do you have any questions?

Mr. LOEFFLER. Mr. Chairman, I have basically one question that I would like to address and perhaps it has been addressed; and if it has, please tell me to go on. I have this one final question, Mr. Chairman.

Mr. Linden, I have seen duplication of data sources from the Department of Energy, particularly your agency; trade associations and various State entities. How would you say your agency does in terms of timeliness and cost compared to these other groups?

Mr. LINDEN. That is a twofold question. With the advent of our own weekly system right now we run a day behind API and our stock numbers are a day later than theirs. We are on about the same scale with them in that regard. In the case of the oil and gas reserves information, we are about three to four months behind them, but we also have year end total numbers. They never had year end total numbers before. They cut off in September and then made an estimate for the rest of the year. They also did not have a validation program as we have on oil and gas reserves.

We have been complimented by OMB in both of their publications as it relates to our burden reduction program and how we have managed our burden reduction program. I think we have a number of pluses but I think we still have got to become more timely and more relevant with our data. We work on that every day.

Mr. LOEFFLER. As a matter of interest, how have your numbers compared with API's over the four years that you have been in existence?

Mr. LINDEN. Well, on a monthly basis they compare exactly because API uses our numbers on a monthly basis. On a weekly basis there are some minor fluctuations because our universe mainly deals with imports. It depends on whether we catch a ship and they don't catch a ship that comes in. One major tanker these days can skew the figures significantly for a given week but they actually use our numbers on a monthly and an annual basis. They adjust their numbers to ours which I think is an important point. They have been doing that for many, many years.

Mr. LOEFFLER. Mr. Chairman, it is interesting to note that the oil and gas industry is counting on the Government for a change.

Mr. YATES. That is interesting except from what I get out of this testimony they won't be able to count on them much longer.

Mr. LOEFFLER. You always get me, don't you?

Mr. YATES. No, I don't.

Mr. LINDEN. I think our basic program will not suffer as a result of this budget.

Mr. YATES. What is your basic statistical program? You had a large comprehensive statistical program. I remember Mr. Moses came in here and testified as to the needs and his hopes for building up a data system, a data bank that would permit the Federal Government to collect statistics and information so complete in itself that you would no longer be required to rely on outside sources. You are going back to that, aren't you?

Mr. LINDEN. No, not really. As I said, we have no plans in the petroleum area to go back to API on a weekly basis or anything

else in the petroleum and natural gas area. The budget here is $4.7 million more than it was in 1981.

Mr. YATES. Look at your revised congressional budget request and you say this on page 145: "Nongovernmental data sources will be utilized whenever possible."

Mr. LINDEN. Yes, particularly I say in the financial area where there is lots of public information that is available. It may not be lined up, or it may not have laid a large number of burden hours on individual companies to line any information up, and it may require a little looking into but it is there. The 10-K, the Census Bureau, and others are collecting some of this information.

Mr. YATES. Are you going to have enough people to gather the data?

Mr. LINDEN. Yes, I think we have an adequate number of people to do the job at the 520 level. I would not want any less than that.

Mr. YATES. They are just exactly right. If one resigns would you be in trouble?

Mr. LINDEN. Yes.

Mr. YATES. All right.

Mr. LOEFFLER. Mr. Chairman.

Mr. YATES. One second.

The proposed rescissions may be entered into the record.

[The information follows:]

DEPARTMENT OF ENERGY, FISCAL YEAR 1981 REQUEST FOR RESCISSION, ENERGY INFORMATION ADMINISTRATION

[Dollars in thousands]

	Presently available	Revised request	Proposed rescission
Energy applied analysis	$5,277	$4,777	−$500
Collection, production, and dissemination	42,300	35,533	−6,767
Information validation	11,590	8,590	−3,000
Data information services	7,800	7,800	0
Program direction	37,150	33,974	−3,176
Total EIA	104,117	90,674	−13,443

JUSTIFICATION

Energy Applied Analysis.—State level forecasts required by the Emergency Energy Conservation Act and conservation activities will be curtailed. Model updates, documentation, verification, quick response analytical reports, scheduled analysis reports, international analysis, long-term forecasts and quarterly reports on policy issues will be scaled down.

Collection, Production and Dissemination.—Financial Reporting System will be phased out. EECA activities which require the development of a state-level Middle Distillate Monitoring System and require monthly reporting on the consumption of six fuels by state will be scaled down. A number of reports and publications will also be scaled down. Support to ERA, Conservation and Solar, and Environment will be cut back concomitant with program reductions in those areas. The OGIS will scale down collection of information at the field level of detail. The EEMIS function will be sharply curtailed. Development of industrial and commercial data systems will cease. The activities of the field offices, which currently provide State liaison for collection and use of data, and presurvey investigations and interpretation of data, will be scaled down.

Information Validation.—The proposed rescission of $3,000,000 in Information Validation will lead to a scaling down of these activities so that by fiscal year 1982 this program will become a quality asessment function within Data Information

Services. This includes validations of systems and analyses, forms review, requirements review and model validations at a reduced level.

Data Information Services.—Support to ERA and Conservation and Solar will be reduced. All EECA activity and ADP hardware and facility renovations will be scaled down. systems development in support of the NGPA will be adjusted according to revised requirements. The functions of the National Energy Information System (NEIS) and of Information Validation will become a quality assessment function with all activities scaled down. NEIS will be scaled down to only developing the Data Resources Directory.

Program Direction.—The amount presently available in Program Direction is directly related to the salaries of the EIA staff. The rescission of 3,176,000 is related to reduction in staff and will have the following impact: In the Applied Analysis area, state level forecasts required by EECA and conservation activities would be eliminated. In Collection, Production and Dissemination, the Financial Reporting System, EECA activities and a number of reports and publications would be eliminated. The validation functions remaining after the budget cut would be transferred to an independent quality assessment office within Data Information Services. Data Information Services would eliminate all support to ERA coal data development, all EECA activity, and ADP hardware and facility renovations.

Mr. LOEFFLER. Mr. Chairman, you may already have the questions our friend and colleague from Illinois wanted asked.

Mr. YATES. Do you mean the questions from Mr. Railsback?

Mr. LOEFFLER. Yes.

Mr. YATES. I have given Mr. Linden the letter and asked him to reply for the record. Mr. Linden please answer some questions submitted by Congressman Railsback for the record.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY CONGRESSMAN TOM RAILSBACK

EIA AS THE CENTRAL ENERGY DATA BANK

Question. If the EIA proposals are implemented, do you see the EIA as being the central energy data bank?

Answer. The EIA will continue to be the central Government source of energy information, although our efforts will be streamlined to focus on essential information. The proposals that the Administration will be submitting will eliminate data requirements that EIA has contended for some time are not necessary in achieving a sound information base for energy policy decisionmaking. The proposals will not negatively impact on EIA's authority to collect energy data, but rather eliminate those items that can be considered information luxuries. EIA will continue to provide the most thorough and timely picture of the nation's energy relationships.

Question. Do you feel EIA can maintain its standards and reputability by increasing reliance on industry and other government resources (for example, returning to use of American Petroleum Institute import data, or using Bureau of Labor Statistics data on wholesalers and retailers)?

Answer. EIA will rely on other Government data, such as the SEC Form 10K and Census data, whenever their use will provide the necessary information of high quality. Where that information is not available, EIA will collect its own data as it has in the past. EIA will only rely on data from other sources when that data is of sufficient quality.

Question. How does EIA plan to validate outside data?

Answer. Industry recognizes the validity of the EIA data by the most sincere form of acceptance: they have quit publishing their data or use EIA data in their publications. Thus, there is very little need to verify the outside data published by others, since much of it is EIA information.

Question. Are industry and other government data derived by using the same methodology as the EIA? If not, how will EIA rectify the figures for use in its publications?

Answer. EIA will use industry and other government data only when the collection methods and imputation methodology is known and is evaluated to be of sufficient quality for inclusion in EIA publications. When used, the data will be fully referenced and described.

STATE LEVEL INFORMATION

Question. I understand that the EIA would like repeal of legislation (e.g., the Energy Supply and Environmental Coordination Act) requiring State-level information. What effect would that have on the availability of State information?

Answer. The Energy Information Administration (EIA) has not proposed the repeal of Public Law 93-319, the Energy Supply and Environmental Coordination Act (ESECA), but has proposed the elimination of Section 242 of Public Law 96-102, the Energy Emergency Conservation Act (EECA). This section requires the Secretary of the Department of Energy to establish and maintain a data collection program for monitoring, at the refining, wholesale, and retail levels, the supply and demand levels of middle distillates on a periodic basis in each State. The repeal of this portion of the EECA would affect data collected on EIA Form 9A, "No. 2 Distillate Price Monitoring Report." Several laws including Section 242(a) of the EECA, authorized the EIA to collect the data obtained on EIA-9A. The No. 2 Distillate Price Monitoring Report provides the data necessary for DOE to execute its role in monitoring certain cost, margin, and price movements for No. 2 fuel oil and No. 2 diesel fuel.

With the pending expiration of the Emergency Petroleum Allocation Act, the EIA is currently examining several forms which collect data on the distribution of petroleum products, including middle distillates. The intent of this review is to assess the need for maintaining certain data systems and to determine ways of consolidating several of these forms, thereby reducing respondent burden. The information collected on EIA-9A is one of the several forms under review. The EIA has met with State officials to discuss their requirements for these data. As a result of this review, the EIA will continue to collect critical State-level data on the EIA-9A as well as on other forms. Authority to collect these data exists under Section 13 of the Federal Energy Administration Act of 1974 (Public Law 93-275) and Section 11 of the ESECA.

Question. How is the State level information gathered now for information on prices, supply and market shares? Has EIA begun to develop its own data base or does it rely on industry and other government sources? How good is the present data base?

Answer. a. *Prices.*—Currently, the only state level price information collected by EIA is for residential No. 2 heating oil reported on the Form EIA-9A, "No. 2 Distillate Price Monitoring Report." This report collects data directly and does not rely on secondary industry or other governmental sources. Recently, the frame and sample were updated and improved.

b. *Supply.*—The primary source for petroleum product supply information is the Joint Petroleum Reporting System which collects data on imports, refinery production, primary stocks and primary distribution. The major source of State level supply is the Form EIA-25 "Prime Supplier's Monthly Report." This survey collects data on the previous month's deliveries and the next month's expected supply into each State for 18 petroleum products. The Energy Information Administration (EIA) has computerized these data and is able to provide time series statistics by product, by State. The present data base maintained by the EIA is essentially an accurate file; however, some products do show a variance when compared on a State level with data from other sources such as the Federal Highway Administration. Studies have indicated that much of this variance is accounted for in the definition of a "prime supplier", differences in timing of collection and some reporting differences that result. The data are deemed sufficiently reliable for use by the States and the Department of Energy for contingency planning and State supply monitoring.

c. *Market Shares.*—The Market Shares System was not designed for publication of State level data. State level data are collected and aggregated to the national level for publication. However, individual State level samples are not large enough to provide reliable State level estimates and do not meet EIA's publication standards. These surveys provide publishable data from EIA data bases collected directly from individual industry sources. Some of the data in the Market Shares System are obtained through contact with the Bureau of the Census. All of the frames for the current Market Shares are becoming outdated, particularly in view of the recent decontrol order.

The EIA-25, referred to above, does provide a measure of market share of major companies in that the volumes of product delivered to a State for consumption within that State are reported. Changes in marketing patterns can, therefore, be identified.

Question. If the current program is not maintained, how does EIA intend to obtain the information. Does EIA intend to maintain the program? Will it rely solely on industry and other government agencies?

Answer. Even with the expiration or repeal of specific legislative authority, EIA intends to continue to collect residential heating oil price data from key States through its State Program. In addition, EIA will rely on industry and governmental sources for some price data, especially for motor gasoline and No. 2 diesel fuel at the retail level wherever a reliable governmental source exists. The EIA will attempt to obtain sufficient information at certain key points.

WHOLESALES AND JOBBER DATA BASE

Question. How strong do you feel EIA's wholesaler and dealer data base is right now?

Where do you obtain the data?

Have efforts been made for EIA to develop its own data base? If so, how will the proposal affect EIA efforts to develop its own data base?

Answer. The No. 2 heating oil wholesaler and dealer data base is current. A new sample was recently selected using probability methods from the latest available DOE dealer universe. Data are collected from a monthly mail survey of approximately 1800 respondents. Efforts are currently underway to update and extend the wholesaler/prime supplier data base.

EIA does not currently have a wholesaler and dealer data base for gasoline prices. Currently, EIA utilizes data collected by the Lundberg Survey and the Bureau of Labor Statistics. Analyses of the two series indicates they are relatively reliable and that the Lundberg Survey, which is available on a timely basis, tracks well with the official BLS series.

EIA Market Shares System contains dealer sales volume data for gasoline which is obtained from the Bureau of the Census. These data are limited in its coverage in that not all retail outlets selling gasoline are included. For example, convenience stores selling gasoline as a secondary product are excluded. As noted earlier, the sampling frame for these data needs updating.

Question. Since wholesalers and dealers are the primary distributors of gasoline and home heating fuel to consumers, do you feel centering most effort on gathering information from refiner-marketers and importers will provide enough information for policymaking?

Answer. A data collection effort centered on gathering information from refiner-marketers and importers will not provide, in and of itself, sufficient information for policymaking. Whenever EIA feels it necessary, such as in the area of the EIA-25, wholesalers/distributors will be surveyed and relevant data obtained. These data, taken in conjunction with data collected by the Lundberg Survey and the Bureau of Labor Statistics, may be sufficient.

FINANCIAL REPORTING SYSTEM

Question. I understand the EIA plans to eliminate the Financial Reporting System (FRS). How far along is the FRS now?

Answer. The FRS is fully operational and currently has twenty-six reporting companies. Two reports have been issued covering the years 1977 and 1978. In addition, preliminary data for 1979 were released in the context of the fourth quarter 1980 profits review. Data for the full 1979 report are now being processed and will be published in June of this year. Data for 1974-1976 are also being processed and are scheduled for publication in September of this year. The 1980 report is expected to be available in the Fall.

Question. What kinds of data does the EIA obtain from the FRS that is unlike any derived from other sources?

Answer. The FRS form is designed to establish a system of uniform segmented reporting for firms having quite different functional and management structures. In this way, patterns of activities and results can be considered in an industry rather than in a firm specific context. In the FRS annual reports, the functional lines of business are defined and include foreign and domestic: petroleum production and refining/marketing; coal; nuclear; other energy; and non-energy. For these line of business segments, comparisons of income, profit and investment flows are featured and compared to the net investment in place for the related functional line of business. The presentations seek to identify similarities and dissimilarities in results across lines-of-business activity or by firm size.

There are FRS-like data available from other sources, particularly in company annual reports and Form 10K's. But these data have certain limitations in drawing a comprehensive, consistent performance profile of the energy industry because of inconsistent geographic breakdowns, segment definition, accounting policies and financial statement line item specification. Also, in many cases the manner of reporting an item is discretionary.

Other major sources include: the Chase Manhatten Bank; the Federal Trade Commission, the Bureau of the Census and the EIA's Oil and Gas Information System. The Chase Manhatten Bank prepares a report on the petroleum industry. Its data sources are company annual reports supplemented by data supplied directly by the energy companies. This report concentrates primarily on petroleum production, and contains nothing on raw material and refined product supply and distribution patterns. The Federal Trade Commission (FTC) line of business (LB) survey collects only skeletal income statement and balance sheet data. Also, the LB survey procedures apply only to manufacturing companies. As a consequence, LB reporting in petroleum and coal includes only companies with significant involvement in manufacturing. It should also be noted that the LB program has no reporting categories for uranium or other energy. Two other sources produce physical data similar to some of the FRS data. The Census MA 13K program and the EIA's Oil and Gas Information System collect data on petroleum exploration and reserve development.

With the proposed termination of FRS, we would have to rely on these sources of information; information which would be lacking would primarily be in the area of segment activities. FRS has been compiling a review of publicly available oil company information on a quarterly basis, which has confirmed certain trends established by the more comprehensive and costly FRS results, particularly at the total company level. In addition, there are private sources of information such as Compustat, which sums SEC 10K information, as well as information that is collected by major banks that can serve to fill some gaps depending on the type of information that is desired. Industrywide analysis of financial operations and physical details on production and refining/marketing could therefore be undertaken but not in as comprehensive a fashion as the FRS now does.

Question. Prices are going up for oil and oil products. A major supply cut-off by foreign countries would wreak havoc on our distribution system. Do you feel Congress, other Federal agencies, and States can monitor prices or adequately deal with an emergency without the FRS?

Answer. Yes. The FRS was not designed with emergency management and short term price monitoring in mind. Its primary purpose is intermediate and long term monitoring of energy industry activities as an input into the policymaking process. For short term and emergency purposes, the EIA has the Energy Emergency Management Information System (EEMIS).

EEMIS is an automated management information system resident on the EIA computer that provides in one place, selected energy supply, demand and transportation information from sixteen EIA systems as a service to government officials who deal with energy emergencies. The system has four basic components: it has an integrated data file with over one million data elements retrieving online EIA's major monthly petroleum and natural gas facility level data through a simple to use index and user-prompted system; a communications network; a reference file of people to be contacted in an emergency; and lastly, a library of emergency-oriented documents maintained on microfilm, such as contingency plans, maps, and statutes. Additionally EEMIS users are able to access weekly company level information and the nearly eight hundred data series maintained by the National Energy Information System.

Mr. YATES. Thank you, Mr. Linden.

THURSDAY, APRIL 2, 1981.

ALTERNATIVE FUELS

WITNESSES

FRANK DeGEORGE, ACTING ASSISTANT SECRETARY, CONSERVATION AND RENEWABLE ENERGY
ROBERT SAN MARTIN, DEPUTY ASSISTANT SECRETARY FOR SOLAR ENERGY
EVERETT PYATT, ACTING DIRECTOR, OFFICE OF ALCOHOL FUELS
DONALD WALTER, ACTING DIRECTOR, OFFICE OF ENERGY FOR MUNICIPAL WASTE

Mr. MURTHA. The hearing will come to order.

Mr. Secretary, we are delighted to have you with us. Your biography will be submitted for the record without objection.

[The information follows:]

BIOGRAPHY OF FRANK DEGEORGE

Frank DeGeorge was named Acting Assistant Secretary for Conservation and Renewable Energy, U.S. Department of Energy (DOE) on February 24, 1981. He had served as Acting Assistant Secretary for Conservation and Solar Energy since January 21, 1981.

Mr. DeGeorge was the Principal Deputy Assistant Secretary for Conservation and Solar Energy from August 1980 to January 1981. He served as the principal adviser to the Assistant Secretary and had major responsibility for the day-to-day management of Conservation and Solar staff and programs. He advised the Assistant Secretary on the effectiveness, responsiveness and quality of program operations, and dealt with various administrative management matters.

Before joining DOE in October 1979 as the Deputy Chief Financial Officer for Internal Management, Mr. DeGeorge served in various senior level administrative positions with the Department of Health, Education and Welfare (HEW). From January 1979 until October 1979, he was Deputy Commissioner of Social Security. Prior to that appointment, he served as Associate Commissioner for Management and Administration at the Social Security Administration, a position to which he was appointed in December 1973.

From 1972 to December 1973, Mr. DeGeorge was HEW's Associate Administrator for Financial Management of the Social and Rehabilitation Service. From March 1971 until December 1972, he was Assistant Administrator for Financial Management of the Social and Rehabilitation Service.

Before joining the Federal Government, Mr. DeGeorge held executive and management positions with several private companies. He was Treasurer at Systematics General Corporation of Falls Church, VA., from 1969 until joining HEW in 1971. From 1968 to 1969, he was Vice President of Alloys Unlimited in New York City. During the period 1958 to 1968, Mr. DeGeorge was associated with Litton Industries. While at Litton, he was Vice President for two of the company's major divisions.

Mr. DeGeorge received a B.S. degree in accounting in 1951 from LaSalle College, Philadelphia, Pennsylvania. In 1956, he was awarded an M.B.A. degree from the University of Delaware.

The recipient of numerous recognition citations, Mr. DeGeorge received the HEW Social and Rehabilitation Service Award of Appreciation of 1973; the HEW Secretary's Special Citation in recognition of service performed as Chairman of the Department Grant Appeals Board in 1974; the Beta Alpha Accounting Association Award of LaSalle College in 1974; HEW's Distinguished Service Award in 1978; DOE's cash award for Special Act or Service in August 1980; and DOE's Outstanding Service Medal in January 1981.

Mr. DeGeorge is also a member of the Department of Health and Human Services' Grant Appeals Board.

Mr. MURTHA. Your statement in its entirety will be entered into the record.

[The statement follows:]

STATEMENT OF FRANK DEGEORGE

ACTING ASSISTANT SECRETARY

Mr. Chairman and Members of the Subcommittee:

I appreciate this opportunity to appear before you today to discuss the Department of Energy's Alternative Fuels Program which includes Biomass, Alcohol Fuels and Municipal Waste. As you may already know, all the major renewable energy programs are now coordinated by the Assistant Secretary for Conservation and Renewable Energy.

The Administration's policy on alcohol fuels, biomass and municipal waste financial incentives is based on the premise that the private market should determine the role of alternative fuels development. The Administration supports a continuation of Federal incentives through tax credits and the Federal excise tax exemption for gasohol. Direct government spending programs for feasibility studies, cooperative agreements and loan guarantees are being proposed for rescission. These additional direct government spending programs are not needed in light of the other financial subsudies now available. For example:

- The 4 cent per gallon excise tax exemption for gasohol (a mixture of 10% alcohol and 90% unleaded gasoline) results in a subsidy of $16.80 per barrel of alcohol. This subsidy reduces the cost of gasohol to the point where it is competitive with gasoline. The Federal excise tax exemption will result in an estimated tax expenditure of approximately $2 billion over the next 5 years.
- In addition, approximately 30 States provide tax credits for gasohol ranging from 2 cents to 10 cents per gallon.
- Capital investment in alcohol fuels, biomass and urban waste projects are made more attractive because certain types of plant and equipment are eligible for an investment tax credit of 20%. In 1982, these costs will result in tax expenditures of over $200 million.

In addition to these incentives, the President's Economic Recovery Program will provide additional new stimuli for alcohol fuels, biomass and municipal waste production. For example, as a result of the President's decision to lift controls on domestic crude oil prices, alcohol fuels will become even more competitive with gasohol. In addition, the combined effect of the Administration proposals for income tax cuts, accelerated depreciation and reductions in Federal credit activities will stimulate greater capital availability in the private sector for all types of alternative fuel projects.

We believe that these proposals will, in the long run, have a more positive effect on alternative fuels development than a contribution of excessive government spending programs which merely lead to higher inflation, high interest rates and less capital availability in the private sector.

As indicated by Mr. LeGassie, the revised FY 1981 and FY 1982 budget requests for biomass, alcohol fuels and municipal waste reflect the Administration's philosophy that the appropriate Federal role in alternative fuels is to pursue long-term, high-risk research and development which private industry cannot be expected to undertake. Accordingly, it is expected that near-term and commercially-proven renewable energy technol-

ogies will be developed by the private sector. The Office of Renewable Energy maintains ongoing research and development programs in these technology areas in addition to the financial incentives programs I will be discussing today. A table showing Budget Appropriations and Requests from FY 1980 to FY 1982 for the alternative fuels financial incentives in these programs is attached for the record with my testimony.

ALTERNATIVE FUELS PROGRAM

I would like to begin by briefly reviewing the Alternative Fuels Program, specifically in regard to feasibility studies, cooperative agreements and loan guarantees. As you know, in November 1979, the Interior and Related Agencies Appropriations Act for 1980 (P.L. 96-126), established an Energy Security Reserve to stimulate domestic commercial production of alternative fuels. $200 million was made available through the Department of Energy for alternative fuels feasibility studies and cooperative agreements. An additional $100 million for feasibility studies and $200 million for cooperative agreements were supplied in July 1980 through P.L. 96-304, the Supplemental Appropriations and Rescissions Act of 1980. Together, these two pieces of legislation provided the funding for the Alternative Fuels Program.

For biomass technologies other than alcohol fuels, the program has funded one round of solicitations, that will be managed by the Biomass Energy Systems Division. DOE selected twelve projects for awards totalling $7.1 million in July 1980. The projects chosen include eleven feasibility studies and one cooperative agreement. The purpose of the feasibility studies is to support efforts leading to a decision for the construction of a commercial scale facility. The feasibility studies which were selected supported the development of gasification technologies, technologies for the densification of wood in order to make it a more versatile fuel, and processes for the production of liquid fuels.

The cost-shared cooperative agreements are designed to provide front end funding for the detailed design and construction of commercial projects. The single cooperative agreement for biomass technologies funded in this round will subsidize the construction of a wood-fueled gasifier. Projects funded under the first solicitation have been negotiated and contracts are in place.

A second solicitation under the Alternative Fuels Program began in July 1980, and in December 1980 DOE announced selection of an additional nine biomass technology projects with proposed funding of $7.1 million. A third solicitation, solely for innovative direct combustion systems, ended in January of this year. Funds for these projects are proposed for rescission.

In the area of municipal waste, alternative fuels projects were funded under the first round of solicitations totaling $11 million. Of these, 15 feasibility studies were for municipal waste/energy projects totaling $7 million, and three were cooperative agreements totaling $4 million. The municipal waste projects selected in the first solicitation covered a wide range of technologies from the recovery of gas from landfills to the production of refuse-derived fuels.

The second solicitation for alternative fuels projects resulted in the selection of 16 projects in municipal waste, including 10 feasibility studies and six cooperative agreements. As with the biomass projects, funding for these projects is proposed for rescission.

In the area of alcohol fuels applications, two solicitations were conducted for federal assistance to those individuals, firms or local governmental entities seeking direct Federal support for alcohol fuels projects. The first round closed in April 1980, with 44 alcohol fuels projects selected and funded. In the second round 12 firms were named as potential recipients; however, these projects will not be funded.

In the area of cooperative agreements for alcohol fuels two solicitations were also conducted for contracts where the Federal government subsidizes design or construction of alcohol fuels plants. In July 1980, two plants were chosen as award recipients. Since then, a letter of commitment has been given to both firms and negotiations are in progress. The second round closed September 30, 1980, with six projects identified as potential recipients. Funds for these six projects are proposed for rescission.

The Administration has proposed termination of feasibility studies and cooperative agreements for alcohol fuels, biomass and municipal waste energy development as part of the general effort to adopt market principles to achieve national energy goals. Tax credits and excise tax exemptions will continue totalling over $431 million in FY 1982. The removal of price controls from domestic crude oil will make alternative fuels more competitive and eliminate the need for additional subsidies such as those provided for in P.L. 96-126. State incentive programs and the increased private capital available for investment as a result of the President's Program for Economic Recovery will provide further assistance to viable alternative fuels.

As a result of this change in policy, projects currently in the selection process under the Department of Energy which propose such feasibility studies or cooperative agreements are not being funded pending Congressional review of this action. These projects will have to compete for financing in private markets along with other energy projects. Projects previously funded will be completed, however.

ENERGY SECURITY ACT

Title II of the Energy Security Act signed into law in June 1980, authorized either the Departments of Agriculture or Energy use of loan guarantees, purchase agreements, price support loans, price guarantees and construction loans as financial incentives to promote production and use of energy from biomass, municipal waste and alcohol fuels technologies. The two Departments decided to limit financial incentives for alcohol and biomass under the program to loan guarantees.

Preliminary regulations for the loan guarantee program were developed and published in the Federal Register on August 14, 1980 for public review and comment. Three public hearings were conducted, as well as a

prebidders conference, in major cities across the country. The final regulations were published in the Federal Register on October 8, 1980. Sixteen alcohol fuels projects were selected for further negotiations for loans guarantees. The proposed program would guarantee three dollars in construction loans for each dollar of its loan guarantee appropriation. A number of proposals were received for municipal waste and biomass loans guarantees. Negotiations have not been initiated for these.

A second solicitation for loan guarantees for biomass energy was completed on December 31, 1980. Negotiations will not be pursued in keeping with the Administration's recommended rescissions.

In addition, to the solicitation cycles several other activities required by the Energy Security Act have been completed. Consultations have been pursued with the Department of Agriculture to establish a Memorandum of Understanding. The memorandum would address categories of projects automatically exempted from a requirement for formal, written concurrence by each Secretary before the other can take action on a loan guarantee. Also completed is a second report required under the Act which lists all private, state and Federal benefits available for production of fuel alcohol.

In addition extensive program management, solicitation preparation, program evaluation and organizational activities have been underway in FY 1981 in support of the financial incentives programs provided in the Energy Security Act. The revised budget for these activities will be $4.5 million for FY 1981. In keeping with the Administration's revised alternative fuels strategy, these activities are proposed to be phased out. Consequently, no additional requests will be made for FY 1982.

As I mentioned earlier in my testimony, the Administration has proposed termination of all activities using Federal funds to support commercialization of the alternative fuels technologies. To achieve this policy change, the Administration will propose a rescission of $740.5 million of the funds appropriated in FY 1980.

In closing, we believe that the financial incentive programs that are underway will achieve significant progress in demonstrating the commercial potential of a number of biomass, municipal waste and alcohol fuels projects. It is now time to move development of these technologies into the private sector where the actions of the market place can determine the most cost-effective options for applications throughout the country. The Federal government will continue to pursue its broad program of research and development for longer range alternative fuels technologies. Through this active partnership between the public and private sectors alternative fuels will be most effectively implemented.

Mr. Chairman, this completes my prepared testimony. I would be pleased to answer any questions.

Department of Energy
Alternative Fuels Program

(BA in Millions)

	FY 1980 Appropriations	FY 1980 Obligation	Jan. 15 Submission FY 1981[1/]	Jan. 15 Submission FY 1982	Revised Budget FY 1981	Revised Budget FY 1982	Changes FY 1981	Changes FY 1982
Feasibility Studies and Cooperative Agreements								
Alcohol Fuels	-	55.0	-	-0-	-0-	-0-	-	-0-
Other Biomass	-	7.1	-	-0-	-0-	-0-	-	-0-
Municipal Waste	-	11.0	-	-0-	-0-	-0-	-	-0-
Other Alternatives	-	126.9	-	-0-	-0-	-0-	-	-0-
	$500.0[1/]	200.0	300.0	-0-	-0-	-0-	-300.0	-0-

1/ Total funds for all alternative fuels from fossil and renewable sources. No set-asides by resource area are made prior to project award decisions.

Department of Energy

Energy Security Act-Financial Incentives
(BA in Millions)

	FY 1980 Appropriation	Jan. 15 Submission FY 1981	Jan. 15 Submission FY 1982	Revised Budget FY 1981	Revised Budget FY 1982	Changes FY 1981	Changes FY 1982
Loan Guarantees							
Alcohol Fuels	$472.5	472.5	-0-	3.0	-0-	-469.5	-0-
Other Biomass	52.5	52.5	-0-	.4	-0-	- 52.1	-0-
Municipal Waste	220.0	220.5	-0-	1.1	-0-	-218.9	-0-
TOTAL	$745.0	$745.0	$-0-	$4.5	$-0-	$-740.5	-0-

Mr. MURTHA. The biographies of Dr. Robert San Martin, Dr. Maxine Savitz and Mr. Everett Pyatt will be entered in the record and the fiscal year 1981 Request for Rescission.

[The information follows:]

U.S. Department of Energy
Speakers Bureau
Office of Public Affairs
Washington, D.C. 20585
202/252-5644

BIOGRAPHY

DR. ROBERT L. SAN MARTIN

Dr. Robert L. San Martin was appointed Deputy Assistant Secretary for Solar Energy, Office of Conservation and Solar Energy, U.S. Department of Energy (DOE), on October 9, 1980. In this position, he is responsible for the management of the Department's solar research, development, and demonstration program. His primary duties include the formulation and implementation of DOE policies which are related to the development and commercialization of solar energy technologies.

Previously, Dr. San Martin had served as Deputy Assistant Secretary for the Field Operations and International Programs in DOE's Office of Conservation and Solar Energy, where he managed the relationship between the Office of Assistant Secretary and DOE laboratories and field installations. He joined the Department of Energy in 1978 as Director of DOE's Division of Distributed Solar Technology.

From 1977-78, he served as Director of the New Mexico Solar Energy Institute and, from 1976-78, was Director of the New Mexico Energy Institute where he assumed responsibility for solar and geothermal energy research in the State.

Dr. San Martin's extensive career in the area of solar energy began in 1962 at the University of Florida, and continued when he moved to New Mexico State University to teach and perform research in solar energy, heat transfer, and thermodynamics.

In 1974, he became Director of the Energy Research and Development Institute at New Mexico State University.

Dr. San Martin received his bachelor's degree in mechanical engineering from the University of Florida in 1963, his master's in 1964 and his doctoral degree in 1969.

A member of numerous solar professional and technical societies, he is past chairman of the American Society of Mechanical Engineers Solar Division and currently a member of the Board of Directors of the American Section of the International Solar Energy Society. He is author or co-author of over 50 technical publications and reports on solar energy.

November 1980

U.S. Department of Energy
Speakers Bureau
Office of Public Affairs
Washington, D.C. 20585
202/252-5644

BIOGRAPHY

DR. MAXINE SAVITZ

Dr. Maxine Savitz was named Deputy Assistant Secretary for Conservation, Office of Conservation and Solar Energy, Department of Energy (DOE) in February 1980. In this position she directs programs designed to improve energy efficiency in transportation, buildings and industry. Her office also includes a program of basic research into areas such as heat transfer and thermodynamics.

Previously, Dr. Savitz has served as DOE's Deputy Assistant Secretary for Conservation and Solar Applications, providing administrative and management support to the Assistant Secretary. Also, she served as Director of the Division of Buildings and Community Systems, Office of Conservation and Solar Applications.

Dr. Savitz held similar positions at the Energy Research and Development Administration (ERDA), which was merged into DOE in October 1977. Before joining ERDA in 1975, she was Director of the Building Policy Research Program, Office of Energy Conservation and Environment at the Federal Energy Administration (FEA). Prior to that she was a Program Manager at the National Science Foundation. She earlier served as Professor of Chemistry at Federal City College where she was the creator and co-principal investigator of the Federal City College Science Mobile. She has also served as Chemistry/ Laboratory Instructor at Hunter College in New York.

In 1967 Dr. Savitz received the MERDC Commander Award for Scientific Excellence at Fort Belvoir, Virginia, where she was a senior research chemist working in the area of hydrocarbon fuel cells and secondary batteries.

In 1976 Dr. Savitz received the ERDA Meritorious Service Award and in 1975 she received the FEA Certificate of Superior Service. She was recognized for her outstanding contribution to the construction industry in 1975 by the Engineering New Record.

Dr. Savitz is editor of Energy & Buildings, Elsevier Publications; a member of the Energetics Division Board, American Society of Mechanical Engineers, and a member of the Advisory Board, Buildings Research Advisory Board.

Dr. Savitz graduated from Bryn Mawr College, magna cum laude with honors in chemistry in 1958. She was awarded a Ph.D. in organic chemistry by M.I.T. in 1961 and was a post doctoral fellow at the University of California, Berkeley, California.

A native of Baltimore, Maryland, Dr. Savitz presently resides in Washington, D.C.

August 1980

U.S. Department of Energy
Speakers Bureau
Office of Public Affairs
Washington, D.C. 20585
202/252-5644

BIOGRAPHY

EVERETT PYATT

Everett Pyatt was named Acting Director of the Office of Alcohol Fuels at the Department of Energy (DOE) on January 27, 1981. In this position, he is responsible for the implementation of a national program to increase alconol fuels production capacity and use. Mr. Pyatt had served as Deputy Chief Financial Officer for Project and Business Management since January 1980.

Before joining the Department of Energy, Mr. Pyatt was the Principal Deputy Assistant Secretary of Navy starting June 1977. In this role he was responsible for oversight of Navy and Marine Corps planning and execution in procurement, merchant marine activities, facilities, occupational health, foreign sales, overhaul, maintenance and supply support of equipment as well as production activities. He was awarded the Navy Distinguished Service Award for his performance of these responsibilities.

Prior to his Navy appointment, Mr. Pyatt worked in a variety of roles in the Office of the Secretary of Defense. From 1976-1977 he was the Director of Logistics, Planning and Analysis reporting to the Assistant Secretary of Defense (Installations and Logistics) where he established a logistics resource management system. From 1973-1976 he was the Director of Systems Acquisition and Planning reporting to the Assistant Secretary of Program Analysis and Evaluation. In this role he developed the Department of Defense Programming Guidance, directed several major analyses of major acquisition programs and improved Department of Defense acquisition policies.

He entered the Civil Service under the Management Intern Program and was employed in the Office of the Director of Defense Research and Engineering. From 1962 until 1969, he reviewed development of Navy programs concerned with submarine warfare including sonar weapons, countermeasures as well as mine and mine countermeasure efforts. He was the Executive Secretary of technical exchange efforts between the United States, United Kingdom Canada and Australia. From 1969 through 1972, he participated in efforts supporting Vietnam activities and U.S. technical exchange with Israel as the R&D member of the Defense Department's Middle East Task Group. He participated in evaluations of Soviet technology and U.S. weapon development and development planning processes as a member of special working groups.

Mr. Pyatt graduated from Yale University in 1962 with a Bachelor of Engineering in electrical engineering and a Bacnelor of Science in industrial administration. He earned a Master of Business Administration from the University of Pennsylvania, Wharton School in 1977.

March 1981

Department of Energy
FY 1981 Request for Rescission

Alternative Fuels Production
(Dollars in Thousands)

	Presently Available 1/		Revised Appropriation 1/		Proposed Rescission	
	BA	BO	BA	BO	BA	BO
Alternative Fuels Production:						
P.L. 96-126	2,208,000	208,000	2,208,000	208,000		
P.L. 96-304	3,310,000	310,000	3,010,000	10,000	-300,000	-300,000
Total, Alternative Fuels Production	5,518,000	518,000	5,218,000	218,000	-300,000	-300,000

Justification

The Alternative Fuels Production program was established as part of interim measures to support the rapid development of the domestic synfuels industry, pending full activation of the Synthetic Fuels Corporation (SFC). This goal was to be achieved by providing financial incentives including the funding of feasibility studies and cooperative agreements, as well as loan guarantees, price guarantees, and purchase commitments.

Of the total of $5,518,000,000 appropriated for this program, $5,000,000,000 was provided for loan guarantees, price guarantees, and purchase commitments, $18,000,000 was provided for program management costs, and $500,000,000 for feasibility studies and cooperative agreements. Of the funding provided for feasibility studies and cooperative agreements, a total of $300,000,000 is proposed for rescission: $300,000,000 from P.L. 96-304 (which, to date, has not been awarded).

Because this program is essentially aimed at providing subsidies to companies to do design and other studies so that they can then ask the Government for much larger subsidies to build their plants, the Administration is proposing to rescind the funds for additional feasibility studies and cooperative agreements. It is doubtful whether any company which does not have either the technical resources or the relatively small financial resources necessary to do these studies will be able to adequately share risks or provide sound management and technical resources necessary to successfully construct and operate a commercial synfuels facility. In addition, the first round of feasibility studies and cooperative agreements initiated a sufficient number of studies to assure that the SFC will have an adequate number of projects to allocate its resources.

1/ Funds appropriated in FY 1980; to date $200 million has been obligated.

Mr. MURTHA. If you will introduce your colleagues for the record and then summarize your statement, we will proceed. We do have some time this morning but we would like to keep these hearings as brief as possible. However, feel free to use as much time as you need.

Mr. DEGEORGE. Thank you, Mr. Chairman.

To my far left is Dr. San Martin who is in charge of the renewable program in the Office of Conservation and Renewable Energy. To my left is Mr. Everett Pyatt who is in charge of the Office of Alcohol Fuels. Dr. Maxine Savitz is unable to be with us this morning, she is attending another hearing.

I would like to summarize what has happened, Mr. Chairman, in the February 24 reorganization in the Department. The Office of Conservation and Solar Energy has been broadened to include the responsibility for the Power Marketing Administration. The Office of Low Head Hydro and the Geothermal program will be transferred to the new office of Conservation and Renewable Energy. In addition, we have previously included from the jurisdiction of this committee for alternative fuels the Office of Municipal Waste. That program, as well as the biomass program, included certain alternative fuel programs as part of the overall legislation.

I should point out that the administration's present policy has been to reduce a number of loan guarantee programs and other financial incentives that were supportive of the expansion of this industry in the past. The philosophy behind that decision is that the private market should determine the rate of development. We support a continuation of Federal assistance primarily through tax incentives including the new tax proposals as well as the present tax exemptions in the case of gasohol.

Direct programs for feasibility studies, cooperative agreements, etc., have been proposed for rescission as you and your staff are aware. Those programs involved biomass, alcohol fuels, and urban waste. I know this committee was provided with tables and detailed information concerning the effect of tax incentives so I will not be redundant and repeat them; but a considerable amount of money is available as an incentive.

The second thrust of the President's budget is that the competitive situation of these fuels will be improved by the increased price of oil, and the disadvantaged alcohol fuels and the disadvantaged other programs will be aided because the price increases have made these approaches more desirable and more competitive.

The Federal Government sees its role in these areas primarily now as one of long-term research and development. There are small amounts of money available in biomass, alcohol fuels and in urban waste still left to deal with components and some systems work, but to not make investments in commercially viable products.

The best way to summarize it, Mr. Chairman, is that this budget proposal says let's turn back to private industry the responsibility for developing products, let's turn back to private industry the commercialization of those products; and reserve to the Federal Government the role of effectively filling the holes in longer term research and development. I think that is the best way to conclude my short summary statement, Mr. Chairman.

NEED FOR A SYNTHETIC FUEL PROGRAM

Mr. MURTHA. Mr. Secretary, five years ago I felt we needed a synthetic fuel program. With the inflation rate the way it is, if the Government had guaranteed a synthetic fuel program, right now we would have been way ahead in costs with a program that private enterprise would have actually developed that the Government would have guaranteed. We could not convince the previous administration until very late and then we could not convince Congress until we had a crisis. The only thing wrong with your philosophy is that as long as we don't have a crisis we are all right. As long as we have a reasonable development by private industry, I think it is a reasonable approach and a logical analysis of the situation.

Four years ago the then Secretary of Energy Schlesinger came before the committee and said we have a line of demand and a line of oil supply and they are going to cross and there could be a real crisis. Well, price has in fact encouraged conservation. As you know, the 55 mile an hour speed limit has helped some, we have had some real advantages. I believe the publicity has helped.

Price is certainly a major factor, I agree with that, but I also believe that we need Government to institute and stimulate and guarantee progress. I disagree completely with the administration that private enterprise will do it soon enough to avoid a possible catastrophy. If it is true that the Soviet Union will be buying oil on the market and if cutoffs from the Middle East and elsewhere are worries imminent then I believe that the Government has to be involved in stimulating and guaranteeing some sort of synthetic fuel program.

If we are in normal times and we had a lengthy time to develop all these alternate fuels, I could not agree with you more. I think the fact that the administration tried to reduce regulations is commendable. I think that is absolutely essential. I think decontrol over a limited period of time or over an extended period of time is reasonable. I think the President made a mistake in decontrolling so quickly but I agree that in the long run decontrol is an appropriate way to increase conservation and stimulate production of renewable resources.

I cannot believe that the administration does not understand that these next four or five years are so crucial and that if we had started this four or five years ago, right now we would be looking at perhaps four or five hundred thousand barrels of oil in the next couple of years. I don't think private industry will go forward at this point unless we have some sort of guarantee on the scale that I would like to see it. They will be so delayed that it won't have an impact.

Now it is like anything else. I have been thinking that the Soviet Union was going to go into Poland and they have not. There are all kinds of reasons they have not gone in. I am convinced it may be this month, it may be next month. The point is I also believe we are going to have a substantial shortage of oil in the next four or five years. Conservation has pushed back across lines so the supply and demand have not crossed so that the prices have not skyrocketed even beyond where they are now but I see this as us necessarily being the stimulating force in this whole thing.

Answer this question for me, Secretary DeGeorge. How many new alcohol fuel plants have been built without Government assistance?

ALCOHOL FUEL PLANTS

Mr. DEGEORGE. I don't have the exact information but I think it is less than a handful.

Mr. PYATT. One major plant is under construction now, 60 million gallons a month from Texaco.

Mr. MURTHA. How many barrels is that?

Mr. PYATT. Approximately 1½ million per month.

Mr. MURTHA. It's not very much.

Mr. PYATT. It is not very many barrels but it is a good sized alcohol plant.

Mr. MURTHA. Compared to the amount of fuel we need it is not very much. You have to admit that there has been practically no capacity without some sort of guarantee or assistance from the Government at this point.

SYNTHETIC FUELS CORPORATION

Mr. DEGEORGE. Mr. Chairman, I would like to add one footnote that I didn't mention before and I know it does not address the time period that you are most concerned with, the next five years. The administration is continuing to support the Synthetic Fuels Corporation.

Mr. MURTHA. Mr. DeGeorge, if they are supporting it, they have a strange way of supporting it. We have no directors that have been appointed at this point. It is a crucial area and they say they are supporting it but we have no action. What convinces me is action in that direction. I understand there are all kinds of investigations or inquiries or suggested appointments, but no actual appointments. That is what indicates to me that there is support so that they can go forward.

I also understand that the present acting staff is trying to get something done but without a board they are really in the dark and no major corporation is going to be able to really develop a program in such an expensive area until we get some board members. I would hope that the administration would in the very near future appoint a synthetic fuel chairman and a board.

By the way, I support the salaries that have been suggested even though a lot of people think they are exaggerated. I think if you are going to attract the right people that those salaries are very appropriate in an area like that. I can't argue at all. That was the idea we set up to get the foremost experts and even then some of them will have to make a sacrifice in order to come to work for the Government.

Mr. DEGEORGE. I agree, Mr. Chairman, it is unfortunate that the appointments have not been made. I know that the slowness of the appointments hurts. I would also point out that I understand they have some 61 major proposals awaiting action. It is unfortunate that they cannot move out on those.

Mr. MURTHA. It is a difficult time but the last seven or eight years have been one crisis after another and we have got to contin-

ue the progress we have made and it has been a compromise the whole way, the increase in price, the consolidation. The American people have responded appropriately and we are using less oil and of course it is having a dramatic impact on the economy also. People are driving less, there are smaller cars using less steel and less coal.

With all of these things I would hope that we would work out some sort of a compromise. I hope that we don't need another crisis like we had to stimulate some movement in this area because I can remember vividly the two synthetic fuel proposals failing by two or three votes for two consecutive years and then when we had the crisis only 25 people voted against those same proposals. In a democratic society we want to see if we cannot lead the way rather than wait and follow, at least in my estimation.

I have heard what you say, Mr. DeGeorge, and I appreciate the President's support of the synthetic fuels proposals. I think we need them and I, of course, disagree on the rescissions effecting the feasibility study and I believe this committee will reject at least part of those proposed rescissions. At any rate, it is a system where we have a separate responsibility. We certainly have tried to cooperate in every way we can and yet in the long run solve this very difficult problem.

Please review for the committee the number of proposals that were received, reviewed and finally selected for negotiation in the alcohol fuels portion of the alternative fuels program. If you would, provide for the record a detailed listing of the selected projects, a summary of the project and the amounts requested for loan guarantees.

Did you actually start negotiations with the firms involved in loan guarantee applications, and to what stage had you progressed? Were you ready to issue any guarantees?

Mr. PYATT. There are more questions there than I can remember one by one.

Mr. MURTHA. Let me ask the first part of the question first. Provide for the record a detailed listing of the selected projects.

Mr. PYATT. Yes, sir.

[The information follows:]

ALCOHOL FUELS PROJECTS SUBJECT TO RESCISSION INCLUDING THOSE UNDER TITLE II

Feasibility Study Grants

1.	Amerhol Corporation	Spring City, Tennessee	$414,540	50.0 million g/a
2.	Hereford Energy Incorp	Hereford, Texas	835,000	25.0 million g/a
3.	Louisiana Alcohol Fuel	Romeville, Louisiana (Plaquemine)	969,225	100.0 million g/a
4.	Louisiana Bio Fuel Cor.	New Orleans, Louisiana	539,573	35.0 million g/a
5.	Red River Ag Energy Co.	Fergus Falls, Minnesota	223,600	15.0 million g/a
6.	Rochelle Corn Products	Rochelle, Illinois	181,000	5.0 million g/a
7.	Rocket Research Corp.	Fort Hall, Idaho	368,800	10.0 million g/a
8.	Sealaska Corporation	Klawock, Alaska	848,000	50.0 million g/a
9.	Sasecol Corporation	Detroit, Michigan	967,000	20.0 million g/a
10.	Sugar Mill Limited	Logmont, Colorado	654,762	20.0 million g/a
11.	Sun Belt Energy Corp.	Sardis, Mississippi	289,122	4.4 million g/a
12.	Walla Walla Farmers Coop.	Walla Walla, Washington	187,886	30.0 million g/a
			$64,478,508	364.4 million g/a

Cooperative Agreements

1.	Agri Power Alcohol Inc.	Addison, Michigan	$ 7,000,000	19.8 million g/a
2.	Columbia Chemicals Co.	North Bend, Louisiana	24,560,120	40.0 million g/a
3.	Columbia Energy Resources	Tacoma, Washington	2,792,000	9.9 million g/a
4.	CEPO Partnership (American Solarhol)	Baltimore, Maryland	5,265,000	14.5 million g/a
5.	Publicker Industries	Philadelphia, Pennsylvania	25,036,905	59.9 million g/a
6.	Syncorp Incorporated	Roberta, Georgia	498,715	2.3 million g/a
			$65,152,740	146.4 million g/a

Loan Guarantees

1.	Agrifuels Refining Company	New Iberia, Louisiana	$37.9 million	30.0 million g/a
2.	Agri Power Incorporated	Addison, Michigan	70.0 million	20.0 million g/a
3.	American Development Corp.	Hastings, Nebraska	30.0 million	15.0 million g/a
4.	ANDCO Energy Processors Inc.	Tonawanda, New York	37.0 million	15.0 million g/a
5.	Circle Energy Corporation	Garden City, Kansas	26.5 million	15.0 million g/a
6.	D.W. Small and Sons Incorp.	Auburn, Maine	119.6 million	25.0 million g/a
7.	Energy Conversion Corp.	Miley, South Carolina	73.2 million	20.0 million g/a
8.	Grain Fuels Incorporated	Alum, Pennsylvania	79.3 million	20.0 million g/a
9.	Gulf Coast Resources	Keokuk, Iowa	74.4 million	20.0 million g/a
10.	J.E. Sirrine Company	Lane, South Carolina	60.0 million	20.0 million g/a
11.	Michigan Sugar Company (Pioneer Fuels Corp.)	Croswell, Michigan	41.3 million	20.0 million g/a
12.	Minnesota Alcohol Producers	Mankato, Minnesota	45.0 million	15.0 million g/a
13.	New Energy Company of Indiana	South Bend, Indiana	154.5 million	50.0 million g/a
14.	Tennol Incorporated	Jasper, Tennesee	77.0 million	25.0 million g/a
15.	U.S. Ethanol Corporation	East Baton Rouge Parish, Louisiana	220.0 million	120.0 million g/a
			$1,146.0 billion	430.0 million g/a

STATUS OF AWARD NEGOTIATIONS

Mr. MURTHA. Did you actually start negotiations with the firms involved in loan guarantee applications?

Mr. PYATT. We had two groups of selections, the first seven and then nine out of the same solicitation for which we had 54 people evaluated in the first group. Both groups were announced for negotiation and not as awards because we just can't make a major business deal like that without going through some set of negotiations.

In the first group there were a series of discussions with those first applicants to clarify facts, to seek additional information. They really could not be characterized as negotiations because there was no back and forth exchange of the clarification facts and additional information, and the same thing occurred with the second group in working towards which ones appear to be the strongest candidates.

Mr. MURTHA. To what stage had you progressed?

Mr. PYATT. I guess the best summary is a set of clarifying discussions of the contents of the proposed amount of the plans of the proposers and clarify some facts.

Mr. MURTHA. Were you ready to issue any guarantees?

Mr. PYATT. No.

Mr. MURTHA. What is the total estimated dollar value of the loan guarantees proposed for the remaining projects?

Mr. PYATT. The remaining, you mean for these 15?

Mr. MURTHA. Yes.

Mr. PYATT. Just a shade under $800 million. I don't recall the exact number right now.

Mr. MURTHA. What projects dropped out?

Mr. PYATT. Great Western Company withdrew of their own volition.

Mr. MURTHA. How much would typically have been spent to prepare a proposal for this program?

Mr. PYATT. It is hard to tell. Some went into fairly detailed designs which is reasonably expensive and others had less. I would guess that on the average probably half a million dollars.

Mr. MURTHA. How many barrels of oil would be replaced by these facilities?

Mr. PYATT. I will have to make that conversion. Four hundred seventy-eight million gallons of annual capacity of ethanol.

Mr. MURTHA. Please explain why you believe that Government loan guarantees will not be needed by these facilities.

Mr. PYATT. These facilities have all made the claim that they do need Government loan guarantees to secure financing. Part of the negotiation is to come to our own conclusion that that would be the case with those specific loan guarantees.

Mr. MURTHA. So at this point every one of them feel that they need loan guarantees?

Mr. PYATT. Yes. They would not be talking to us if they didn't need them. They need them.

Mr. MURTHA. Why did you request them, if you are not sure, that the funds would be rescinded?

Mr. PYATT. I did not so request. As part of the budget process the administration made the general proposition that there is too much loan guarantee activity going on.

Mr. MURTHA. They made the general judgment so in their estimation they obviously thought it was necessary.

Mr. PYATT. They thought there were sufficient tax advantages for the lenders and users that would keep alcohol as a viable energy source.

Mr. MURTHA. Will banks issue loans to these organizations without guarantees?

Mr. PYATT. Well, certainly the banks are not saying they will do that. I am sure they perceive that why should they volunteer the possibility of loan guarantees.

Mr. MURTHA. The point is they are saying they will not issue loan guarantees at this point.

Mr. PYATT. At this point. What they will say in the future I don't know.

Mr. MURTHA. At this point they will not issue a loan guarantee.

How much will be saved in terms of outlays in fiscal year 1981 and beyond based on the proposed rescission?

Mr. PYATT. I believe it is seven million.

Mr. MURTHA. Seven million dollars?

Mr. PYATT. That is my recollection.

Mr. MURTHA. What is the basis of your outlay estimates?

Mr. PYATT. There is $10 million of administrative fee charges in that authorization and I believe we spent $3 million of it in conducting the competition to date and initiating an environmental statement.

Mr. MURTHA. Do these projects actually have to pay a fee to receive a loan guarantee?

Mr. PYATT. There is a fee.

Mr. MURTHA. Will you put in the record how much?

Mr. PYATT. Yes.

[The information follows:]

LOAN GUARANTEE FEES

Under the Alcohol Fuel Loan Guarantee Program regulations, the fee is 1% of the amount guaranteed. Since there have been no conditional acceptances with any of the 16 selected firms, the fee required of each lender has not been specified.

Mr. MURTHA. Would that cover the administrative expenses anticipated for this program?

Mr. PYATT. Yes, except for the fee that goes to the Treasury when it is put together.

Mr. MURTHA. The Government will get it back?

Mr. PYATT. The Government gets it back.

Mr. MURTHA. The agency does not get credit for it?

Mr. PYATT. The agency does not get credit for it.

PRICE OF GASOHOL VS. GASOLINE

Mr. MURTHA. What is the approximate cost of gasohol versus gasoline?

Mr. PYATT. Currently in this area gasohol, which is comparable to premium performance, is about three cents less than premium.

In other areas of the country it is competitively priced or about three cents more than regular unleaded.

Mr. MURTHA. It is three cents more than regular unleaded?

Mr. PYATT. But it has more performance than regular unleaded.

Mr. MURTHA. Would you say it is competitive at this point?

Mr. PYATT. I use it, yes.

Mr. MURTHA. How many States have waived the excise tax for gasohol?

Mr. PYATT. I think it is 30 or 31 States that have tax incentives of various kinds for gasohol.

Mr. MURTHA. Please put a list of those in the record and indicate those incentives.

Mr. PYATT. Yes.

[The information follows:]

SUMMARY OF STATE TAX EXEMPTIONS

	Excise Tax		Sales, use or gross receipts tax exemptions for gasohol *	Property tax reduction **	Income tax reduction ***
	Exemption for Gasohol per Gallon	Total Tax per Gallon Motor Fuel			
ALA	3¢	11¢	no	no	no
AK	8¢	8¢	no	no	no
AZ	0¢	8¢	no	no	no
AR	9.5¢ [1,2,6]	9.5¢	no	no	yes [1]
CAL	0¢	7	no	no	no
CO	5¢ [1,2]	7¢	no	yes (98%) [1]	no
CT	1¢	11¢	no	no	no
DEL	0¢	9¢	no	no	no
FLA	5¢ [1]	8¢	no	no	yes [1,7]
GA	0¢	7.5¢	no	no	no
HI	0¢	11.5-13.5¢	yes (sales) (4%) [1]	no	no
ID	4¢ [2]	9.5¢	no	no	yes (8%) [1]
ILL	0¢	7.5¢	no	no	no
IND	0¢	8.5¢	yes (sales) (4%)	no	yes [1,10]
IA	10¢ [1,2]	10¢	no	no	no
KS	4¢ [1,2]	8¢	no	no	no
KY	0%	9% of the avg. wholesale price	yes (sales) (5%) [1]	yes (99%) [1,2]	no
LA	8¢ [1,2]	8¢	yes (sales) (3%) [1,2,3]	no	no
ME	0¢	9¢	no	no	no
MD	4¢ [2] 9¢ [2,4]	9¢	no	no	no
MASS	0¢	8.5¢	no	no	no
MI	0¢ [1,2]	11¢	no	no	no
MN	4¢	11¢	no	no	yes (20%)
MISS	0¢	9¢	no	no	no
MO	0¢	7¢	no	no	no
MT	7¢ [1,2]	9¢	no	yes (97%) [1,2]	no
NEB	5¢ [1,2]	10.5¢ and 2% of the average statewide cost of fuel. [20]	no	no	no
NV	0¢	6¢	no	no	no
NH	5¢ [2]	11¢	no	no	no
NJ	0¢	8¢	no	no	no
NM	8¢ [1,2]	8¢	yes (3%) (gross receipts) [1,2]	no	no
NY	0¢	8¢	no	no	no
NC	4¢ [1,8]	9¢ [1,13]	no	no	yes (20%) [1,8,12]
ND	4¢	8¢	yes (sales) [3,9,14]	no	no
OH	0¢	7¢	no	no	no
OK	6.50¢ [1,2]	6.58¢	no	no	no
ORE	0¢	7¢	no	yes (100%) [1]	yes (100%) [1,15] (20%) [1,16]
PA	0¢	11¢	no	no	no
RI	0¢	10¢	no	no	no
SC	4¢ [1]	11¢ [20]	no	no	no
SD	4-5¢ [1]	12-13¢	yes (use) (4%) [1]	yes (100%) [1]	no
TN	7¢ [5]	7¢	no	no	no
TX	0¢	5¢	yes (4%) [17]	yes, (100%) [17]	no
UT	5¢ [1,2]	9¢	no	no	yes [10]
VT	0¢	9¢	no	no	no

	Excise Tax		Sales, use or gross receipts tax exemptions for gasohol *	Property tax reduction**	Income tax reduction***
	Exemption for Gasohol per Gallon	Total Tax per Gallon Motor Fuel			
VA	0¢	11¢[19]	no	no	no
WA	1.8¢[1]	12¢	yes (sales & use) (4.5%)[1]	yes[1,18]	no
WV	0¢	10.5¢	no	no	no
WIS	0¢	9¢	no	no	yes[12]
WYO	4¢[1]	8¢	yes (sales)(3%)	no	no

*Sales, use and gross receipts tax exemptions- Percent listed is the sales tax rate in that state. In all cases, the entire amount of the tax is exempted.

**Property tax reduction- The percent listed equals the percent of the state property tax applicable to qualifying fuel alcohol production facilities which is exempted.

***Income tax exemptions, credits and deductions- The percent listed equals the percent of the exemption, deduction, or credit with respect to taxable income attributable to qualifying fuel alcohol production.

1. The enabling legislation contains a decreasing scale, sunset provision, an expiration date and/or a maximum ceiling provision which limits the total amount of excise tax refunds which the state can lose as a result of the gasohol excise tax exemption.

2. Gasohol's exemption is restricted in some manner to alcohol produced from state crops, produced within the state or blended within the state.

3. Applies to agricultural use only.

4. Includes only unmixed ethyl and methyl alcohol.

5. If production does not exceed 1000 gallons annually.

6. Effective in 1981.

7. The corporate income tax reduction is based on the amount of property taxes paid by producers of fuel alcohol for production costs incurred in the manufacture of fuel alcohol.

8. An additional 10% income tax reduction is credited to those producers of fuel alcohol whose distilleries are powered primarily by the use of an alternative fuel source.

9. A 1/8 cent sales tax charge is levied on gasohol exempted from the 3% state sales tax.

10. No standard amount of reduction is stated in the law. Certain business expenses incurred in the production of fuel alcohol qualify as deductions in the calculation of the producer's next corporate income tax.

11. A gross income tax deduction for a coal conversion system to process coal into liquid fuel applies only to those who receive the federal depreciation deductions for a coal conversion system.

12. The law provides for both corporate and personal income tax reductions.

13. A 9 cent excise tax exemption is provided for non-anhydrous alcohol which is not used for sale or distribution.

14. The exemption only applies when the gasohol is used for agricultural or industrial purposes.

15. 100% income tax exemption- applies only to alcohol fuels production.

16. 50% investment tax credit- applies to all alternative energy development projects.

17. The exemption only applies to the purchase of equipment used in the production of ethyl alcohol.

18. This exemption includes leasehold tax exemptions.

19. A 2 cent increase in the gasoline excise tax is imposed in Northern Virginia.

20. Effective October 1, 1980.

Source:
U.S. National Alcohol Fuels Commission
July 1980

Mr. MURTHA. How much of our corn is used for these projects?

Mr. PYATT. Oh, it is very little.

Mr. MURTHA. Is it very little corn compared to the total amount of corn we use?

Mr. PYATT. There are about seven billion bushels of corn produced a year and we make about 65 million gallons of alcohol a year. It is a very small amount.

Mr. MURTHA. Is the price of corn a sensitive part of the price of the alcohol or is the production of it the key?

Mr. PYATT. The price of the corn is by far the dominant factor.

Mr. MURTHA. What is the market for the dried grains that result from the production of alcohol?

Mr. PYATT. You have to speak to people more experienced in agriculture than I but it is my understanding that there is a growing demand for it used as a valuable feed. In the alcohol production process the starches are converted to alcohol leaving a high protein byproduct.

INCENTIVES FOR OTHER BIOMASS

Mr. MURTHA. Would you please review for the committee the status of the $52.5 million set aside for other biomass programs, excluding alcohol fuels?

Mr. PYATT. I will defer to Dr. San Martin.

Mr. SAN MARTIN. Mr. Chairman, it is my recollection that the administration has proposed that for rescission.

Mr. MURTHA. What kinds of proposals have been received for loan guarantees?

Mr. SAN MARTIN. I don't recall exactly the number of proposals. There was no selection and no announcement of awards made in that category at all.

Mr. MURTHA. Would you provide for the record a list of the projects and also a summary of the content and the amount of assistance required?

Mr. SAN MARTIN. Certainly.

[The information follows:]

TITLE II—BIOMASS ENERGY LOAN GUARANTEE PROGRAM

The final regulations were published in the Federal Register on October 8, 1980. No qualifying proposals were received during this solicitation. A second solicitation was announced on November 14, 1980 and closed on December 31, 1980. A total of five proposals were received, valued at greater than $200 million. Preliminary evaluation of the proposals was completed in late January 1981, but no awards were made due to the proposed rescission of the loan guarantee program. Four of the proposals received involved cogeneration of electricity and process heat from either wood wastes or agricultural wastes. The fifth proposal was for a wood pellet processing facility in the Pacific Northwest. Since awards for the second solicitation have not been announced, DOE regulations preclude providing further details on the proposals submitted.

Mr. MURTHA. Will you complete your evaluation of these projects even if the funds are rescinded?

Mr. SAN MARTIN. The projects have been under evaluation. Mr. Chairman, I believe that the feedback from the process is always valuable to the proposals and I am sure that could be done.

Mr. MURTHA. What will happen to the personnel associated with the alcohol fuels and biomass programs if the funds are rescinded?

Mr. PYATT. Speaking for alcohol fuels, approximately half of the office was involved in the process of negotiation of the loan guarantees and that portion of the office would be eliminated.

Mr. MURTHA. Will you continue to monitor previous awards?

Mr. PYATT. Yes.

MUNICIPAL WASTE

Mr. MURTHA. Let's talk about urban waste. Please review for the committee the status of your activity pertaining to the $220 million provided for urban waste under the alternative fuels production incentives.

Do you have an expert here?

Mr. DEGEORGE. Yes. Mr. Walter.

Mr. MURTHA. Give your full name to the reporter.

Mr. WALTER. Donald Walter, the Acting Director of the Office of Energy for Municipal Waste.

We have had a solicitation making $25 million available for loan guarantees for municipal waste products. A total of 12 requests were received and two have subsequently been withdrawn. Of the remaining 10, the evaluation reduced that number to four; and for those four we would have acquired additional information. However, we have suspended the evaluation at this time.

Mr. MURTHA. For the record please provide a summary of each project and the amount of loan guarantee requested.

Mr. WALTER. Yes, sir.

[The information follows:]

LOAN GUARANTEE APPLICATIONS

NAME	GUARANTEE REQUIRED	CAP	DESCRIPTION
Central Wayne Co., MI**	$ 25MM	570 TPD	Add Boilers to Existing Incinerator for Electric/ Cogeneration
Marion Co., OR	19.5MM	420 TPD	DRDF for Existing State Owned Boilers
Starrett City, NY**	4MM	600.000 SCF/D	Digester Gas for Existing Total Energy Plant
Columbus, OH**	17MM	1200 TPD	RDF and Coal in Dedicated Boiler for Electricity
Wisconsin Solid Waste Authority	3.3MM	2000 TPD	RDF to Dedicated Boiler for Industry Process Steam
CEA Bridgeport, CN	7.7MM	1800 TPD	Powered RDF to Existing Utility Oil Boiler
Gas Alternative Sys, NJ	90% of Const.	3.4 MMCF/D	Landfill Gas/Gas Turbine/ Electric
Westchester Co., NY	21.2MM	1500 TPD	Mass Burning to Produce Electricity
Detroit, MI	*	3000 TPD	RDF/Dedicated Boiler Steam to District Heating
Stockyards Energy Recovery Assoc., IL	4MM	500 TPD	Mass Burn for Industry Steam
Environmental Preservation, Inc. IL	4.5MM	120.000 GPD	Sewage Sludge/Coal Fines to Power or Densified Fuel
Watson Energy Systems, Inc.	90MM	1000 TPD	RDF/Rotary Kiln for Industry Steam

* Apparent Request was for $180MM. - The Project Actually Requires a Guarantee of $20MM

** Selected for Further Discussion

Mr. MURTHA. Have you completed your evaluation of these proposals?

Mr. WALTER. There has been a preliminary evaluation reducing the total to four requesting approximately $78 million. We will acquire further information to further reduce that list to the $25 million made available.

Mr. MURTHA. Are all four viable projects?

Mr. WALTER. Yes, sir.

Mr. MURTHA. Have you received proposals for price supports?

Mr. WALTER. We have received one proposal for a price support loan from the City of Akron. The price support loan rule is not finalized yet. We would expect more if the rule were finalized.

Mr. MURTHA. What is the status of the proposed rule for price supports?

Mr. WALTER. The proposed rule has been issued, public hearings have been held, comments have been received, the public comment period is terminated. The administration is evaluating and making a decision on an amended proposed rule.

Mr. MURTHA. Do you intend to issue a final rule?

Mr. WALTER. I do not know the exact answer to that question. That will be provided for the record.

[The information follows:]

FINAL RULE FOR URBAN WASTE LOAN GUARANTEE PROGRAM

The Final Rule for Loan Guarantees for Alcohol Fuels, Biomass Energy and Municipal Waste Energy Projects was issued on October 8, 1980, Federal Register/Vol. 45, No. 197/pp. 67022 to 67039.

The Department of Energy currently plans to finalize the proposed rule for price support loans which was issued September 25, 1981, Federal Register/Vol. 45, No. 188/pp. 63822 to 63829 and October 29, 1980, Federal Register/Vol. 45, No. 211/pp. 71746 to 71757. This rule provides th formulas for calculating the price support loan as was required by Section 234 of the Energy Security Act (PL 96-294). If should also be noted that the Department of Energy has recommended rescission of the funds appropriated for the price support loan program.

[COMMITTEE NOTE.—Issues of Federal Register were provided for committee files.]

Mr. MURTHA. If the rescission you propose was rejected, how long would it take to publish a final rule?

Mr. WALTER. We could publish a final rule within 60 days.

PRICE SUPPORT LOANS

Mr. MURTHA. Would you explain why facilities require price support loans?

Mr. WALTER. Most municipal waste facilities have two sources of revenue: one is the sale of the energy they produce and the other is the cost; called the tipping fee, to dispose of waste in the plant. As far as the city is concerned, the tipping fee must be competitive with its alternative land fill. Most municipal waste plants that have been evaluated to date would indicate that based only on the first cost, the cost of disposing waste in the plant would be more expensive than it would be in the land fill. However, if you look at the life cycle cost of a plant in three to five to seven years, the cost of disposing of waste in the plant in the land fill becomes equal. The theory behind the price support loan was to translate that early negative cost to the future. One could look at this as if it

were a pure business. Most businesses when they open their doors do not expect to make money for the first several years and basically waste energy plants are exhibiting the same thinking.

Mr. MURTHA. How many urban waste facilities are there?

Mr. WALTER. There are approximately 27.

Mr. MURTHA. Would you provide the locations for the record?

Mr. WALTER. Yes, sir.

[The information follows:]

EXISTING URBAN WASTE FACILITIES

Combustion Plants Operating: Chicago, IL; Braintree, MA; Saugus, MA; Oceanside, NY; Akron, OH; Harrisburg, PA; Nashville, TN; Hampton, VA; Norfolk Naval Base, Portsmouth Naval Base.

Combustion Plants Constructed Not Operating: City of Baltimore, MD; Duluth, MN; Hempstead, NY; Niagara Falls, NY.

Refuse Derived Fuel Plants Operating: Ames, IA; Madison, WI; Milwaukee, WI.

Refuse Derived Fuel Plants Complete but in Start Up or Shut Down: Bridgeport, CN; Chicago, IL; Albany, NY; Monroe County, NY; Lane County, OR; Tacoma, WA.

Refuse Derived Fuel Plants Recovering Materials Limited Fuel Market: Baltimore County, MD; New Orleans, LA.

Mr. MURTHA. What has been their performance?

Mr. WALTER. Their performance has been generally mixed. Most of the plants have had a number of problems in their initial startup period. There are five or so that are considered to be quite successful today that are producing and selling their product and they either are now economic or they are beginning to become economic. Most of the others are still in the startup phase or have closed down for various reasons, generally technical.

Mr. MURTHA. Will municipalities go forward with building facilities on their own?

Mr. WALTER. I believe that municipalities in the end build these plants. I think it will be a relatively long period in building them because of the difficulty, economics and the poor experience we have had in the past.

Mr. MURTHA. So you are in the position that I believed you were. Will synthetic fuels set the program back four or five years and rescind these loan guarantees? In other words, you are saying that municipalities cannot build these plants in the near future. They may start some years in the future, and I certainly agree with that assessment. They are going to have to find a way to dispose of the waste and this is the logical way to do it, but the cities don't have the financing to do it at this time.

Mr. WALTER. That is essentially correct, plus cities make decisions on first cost basis and there is a negative first cost.

Mr. MURTHA. So it could be 10 years before they start building. At any rate the answer is they are not going to go forward immediately because most of them don't have the money?

Mr. WALTER. There will be some which will go forward. There will be a slow market.

Mr. MURTHA. Please make a prediction of the ones that will go forward and provide this for the record.

Mr. WALTER. Yes, sir.

[The information follows:]

LISTING OF URBAN WASTE PROJECTS EXPECTED TO ADVANCE WITHOUT FEDERAL SUPPORT

State	Location	Reported capacity (tons per day)	Current status
California	San Francisco	2,000	Design.
Connecticut	Hartford	1,400	Planning.
Florida	Lakeland	300	Construction.
Do.	Pinellas County	1,500	Do.
Massachusetts	Boston	1,200	Planning.
Missouri	St. Louis	2,000	Do.
New York	New York City	3,000	Do.
Do.	Port Authority/New York City	6,000	Do.
Oklahoma	Tulsa	1,000	Do.
Oregon	Portland	8,00	Do.
Tennessee	Nashville	1,500	Do.

Mr. MURTHA. What will happen to the personnel associated with the urban waste program if these funds are rescinded?

Mr. DEGEORGE. Actually, Mr. Chairman, the staffing was not accomplished.

Mr. MURTHA. The committee will now recess. Mr. Dicks is going to come over, he has some questions, so just stand in recess until he comes.

Mr. DEGEORGE. Surely.

Mr. MURTHA. Thank you very much, Mr. DeGeorge.

Mr. DICKS [presiding]. The committee will come to order.

ALCOHOL FUELS COOPERATIVE AGREEMENTS

I understand that several of the alcohol fuel companies which received tentative cooperative agreements with the Department have been awarded funds, is that correct?

Mr. DEGEORGE. No, sir, not that I am aware of. Mr. Pyatt will be able to answer the question.

Mr. PYATT. In round two of the cooperative agreement two proposals were provided letter contracts up to $500,000 apiece.

Mr. DICKS. Which two?

Mr. PYATT. CEPO and Columbia Energy Resources.

Mr. DICKS. Was it done this morning?

Mr. PYATT. No, sir, it was done on the 19th of January.

Mr. DICKS. Why have they received funds while others have not?

Mr. PYATT. They were able to come to an agreement with the contracting officer promptly on the scope of the work.

Mr. DICKS. By January 19, 1981?

Mr. PYATT. Yes. The CEPO partnership and Columbia Energy Resources.

Mr. DICKS. That is not full funding, is it?

Mr. PYATT. No, sir.

Mr. DICKS. What are you going to do about that? Are you going to keep that in place?

Mr. PYATT. Yes. Those are agreements and we will fund those up to the limits of the $500,000 apiece.

Mr. DICKS. What percentage is that of the total requirement for each of those projects?

Mr. PYATT. The Columbia Energy requirement is $2.8 million and the CEPO partnership requirement is $5.3 million.

Mr. DICKS. How does this $500,000 divide between the two of them?

Mr. PYATT. It is $500,000 apiece.

Mr. DICKS. Apiece?

Mr. PYATT. Yes.

Mr. DICKS. So it is only a small percentage?

Mr. PYATT. That is right.

Mr. DICKS. Since you made the initial award, don't you want to go ahead and finish your commitment?

Mr. PYATT. We made the award for a letter contract for a partial award and it is the administration's position that they would be happier if those awards had not been made. There is no necessity nor requirement to go on and finish through the deal.

Mr. DICKS. I have a letter here from another alcohol fuels company that also received a tenative cooperative agreement before the proposed rescission of $300 million for this program. This company has committed over four million of their own money based on this commitment. Now let me read your commitment letter dated January 19, 1981.

This letter will constitute letter of agreement by and between the United States of America, hereinafter called the Government, acting through its Department of Energy, hereinafter called DOE, and Columbia Energy Resources, hereinafter called the participant. The amount of $500,000 of DOE funding is hereby obligated to commence this work described in the statement of work pending definitization of the cooperative agreement. The parties agreed to negotiate in good faith and replace this letter agreement with a definitive cooperative agreement on or before May 18, 1981.

This is signed by all the parties.

Do you think that creates a contractual commitment on the part of the Government?

Mr. PYATT. No. A letter contract of that kind, so I understand from my counsel, is not a contractual agreement to complete the whole thing. All of these awards are made subject to the availability of funding.

Mr. DICKS. In March, however, the company received another letter terminating negotiations with the cooperative agreement. You don't feel like we have an obligation here?

Mr. PYATT. I do not. We have no obligation to fund beyond the $500,000.

Mr. DICKS. And you will not?

Mr. PYATT. And we will not.

Mr. DICKS. I also have letters from one of the 16 companies that was chosen for an alcohol fuels loan guarantee which the administration proposes to rescind. They have spent over $2 million based on this commitment. Don't we have an obligation here?

Mr. PYATT. No.

Mr. DICKS. What about an equitable obligation? I mean is it really fair to these companies who went ahead through cooperative programs and on the loan guarantee program after we told them we wanted them to be part of the solution to the country's energy problems? These people went out to raise money, and then spent money to provide part of the resources. Then when we get a new administration that is supposed to be concerned about the private sector in business, the first thing they do is come in and terminate

the agreements with these companies. Now that does not seem fair to me. How do you justify that?

Mr. PYATT. The overall economic situation of the country makes it necessary to reduce Federal spending.

Mr. DICKS. Don't we have an energy problem, too?

Mr. PYATT. We have an energy problem, too.

Mr. DICKS. Would that not solve the matter?

Mr. PYATT. Yes; it could perhaps make a contribution.

Mr. DICKS. Then why terminate it? A lot of people think the real economic problem is our energy problem.

Mr. PYATT. That is a matter for the Congress to consider in going over the rescission of the proposals.

RESCISSION OF FINANCIAL INCENTIVES

Mr. DICKS. Do you know, that under the law you are not to rescind money until Congress approves the rescissions. Do you understand that?

Mr. PYATT. We are not rescinding.

Mr. DICKS. You have not rescinded?

Mr. PYATT. We have not.

Mr. DICKS. Under the law you are to continue these programs until Congress approves the rescissions. Now that is the law.

Mr. PYATT. I understand.

Mr. DICKS. If you are testifying that you are not continuing these programs, in my view you are testifying that you are breaking the law.

Mr. PYATT. In the view of our counsel I think that is not a joint view.

Mr. DICKS. Who is the counsel? Is he here today?

Mr. PYATT. No, sir.

Mr. DEGEORGE. No, sir.

Mr. DICKS. For the record can you have the counsel provide us with a legal brief explaining the legal underpinnings in case decisions, if any, or your view of the law that you can violate the Budget and Impoundment Control Act of 1974? I don't believe you have the legal authority to stop these programs until Congress acts on the rescissions or deferrals as presented by the administration. I would like to have the counsel of the Department of Energy provide us with a brief on the legality of your actions. I believe you are in serious trouble, by the way.

Mr. PYATT. I don't think so. I have seen this before in other departments and we are handling this in the same manner.

Mr. DICKS. Yes, but that does not mean it is right.

Mr. PYATT. It was upheld in those cases, it was not challenged.

Mr. DICKS. That is different. I am now challenging it.

Mr. PYATT. That is your privilege.

Mr. DICKS. I want you to provide us with a brief explaining the legal rationale for your belief that you can stop these programs.

[The information follows:]

AUTHORITY TO WITHHOLD OBLIGATION OF COMPETITIVE AWARDS

The budget authority for the projects has been proposed for rescission. The Impoundment Control Act of 1974, title X of Pub. L. 93-334, July 12, 1974, does not explicitly state whether an agency is required to make available for obligation funds appropriated by Congress during the 45-day pendency of a rescission request. How-

ever, section 1012 of the Act provides that if a rescission bill has not been passed after the 45 day period, the budget authority must be made available for obligation.

The Comptroller General has interpreted this provision of the Act to mean that appropriated funds need not be made available for obligation during the 45-day period (Comp. Gen. letter to Senator Muskie, dated December 18, 1974 B–115398). DOE concurs in this interpretation because if the rescission of the budget authority is approved by Congress, the DOE will no longer have the funds available for the projects.

Mr. DICKS. Are you dismantling these programs at this point?
Mr. PYATT. Oh, no.
Mr. DICKS. People are still there. Have you laid off any people?
Mr. PYATT. No, sir we haven't.
Mr. DICKS. The programs are still operating?
Mr. PYATT. Yes, they are.
Mr. DICKS. That is what I want to know.
Mr. PYATT. We are ready to carry on.
Mr. DICKS. Even if the rescissions are not approved?
Mr. PYATT. Yes, sir.
Mr. DICKS. All right. That is what I wanted to hear.
Mr. PYATT. I am fully aware of that part of it.
Mr. DICKS. Good.
Mr. PYATT. I am prepared to execute it if that be your will.
Mr. DICKS. Anything else?

REDUCING OIL IMPORTS

I met with Mr. Stockman yesterday and he feels as strongly about this as the Secretary does. The projections that we have seen of three million dollars concern us. If we do not go ahead with this alternative energy program it will mean that we will not be backing out about three million barrels a day within three to five years of the program. If we do not go ahead with these alternative energy programs in the 1990's it will mean that we will be importing three million barrels a day of oil more than we would have been had we gone forward with the programs outlined in the Carter budget. Now do you have any information that would contradict that?

Mr. PYATT. That is general. I was talking about alcohol fuel.
Mr. DEGEORGE. You are talking about the synfuels?
Mr. DICKS. No, we are talking about the difference in the Carter budget and the Reagan budget. Do you have that belief?
Mr. PYATT. We don't get near that.
Mr. DICKS. That is geothermal energy.
Mr. DEGEORGE. The numbers are nowhere near that, Mr. Chairman.
Mr. DICKS. You cannot testify on that?
Mr. DEGEORGE. Yes, sir, I can testify. There have been projections made by other people. There were substantial variances in the effects of some of these decisions.
Mr. DICKS. While we are trying to find those numbers, let me ask you this question.

SYNTHETIC FUELS PROGRAM

Can you testify on the synthetic fuels program?

Mr. DeGeorge. No, sir, just to the extent that we know the financing in that program is being continued at about $18 billion and that several of the fossil programs will be basically considered there.

Mr. Dicks. Of that $17.2 billion $5 billion of it was provided and is available now in fiscal year 1981, is that correct?

Mr. DeGeorge. I think that is correct, yes, sir.

Mr. Dicks. And of that $5 billion the Administration is going to commit about $3.6 billion and the remaining $1.4 billion is going to be transferred to the Synthetic Fuels Corporation. Is that your understanding?

Mr. DeGeorge. I am sorry, sir. I really can't confirm those numbers.

Mr. Dicks. We will get that information this afternoon.

There has been some discussion that possibly that $1.4 billion could be used for these alternative energy programs. That would mean that these alternatives that we are talking about, such as conservation, geothermal, gasohol, biomass and others, would be made available by funding from the Synthetic Fuels Corporation. About eight percent of the $17.2 billion would be available for these alternatives. It seems to me that that would be a more balanced approach than the approach the Administration is proposing. Why aren't we interested in doing some small modicum of effort on these programs?

GOVERNMENT ROLE IN TECHNOLOGY DEVELOPMENT

Mr. DeGeorge. Well, in addition to the specific programs, Mr. Chairman, you know that there were several, overriding philosophies, which I am sure you have heard, that went into this such as: the high cost of energy will push people in the direction of other technologies and that, in these particular cases, the best way to go is to turn the emphasis and the technology back to private industries, and that the Government's role is long-term research and development and not the demonstration business. As a result, the conservation program, the solar program and the other programs in my jurisdiction have been substantially reduced. That was an overriding theme of the budget, so the $17.2 billion that was available was reserved for some very large commercial applications which were basically determined to be commercially feasible.

What I am trying to say is that the decision was that the Federal Government would not be in the demonstration business. It did not see the necessity of being in the loan guarantee business. There was a great deal of money that would provide a large capacity that would be available for synthetic fuels. We purposefully decided that we did not want to be in demonstration or in commercialization programs within the Department of Energy.

Mr. Dicks. Isn't it true that these kinds of projects that we are talking about here on the loan guarantees, and the cooperative agreements, would not qualify under the Synthetic Fuels Act?

Mr. DeGeorge. It is my understanding they would not.

Mr. Dicks. Is the administration going to ask for legislation to make them qualify?

Mr. DeGeorge. I do not know, sir. I personally do not know.

Mr. Dicks. Has there been a decision not to?

Mr. DEGEORGE. Not to my knowledge. I have not been privy to any discussions.

Mr. DICKS. Should we ask the Secretary that question?

Mr. DEGEORGE. Well, the Secretary or the Deputy Secretary.

PROJECTIONS OF SYNTHETIC FUELS OUTPUT

Mr. DICKS. Proposed actions by the Reagan administration will reduce the volume of synthetic fuels output of many projects. While these steps may appear attractive in the short term, the consequences of such action should be given serious thought. The summary analysis of the potential synfuels production the Carter budget followed estimated in thousands of barrels per day. Under the Carter proposal in 1990 we would have 900,000 barrels a day. By 1995 we would have 2,300,000 barrels a day. By the year 2000 we would have 4,800,000 barrels a day. Under the Reagan proposal we would have 300,000 barrels a day and by 1990 we would have 900,000 barrels a day and by 1995 we would have 1,500,000 barrels a day for a difference of 3.3 million barrels a day.

I am concerned that we may need to continue to import, unless we magically come up with another 3.3 million barrels a day from some other source, making us more dependent on foreign governments. It raises very serious national defense and national security issues which I think should be overriding in an administration that says it is concerned about national defense and continues to leave us vulnerable to exploitation by OPEC.

Now in light of that I just don't understand why the Administration, when these commitments had been made, wants to terminate all of these important programs. Can you explain it to me?

Mr. DEGEORGE. The numbers don't seem correct to me, sir. I don't know the basis of the calculation. Within the alcohol fuels side of it or the alternative fuels side there are no numbers that even approach a fraction of those type savings from the program. That is half of what we import today. I don't think anyone in any way senses from the development of the alcohol fuels program that we are going to save that kind in any case. I just don't know the basis of your arithmetic.

Mr. DICKS. We will provide it for you.

Mr. DEGEORGE. I will be glad to comment on it when working with your staff.

Mr. DICKS. We would like to get your idea because if we are wrong we certainly want to correct the record but these projections were done by some of the best people in the business. Those who have had great experience and who are looking at the difference in the two plans and I guess that is what we are worried about here. We don't want to do something that is going to leave us in a more vulnerable energy position because there are very serious national defense implications.

I am on the Defense Appropriations Committee and we are very concerned about our ability to respond in the Middle East, whether we have the Navy and whether we have the rapid deployment force, to handle contingencies in that part of the world. The vulnerability here is very, very great. Anything that we do that undercuts our effort to make ourselves more energy independent raises some grave doubts about the real commitment here to strengthen

ourselves from the national defense perspective. That is what concerns a lot of our people.

Mr. DEGEORGE. I understand your concern, sir, but if the arithmetic as you have portrayed it is correct, then I would reach the same conclusion you do and that is why I would like to discuss this with your staff.

Mr. DICKS. The assumptions?

Mr. DEGEORGE. The assumptions underlying that.

EFFICACY OF CONSERVATION BUDGET

Mr. DICKS. These figures effect everything we are talking about, conservation, all of the alternative energy approach, all the things the Government used to be involved in when we were promoting prior to January 20, 1981. The reason I want to raise this with you is because we thought we were on a balanced approach and now we seem to be on an approach that only emphasizes nuclear and synthetics in terms of coal. We thought that a balanced approach made some sense.

Mr. DEGEORGE. It is quite clear that Congress for many years has supported the programs of conservation and solar and has voted many new programs. I think it goes a little bit beyond that, Mr. Chairman. I think it goes to several different facts. There is an increase in nuclear and defense budgets but the Government feels that the investment tax credit incentives plus the new depreciation schedules are available. The new tax bill provides large additional incentives. Now they may not do it or they may do it. The thrust is to turn it back to private industry and to provide those two mechanisms.

Mr. DICKS. Is it your professional rather than your political opinion, that this is true?

Mr. DEGEORGE. I would answer that question this way. One could spend, legitimately, and effectively, more dollars than this budget has requested in the conservation and solar areas and I think it would result in less energy usage. I could not give you exact determinations of what that budget level would be. We would have personal differences on individual programs but the budget that we have is a sparse budget. It was purposefully created that way. I think that the program would spend more money. But I would question any additional requests and how meaningfully more dollars could be spent.

Let me give you the other side of the coin. I spent eight months being responsible for conservation programs and I am absolutely convinced that a great number of the dollars that we had spent in the conservation and solar area were not properly and prudently spent. The number is somewhere below previous authorizations in my judgment. On the other hand more dollars could be spent more effectively than we now have in this budget. Now that is my personal view.

Mr. DICKS. That seems to me to be a fair answer. In other words, we could have cut this back without totally eliminating the programs and it would have been in a better position.

Mr. DEGEORGE. I think we could have spent more money intelligently here. I think we have authorized too many dollars in the

past and some of it was spent unwisely. The answer is somewhere in between.

RESCISSION REQUEST

Mr. DICKS. The bottom line here is if we don't approve the entire rescission package, the administration is still prepared to go ahead with these programs to a certain extent.

Mr. DEGEORGE. Yes, sir.

Mr. DICKS. Have steps been taken to dismantle these programs.

Mr. DEGEORGE. No, we have not taken any steps. We can get into an argument on deferring, based on prior opinions.

Mr. DICKS. I think under the law you are allowed to do something during the time when the rescission is pending.

Mr. DEGEORGE. We are allowed to tread water.

Mr. DICKS. You are allowed to tread water during time?

Mr. DEGEORGE. That is right.

Mr. DICKS. I know of examples in the 312 program at HUD where it has been stopped. They are not treading water, they are dismantling the program and that cannot be done before Congress approves the rescission.

Mr. DEGEORGE. I think that is why Mr. Pyatt and I felt comfortable in our answer to your question. We have not laid off staff, we have not cancelled contracts, we have not taken the approach that says we are not going to do that ever. What we have said is that where decisions can be deferred we have continued on such things as the reviews of the loan guarantees. Should Congress approve the rescission, then we would not award them. Should Congress not approve the rescissions and not deal with the deferral, which I have heard discussed as well, then we will have to act in accordance with Congress will.

Mr. DICKS. If a decision was made next week when would you be able to honor the commitments you desire to have honored?

Mr. DEGEORGE. We would have to talk about it program by program.

Mr. PYATT. In the feasibility studies and the cooperative agreements where they had basically come to terms it is a matter of signature. In some they had not come to terms and it is a matter of complete negotiation.

Mr. DICKS. How would you proceed if the total $300 million for cooperation agreements was not rescinded?

Mr. PYATT. You would have to have a whole new process to depict which ones you wanted to go with. I don't see the complex funding. You have to have some process that you go through and say we want to work in this area and we don't want to work in this area. That would just throw the whole thing up in the air.

Mr. DEGEORGE. I think from a competitive standpoint since they compared on dollars, in effect you said there is less money.

Mr. DICKS. You just take the ones that are at the top of the ranking.

Mr. DEGEORGE. I think that there would be legal ramifications.

Mr. DICKS. It does not sound like treading water to me. If you are treading water you go back and take care of the people that you funded. If you have partially funded a project it seems you have to complete those.

Mr. PYATT. I don't believe so. If you cut the money, you throw the whole thing up in the air and require it all be done over again.

Mr. DICKS. Since you talked about a legal opinion, why don't you give us a legal opinion on that as well?

Mr. PYATT. Our counsel will.

Mr. DICKS. We will keep him busy.

Mr. PYATT. Yes.

Mr. DICKS. Don't rescind his money.

[The information follows:]

PROCEDURE TO BE FOLLOWED IF FULL RESCISSION REQUEST FOR COMPETITIVE AWARDS IS NOT GRANTED

There is nothing in the relevant appropriations statutes, solicitation issuance or program regulations which addresses the issue of the correct procedure to be followed by the Department when the amount appropriated for awards is reduced by legislative action, after solicitations requesting proposals seeking award of such appropriated funds has been issued. Nor do the provisions governing feasibility study and cooperative agreement awards and Title II financial incentive awards require the Department to make a certain number of awards or to make awards of a specific monetary amount.

Mr. DICKS. I want to tell you that I believe you are wrong.

Mr. PYATT. I think it is a matter of judgment.

Mr. DICKS. If you funded two of these projects it would seem that you would want to go ahead and complete the funding. Why wouldn't you want to complete those? Would that not be wasting money then? I mean you are just wasting $500,000 which you can get paid back if they go ahead.

Mr. PYATT. If they go ahead.

Mr. DICKS. If the ability to go ahead is really contingent upon getting the rest of the funding for those two projects, then you are telling me that you are undercutting our ability. You made these decisions, not the Congress, and it seems to me that you have a really very strong obligation to try and proceed in a way that will get our money back. If you don't complete funding on those two projects, it seems to me that you make the possibility of us getting paid back less which we are not going to be very happy about.

Mr. PYATT. You also have under the hypothetical situation some partial funding; you have the problem of spreading that among the technologies that you think are going to produce the most overall and that is the reason I say you throw the hope to alcohol or something else. It just depends on judgmental situations.

COOPERATIVE AGREEMENTS

Mr. DICKS. Tell me all that comes under cooperative agreements.

Mr. PYATT. In the list, and I think he has it there, there is coal gasification, high Btu gas, and coal liquefaction. There are some urban waste studies, alcohol studies, shale studies, coal-oil mixtures, and tar sands. I think that is all. It is a wide variety.

Mr. DICKS. Have you been doing any consigning up to this point?

Mr. PYATT. I have been focusing on loan guarantee situations. Another part of the Department is responsible for the overall management of the feasibility study and the cooperative agreements.

Mr. DICKS. What are all the other people doing who are treading water in that swimming pool? Are we getting any work out of them?

Mr. DEGEORGE. I am sure they either have or will be before this committee, Mr. Chairman. We can speak to biomass and to municipal waste. The rest come under the fossil side as you know. I think Mr. LeGassie or someone will be here to testify on that this afternoon.

PERSONNEL SITUATION

Mr. SAN MARTIN. The personnel situation.

Mr. DICKS. Yes.

Mr. SAN MARTIN. The personnel to implement these programs? The process of bringing additional people on board to carry out these programs lags greatly. What occurred throughout the system is that individuals with expertise were borrowed from all other kinds of activities and they were all in the process of carrying them out. We have gone in essence into a deferral situation waiting on the will of Congress. These individuals have gone back to their regular jobs and are carrying those out. I don't want to leave the impression that we have a large group of people who were dedicated to this and to this only and who are now inactive because virtually all of these individuals were involved in other activities within the Department and they are working within those areas right now.

Mr. DEGEORGE. The Department did not reach the point of adding to the total staff that was needed to administer some of these programs. We have put groups of people together to evaluate the programs and those people hopefully, and I think probably, would be able to be reconstituted and put back to complete the evaluation process.

Mr. DICKS. All right.

Well, the committee will stand adjourned until one o'clock.

Mr. DEGEORGE. Thank you.

Mr. DICKS. Thank you.

THURSDAY, APRIL 2, 1981.

FOSSIL ENERGY PROGRAM

WITNESSES

ROGER LeGASSIE, ACTING ASSISTANT SECRETARY, FOSSIL ENERGY
CARL GUIDICE, DEPUTY ASSISTANT SECRETARY FOR MANAGEMENT, FOSSIL ENERGY

Mr. MURTHA. The hearing will come to order.

Mr. LeGassie, welcome. Both of your statements will appear in the record in their entirety as will your biography and the biography of Mr. Carl Guidice.

[The statements and biographies follow:]

Statement of Roger W. A. LeGassie
Acting Assistant Secretary
for Fossil Energy
U.S. Department of Energy
Before the Subcommittee on Interior
and Related Agencies
Committee on Appropriations
U.S. House of Representatives
April 2, 1981

Mr. Chairman and Members of the Committee, I am pleased to appear before you this morning to discuss the Alternative Fuels program under the cognizance of the Department of Energy.

As the Committee is aware, the Alternative Fuels program can basically be divided into three major areas: 1) feasibility studies and cooperative agreements; 2) incentives authorized under the Defense Production Act and the Federal Nonnuclear Research and Development Act; and 3) activities related to alcohol fuels, biomass and urban waste. I will discuss briefly the first two categories, and then turn to Mr. DeGeorge for a similar overview of the third.

With respect to the cooperative agreements and feasibility studies, the Department has been appropriated a total of $500 million under Public Laws 96-126 and 96-304. From the first round of proposals in this area, we are funding 103 feasibility studies and 11 cooperative agreements totaling approximately $200 million of Federal funds. These efforts are underway, and we are not recommending any changes in these activities.

Members of the Committee might also be interested in a description of resource and technology areas encompassed by the first round awards. Biomass projects accounted for 27 percent of the feasibility study funding and almost 38 percent of the cooperative agreements. Coal liquefaction projects made up 22 percent of the feasibility study funds and slightly more than 25 percent of the cooperative agreements. Coal-derived synthetic gas projects, both high, medium and low-Btu, totaled 23 percent of the feasibility study funding and 14 percent of the cooperative agreements. The remainder of the projects involved oil shale, tar sands, solid waste, unconventional gas, peat, and upgrading technologies.

Regarding the second round of similar activities, the Administration is seeking a rescission of the $300 million of appropriated funds. In December, 53 candidates were selected for further negotiations for feasibility studies and 26 for cooperative agreements. In addition, a solicitation involving innovative combustion technologies has been issued. The Administration's position is that these planning and study activities should more properly compete for financing in the private market along with other energy projects. We do not believe this action will in any way affect the quality of synthetic fuel projects which will ultimately receive financial assistance under our interim alternative fuels program or the Synthetic Fuels Corporation.

We are proposing no changes in the second category -- loan guarantees, price supports and purchase agreements authorized under the Defense Production Act and the Federal Nonnuclear Research and Development Act.

With respect to the Defense Production Act (DPA), 10 proposals for the production of fuels meeting defense needs were submitted in response to a solicitation issued in October 1980. The previous Administration announced in January that three of these were selected for negotiations which could lead to the issuance of conditional commitments. Two proposers -- Union Oil of California and TOSCO -- are planning commercial oil shale projects, both with prospective sites in Garfield County, Colorado. The third proposer -- Tennessee Synfuels Associates -- is a 3-member group made up of the Koppers Co., Cities Service Co., and The Continental Group. They propose a commercial coal-to-gasoline facility to be located near Oak Ridge, Tennessee.

The Acting Under Secretary recently established a centralized DPA negotiation team, and this group is holding discussions with the three proposers. I cannot give you a precise date by which conditional commitments will be reached, since this is solely a function of the negotiating process. We have involved Synthetic Fuels Corporation officials in these talks to ensure that our negotiating posture is consistent with the requirements of the Corporation. This is particularly important since these projects could ultimately transfer to the Corporation. The cooperation of the Department of Defense has likewise been excellent and most beneficial in these negotiations.

With respect to the Nonnuclear Act, 10 proposals have emerged from an initial qualification screening and are currently being evaluated.

This process should be complete by about the end of March. These proposals represent the production of alternative fuels from oil shale, tar sands, peat, coal-oil mixtures, high Btu gas from coal, and hydrogen production by electrolysis.

In addition, we are expecting a proposal to revise the existing conditional loan guarantee commitment under the authority of the Nonnuclear Act with the Great Plains Gasification Associates. As the Committee is aware, this group of companies, headed by American Natural Resources, proposes to construct a commercial high-Btu gas project in Mercer County, North Dakota. We expect to make a final decision regarding a new conditional commitment for this project within a few weeks of receiving the revised proposal.

I might also mention, Mr. Chairman, that the Secretary has recently restructured the Department to streamline many of the activities. As part of this, several functions of the Office of Resource Applications, including those for the management of the Alternative Fuels program, have been transferred to the Office of Fossil Energy. We are currently

preparing a revised Fossil Energy organization which would incorporate these functions, and I will be pleased to provide a description of the new organization to the Committee as soon as it is available. Regarding the Department's funding request for these activities in FY 1982, because the Synthetic Fuels Corporation will assume the primary Federal role in providing the financial stimulus for construction of synthetic fuel projects, no funds are being requested to continue these activities.

Before turning our formal presentation over to Mr. DeGeorge, I would like to reiterate the Administration's commitment to the establishment of a viable synthetic fuels industry in this country that is both efficient and economically competitive. This committee has been instrumental in the timely evolution of this new venture, and we are appreciative of your efforts. I look forward to working closely with you in the discussion of this important topic today and in the months ahead.

Thank you.

Statement Submitted by
Roger W.A. LeGassie
Assistant Secretary (Acting) for Fossil Energy
U.S. Department of Energy
to the
Subcommittee on Interior & Related Agencies
Committee on Appropriations
U.S. House of Representatives
April 2, 1981

Mr. Chairman and Members of the Committee:

We are appearing before you this afternoon to discuss the impacts of the Administration's FY 1982 DOE Fossil Energy budget request on the current 1981 budget, specifically with respect to proposed rescissions.

As the Committee is aware, the Administration has placed its highest priority on regaining control of the Federal budget as a necessary step in the President's Economic Recovery Plan. A key part of this plan is a fundamental refocusing of Federal energy technology activities to the high-risk, long-term, potentially high-payoff technologies as well as generic and basic research which industry has generally been less willing to undertake.

Within this context, the private sector is being called on to resume its traditional role as the deployer of new technologies into the marketplace as well as the primary supporter of near term R&D. We believe the Administration's energy decontrol and tax and regulatory reform policies will enable private industry to move more efficiently and effectively in this area than would occur with the continuation of direct Federal expenditures.

Based on the Administration's economic goals and the concomitant redirection of Federal energy priorities, the Department of Energy is proposing $435 million in budget authority for the Fossil Energy programs in FY 1982. This budget proposal will have an impact on the conduct of our program through the remainder of the current fiscal year. Therefore, concurrently with the submission of the FY 1982 budget, we are proposing rescissions of $320 million in unspent funds from the Fossil Energy budget. These rescissions can be categorized as follows:

(dollars in millions)

Coal Technology	Petroleum Technology	Gas Technology	Domestic Energy Supply	Federal Leasing
-$308.2	-$ 1.7	-$ 3.0	-$ 7.1	-$ 0.4

We also anticipate forwarding to the Congress an amended deferral of FY1981 construction funds for the Solvent-Refined-Coal II coal liquefaction demonstration plant.

In addition, the Department is proposing to rescind the $300 million appropriated in FY 1980 for a second round of feasibility studies and cooperative agreements under the Department's interim Alternative Fuels program.

With the Committee's permission, I would like to describe briefly the rescissions proposed in each of the major program areas within these general categories.

COAL TECHNOLOGY

Mining Research and Development:

(BA in millions)

	FY 1980	FY81 Approp.	Revised FY81 Approp.	Proposed Rescission	FY82 Request
Underground...	$ 35.7	$ 31.0	$ 28.0	- $ 3.0	$ 15.0
Surface.....	12.5	8.0	5.0	- 3.0	...
Prep & Anal...	10.9	9.0	7.0	- 2.0	6.0

In keeping with the Administration's policy of refocusing R&D support, Federal funding for company-specific hardware demonstration activities and near term technology development will be terminated and an orderly phase out of cost-shared field testing and demonstration will begin. The new program will be committed to developing a technology base that encompasses longer-range, high risk projects which offer the potential for significantly improving mining technology and productivity.

Specifically in FY 1981, reductions would begin for hardware-related work for high-speed in-mine development, such as entry driving and tunneling; for follow-up work on roof-bolters and support work for miner-bolters; and for longwall mining studies. Near-term projects in surface mining would begin phasing out in 1981 in conjunction with the Department's request for no funding for this activity in 1982. Coal preparation activities will continue to focus on high gradient magnetic separation, oil agglomeration, and chemical techniques with a reduction of efforts to improve current flotation equipment and advanced dewatering techniques. Less preparation plant instrumentation would be done, and a general shift to more in-house research would be made.

The revised FY 1981 mining R&D budget would total $41.5 million. In underground mining, funding would be sufficient for activities such as the completion of mine trials of a miner bolter, the completion of an assessment of the initial trial of the DOE/Robbin shaft borer machine, and the initiation of trials of advancing longwall techniques. In surface mining, a mountaintop removal technique will be demonstrated. Coal preparation activities would complete the demonstration of a process to pelletize thermally-dried South Dakota lignite, initiate a test of comparative performances of alternative chemical coal cleaning processes, and begin the phase down of the fused alkali salt chemical cleaning process.

Coal Liquefaction:

(BA in millions)	FY 1980	FY81 Approp.	Revised FY81 Approp.	Proposed Rescission	FY82 Request
Indirect Liq.....	...	$ 18.0	$ 12.0	-$ 6.0	$ 14.0
Support Studies/ Eng. Eval.....	13.8	12.0	9.0	- 3.0	10.6
Demo. Plants/ SRC-I Const.....	40.0	157.5	...	- 157.5	...
SRC pilot plants.....	15.0	47.0	46.0	- 1.0	12.3

In the indirect liquefaction program, the level of effort will be reduced for slurry phase process development and in-house support at the Pittsburgh Energy Technology Center. In addition, the Federal participation in the design activity conducted by W.R. Grace for a commercial size coal-to-gasoline facility proposed for Baskett, Kentucky will be reduced in light of the similar design activities being undertaken by other companies without Federal subsidies. A rescission of $3 million leaves $3 million in FY 1981 to continue conceptual design activities. Support for continuation of this commercial project must come from private sources or from the Synthetic Fuels Corporation where it would compete with proposals for similar projects. The 1981 funding will still be sufficient to permit us to meet our commitments to the international project underway to construct a 100 bbl/day M-Gasoline pilot plant and to prepare a 35 bbl/day liquid phase synthesis gas conversion plant for operation.

In Support Studies and Engineering Evaluations, funding for health effect studies on coal liquids and gasification tests of liquefaction residual materials and the scope of engineering evaluations will be slightly reduced.

The rescission of 1981 funds for the Solvent Refined Coal I demonstration plant, proposed for Newman, KY, is not expected to impact significantly the preparation of a proposal to the Synthetic Fuels Corporation (SFC) by the industrial sponsors. Process design will continue until Congress acts on the rescission request. Also, the final Environmental Impact Statement should be completed in May. Unobligated prior year funding should be sufficient to complete these actions and provide for an orderly DOE withdrawal on or before the end of FY 1981.

Regarding the SRC-II project, proposed for Morgantown, W.V., the Department intends to continue design efforts and complete the Environmental Impact Statement procedure in FY1981, during which time consultations will be conducted with our international and domestic partners. We envision that this will permit adequate opportunity for the project sponsors to prepare proposals to and receive consideration from the

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Synthetic Fuels Corporation. Not all previously appropriated funds are required to continue this FY 1981 activity; therefore, the Department will be proposing an amended deferral of that portion of the FY 1981 construction funds not required.

The SRC pilot plant program will terminate DOE activities at the Wilsonville facility in FY 1981. Demonstration and commercialization of the SRC-I technology will be the responsibility of private industry with the potential assistance of the Synthetic Fuels Corporation. A total of $1 million is proposed for rescission for the SRC pilot plant operations.

Surface Gasification:

(BA in millions)

	FY 1980	FY81 Approp.	Revised FY8 Approp.	Proposed Rescission	FY82 Request
Peat Gasif.....	$ 3.0	$ 13.0	$ 8.0	- $ 5.0	...
Demo. Plants					
High Btu Gas					
-Oper Exp.....	24.0	6.0	1.0	- 5.0	...
-Const.....	27.0	44.0	...	- 44.0	...
Low/Med Btu Gas					
-Const.....	...	45.4	...	- 45.4	...

Modification to the HYGAS pilot plant, near Chicago, was planned in FY 1981 to prepare it for operation with peat feedstock. The technical feasibility of peat gasification, however, has been demonstrated at the benchscale and process development unit scales with peats which realistically bracket the types found throughout the U.S. The information produced by these efforts has established a broad technology base for private firms wishing to pursue peat gasification, therefore $5 million is proposed for rescission related to the HYGAS modifications. We will continue several peat-related efforts including harvesting and dewatering studies, environmental assessments, and combustion tests with new technologies such as atmospheric fluidized bed.

In addition, $5 million in operating expense funds within the High-Btu Gasification Demonstration Plant Program is being proposed for rescission. These funds were to finance an unsolicited proposal submitted by the Texas Gas Transmission Corp. and the Commonwealth of Kentucky for a preliminary design study of a demonstration plant based on the HYGAS technology. The rescission proposal is consistent with the Administration's policy to focus Federal support for all large-scale synthetic fuel construction projects in the Synthetic Fuels Corporation.

Also within the context of this policy, the Department is proposing to closeout the High-Btu Gasification Demonstration Plant program, in which two firms -- CONOCO Coal Development Company and the Illinois Coal Gasification Group -- are currently involved. Prior year funds will be sufficient to complete the designs of these plants and other Phase I activities by August 1981, and this data could form the basis for the industrial sponsors to propose continuation of the projects to the SFC. Therefore a rescission of $44 million appropriated by the Congress in 1981 is proposed since the Administration does not support the continuation of the project within DOE at the completion of the designs.

Prior year funds will also permit the City of Memphis Light, Gas and Water Division to continue design of its proposed medium-Btu industrial fuel gasification demonstration plant through the end of this fiscal year, including completion of the final Environmental Impact Statement by April 1981. Therefore, the FY 1981 appropriation is no longer required. The project sponsors may propose continuing the project under the incentives provided by the Synthetic Fuels Corporation.

Advanced Environmental Control Technology:

(BA in millions)	FY 1980	FY81 Approp	Revised FY81 Approp	Proposed Rescission	FY82 Request
Adv. Flue Gas Desulfurization	$ 8.3	$ 9.0	$ 6.0	- $ 3.0	...

This rescission is focused on efforts underway to develop second generation flue gas desulfurization technologies that avoid the problem of wet sludge disposal. Industry continues to make progress in the development of scrubbers which produce a dry, disposable waste product; therefore the large Federal role is no longer justified. This is consistent with the Administration's policy of leaving demonstrations, particularly those employing "off-the-shelf" type hardware, to the private sector.

In moving away from flue gas desulfurization, DOE's flue gas cleanup efforts will instead be refocused on advanced concepts that combine NOx, SOx and particulate removal. In FY 1981, $6 million is allocated for this task, with $6.5 million requested for FY 1982.

Combustion Systems:

(BA in millions)	FY 1980	FY81 Approp.	Revised FY81 Approp.	Proposed Rescission	FY 82 Request
AFB 30 MW Boiler...	$ 7.0	$ 3.1	$ 0.10	-$ 3.00	...
Coal-Oil Mixtures..	2.5	22.0	4.55	- 17.45	...

Funds for the 30-megawatt atmospheric fluidized bed boiler at Rivesville, WV, were originally intended to finance its continued operations. The Department believes, however, that the experimental boiler has served its purpose in demonstrating fluidized bed technology. No further data is needed from the unit because its design has been superseded by more advanced designs such as that employed in the Georgetown University (Washington, D.C.) project.

The Department proposes to rescind funding for additional coal-oil mixture demonstrations. This technology has been successfully demonstration in past DOE projects, and several industrial suppliers and utilities have already moved to apply the technology commercially. Future proposals for Government support, if needed, could be submitted under the authority of the Synthetic Fuels Corporation.

Efforts in the FY 1981 and 1982 combustion program will center on continuation of current atmospheric fluidized bed industrial applications, a significant effort in pressurized fludizied bed combustion, and a new focus on alternate coal-based mixtures such as coal-water, peat-coal-oil, methanol-coal and ethanol-coal.

Heat Engines & Heat Recovery:

(BA in millions)	FY 1980	FY81 Approp	Revised FY81 Approp	Proposed Rescission	FY82 Request
Directly-fired heat cycles.....	$ 9.2	$ 5.6	$ 2.6	-$ 3.0	$ 6.5
Low grade heat recovery.....	8.5	4.3	2.3	- 2.0	...

The directly-fired heat cycles activity was originally initiated to address technical problems anticipated in the use of coal-derived liquid fuels in stationary diesels and gas turbines. The major turbine research and development efforts have focused on the development of low NOx combustors and advanced coatings to protect key components

from corrosion. Rescission of $3.0 million is proposed consistent with the change in schedule for Phase II implementation of the low NOx combustor and material efforts. The combustor program is primarily in support of the High Temperature Turbine Technology effort and the schedule strech-out is consistent with the pace of this program in the FY 1982 budget proposal.

The low-grade heat recovery project is intended to demonstrate the use of waste heat at temperatures under 200 degrees F with particular emphasis on applying energy recovery techniques to process cooling water at various DOE facilities. The FY 1982 budget proposes to eliminate this activity from the Fossil Energy budget, and the proposed rescission is consistent with this action. The technology for waste heat recovery is available, and the Administration's energy pricing policies will act as a much stronger incentive for waste heat recovery than additional Government-funded demonstrations. Sufficient funds are available to complete initial feasibility studies of the use of waste heat at DOE's uranium enrichment and nuclear weapons plants.

Magnetohydrodynamics:

(BA in millions)

	FY1980	FY81 Approp	Revised FY81 Approp	Proposed Rescission	FY82 Request
Engineering Dev...	$ 29.9	$ 31.8	$ 27.8	- $ 4.0	...
Supporting Res....	13.6	11.4	9.4	- 2.0	...

No funds have been requested in the FY 1982 proposed budget for the Magnetohydrodynamics (MHD) program. MHD is a long-range technology whose potential payoffs do not justify the substantial development costs, particularly in the context of a constrained fiscal climate. With the proposed redirection in FY 1981 to closeout facilities and bring other ongoing efforts to an orderly conclusion, a rescission of unnecessary FY 1981 funds is proposed. Specifically, certain efforts in engineering development including combustor development and the Advanced Power Train program, will no longer be necessary and can be phased out. In addition, supporting research diagnostic efforts can be terminated and operations at the Component Development and Integration Facility, near Butte, Montana, and the Coal-Fired Flow Facility, at Tullahoma, Tennessee, would be phased-down in an orderly manner.

PETROLEUM TECHNOLOGY

Enhanced Oil Recovery

(BA in millions)

	FY 1980	FY81 Approp	Revised FY81 Approp	Proposed Rescission	FY82 Request
Heavy Oil.....	$ 7.25	$ 7.3	$ 6.3	- $ 1.0	$ 7.1
Tar Sands.....	$ 4.80	5.5	4.5	- 1.0	5.0

The rescission of $2 million from FY 1981 appropriations would place funding for enhanced oil recovery to a level consistent with the FY 1982 refocused program supporting critical in-house, long-range research activities.

The proposed rescission will apply to DOE supported engineering and site preparation for field tests of thermal methods for the in situ recovery of bitumen from tar sand and will reduce DOE tests on steam drive with additives for heavy oil recovery. The recently concluded EOR "front-end" incentive program has demonstrated the effectiveness of using price incentives to encourage application of new technologies in this area. We expect that the Administration's leasing, tax, regulatory and decontrol policies will accelerate additional industrial involvement in developing these technologies.

GAS TECHNOLOGY

Enhanced Gas Recovery

(BA in millions)

	FY 1980	FY81 Approp	Revised FY81 Approp	Proposed Rescission	FY82 Request
Eastern Shales..	$ 10.3	$ 12.4	$ 11.4	- $ 1.0	$ 2.6
Western Sands...	10.5	12.4	11.4	- 1.0	6.0
Coalbed Methane.	5.0	5.0	4.0	- 1.0	1.0

With the completion of resource estimation and characterization for eastern gas shales in the Applachian Basin in FY 1981 and a refocusing of the enhanced gas recovery program in light of the trend toward deregulation of natural gas, a rescission of $3 million is proposed for this program. Recent industry activity in gas exploration and development suggests that price and regulatory reforms will be more effective at encouraging development of unconventional gas deposits than Federal R&D subsidies. The oil and gas industry has a strong financial and technical base and is better able to develop and apply new technologies than is the Federal Government. Specific areas for

the proposed rescission include research relating to resource characterization, directional drilling, stress tool fabrication, diagnostic instrumentation on the planned multi-well tight sands test and a Request-for-Proposals for an integrating contractor to support the methane from coalbeds activity.

DOMESTIC ENERGY SUPPLY

On February 25, 1981, the Secretary announced a realignment of the Department to improve management and to reflect a decreased emphasis on regulation and commercialization activities. As part of this restructuring, several functions previously conducted by the Office of Resource Applications, specifically those involving coal, oil, natural gas, oil shale, leasing policy, and the interim Alternative Fuels program, were transferred to the Office of Fossil Energy. No funding is being requested in the FY 1982 budget for these activities, and the following is a description of the proposed FY 1981 rescissions which are intended to begin an orderly phase-out of the near term functions of these activities:

Domestic Energy Supply

(BA in millions)

	FY 1980	FY81 Available	Revised FY81 Approp	Proposed Rescission	FY82 Request
Coal Res. Mgmt....	$ 2.25	$ 0.5	...	- $ 0.5	...
Loan Guarantee...	...	6.0*	...	- 6.0	...
Oil and Gas.....	4.0	5.1	$ 4.2	- 0.9	...

* Appropriated in 1978

The proposed reduction of $ 500,000 in the FY 1981 budget for the Coal Resource Management eiminates funding for coal-related studies and assessments conducted in support of private sector commercial initiatives. This is consistent with the Administration's refocusing of Federal funding away from commercialization and toward longer range research. Decontrolling energy prices, providing regulatory certainty and tax programs which encourage investments will do more to encourage adoption of new technologies than Government-funded studies and assessments.

The coal loan guarantee program, authorized in 1975 to provide financial incentives to small and medium-size coal producers for low-sulfur underground mines, received $6 million in appropriations for a loan default fund in 1978. The Administration is proposing to rescind the appropriated funds since we see no evidence that existing private sector institutions are inadequate to finance new mine capacity.

Reduction of $0.9 million in the Oil and Gas Resources program will apply to municipal grants for demonstrations of the recovery and use of unconventional gas resources.

FEDERAL LEASING

Federal Leasing

(BA in millions)

FY 1980	FY81 Approp	Revised FY81 Approp	Proposed Rescission	FY82 Request
$ 2.15	$ 2.78	$ 2.38	- $ 0.4	...

During FY 1981, the DOE Federal leasing program will be phased out with a wrap-up of all ongoing activities during FY 1982. The DOE Leasing program responsibilities are expected to be transferred to the Department of Interior in FY 1982; therefore, a rescission of $400,000 is proposed in FY 1981 as part of the phase-out of this program within the Department of Energy.

INTERIM ALTERNATIVE FUELS PROGRAM

As the Committee is aware, Congress in 1980 appropriated an additional $300 million to the Department to conduct feasibility studies and cooperative agreements as part of the Interim Alternative Fuels program. This activity followed an earlier $200 million appropriation for feasibility studies and cooperative agreements which DOE has previously allocated.

The Administration is requesting a rescission of the $300 million. The Department announced selection of 79 proposals last December and is currently involved in negotiations with the proposers. Funds for this program were not requested by the previous Administration but were added by the Congress on the belief that these subsidies would accelerate the introduction of new alternative fuel technologies. The Administration believes that improving the market environment for new technologies will be a more effective and less costly way to accomplish this objective. If a firm is unwilling or unable to expend the relatively modest sums necessary to do these preliminary activities, many of which could qualify it for Federal subsidies from the Synthetic Fuels Corporation, we question whether the firm has the financial and technical ability and is willing to assume sufficient levels of risks for successful project implementation.

The Administration's position is that these planning and study efforts should more properly compete for financing in the private market along with other energy projects.

This concludes my formal presentation, Mr. Chairman.

U.S. Department of Energy
Speakers Bureau
Office of Public Affairs
Washington, D.C. 20585
202/252-5644

BIOGRAPHY

ROGER W. A. LEGASSIE

Roger W. A. LeGassie is currently the Department of Energy's (DOE) Acting Assistant Secretary for Fossil Energy, a position he assumed on January 21, 1981. On February 19, 1981, he was also named Director of the DOE Office of Policy, Planning and Analysis. Previously, Mr. LeGassie had served as Principal Deputy Assistant Secretary for Fossil Energy since October 1979. Prior to his Fossil Energy appointment, Mr. LeGassie was Acting Deputy Assistant Secretary of Energy Technology for Planning and Analysis.

Mr. LeGassie began his Federal service in 1952 at the New Brunswick, New Jersey Research Laboratory. In 1955 he moved to the Oak Ridge Operations Office and to the Washington Headquarters of the Atomic Energy Commission in 1962. He played an important role in the development and commercialization of new energy technologies and, in later years, the analysis and evaluation of the U.S. and world energy situation. From 1976 through 1978, he chaired the working group on research and development strategy for the International Energy Agency.

Throughout his Government career, Mr. LeGassie has received numerous special achievements awards. In 1973, he was a recipient of the AEC's Distinguished Service Award -- the highest honorary award given to an employee by the Federal Government for distinguished contributions and achievements.

Mr. LeGassie began his professional career in 1948 as a Research and Development Engineer with the Harshaw Chemical Company, working on the design and operation of chemical pilot plants and production installations based on new technology.

He received his B.S. degree in Chemical Engineering in 1947 and his B.A. degree in Mathematics and Chemistry in 1948 from Columbia University.

March 1981

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BIOGRAPHY

CARL W. GUIDICE

Carl W. Guidice is the Deputy Assistant Secretary for Management in the Office of Fossil Energy, U.S. Department of Energy (DOE). In this position he is responsible for budgetary and administrative functions including long-range financial planning; budget formulation, presentation, and execution; procurement planning and systems development for both headquarters and the energy technology centers. He was named to this post in 1979 when the Office of Fossil Energy was elevated to an Assistant Secretary level within DOE.

On the formation of the Department in 1977, Mr. Guidice became Director of Program Control and Support, Office of Fossil Energy. Previously, he had held the title of Assistant Director of Planning and Budget under DOE's predecessor agency, the Energy Research and Development Administration (ERDA). He came to ERDA in 1974 as Chief of Resources Management in the Office of Fossil Energy when a portion of the Department of Interior was incorporated in ERDA.

Mr. Guidice joined the Federal Government in 1966 as a budget and management officer in the Bureau of the Budget (now the Office of Management and Budget). Two years later he became Chief of the Division of Fiscal Service, Department of the Interior, a position he held until 1972 when he was named Chief of the Interior Department's Budget Division.

From 1963 to 1966, Mr. Guidice was a district office supervisor for the American Telephone and Telegraph company. He had served as an administrative officer for the Social Security Administration from 1960 to 1963.

Mr. Guidice is a graduate of St. Vincent College in Latrobe, Pennsylvania, his hometown. In addition to a B.S. degree in business administration he has also done graduate work in financial management at American University in Washington, D.C. In 1973, he was awarded a Princeton Fellowship in Public Affairs from Princeton University.

November 1980

Mr. MURTHA. Without objection, the two separate justifications for rescissions will appear in the record at this point.

[The information follows:]

Department of Energy
FY 1981 Request for Rescission
Fossil Energy Research and Development
(Dollars in Thousands)

	Presently Available B/A	Revised Estimate B/A	Proposed Rescission B/A
Coal			
Advanced Environmental Control Technology	37,500	34,587	- 2,913
Coal Liquefaction	193,900	184,197	- 9,703
Combustion Systems	56,500	36,168	-20,332
Heat Engines & Heat Recovery	36,400	31,468	- 4,932
Magnetohydrodynamics	67,000	61,033	- 5,967
Mining R&D	49,500	41,669	- 7,831
Surface Coal Gasification	75,500	65,704	- 9,796
Other Coal	104,679	104,873	+ 194
Subtotal Coal	620,979	559,699	-61,280
Petroleum			
Enhanced Oil Recovery	18,600	16,758	- 1,842
Other Petroleum	40,893	41,033	+ 140
Subtotal Petroleum	59,493	57,791	- 1,702
Gas			
Enhanced Gas Recovery	30,963	28,013	- 2,950
Total Fossil Energy	711,435	645,503	-65,932

Justification

The Fossil Energy research and development program has been re-evaluated and the focus narrowed in order to establish the role of the private sector as the primary supporter of near term R&D and to focus Federal activities on those generic and basic R&D activities which do not benefit individual firms. In addition, the private sector will be better able to undertake near term R&D because of the Administration's energy decontrol and tax and regulatory reform policies. The program focus for FY 1982 and the proposed rescissions in the FY 1981 appropriations are based on the following criteria:

- The primary Fossil Energy mission is to support longer-term, high-risk R&D with high potential payoff.
- Near term technical support for processes or demonstrations are limited to cases where the government has a unique resource or facility.
- Demonstration and commercialization of technology will be the responsibility of private industry.
- Ongoing projects which could be supported by the SPC are recommended for SFC funding rather than continued DOE support.
- Longer-range R&D activities will focus on acquiring the technology base necessary for industry to develop and demonstrate hardware with minimal government involvement rather than committing or preparing for a particular demonstration activity.
- Limit R&D activities in those cases where the Federal support primarily benefits individual firms.
- Support for unconventional oil and gas R&D limited to longer-term, high-risk activities.

The FY 1982 thrust based on the above stated criteria impacts in the manner listed below:

- Maintains focused activities that are longer range, higher risk for mining, fuel cells, heat engines and heat recovery, and petroleum, gas and oil shale programs.
- Redirects combustion and advanced cleanup programs to longer range, higher risk, with industry to be responsible for developing and demonstrating near-term technology for direct coal use.
- Surface coal gasification and liquefaction activities are refocused to emphasize longer term, higher risk, and limits support for large scale systems integrated operations.
- Continued responsibility for development and demonstration of MHD will become the responsibility of industry.

In conformance with the guidelines stated above, and consistent with the Administration's economic goals, the following items have been identified for rescission based on programmatic redirections initiated in FY 1981.

Advanced Environmental Control Technology

In FY 1981, the Administration is proposing a rescission to the advanced flue gas desulfurization (FGD) project totaling $3,000,000. This project is focused upon developing second generation flue gas desulfurization technologies that avoid wet sludge disposal.

Based on the Administration's policy of redirecting Fossil Energy programs to concentrate on longer range, high risk technology development, and to leave demonstrations (especially with "off the shelf" type equipment) to industry, the FGD project was redirected to eliminate such demonstrations. The justification for rescission is that the industry continues to make remarkable progress in the development of scrubbers which produce a dry, disposable waste product; therefore, the large federal role is no longer justified.

Coal Liquefaction

Three areas within this activity have been identified for realignment. Specifically:

- In the Indirect Liquefaction program the level of effort will be reduced for slurry phase process development and in-house support at PETC. In addition, the design activity conducted by W. R. Grace for a commercial size coal to gasoline facility will be discontinued in FY 1981 in light of the similar design activities being undertaken by other companies without Federal subsidies.

- In support studies and engineering evaluations, funding for health effect studies on coal liquids and gasification tests of liquefaction residual materials will be reduced, and the scope of engineering evaluations will be reduced.

- The SRC pilot plant program will terminate activities at the Wilsonville, Alabama facility because of the proposed transfer of responsibility of demonstrating the SRC-I process from DOE to industry and the SFC. This $1,000,000 reduction will still leave $46,000,000 in the SRC pilot plant progam, however.

These terminations are consistent with the Administration's position that industry should be responsible for conducting the related process support for commercializing liquefaction processes. Therefore, FY 1981 funds in the amount of $10,000,000 are proposed for rescission.

Combustion Systems

Funds in the amount of $3,000,000 for the Rivesville 30 MW AFB boiler and $17,450,000 for coal-oil mixtures are proposed for rescission. Funds for the Rivesville boiler were originally intended to finance its operation. However, it is felt that the Rivesville

boiler has served its purpose in identifying problem areas in fluidized bed technology. Based on the successful performance of this first 30 MW unit and subsequent demonstration plant, it is expected that several utilities will be ready to commit to installation of AFB boilers. TVA efforts reflect more modern designs and thus obviate the need for further data from the Rivesville facility.

Coal-oil mixtures (COM) combustion substitutes coal for a portion of the oil used in utility and industrial boilers. It is primarily a retrofit technology potentially suitable for replacing significant quantities of oil in utility and industrial boilers. The program objective of the COM is to demonstrate technical, economic and environmental feasibility to the private sector and to enforce provisions of the Fuel Use Act with respect to conversion of oil burning facilities to alternate fuels. Funds are proposed for rescission because successful application of COM technology has already been demonstrated in past and current DOE and industry projects. Applications for additional demonstrations should be made under the alternate fuels programs and the Synthetic Fuels Corporation.

Heat Engines and Heat Recovery

In FY 1981, the Administration is proposing a rescission of $3,000,000 in the directly fired project and $2,000,000 in the low grade heat recovery project, totalling $5,000,000 scheduled to be reduced from the Heat Engines and Heat Recovery program. The directly fired heat cycles activity was originally initiated to address technical problems anticipated in the use of coal derived liquid fuels in stationary diesels and gas turbines. The major turbine research and development efforts focus on the development of low NO_x combustors and advanced protection coatings for hot corrosion protection. The low grade heat recovery project will develop technology to utilize waste heat at temperatures under 200°F with particular emphasis on application to energy recovery from process cooling water at federal facilities. In keeping with the new Administration's policy of concentrating upon longer term, high risk technology development and leaving to industry to conduct demonstrations, and, in keeping with FY 1982 budgetary decisions to focus primarily upon the High Temperature Turbine Technology (HTTT) project, and to eliminate the low grade heat recovery project, the rescissions proposed impact minimally upon ongoing programs while giving maximum cost savings for FY 1981. Specifically, the reduction in directly fired heat cycles will delay Phase II implementation of the low NO_x combustor and material efforts; however, because this combustor program is primarily in support of the HTTT effort, the delay is consistent with the pace of the HTTT program allowed for in the FY 1982 revised budget. Reduction in low grade heat recovery will cancel design projects at Paducah and Portsmouth for waste heat recovery and delay the issuance of a Program Opportunity Notice (PON) for the Oak Ridge design.

MHD

In conjunction with the refocusing of the Coal R&D program, no funds have been requested in FY 1982 for continuing the development and demonstration of MHD. In order to facilitate the phase out of DOE efforts, the MHD program will be redirected in FY 1981 to closeout facilities and bring other ongoing efforts to an orderly conclusion. This program redirection will yield a savings of $6,000,000 in appropriated funds related to efforts which will not be conducted during FY 1981. A rescission is therefore requested for these funds. These efforts include engineering development and supporting research activities. Current efforts in engineering development include the Coal Fired Flow Facility (CFFF) activation and testing; continuation of testing at the High Performance Demonstration Experiment (HPDE) in Tennessee; subscale development in the generator, magnet, combustor, and downstream components necessary to fully define component design concepts; competitive selection of preferred 20 MW$_t$ combustor design; continuation of the Advanced Power Train program; and limited support for the CFFF superconducting magnet and Heat Recovery and Seed Recovery (HRSR) system projects. Supporting research funds provide for a cross spectrum of MHD research support activities including work on generators and electrodes; design and engineering tests of radiant boilers and seed-slag

properties; development of special MHD diagnostic techniques; and materials development and analysis.

Consistent with the Administration's policy, continued responsibility for development and demonstration of MHD will become the responsibility of industry, with support from the SFC as necessary. As a result of the FY 1981 program redirection, certain efforts will not be conducted in engineering development including combustor development and the Advanced Power Train program. In addition, supporting research diagnostic efforts will not be conducted and reductions made in CDIF and CFFF operations.

Mining R&D

In FY 1981, the Administration is proposing rescissions in coal preparation and analysis project ($-2M), underground coal mining project ($-3M), and the surface coal mining project ($-3M) totaling $8,000,000 in the Mining R&D program.

Coal preparation and analysis work will develop the processes needed so that raw coal, which contains impurities such as sulfur, ash, and trace elements, is cleaned into a salable product, thereby increasing the amount of coal available for direct use. The objective of both the underground and surface mining projects is to increase the direct use of coal by developing mining techniques and systems that will mine coal more cost effectively while keeping within existing environmental, health and safety standards.

In keeping with the new Administration's policy of focusing Federal R&D support on longer range, high risk technologies leaving industry to demonstrate the feasibility of near term technologies, the Mining R&D program has been refocused. Hardware demonstration activities and near term technology development will be terminated and an orderly phase out of cost-shared field testing and demonstration will begin. The new program will be committed to developing a technology base that encompasses longer range, high risk projects which offer the potential for significantly improving mining technology and productivity.

Surface Coal Gasification

One of the objectives of this program is to develop technology for converting peat to pipeline quality gas in an economic and environmentally acceptable manner. Modification to the HYGAS pilot plant to prepare it for operation with peat feedstock was planned for FY 1981. However, proceeding with these modifications and operational test program in FY 1981 would not be meaningful given the Administration's position to cease efforts in support of the peat program in FY 1982. Therefore, FY 1981 funds in the amount of $5,000,000 are proposed for rescission related to the Hygas and other peat activities.

In addition, funds are proposed for rescission in the amount of $5,000,000 for a HYGAS conceptual design. These funds were to finance an unsolicited proposed submitted by the Texas Gas Transmission Corporation and the Commonwealth of Kentucky for a phase zero design study relative to the HYGAS demonstration project. This rescission proposal is consistent with the Administration's policy to focus all commercialization support and demonstration activities for coal conversion technologies in the Synthetic Fuels Corporation.

Enhanced Oil Recovery

The Enhanced Oil Recovery (EOR) program is designed to assist development of technology to recover oil through new or improved methods. The current program involves assessing the potential for recovery from heavy oil, light oil, and tar sands resources and supporting the development of the advanced technology necessary to make recovery of these resources technically and economically feasible. A rescission of $2,000,000 is proposed in FY 1981 for EOR. The proposed rescission sets the EOR funding to a level consistent with the FY 1982 refocused program supporting critical in-house, long-range research activities.

The proposed rescission will delay DOE supported engineering and site preparation for field tests on thermal methods of recovery from tar sands and reduce DOE tests on steam drive efficiency for heavy oil recovery. Other private sector supported activities are underway or planned in these technology areas. This rescission will not affect the development of EOR technologies since Administration leasing, tax, regulatory and decontrol policies will more effectively accelerate technology in this area.

Enhanced Gas Recovery

Funds are proposed for rescission in the amount of $3,000,000. The Enhanced Gas Recovery program is designed to help develop technology, and maintain a technology base for industry to increase natural gas supplies from unconventional sources at prices commensurate with the prevailing market conditions. The unconventional sources (eastern gas shales, western tight sands, and methane in coalbeds) present technical problems in exploration, stimulation and production. Currently, the major program thrusts include resource assessment, gas reservoir characterization, development of improved production techniques, and testing of gas upgrading methods. The $3,000,000 is proposed for rescission due to the FY 1982 refocusing of the Enhanced Gas Recovery program away from resource assessment and characterization activities and field demonstrations. The redirected program will emphasize high risk, long term research and development aimed at expansion of the existing technology base and will rely on the private sector at the development and production stages. This redirection will have minimal effects on technology development in this area since energy pricing, regulatory, tax and leasing policies will be modified to encourage enhanced gas recovery activities.

Specific areas for the proposed FY 1981 rescission include research relating to resource assessment, directional drilling, stress tool fabrication, diagnostic instrumentation on multi-well test experiments and a Request for Proposal (RFP) for an integrating contractor to support the methane from coalbeds subprogram.

Department of Energy
FY 1981 Request for Rescission
Fossil Energy Construction
(Dollars in Thousands)

	Presently Available B/A	Revised Estimate B/A	Proposed Rescission B/A
Coal			
Coal Liquefaction	327,500	170,000	-157,500
Surface Coal Gasification	89,400	...	-89,400
Other Coal	6,400	6,400	...
Total Fossil Energy	423,300	176,400	-246,900

Justification

The Administration's policy is to focus all commercialization and demonstration activities for synthetic fuels in the SFC. This will assure that the "information" and "deployability" benefits of advanced technology demonstrations will be captured. In addition, the private sector's ability to pursue technology demonstrations will be enhanced by new tax and regulatory reforms proposed by the Administration. As a consequence, the Department is redirecting its R&D thrust to primarily long range and high risk activity with high potential payoff. Near term R&D will continue only where the government has a unique resource or facility which is necessary to the development and commercialization of first-of-a-kind technologies by the private sector. Therefore, the following demonstration plants that could be supported by the Synthetic Fuels Corporation (SFC) will be recommended for rescissions of FY 1981 construction funds and DOE support for these projects in future years will be discontinued.

SRC-I Demonstration Plant (78-2-d)

The SRC-I demonstration plant utilizes a direct liquefaction process to convert a nominal 6,000 tons of high sulfur coal per stream day into a solid fuel or liquid product that can be used directly as fuel oil or further converted to a feedstock that is refineable to transportation fuels, sulfur, ammonia and acid by-products. The plant is designed as the initial module of a multi-module facility that would achieve commercial levels of production.

The SRC-I project was initiated on July 10, 1978, with an award of a multi-phased contract to design, construct, and operate the plant at Newman, Kentucky. The nature of this demonstration and the technical risks are such that it could qualify for support by the SFC.

An orderly closeout of this project is possible by using the design work to date to provide a definitive mechanical configuration and packaging it for record and for use in an application to the SFC. This, in turn, will be the basis for a definitive cost estimate which would be completed by July 1981, in conjunction with finalizing the EIS by April 1981. These materials will be made available to industry if it chooses to pursue this technology to commercialization and will be sufficient to merit consideration for financial assistance by the SFC. Unobligated prior year funding should be ample for the accomplishment of this closeout. Therefore, FY 1981 funds in the amount of $157,500,000 are proposed for rescission.

High-Btu Pipeline Gas Demonstration Plants (76-1-b and 77-1-b)

The high-Btu pipeline gas demonstration program was initiated as a competitive program in October 1975. Of the five proposals received, two were accepted and contracts were awarded in 1977 to the Continental Oil Company and the Illinois Coal Gasification Group to continue the competition into design stages, ultimately for the selection of one process for possible Federal support in the construction phase. An evaluation of both processes as well as proposed business and financial arrangements was scheduled in FY 1981. Consistent with the Administration's policy in the synthetic fuels area and given the nature of these demonstrations both projects could qualify for financial assistance from the provisions of the SFC.

An orderly closeout of the program is possible by completing the design and other activites of Phase I by August 1981 and by completing the EIS's. These data would be made available for future industry use and are sufficient for financial assistance consideration by the SFC should industry decide to pursue these projects to commercialization. The unobligated portion of prior year funding should be sufficient to accomplish this closeout. Therefore, FY 1981 funds in the amount of $2,000,000 for project 76-1-b and $42,000,000 for project 77-1-b are proposed for rescission.

Low/Medium-Btu Demonstration Plant (76-1-c)

The Low/Medium-Btu demonstration plant was initiated in August 1977, as a competitive project with the award of design contracts to the W. R. Grace Company and the Memphis Light, Gas & Water Division. In May 1980, Memphis was selected to proceed to final design, construction and operation. Construction was scheduled to begin in late FY 1981 with site preparation and access road work. The nature of this demonstration and the technical risks are such that this project could also qualify for financial assistance from the SFC.

An orderly closeout of this project is possible by using the design work to date to provide a definitive mechanical configuration and package it for record by late FY 1981 in conjunction with finalizing the EIS by March 1981. These materials would capture the design work to date and permit industry's continuation of the project if it chose to do so and will merit consideration for financial assistance by the SFC. Unobligated prior year funding should be sufficient to accomplish this closeout. Therefore, FY 1981 funds in the amount of $45,400,000 are proposed for rescission.

Department of Energy
FY 1981 Request for Rescission

Energy Production, Demonstration and Distribution
(Dollars in Thousands)

Appropriations under this heading in the Department of Interior and Related Agencies Appropriations Act, 1981 (Public Law 96-514) and the Supplemental Appropriations Act, 1978 (Public Law 95-240) are rescinded in the amounts of $6,649,000 and $6,000,000, respectively.

	Presently Available		Revised Appropriation		Proposed Rescission	
	B/A	B/O	B/A	B/O	BA	BO
Domestic Energy Supply	11,873	11,584	4,797	10,500	-7,076	- 1,084
Naval Petroleum Reserves	197,974	194,106	198,246	191,034	272	- 3,072
Naval Oil Shale Reserves	3,900	3,800	3,900	3,800	-	-
Federal Leasing	2,775	2,699	2,375	2,300	-400	- 399
Solar	8,540	28,240	3,095	26,147	-5,445	- 2,093
Executive Direction	1,000	1,000	1,000	1,000	-	-
Cost/Outlay Adjustment	-	-3,403	-	-3,403	-	-
TOTAL	$226,062	$238,026	$213,413	$231,378	-12,649	- 6,648

The total rescission for the Energy Production, Demonstration and Distribution Appropriation is $12,649,000. This is composed of reduction to Domestic Energy Supply ($7,076,000; including $6,000,000 from the reserve fund of the coal loan guarantee program); Leasing ($400,000); and Solar Marketing Analysis ($5,445,000). These amounts are offset by an increase for FY 1981 pay-cost requirements to the Naval Petroleum Reserves ($272,000).

Justification

Domestic Energy Supply

Coal
Funding for this program was intended to monitor projects funded under the Alternative Fuels Act and gather and disseminate the information to private industry. Funds in the amount of $427,000 are proposed for rescission. It is planned for this activity to transfer to and become the responsibility of the Synthetic Fuels Corporation. Funds in the amount of $6,000,000 are also proposed for rescission from the Coal Loan Guarantee program which was appropriated in a prior fiscal year. To date, no monies have been expended, thus, they are proposed for rescission.

Oil and Gas
Funding is provided in this program for grants to municipalities, community gas utilities and rural cooperatives to demonstrate the economic and technological viability of unconventional gas resources. Funds in the amount of $921,000 are proposed for rescission because the economics and technology of unconventional gas resources has been successfully demonstrated. Further demonstrations, if necessary, can be adequately provided by the private sector.

Program Direction

Partially offsetting the rescissions mentioned above for Coal and Oil & Gas is an increase of $272,000 for program direction. This is the amount which was previously requested for the payraise supplemental. Even though the program direction activities are being cut back commensurate with the program reductions there is still a need for this addition. The total staff years required in FY 1981 will remain approximately the same as originally requested.

Federal Leasing

Funding for this program is provided for leasing policy development activities including production rate, production goals, alternative bidding systems, work commitment leasing systems, and accelerated onshore oil and gas leasing. Funds in the amount of $400,000 are proposed for rescission. This will terminate initiation of oil shale production goals, oil shale and tar sands alternative bidding systems, onshore oil and gas leasing initiatives and initiation of OCS oil and gas extended leasing systems. It is planned for all leasing activities except the establishment of production rates and goals to be transferred to the Department of Interior.

Solar

The proposed rescission in this program is due to the reduction of its market analysis activities ($5,445,000). The Federal role is to support long-term high-risk R&D that have the potential for providing solar energy at competitive prices. Industry is expected to provide the financial resources necessary to produce and market solar systems.

Department of Energy
FY 1981 Request for Rescission
Energy Production, Demonstration and Distribution
Operating Expenses and Plant & Capital Equipment
(Dollars in Thousands)

Solar Subprogram	Presently Available	Revised Request	Proposed Rescission
1. Federal Buildings	$ 1,800	$ 1,800	$ 0
2. Market Analysis	6,000	555	-5,445
3. Program Direction	740	740	0
Total	$ 8,540*	$ 3,095	$-5,445

*All of these funds are operating expenses. No capital equipment funds are provided.

Justification

Market Analysis

The Federal role is to support long-term high risk R&D that has the potential for providing solar energy at competitive prices. Industry is expected to provide the financial resources necessary to produce and market solar systems. Therefore, the following is proposed for rescission:

- Reduction of market analysis activities ($5,445)

Mr. MURTHA. Mr. LeGassie, if you will summarize your statement we then will go to questions.

SUMMARY STATEMENT

Mr. LEGASSIE. Very good, sir. It is good to appear before you. I will try to be responsive to your questions.

As you are aware, there are certain elements of the program which we are addressing within the basic core energy research and development program. There are also rescissions associated with demonstration projects. These account for the bulk of the rescission requests under the general heading of Coal Technology, some $250 million of a total rescission request of 308 million within that area. The remainder comes from the more basic research and development program in coal technology. The rescission in this program is something on the order of 10 percent of the fiscal 1981 request exclusive of the demonstration program; so in dollar volume it is not large although it does represent a contribution to budget reductions which we think are necessary inside the total Federal budget.

We have in general limited those rescissions either to situations in which we see a closeout of activity in Fiscal 1982 and the rescission is the forerunner of that event, or, in a few cases, the rescission represents reductions in relatively lower priority elements of continuing programs.

In addition to that there is another $4.7 million in the area of gas and petroleum technology. Further, some of the activities that were formerly carried on in the Resource Applications office associated with technology commercialization are being proposed for rescissions. The most prominent element of that is a $6 million rescission request for 1978 funding for the coal Loan Guarantee Program. The other amounts are smaller, about $1.5 million.

These are the various kinds of activities that are covered by these rescission requests. There are different situations to talk about in each case and we would be pleased to proceed to your questions.

I should mention, I think, that the second statement covers the proposed rescission of $270 million of second round awards that had been selected for negotiation under the alternative fuels program and $30 million for innovative direct combustion solicitations. These are essentially feasibility studies and cooperative agreements. There was previously $200 million of awards that had been consummated, as a first round. The first round awards are not affected by this but we are proposing a rescission to the second round.

That completes my opening remarks.

Mr. MURTHA. As I told Secretary DeGeorge this morning, I disagree with rescissions but I think the Government must be in the forefront in assuming some of the risk in these areas, and very few companies are willing to assume the risk in such important programs. I can remember four years ago the synthetic fuel bill failed by two or three votes and in the successive year you remember it failed again. Then we got long lines at the gasoline stations and the bill passed and only 25 people voted against it. It took us two or three years to convince the previous administration that this was

an important program even though the Department of Energy understood it.

We have to assume some of the risk and take the lead in this very important area. I think we are going to look at the rescission and perhaps disagree slightly with the recommendation on the rescissions that you have sent down.

DEFENSE PRODUCTION ACT

Would you review for the committee the status of the proposed receipt by the Department of Energy in response to a solicitation of $3 billion for projects under the Defense Production Act?

Mr. LEGASSIE. These are ongoing activities, sir. Three companies have been selected under the Defense Production Act and we are in active negotiation with them. The firms are TOSCO and Union, both of whom have oil shale projects, and the Tennessee Synfuels Associates proposing a coal liquefaction project. These three proposals are in active negotiation. The Synthetic Fuels Corporation is represented on the negotiating team. We are proceeding full steam ahead with these negotiations and hope to complete them as promptly as we can. There is no delay in this activity and we anticipate that one or more projects will be successfully negotiated and eventually will be able to find its way into the Synfuels Corporation.

The way the law is written, if they are provided incentives on this side, the Corporation may by majority vote of the board of directors receive them for the corporation's activities. If negotiations are not completed and the appropriation becomes operational, the funds will become available to the Corporation and it may itself consummate these arrangements.

Mr. MURTHA. How many have you received?

Mr. LEGASSIE. I have the data here of the three that we are negotiating with. They are the only three that met the requirements for an adequate proposal under the DPA.

Mr. MURTHA. Do you expect to complete negotiations prior to June 30?

Mr. LEGASSIE. We are hopeful that that can be done, sir, but it is not really possible to place a deadline on the closure of negotiations. If we were to do that, for example, it would give a very strong negotiating lever to the parties on the other side. I think inasmuch as the activity can be done by us or by the Synfuels Corporation—and we are presently doing it together—I think the exact date of completion of the negotiations is not critical except that the Government get a good arrangement out of this process.

Mr. MURTHA. If the negotiations are not complete——

Mr. LEGASSIE. By June 30, the money will transfer to the corporation and the corporation can complete the negotiations.

Mr. MURTHA. Will this delay the process?

Mr. LEGASSIE. Well, obviously the sooner you close on the arrangement, the more promptly actual activity can begin but you have to balance that against what is an appropriate agreement in which Government funds are administered.

Mr. MURTHA. Is there such a thing as a conditional commitment?

Mr. LEGASSIE. Yes. Probably a normal course of events would be to sign a conditional commitment, as in fact the Department did in

a related area with the American Natural Resources Gasification Project. The Government could obligate itself subject to conditions that the other party has to meet and then if the other party successfully meets those conditions a firm commitment is consummated. If all the substantive matters are negotiated and can be described in terms of conditions, one could do that.

Mr. MURTHA. Can the Corporation complete negotiation or make contract awards without being declared operational?

Mr. LEGASSIE. I am not an expert on what the Corporation's requirements are, sir, so I should not answer that question.

Mr. MURTHA. Do these projects, since they are already negotiated, get preference over other project proposals at the Corporation?

Mr. LEGASSIE. As I understand it, these projects are covered by a $3 billion appropriation allocated at the present time to DOE. The corporation will have $17 billion of which this is a part. If for some reason or other the negotiations were not complete on our side and the money went to the Corporation, then, as I understand it, it is available for the totality of the corporation's activities and to that degree these projects might come into competition with other projects.

Mr. MURTHA. Will you sign the contract or will Synthetic Fuels sign the contract?

Mr. LEGASSIE. If we complete the negotiation and the corporation is not yet active, we would have the power to enter into arrangements ourselves. We also have to have the concurrence of the Department of Defense, since this is for defense fuels production.

NONNUCLEAR ACT

Mr. MURTHA. Would you also review for the committee the status of the Nonnuclear Act?

Mr. LEGASSIE. Yes, sir.

Mr. MURTHA. Proposals received in response to your solicitation.

Mr. LEGASSIE. Yes, sir. There are 10 proposals currently being evaluated. We received 15, but the 10 that are currently in the system are all of those that met the technical criteria for being an acceptable proposal. That initial screening did not require any technical evaluation or judgment. Those that remained after the initial screening are in process of being evaluated by technical teams. That evaluation should be essentially complete now. The target for completing it was in fact today.

I have not checked as to whether it is absolutely done but if it is not, it will be in a matter of a few days. Senior management will then have to receive and understand that evaluation. This has not yet been done and that will have to be completed before we can make a judgment about how we should proceed. We can't do that until we know what the evaluation looks like, whether there are difficult issues involved or not.

Mr. MURTHA. Is this evaluation process moving more slowly than the Defense Production Act process?

Mr. LEGASSIE. No, sir, it was simply in sequence; that is, we did the Defense Production Act work first and this second and that is the reason they are in a different status. Again there has been no delay sought or instructed or requested or desired in this evaluation process.

Mr. MURTHA. Is there any prospect of beginning negotiations on any of those proposals prior to June 30?

Mr. LEGASSIE. The prospect certainly exists but the decision on that would have to await our understanding of what it is we have to deal with which I will receive when I am presented with the evaluation.

Mr. MURTHA. Would that be prior to the transfer of the funds to the corporation?

Mr. LEGASSIE. Yes. Again we would hope that the evaluation would allow us to reach some judgments on possible selection of companies to begin negotiations and that those negotiations could begin. There is in this area, however, an additional element. The same $2 billion which is associated with these projects is also available to fund the American Natural Resources Gasification Plant, and we are anticipating a proposal from that project possibly for as much as $600 million to cover up to $1.8 billion of loan guarantees, in which case we would have an embarrassment of riches; that is, we would have requests, which clearly exceed the total funds available. We would have to make some decision about how to proceed in that case. Again, we are anticipating that we will receive the proposal from ANR and that will be relatively soon, so that we should be able to make a judgment soon about how to proceed.

Mr. MURTHA. No negotiations have started upon transfer. Will these projects end up being behind those submitted to the corporation directly; in other words, the ones being submitted?

Mr. LEGASSIE. I don't think that is necessarily so, sir, because the proposals in the Nonnuclear Act we received are very extensive and detailed; in fact, there were even some complaints about the amount of material that had to be submitted to us. The Corporation, with respect to the 61 proposals it received through March 31, did not have such a significant requirement for detail. Their intention, as I understand it from public documents, was to begin to screen those, then sit down and obtain that detail through continuing and lengthy discussions with the proposers over a substantial period of time. So given that there is a lot of documentation in hand on the proposals in the Department, and there are obviously many things the Corporation has to go and seek on the others, it is not at all clear to me that they necessarily are in a "one down" position if they should have to be considered along with the others.

Mr. MURTHA. Are you saying the corporation will accept your evaluations of these proposals or will they re-evaluate them?

Mr. LEGASSIE. Well, I cannot speak for the new board of directors.

Mr. MURTHA. That is because you don't have a new board.

Mr. LEGASSIE. That is right. The Corporation does not yet have its Chairman or its board of directors. They certainly can accept our evaluation. We have kept in very close communication and contact with the Corporation staff at every step. I think that if they wished to do more than simply accept our recommendations, I would not anticipate that they would necessarily duplicate them. They might want to monitor, to audit, to pick up one or two and look at them in detail and test them more precisely but I really cannot imagine that it would be efficient to redo the entire process.

GREAT PLAINS GASIFICATION PROJECT

Mr. MURTHA. Would you bring the committee up to date on the status of the Great Plains Gasification Associates plant in North Dakota?

Mr. LEGASSIE. This is the ANR project that I referred to. I think it has been indicated in the newspapers in the last few days that a major barrier to the development of a proposal to the Department of Energy by the private sponsors lay in reaching agreement with a number of people who were concerned about how the gas would be priced and sold. These concerned groups include General Motors. I have seen a report in the newspapers that they have reached agreement with General Motors and thus I think the major barrier to their submitting a proposal to us may in fact have been removed. We should therefore be expecting something quite shortly from them.

Mr. MURTHA. What was the substance of the Appeals Court ruling against the Federal Energy Regulatory Commission financing plan for the facility?

Mr. LEGASSIE. I am not a legal expert, sir. My understanding is in general that they sought certain findings from the Federal Energy Regulatory Commission which were given and the case was taken to court on the basis that the action was outside the power for FERC to do. The Court of Appeals so found, and the sponsors have then sought other means of addressing the financial risks of the project.

Mr. MURTHA. Would you furnish the details of that decision for the record?

Mr. LEGASSIE. I would be happy to do so.

[The information follows:]

SUMMARY OF GREAT PLAINS RULING BY U.S. COURT OF APPEALS

In 1979 the Federal Energy Regulatory Commission (FERC) authorized the Great Plains Gasification Associates to sell mixed natural gas and synthetic coal gas on a rolled-in, cost-of-service basis to five interstate pipeline companies and authorized the pipeline companies to modify their tariffs to recover the costs of the project in their rates.

The U.S. Court of Appeals for the District of Columbia Circuit set aside and remanded the FERC's opinions. The Court of Appeals held that the FERC exceeded its jurisdiction by approving the Great Plains' proposed sale on terms and conditions which (a) would involve FERC regulation of the construction and operation of the non-jurisdictional coal gasification facility, and (b) would promote project financing by permitting the recovery of project costs from the pipelines and their customers before any gas had been manufactured and delivered.

[COMMITTEE NOTE.—Copy of the decision is retained in committee files.]

EFFECT OF RULING

Mr. MURTHA. How will this ruling affect future plants?

Mr. LEGASSIE. Well, it appears that Great Plains has been able to deal with this ruling by looking for other mechanisms to insure that they can obtain the financing necessary for such a project; so, on the assumption that they appear to be successfully dealing with that question I would think that others could as well. I think the approach to FERC was perhaps that if that method could have been used, it might have been simpler, easier, and put less burden

on the private sector sponsors. Clearly in the view of the opponents, however it had disbenefits which now presumably are being resolved by these new approaches.

Mr. MURTHA. What is the substance of the provisions that Great Plains is attempting to negotiate with the plaintiffs in the court case?

Mr. LEGASSIE. I cannot speak to that from personal knowledge, sir. I am not sure that the Department necessarily has detail or specific knowledge of that until we actually receive the proposal. I think we are aware of these discussions but it is one thing to be aware of them and another to know the details.

Mr. MURTHA. We are concerned that the project continue.

Mr. LEGASSIE. Why don't I give you for the record, sir, what knowledge the Department has on these matters.

[The information follows:]

DOE'S UNDERSTANDING OF REVISED PROPOSAL BY GREAT PLAINS GASIFICATION ASSOCIATES

DOE has not participated in the proposed settlement proceedings since January, 1980. However, under the proposal as DOE understands it, the gasification facility itself would not seek to be under the jurisdiction of the Federal Energy Regulatory Commission and therefore would not receive authorization from FERC to pass along to the pipelines and their customers the cost of construction and operation of the facility under a cost of service tariff. Instead, the pipeline purchasers, which are jurisdictional entities, would seek advance approval from FERC to recover from their customers a specified purchase price for the synthetic gas.

The proposed price for the synthetic gas would be derived from a formula with an initial price of $6.75 per million Btu's, escalated every three months in relation to the price of No. 2 fuel oil and the Producer Price Index. The formula price is limited by various caps throughout the term of purchase. Since the price would not be based on the cost of the construction and operation of the facility, the risk of construction and operation would not rest with the ultimate gas consumers.

PROJECT SPONSORS

Mr. MURTHA. Who are the current partners?

Mr. LEGASSIE. The information is available to me and if I can lay my hands on it quickly, I will do so. The sponsors of the Great Plains projects are the Great Plains Gasification Associates, a partnership created by American Natural Resources, People's Energy Company, Tenneco and Transco companies.

Mr. MURTHA. Has anybody dropped out?

Mr. LEGASSIE. Again I am not aware of the details of that.

Mr. MURTHA. What about Columbia?

Mr. LEGASSIE. Columbia Gas has in fact dropped out. I do have an expert in the audience that confirms that.

Mr. MURTHA. Would you check and provide for the record any other purchasers that may have dropped out for any reason?

That is the only one?

Mr. LEGASSIE. I will do so.

[The information follows:]

CURRENT PARTNERS IN GREAT PLAINS PROJECT

The current industrial participants in the Great Plains Coal Gasification project include American Natural Resources Gasification Properties Company, an affiliate of Michigan Wisconsin Pipe Line Company; PGC Coal Gasification Company, an affiliate of Natural Gas Pipeline Company of America (Peoples Gas); Tenneco SNG, Inc., an affiliate of Tennessee Gas Pipeline Company, a division of Tenneco, Inc.; and Transco Coal Gas Company, an affiliate of Transcontinental Gas Pipe Line

Company. Columbia Coal Gasification Corporation, an affiliate of Columbia Gas Transmission Corporation, was originally a member of the partnership but has withdrawn.

Mr. MURTHA. Does the loan guarantee cover the coal mine as well as the gasification plant?

Mr. LEGASSIE. Inasmuch as we do not yet have a proposal, we have not received a proposal, so I don't think we can answer that without a proposal in hand.

Mr. MURTHA. Did the old proposal include the coal mine?

Mr. LEGASSIE. Let us give you material for the record on that as well, sir.

[The information follows:]

INCLUSION OF COAL MINE IN GREAT PLAINS PROPOSAL

The initial proposal by Great Plains Gasification Associates for a loan guarantee did not include funding support for a coal mine.

Mr. MURTHA. Assuming the loan guarantee is approved, will DOE sign all the agreements before transferring them to the Synthetic Fuels Corporation?

Mr. LEGASSIE. I think we should not answer that at this time, sir, because we are not certain how long it will take to complete the discussions and evaluate the proposal. We would certainly want to check with how near operational status the Corporation is and then make a judgment as to whether we should move on this side or perhaps as a result of a short delay allow the Corporation to move instead.

Mr. MURTHA. What size will this plant be?

Mr. LEGASSIE. It will produce roughly 125 million cubic feet of synthetic gas per day.

Mr. MURTHA. Is it expected to be expanded at some later date?

Mr. LEGASSIE. It is able to be expanded up to perhaps double the size.

$300 MILLION ALTERNATIVE FUELS RESCISSION

Mr. MURTHA. Please explain your rationale for requesting the rescission of the $300 million for feasibility studies and cooperative agreements.

Mr. LEGASSIE. Basically, sir, we don't think that the expenditure of these funds is central to the creation of a synthetic fuels industry in this country. We think that the funds to be expended by the Corporation itself in support of actual decisions to construct commercial projects is what is critical. The feasibility studies and cooperative agreements are on the one hand paper studies. Those that are thinking about such an activity may or may not proceed after the study. The feasibilty studies are certainly within the financial capability of companies to fund since the other companies have so funded in order to support their recommendations to the Synthetic Fuels Corporation. The cooperative agreements are design activities, again short of commitments to construct. As many as 61 companies have been able to go directly to the Synthetic Fuels Corporation having done a feasibility study they thought necessary and having made a decision to construct. We think that is where the central action is and we are not certain

that this $300 million would really contribute anything to the real world of moving ahead with the establishment of the industry.

Mr. MURTHA. Where did you get the figure 61 applications?

Mr. LEGASSIE. That is my memory of what is in the Corporation's press release.

Mr. MURTHA. I know at least one of those projects expects to be funded. They are anticipating the feasibility study being funded by the Government. Because they have applied for a cooperative agreement I don't expect to prejudice the case for their original application for a feasibility study.

Mr. LEGASSIE. Well, sir, if I could get my feasibility study funded by the Government, too, I would love to do that but it seems to me that the examination would show that that is not the case for the majority of the proposals submitted.

Mr. MURTHA. Do you believe that many of these projects will go ahead without Government funding?

Mr. LEGASSIE. Are you talking about those covered by feasibility studies and cooperative agreements?

Mr. MURTHA. That is right.

Mr. LEGASSIE. I would question whether a large number of those feasibility studies would go ahead even if the Government paid for these feasibility studies. It is not clear to me that the projects so described would necessarily proceed.

Mr. MURTHA. You are saying that the projects will quite possibly not go forward with or without Government funding for the feasibility studies?

Mr. LEGASSIE. Yes, sir. I look on a feasibility study that the Government pays for as an easy way to get a company educated and informed about synthetic fuels. It is not necessarily clear that such a project is going to be a real one. Now I am certain there are indeed some people who have very serious plans but the inability to get a relatively small amount of front end planning money because of our rescission should not be a deterrent to somebody who is planning seriously about going ahead with a two or three billion dollar project. I cannot imagine this sum of money is critical to a decision to proceed or not proceed.

Mr. MURTHA. Of course, the Congress disagrees with you. The Congress passed overwhelmingly the legislation which would allow this to go forward and believes that it is necessary to create an incentive for the Synthetic Fuels Corporation. We have been sitting here now with a energy crisis for a long time. How many plants have you seen built throughout the country without Government assistance?

Mr. LEGASSIE. There has not been an economic basis for any plant to be built yet. In fact, the cost increases for our imported crude now making some of these technologies economically viable are no more than two years old.

Mr. MURTHA. We would have taken a chance if we tried to pass the appropriate legislation four years ago to create the loan guarantees. Right now we were coming on line with some synthetic fuel plants at a much cheaper cost because of inflation. I assume that at this point they will be close to competitive or in a few years the synthetic fuel plants will be competitive yet we are talking prob-

ably eight years from now before we have one plant built that could go forward quickly.

Mr. LEGASSIE. It is true that it takes that length of time but I think also that in the last several years a number of important things have changed. Most importantly the cost of energy has been rising to the point that initiatives that indeed did require the Government to put some money down four years ago in order to move activity forward, today could move forward on the basis of economic competitiveness. That is a significant change in the economic climate.

Mr. MURTHA. Have you had a company say to you that they are going to go forward without some sort of Government guarantee?

Mr. LEGASSIE. I am not talking here, sir, about the important guarantees that are in the Synthetic Fuels Corporation. I believe, as does the Congress and this Administration, through its continued support of funding for that Corporation, that loan guarantees and price supports are appropriate for these initial commercial facilities.

SYNTHETIC FUELS CORPORATION

Mr. MURTHA. Would you say that the Synthetic Fuels Corporation is critical to the overall security of the country?

Mr. LEGASSIE. In my own judgment, sir, it is critical to take the first steps in the establishment of the synthetic fuels industry.

Mr. MURTHA. Why do you suppose they have not made an appointment to those very important positions of Chairman of the Corporation and the other board members at this point?

Mr. LEGASSIE. I cannot say, sir, except that it is clear that there are many positions still waiting to receive appointments. These are not exceptions, and to that extent the Department of Energy is still waiting for a substantial number of appointments to be made. I think we are all aware of some of the problems in recruiting good people and in going through the kinds of processes that are necessary to become an individual that the President is prepared to recommend to Congress.

Mr. MURTHA. Have you discussed with any of the proposers whether they would go ahead without Government funding?

Mr. LEGASSIE. I have not personally had such conversations but I again would point out that in the area, for example, of the DPA and NNA, we have sponsors who are at the point of having made a decision to construct a plant if they can obtain the support guarantees for the plant itself. They are not asking the Government to provide either feasibility study money or cooperative agreement money.

Mr. MURTHA. How much will it cost each proposer to put together an application to DOE under this program?

Mr. LEGASSIE. You are now talking about the proposals we received in the second round and perhaps indicating that this was private money spent in good faith to earn an award. I do not have an estimate of what it cost to submit that proposal, but I am sure it is expensive. But such people also were in competition with others who spent the same amount of money and never got selected for negotiation, so they surely knew that there was a risk that they would not be an award winner. The Government in that solicita-

tion reserved the right to reject any and all proposals, so there was no guarantee that the expenditure of money in submitting a proposal would automatically result in an award.

Mr. MURTHA. But we don't have any synthetic fuel plants in this country, do we?

Mr. LEGASSIE. No, sir.

INNOVATIVE DIRECT COMBUSTION SOLICITATION

Mr. MURTHA. What is the status of the $30 million you set aside for direct combustion proposals?

Mr. LEGASSIE. That is embodied in the same $300 million request for rescission.

Mr. MURTHA. What kinds of proposals did you receive?

Mr. LEGASSIE. This was set aside for innovative direct combustion technology. I don't have a breakout separately of the proposals received under the $30 million.

For this area of questions if I could ask Mr. Passman under whose direction some of these activities are occurring to join us at the table. He has obviously a little more detail than I do.

Mr. PASSMAN. The categories which we were able to place the more than one hundred proposals received were coal, peat and biomass. The status of the evaluation is that the Source of Evaluation Board has completed its review and further evaluation in the process awaits a senior review board which will be formed if the rescission requested is denied.

Mr. MURTHA. What ongoing evaluations will you have of the awards you made in July of 1980 totaling $200 million?

Mr. LEGASSIE. We plan, sir, to have staff monitor the performance of that activity. Of course there are field contract administrators but we do plan to have a staff that will be following the technical progress of those activities, both in headquarters and in the field.

Mr. MURTHA. How many do you have?

Mr. LEGASSIE. That determination has not been made. We are looking at total staffing issues of which that is one element.

Mr. MURTHA. Will the results of these studies be available to the public?

Mr. LEGASSIE. Yes since there is Government funding in these activities. For example, the feasibility studies are to be published and generally the results of the cooperative agreements will be publicly available and can be evaluated by other companies interested in the same kinds of activities.

PERSONNEL IN ALTERNATIVE FUELS PROGRAM

Mr. MURTHA. What will happen to the personnel associated with the alternative fuels program once it is transferred to the Corporation?

Mr. LEGASSIE. Are you now talking about the personnel being transferred to the Corporation? I am not certain I understood the question precisely.

These particular activities will continue to be carried out within the Department of Energy unless the Corporation makes a judgment that it wishes to have them transferred.

Mr. MURTHA. I was asking you what will happen to the people when their jobs are transferred?

Mr. LEGASSIE. Yes, sir.

We have reduced manpower requirements for these activities at the end of fiscal year 1982 so we will be reducing the staff formerly associated with these activities through perhaps the latter part of 1981 so that we meet our minimal manpower requirements in this area. The manpower requirements will not be absolutely zero as we presently see it because we do intend to follow and monitor the status of some of the activities but there will be large reductions in staff associated with these programs.

Mr. MURTHA. Do you have any questions about this, Tom?

Mr. LOEFFLER. No.

FOSSIL ENERGY CONSTRUCTION

Mr. MURTHA. Let's talk about fossil energy construction.

Mr. LEGASSIE. All right.

Mr. MURTHA. Have any of the demonstration plants you currently sponsor applied to the Synthetic Fuels Corporation?

Mr. LEGASSIE. The Memphis Light, Gas & Water low-medium Btu gasification project has, as I understand it, made an application to the Corporation. This is one of the five demonstration projects.

Mr. MURTHA. Have you had discussions with contractors in reference to the administration's stated policy with regard to demonstrations?

Mr. LEGASSIE. Yes. We have met and discussed the President's proposals and the Department's proposals with contractors in every case, sir.

Mr. MURTHA. Do you expect any of the other demonstrations to apply to the corporation?

Mr. LEGASSIE. I want to speak about SRC-II separately. The other three projects have not given me any indication that they intend to apply. With respect to the SRC-II project, since that is an internationally supported project and decisions have to be made jointly by the United States Government, Germany and Japan who are the present primary funders of the project, a decision about whether or not sponsors wish to see that project submitted cannot be made until the three governments meet to discuss that. Such a meeting is planned for later this month and out of that meeting will presumably come a conclusion on that point.

Mr. MURTHA. If neither of the solvent refined coal plants apply to the corporation, how long do you think the direct liquefaction of coal will be delayed in this country?

Mr. LEGASSIE. That is really a very theoretical question because I can think of scenarios in which we would propose to go ahead and build those projects and they would have substantial difficulties, cost overruns and failures which is always a risk that you encounter in a demonstration project. These should also generate a delay, so it is a very theoretical question.

Mr. MURTHA. Assume that they are successful.

Mr. LEGASSIE. If they were successful, then that would indeed be useful in terms of having a large plant on line earlier than the Corporation could have such a large project physically up and

running. That would certainly be beneficial at some cost. In connection with your question also I want to point out that a proposal involving the H-Coal process, which is also a direct liquefaction process, has been submitted to the SFC. But again, that plant could not be built as quickly as either the SRC-I or SRC-II modules, so I would not disagree with you about the timing point.

IMPORTANCE OF DIRECT LIQUEFACTION

Mr. MURTHA. How important is the ability to directly liquefy coal?

Mr. LEGASSIE. The virtue that is being sought there is a reduction in cost. That is to say, we can liquefy coal by indirect liquefaction without this technology, and so the United States could go ahead and deploy large plants based on SASOL or other existing commercial technology. In fact, there are proposals of that kind in the 61 that have been made to the SFC.

The benefit of direct liquefaction, if our judgment is correct, is to be able to do this at reduced cost because it is a more thermally efficient process. There are some down sides associated with that technology which also have to be adequately managed. For example, there are some greater concerns about the carcinogenic or mutagenic properties of the products of that process prior to upgrading which have to be dealt with; so it is not a completely advantageous situation. On balance we think that technology has some promise and that is why we have been developing it.

Mr. MURTHA. How much more efficient is the technology to directly liquefy coal than the indirect liquefaction technology?

Mr. LEGASSIE. My memory is that it is about 25 or 30 percent more efficient but let me check with our experts.

We would hope that that would translate that into a cost benefit.

Mr. MURTHA. If the United States went ahead in a rapid manner on direct liquefaction technology implementation, would we not have a market advantage over other countries?

Mr. LEGASSIE. Other countries are moving with the same technology so one would have to ask what they are doing in comparison with what we are doing. To put it in a very clear way, if we were successful in developing a coal liquefaction technology that was cheaper than that otherwise commercially available, that would be to the benefit of the United States in terms of a marketable commodity of worldwide interest.

Mr. MURTHA. What kinds of products can be produced by direct liquefaction technology that would make it more or less attractive than indirect liquefaction technology?

Mr. LEGASSIE. Well, let's say some of the technology that exists abroad produces a range of materials that goes beyond that of boiler fuel and liquids that can be upgraded to transportation fuels. My belief is that that is strictly a question of cost, that one can torque the products for most of these technologies, including the direct liquefaction technology, in a way to make more of one product and less of another if that is what you want to do. So it is really a question of what it costs to do that, more than some lack of flexibility.

COST ESTIMATE FOR SRC-I

Mr. MURTHA. Your rescission justification on page 61 states a definitive cost estimate will be completed by July 1981 for the SRC-I demonstration plant and that the EIS will be completed in April. Are those two dates still valid?

Mr. LEGASSIE. I believe the late April date is still valid. I think the date for the completion of the definitive cost estimate is optimistic.

Mr. MURTHA. Do you have a date for the second?

Mr. LEGASSIE. We are really in the process of trying to determine what it takes to get a definitive cost estimate on SRC-I. It is partly associated with the availability of some expertise that is not yet accessible to the contractor in question. The contractor has some views about how quickly it could be done, we have others. I really think that it is a matter that is not resolved yet in our own mind.

Mr. MURTHA. Why isn't that expertise available?

Mr. LEGASSIE. We are talking about the construction manager, sir. It was earlier envisioned that the SRC-I construction manager, which would be a subcontractor to Wheelabrator-Frye and Air Products, would be brought on board earlier than the present time. It has taken a substantial length of time to go through the solicitation and procurement process up to the point where the contractor recommended a manager to us and we are exercising our responsibility to consent in that recommendation. We are essentially at the point where if nothing else was happening we would be in a position to so consent.

Mr. MURTHA. When will you do that?

Mr. LEGASSIE. We do not, sir, at the present moment think it prudent to go ahead and sign a contract for some $700 million worth of construction services in a case in which we have a rescission request before the Congress for the fiscal 1981 construction money and zero dollars in 1982 on the basis of a different approach to this project.

Mr. MURTHA. How are you going to get a definitive cost estimate?

Mr. LEGASSIE. We are determining if, instead of an entire contract, we could identify a piece of the expertise that is available and break that off as a sub item, either through a letter contract or a revised scope of work. In that way, we can proceed with that element that appears reasonable. We are presently discussing with our lawyers and procurement people how that might be done. That is the exact situation we are in and we were involved in discussion of that yesterday.

Mr. MURTHA. If the rescission for SRC-I were granted, would funds remain to finish up the project in DOE?

Mr. LEGASSIE. The money is very tight for SRC-I, sir. There is $41 million available following the rescission and we would need to reserve some $19 million for termination costs, so that we have about $22 million left and that would take us through about the next four months. So we would not go really quite all the way to the end of the fiscal year.

Mr. MURTHA. What activities would be completed before DOE ceased funding?

Mr. LEGASSIE. Well, we would have made further progress in the development of the design but we are only 14 percent of the way through the total design package. There is no way, therefore, that you are going to complete a total design package in the next four months. At the time the project is to be terminated we would receive all the work that had been done to date in a tidy fashion but that would not be a complete design.

COST ESTIMATES FOR SRC–II

Mr. MURTHA. When will you have definitive cost estimates and a completed environmental impact statement for the SRC–II plant?

Mr. LEGASSIE. Well, there is a final environmental impact statement that was issued some 30 or 45 days ago and so that essentially is done. With respect to the equivalent matter of when would a definitive cost estimate be available, my judgment is that we might be as much as a year away from that. This is why I am partially questioning whether the statement that we are only a few months away from that in SRC–I is an equivalent statement. We might be comparing apples and oranges and I am concerned about that. I am not sure that those two statements mean the same thing. I mean, obviously at any moment you can come up with something you call a definitive cost estimate but the question is how much you knew at the time you laid it on the table.

Mr. MURTHA. How much funding would be needed to get the SRC–II project to the same stage of completion as SRC–I?

Mr. LEGASSIE. I don't think they are necessarily in different stages of completion, sir. I think we are really going on at about the same condition. We are looking in both cases at the current schedule and funding situation. We find that relative to cost estimates that have been furnished to the Congress more than a year ago, say December of 1979, that we are seeing cost growth in both projects and we are seeing schedule slippages in both projects which are partly responsible for that cost problem. We are seeing them about the same stage of process in overall design. I don't think that they are necessarily in really significantly different status.

Mr. MURTHA. What indications do you have that costs are increasing on either the SRC–I or SRC–II projects?

Mr. LEGASSIE. Well, we are looking at material furnished to us by the contractors which so indicates. We are in the process of trying to understand these submissions which do indicate some cost growth. We are attempting to identify the sources of it and to try and look at what some of the remedies to that might be. We are in the middle of an evaluation of that kind. I would prefer not to try to present to the Committee the specifics when we are still in the middle of an evaluation and until I am convinced that we really understand the numbers we are looking at. We have made a commitment, sir, in testimony before another committee to furnish to the Congress an evaluation of our best available information.

Mr. MURTHA. Would you explain for the committee what preliminary cost data you have that indicate this and what the respective causes for such increases are? For example, how much is because of design changes and how much is because of increases in inflation?

Mr. LEGASSIE. Sir, I think we need to complete our evaluation before giving you judgments in that area. I am not at all comfortable with the present state of our evaluation as to providing information I think is reliable and trustworthy to the committee and I would respectfully ask if we could furnish this material on the schedule that we have in mind which is the end of this month.

[The information follows:]

Department of Energy
Washington, D.C. 20585

APR 30 1981

Honorable Sidney Yates
Chairman, Subcommittee on Interior
and Related Agencies
Committee on Appropriations
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

I am enclosing for your information a copy of updated cost information for the Solvent-Refined-Coal Demonstration Plants. During my March 25, 1981, testimony before the Senate Appropriations Committee's Subcommittee on Interior and Related Agencies, I indicated that such information would be available by the end of April. It should be noted that this data has been supplied by our contractors: International Coal Refining Company (SRC-I) and SRC International, Incorporated (SRC-II). These estimates are being analyzed by the Department of Energy and in the case of SRC-II by the governments of Japan and the Federal Republic of Germany. They are being provided to the Congress at this time for information purposes only.

Members of my staff are available to answer any questions that may arise.

Sincerely,

Roger W.A. LeGassie
Acting Assistant Secretary
for Fossil Energy

Enclosure

SRC-I PROJECT

Costs

The first column presents the estimate previously submitted to the Congress and the second column identifies the contingency contained in that estimate. The third column is the latest Industrial Partner's estimate and the fourth column identifies the contingency contained in that estimate.

	Millions of Dollars			
	December 1979 Estimate 1/	December 1979 Contingency	April 1981 Estimate 2/ 4/	April 1981 Contingency 5/
Phase I - Design	129	15	292	26
Phase II - Construction	1103	221	1,537	199
Phase IIIA - Start-Up	126	25	118	0
Preoperational Subtotal	1358	261	1,947	225
Phase IIIB - 2 years operation	189	0	401	0
Phase IIIC - 3 years operation	286	0	739	0
Coal Costs	324	0	813	0
Operational Subtotal	799	0	1953	0
Supporting R&D	132	0	0 3/	0
Total Costs	2,289	261	3,900	0
Potential Revenues (5 years)	(801)	0	(2,546)	0
Potential Net Costs	1,488	261	1,354	225

1/ Current year dollars except for Phase IIIB, IIIC, Coal Cost, and Potential Revenues which contain no escalation and are expressed in Constant 1979 dollars. Phases I, II, and IIIA are escalated at 10% per year for FY 1979 and FY 1980 and 9% per year thereafter.

2/ Supplied by ICRC, no DOE analysis and no DOE costs included. All Phases including coal costs and revenues have been escalated at 10% per year.

3/ Does not include $173 Million for related DOE R&D and support costs.

4/ Mechanical completion is estimated to be September 1984. Adequacy of this date is still under DOE review.

5/ DOE believes these contingency amounts to be inadequate in light of the still early stage of design.

Discussion of Increases

A. Phase I - Design

The Phase I cost estimate has increased from $129 Million to $292 Million. Details of the Phase I increase as as follows:

	M$
- Vendor engineering shifting from Phase II to Phase I	24
- Additional engineering costs associated with engineering changes (See engineering change list following Phase II)	23
- Additional ICRC staffing and subcontracts	4
- ICRC G&A	9
- Construction Manager/Constructor costs	9
- Other additional costs due to reporting requirements, Quality Assurance program, procurement regulation compliance, and estimating adjustment due to increased data base	19
- Contingency and escalation adjustment	75
Total	163

B. Phase II - Construction

The Phase II cost estimate has increased from $1,103 Million to $1,537 Million. Details of this Phase II cost increase are as follows:

	M$
- Additional procurement and construction costs associated with engineering changes (see engineering change list below)	156
- Transfer of vendor engineering from Phase II to Phase I	(24)*
- Transfer of commissioning costs from Phase IIIA to Phase II	87
- ICRC G&A and fee elimination	(42)
- Transfer of training from Phase II to Phase IIIA	(6)
- Estimate adjustment	2
- Contingency and escalation adjustment	261
Total	434

Engineering Changes

	M$
- Filters to Critical Solvent Deashing	(44.0)
- Critical Solvent Deashing Unit Changes	7.7
- Site Related Modification	10.8
- Coal Feed System Changes	1.3
- Heat Recovery and Fractionation Modifications	7.5
- Slurry Preheater Changes	25.2
- Building Modifications/Additions	11.9
- Facility Integration Requirements	33.5

*Parentheses denote a cost decrease

-Eliminate Hydrogen Plant for Hydrocracking Unit	(17.6)
-Add Spare Parts and Miscellaneous Modifications	8.6
-Air Plant and Hydrogen Purification Unit Modifications	3.9
-Gasification Process Changes	36.6
-Gasification Unit Contract	4.5
-Gas Treating Unit Modifications	3.6
-Fues Gas Recovery Addition	4.1
-Sulfur Treatment System Modifications	2.2
-Central Control System Addition	8.7
-Utilities System Expansion (Boilers, etc.)	6.6
-Waste Treatment Facilities Expansion/Additions	40.2
-Site Facilities Expansion	20.7
-Barge Dock	4.5
-Coal System Modifications	2.5
-Delete Vendor Engineering	(6.3)
-ICRC Phase II Costs	29.3
-Incorporation of Design Changes into Area Contractors' Scope	(49.9)
Phase II Engineering Chabge Total (rounded)	156.0

C. Phase IIIA - Start-Up

The Phase IIIA cost estimate has decreased from $126 million to $118 million due to cost changes in start-up and commissioning, transfer of commissioning from Phase IIIA to Phase II, Operator training transfer from Phase II and escalation and contingency adjustments.

D. Phase IIIB - Two Years Operation

The Phase IIIB cost estimate has increased from $189M to $401M due to increased power costs, labor and material costs, and escalation adjustment to current year dollars.

E. Phase IIIC - Three Years Operation

The Phase IIIC cost estimate has increased from $286 Million to $739 Million due to increased labor and material costs, and escalation adjustment to current year dollars.

F. Coal Costs

The coal cost estimate for plant operations has increased from $324 Million to $813 Million. The unit coal prices were unchanged

between the April 1981 and the December 1979 estimate. The usage rate in MM Btu's/Hour of design capacity per the contract was approximately 10% lower in the April 1981 estimate. Offsetting this lower coal usage rate however, is higher coal consumption due to attainment of "steady state" operating indices earlier in the April 1981 Phase III estimate and higher coal consumption resulting from the extension of the commissioning schedule as discussed earlier.

G. Potential Revenues

The revenue estimate has increased from $801 Million to $2,546 Million due to earlier steady state, shift in product mix, increased pricing index, and escalation adjustment to current year dollars.

Reduced Plant Size

Plant size reduction as well as changes in design scope to eliminate risk mitigating measures have been considered with cost related to the current 6000 TPD design as follows:

Plant Size (TPD)	Design	Relative Cost %
6000	Risk mitigation components elimitated	86
3000	Size reduction with minimal risk mitigating components	76
2000	Size reduction only	64

This comparison is for INSTALLED COST ONLY. Operating costs, revenues, contingency, schedule, etc. are not considered, so no direct comparison can be made with the April 1981 estimate.

It must be noted that plant size and product volume do not decrease by the same percentage as capital cost. As an example, when plant size is reduced from 6000 to 2000 TPD, or by 67%, capital cost decreases only 36%. Consequently, capital cost required to produce a barrel of product increases which in turn reduces net revenue. These impacts have not been evaluated in detail but smaller plant sizes and elimination of risk mitigating measures do not appear to represent a viable venture based on return on investment through product sale and revenue.

Schedule Comparison

	February 1980[1/] Estimate	April 1981 Estimate	Months Change
Phase I - Design			
Start	October 1979	October 1979	0
Complete	June 1982	April 1983	9
Phase II - Construction			
Start	March 1981	March 1981	0
Complete	September 1984	December 1984[2/]	3
Phase IIIB - 2 Years Operation			
Start	April 1984	June 1985	14
Complete	April 1986	June 1987	14

1/ The first column is the schedule estimate provided to the Congress in February 1980. The second column presents the latest industrial partner's schedule estimate.

2/Mechanical completion for the Plant is September 1984

SRC-II Project

The first two columns present the estimate previously provided to Congress. The first column includes contingencies and the second has the contingency listed separate from the estimate. The next two columns present the latest industrial partner's estimate with the associated contingency separated.

(Millions of Dollars)

	Oct. 1979 Estimate 6000 TPCD 1/	Oct. 1979 Contingency	Feb. 1981 Estimate 6000 TPSD 2/	Feb. 1981 Contingency 3/
Phase I - Design	$ 134	$ 18	$ 292	$ 0
Phase II - Construction	981	179	1,415	202
Phase IIIA - Startup	193	17	286	22
Preoperational Subtotal	1,308	214	1,993	224
Phase IIIB - 2 Yrs. Opns.	130	13	347	19
Phase IIIC - 3 Trs. Opns.	164	4	495	5
Coal Costs	198	0	395	0
Operational Subtotal	492	17	1,237	24
Supporting R&D	150		150	
Total Costs	1,950		3,380	
Potential Revenues (5 Yrs.)	(511)		(1,830)	
Potential Net Costs	1,439		1,550	
Total Contingency		231		248

Footnotes:

1/ Current year dollars except Phase IIIB & C, coal cost and potential revenues which contain no escalation and are in 1979 constant dollars.

2/ Supplied by SRC International, no DOE analysis and no DOE costs included. Current year dollars at 10 percent per year inflation except potential revenues which escalate at 13 percent per year. The 6000 tons per stream day represents 90 percent of stream-day capacity. This is equivalent to Oct. 1979 estimate of 6000 tons per calendar day. Mechanical completion moved from Nov. 1984 to Dec. 1985. Adequacy of this date estimate is still under DOE review.

3/ DOE believes these contingency amounts to be inadequate in light of the still early stage of design.

Discussion of Increases

A. Phase I - Design	(in millions)
1) Schedule slippage	$ 55
2) Additional administrative requirements (patents, filing fees, technology transfers, training, government procurement requirements, reports, office space, construction manager coordination)	41
3) Engineering scope changes (detailed under Phase II)	16
4) Vendor engineering moved from Phase II in the 10/79 estimate to Phase I in the 2/81 estimate	46
Total Phase I Increase	$158

B. Phase II - Construction		(in millions)
1) Schedule slippage		$211
2) Contingency (deletion of $73 million from previous estimate, current estimate includes 25 percent contingency)		(73)
3) Escalation rate adjustment (current estimate utilizes escalation at 12.68 percent/year to 4/81 and 10 percent/year thereafter, 10/79 estimate escalated Phases I, II, and IIIA at 10 percent for 1980 and 9 percent/year thereafter)		118
4) Scope changes		
a) Oxygen Supply System (operability)		
Increased number of trains	$ 58	
b) Utility Systems (Operability)		
Increased boiler capacity and feedwater treating plus storage	34	
c) Fuel and Flare System (Environmental)		
Added ground level flare and add system for recovery of fugitive leaks	29	
d) Electrical Supply and Distribution System (Operability)		
Added power generation turbines	16	
e) Crushed coal surge, mechanical reclaiming from coal storage, and crushed size changes from 30 mesh to 200 mesh	39	
f) Receiving, Storage and Shipping (Operability and Site)		
Increase caused by doubling the number of equipment items, larger tank requirements, plus an allowance for heavy rock instead of medium rock excavation	29	
g) Variety of Changes	19	
Subtotal		$224
5) Transfer of vendor engineering to Phase I		(46)
Total Phase II Increase		$434

	(in millions)
C. Phase IIIA - Startup and Commissioning	
1) Schedule slippage	$ 52
2) Modified startup program	41
Total Phase IIIA Increase	$ 93
D. Phase IIIB & C - Operation	
1) Schedule slippage	$ 53
2) Escalation (10 percent/year)[1/]	277
3) Modified operating program	218
Total Phase IIIB & C Increase	$ 548
E. Coal Cost	
1) Schedule slippage	$ 42
2) Escalation (10 percent/year)[1/]	208
3) Modified operating program	(53)
Total Coal Cost Increase	$ 197
F. Potential Revenues	
1) Schedule slippage	$ 122
2) Escalation (13 percent/year)[1/]	779
3) Increased value of products at current world oil prices (1980 base price $33.64/bbl FOE)	255
4) Modified operating program	163
Total Potential Revenues Increase	$1,319

1/ October 1979 estimate had no escalation. This figure represents the inclusion of escalation according to the October 1979 schedule.

Reduced Plant Size

Plant size reduction has been examined resulting in the following cost estimates:

	3000 TPSD Estimate[1] Dated April 1, 1981 ($ in millions)[2]	
Phase I	$ 292	
Phase II	1,002	
Phase IIIA	196	
Initial Capital Requirements		$1,490
Phase IIIB - Operations (2 Yrs.)	250	
Phase IIIC - Operations (3 Yrs.)	354	
Coal Costs	202	
Operation Costs		806
Subtotal		2,296
Potential Revenues		(936)
Subtotal		1,360
Supporting R&D		150
Total		1,510[3]

1/ Supplied by SRC International, no DOE analysis included and no DOE costs are included.

2/ Current year dollars at 10 percent per year inflation except Potential Revenues which escalate at 13 percent per year.

3/ The impact has not been evaluated in detail but smaller plant sizes and elimination of risk mitigating measures do not appear to represent a viable venture based on return on investment through product sales and revenue.

Schedule Comparison

	Oct. 1979 Estimate	Feb. 1981 Estimate	Months Change
Phase I - Design			
Start	October 1979	October 1979	0
Complete	January 1983	July 1984	18
Phase II - Construction			
Start	August 1980	June 1981	10
Complete	September 1984	September 1986	24
Phase IIIB - 2 Yrs. Opns.			
Start	October 1984	July 1986	21
Complete	September 1986	June 1988	21

Mr. MURTHA. Considering that this is a first-of-a-kind demonstration for both facilities, how does this expected cost increase relate to other types of first-of-a-kind facilities that the Department of Energy has constructed in the past?

Mr. LEGASSIE. It is not at all unusual, sir, to have cost growth, cost overruns if you will, in first-of-a-kind activities. I think the Department of Defense provides many examples. I am sure the Department of Energy and its predecessor agencies can also provide examples. When you are actually sitting on one of these, though, it does not make it very comfortable to know that other people have had similar problems in the past.

Mr. MURTHA. Of course, you are saying cost increases would be the same whether it was Synthetic Fuels Corporation or DOE, there would not be any difference.

Mr. LEGASSIE. With respect to something where there is no experience, that is clear, sir.

Mr. MURTHA. How much of the projected cost increase is the result of requirements added after the preparation of environmental impact statements?

Can you answer that at this point in time?

Mr. LEGASSIE. Not at this point. The point of the question is valid; that is, if as a result of doing the environmental impact statement we identified the necessity of modifications that deal better with the environmental issues. That undoubtedly could be an element.

RISK OF MAJOR LIQUEFACTION PROJECTS

Mr. MURTHA. In your testimony on Thursday, March 26, you stated that these projects might be so large and so new as to be possibly too risky to build at this time. If that is the case, how then would they ever be considered by the Synthetic Fuels Corporation as viable projects?

Mr. LEGASSIE. Well, I think my point is that if you go to a large scale, it is presumably because you have built an adequate base of understanding on a smaller scale. The concern I was alluding to in the case of these projects is that 6,000 tons per day is a very large scale. We are finding out through the design process and the cost implications that we may not understand these projects well enough to make that large jump in size while trying to avoid some intermediate experience which perhaps is the better way to approach the problem.

In the case of H-Coal and the Exxon donor solvent process, we have gone to a 200 ton a day pilot plant. That experience does not represent such a large jump in size but could provide an adequate basis for going from there to a commercial plant. So it is a question of strategy in terms of trying to get from a small process development unit of one ton a day to 30,000 tons a day. How do you do it in a step wise and rational fashion? My concern is that it might be trying to bite off more than we could chew in these very large plants given the basis of the knowledge that we had available.

Mr. MURTHA. Considering what you have just said, why would industry be willing to put more money into the projects at this time?

Mr. LEGASSIE. Well, obviously what is being suggested here, and I am not saying that my judgment is right or even final on this point, is the implication that one ought to go to an intermediate-sized facility before trying to go finally to the big one. Now that is entirely within industrial capability to do. We have some cases in point where companies without government funding have built a facility at 200 tons a day. One I have in mind as an example is the Exxon catalytic gasification technology. Exxon has announced that they will build in the Netherlands a 100 ton a day pilot plant which will be their next step in the commercialization of the catalytic gasification process which they plan to commercialize in Europe. That will be costing them in the neighborhood of three to five hundred million dollars. They are doing that without Government funding so it is within the capability of certain large corporations to do those kinds of things.

I could not argue that it is within the capability of a corporation to go out and build a $2 billion demonstration plant. I think that is a rather unique event that apparently if the Government would do something like that, then it could be done. It does not appear to be the way industry normally approaches the commercialization of technology so perhaps there is a point there also.

HIGH BTU GASIFICATION

Mr. MURTHA. If funds for the high Btu gasification demonstration were not rescinded, how long would it take to get a financial proposal from the Illinois Coal Gasification Group?

Mr. LEGASSIE. I think they have already submitted proposals. Whether they are formal or informal I am not certain. I think it is easy to get a proposal. The real question is how long would it take to negotiate a reasonable arrangement on the basis of a proposal submitted and you can't answer that unless you sit down and start to do it. I know in some cases it would take you six months or a year to negotiate something that you thought was acceptable.

Mr. MURTHA. Are those proposals public?

Mr. LEGASSIE. No, sir, they are not public.

Mr. MURTHA. Is this project a module that could be replicated to make a commercial facility or does the gasifier need to be scaled up to be made commercial?

Mr. LEGASSIE. You are talking about the Illinois Coal Gasification Group Project?

Mr. MURTHA. Yes.

Mr. LEGASSIE. I do not see that as a commercial module which would be replicated exactly. It differs from some of the other demonstration projects in that regard. For example, the Memphis plant is at a size that was not expected to increase, and the plant would continue to operate as a commercial facility. It was, therefore, relatively easy, it seems to me, for Memphis to go to the Synthetic Fuels Corporation. The SRCs are intended to be commercial-sized modules which would require replication but not scale-up to go to a commercial facility. The ICGG is a different kind of situation. I would prefer to submit that material for the record because I think it is rather complicated.

[The information follows:]

ILLINOIS COAL GASIFICATION GROUP

The Illinois Coal Gasification Group (ICGG) is designed to process 2,210 tons per day (TPD) of coal and yield 23 million (MM) standard cubic feed (SCF) of pipeline gas and 1,620 barrels of fuel oil per stream day. The demonstration gasifier is one-fourth the size of a single train commercial plant. The scale up ratio is considered low because fluid bed technology is easily scaled up. A commercial facility would consist of three parallel trains (with no spare) and process 26,000 TPD of coal to yield 264 MMSCF of pipeline gas and 45,408 barrels of fuel oil per stream day.

Mr. LEGASSIE. A summary of the Memphis project is that the Government put up a large portion of the front end money but has arrangements for repayment out of the future operation of the plant. For example, the total estimated cost of the project is $830 million. The Government's portion is $730 million, so we are putting up a large amount of front end money. However, there are revenue streams that could come from the operation of the plant later on which might in fact make the effective Government participation 50 percent.

COAL LOAN GUARANTEE PROGRAM

Mr. MURTHA. You are requesting a rescission of $6 million for the Coal Loan Guarantee program originally appropriated in fiscal year 1978. Do you have applications under this program?

Mr. LEGASSIE. We have one conditional commitment as I understand it.

Mr. MURTHA. What facility is that for?

Mr. LEGASSIE. I don't have in my head the name of the contractor or the details. Perhaps Mr. Passman can summarize this for us.

Mr. PASSMAN. The proposer is the Eastern Minerals Corporation in Tennessee. We have issued a conditional loan guarantee commitment. I believe that the conditions relate to terms and conditions to be negotiated that have been offered to them. The owner of the mine will have to accept them and he must obtain a suitable contract according to the conditions of the law.

Mr. MURTHA. Do you have other applications?

Mr. PASSMAN. We have other applications.

Mr. MURTHA. Why are you requesting that the program funds be rescinded?

Mr. LEGASSIE. Historically we have not seen proposals under that arrangement that in our view were sound. The requirements of the law are quite stringent with respect to what it takes to get such a guarantee so that those who can readily meet the conditions are very likely also to be able to obtain loans from banks without having to come to the Government. The situation, therefore, is not one which has resulted in many actual applications.

Secondly, in general there is a question of the degree to which the Goverment ought to be in the loan guarantee business. We are seeking to withdraw from that area of activity except in the most essential areas. As you know, we are seeking rescissions in loan guarantees for other activities as well. With rising prices of energy and with other activities the Government is undertaking to create markets, it would appear that sound coal mine projects generally should be able to obtain financing without having to have loan guarantees from the Government.

Mr. MURTHA. Would you provide a list of the applicants for the record?

Mr. LEGASSIE. We will do that, sir.
[The information follows:]

LIST OF APPLICANTS FOR THE COAL LOAN GUARANTEE PROGRAM

The applications presently being processed by the Coal Loan Guarantee Program staff include the following companies:

Eastern Minerals Corporation, a loan of $7.1 million for a mining and preparation plant operation.

National King Coal, a loan of $5.0 million for a mining and preparation plant operation.

Anjomar, Inc., a loan of $7.0 million for a coal preparation plant.

Boone Resources, a loan of $1.5 million for a mining operation.

Holiday Coal Co., a loan of $2.0 million for a coal preparation plant.

The total amount of the loan guarantees requested is $18.08 million, which is 80 percent of the loan.

The coal loan guarantee program, authorized in 1975 to provide financial incentives to small and medium-size coal producers for low-sulfur underground mines, received $6 million in appropriations for a loan default fund in 1978. The administration is proposing to rescind the appropriated funds since we see no evidence that existing private sector institutions cannot finance new mine capacity.

Mr. MURTHA. Do you know of lending institutions that have indicated they will provide the funds even though the loan guarantee provision does not apply?

Mr. LEGASSIE. Well, there are many people who have proceeded to open up mines using loans from banks. No one has attempted to take some particular project that we won't fund and the bank won't fund and say that it is a good project and somebody should have funded it.

Mr. MURTHA. In other words you don't know of any banks that are willing to lend these particular applicants money without a loan guarantee?

Mr. LEGASSIE. If you are talking about those who are now applying, no, sir. We have not tried to go out and find bankers for them nor do we know whether they are all good projects and worthy of being financed by anybody, either a bank or the Government.

LEASING PROGRAM

Mr. MURTHA. Why will you terminate work on production goals and alternative bidding systems as you suggest with the rescission of $400,000 in fiscal year 1981?

Mr. LEGASSIE. You are now in the leasing program where we are requesting a rescission of $400,000. We are basically trying there to reduce the amount of activity in that program. It has a fiscal year 1981 budget of $2.8 million, so this is a small percentage reduction. While specific things may be indicated as possible targets for that rescissionary action, we are in fact looking carefully at the activity to determine the lowest priority work that would have been done. That evaluation is in progress now.

Mr. MURTHA. Your justifications state that you will transfer all leasing activities except the establishment of production rates and goals to the Department of Interior. What activities will be transferred?

Mr. LEGASSIE. I think the statement uses the word "anticipates." The actual situation is that we are initiating discussions with people in the Department of Interior about what would be appropriate. No final decisions have been made in this area.

There are two kinds of activities the Department is presently conducting. One kind of activity is associated with the actual performance of matters related to leasing such as the due diligence provisions and bidding systems which the Department is responsible for establishing. With most of the leasing activities being conducted in Interior, I think it is reasonable to ask the question, why leave these matters separated in another agency? One could argue, for reasons of efficiency, that it would make sense to combine them. We are looking at that question.

The other kind of activity relates to the establishment of targets for leasing, which is an analytic activity running computer programs and publishing reports, and making recommendations. That was appropriate and necessary when the position of the Department of the Interior was that it was just barely going to lease enough to meet their perceptions of needs. Secretary Watt has indicated that the Interior Department has a different view these days, for which I am quite thankful, and that they would plan to be quite liberal in their approach to leasing land. It may therefore be unnecessary to do this kind of target work to the extent that any of these are requirements of law. If we were to have a view that they should either not be done or be done by Interior rather than the Department of Energy, we would then bring that to the Congress for your consideration, and we recognize that.

Mr. MURTHA. The law does say that it is the responsibility of the Department of Energy, we will need some recommendations from the Department if you feel it needs to be changed.

Mr. LEGASSIE. I would say, sir, that my instinct, with my present knowledge and examination, is that it would make sense to consolidate all of the technical aspects of the leasing activity in one agency and that if indeed the Interior Department is going to pursue the approach to leasing that it has talked about, then it would be unnecessary either for the Department of Energy or Interior to run these computer calculations.

Mr. MURTHA. Let's go to Fossil Energy R&D.

Mr. LEGASSIE. All right.

ADVANCED ENVIRONMENTAL CONTROL TECHNOLOGY

Mr. MURTHA. You are requesting a rescission of $3 million in advanced environmental control technology for advanced flue gas desulfurization. Your justification on page 57 indicates that industry is making remarkable progress in the development of scrubbers which produce a dry, disposable waste product.

Could you provide for the committee examples of where industry has begun to build and market these systems?

Mr. LEGASSIE. Yes, sir. I would like to do that for the record because there is some substantial material and quite a number of companies involved in that area.

[The information follows:]

COMMERCIAL STATUS OF ADVANCED SCRUBBERS AND DEVELOPMENTAL NEEDS

The following chart summarizes the commercial status of advanced scrubber systems and remaining developmental needs.

COMMERCIAL STATUS OF ADVANCED SCRUBBERS AND REMAINING DEVELOPMENTAL NEEDS

SYSTEM	WASTE	COMMENTS	DEVELOPMENTAL STATUS	COMMERCIALIZATION STATUS UNITS SOLD	COMMERCIALIZATION STATUS OPERATION	GOVERNMENT ROLE DEVELOPMENTAL NEEDS
Throwaway Systems (Sludge)						
• Lime/Limestone Slurry						
- Adipic Acid (Shawnee, Springfield, MO)	Sludge	Improved SO_2	Commercial Ready	0	0	Private Sector
- Forced Oxidation (Shawnee, Widows Creek	Stable Sludge		Commercial	4 (Widows Creek Tampa, Muscatine)	1 (Dallman)	None (Comm)
• Dual Alkali (CIPS, SIGECO)	Stable Sludge	NA Reactant	Commercial	3+? Util	3 Utility (SIGECO, LG&E CIPS)	None (Comm)
				10+? Ind	10 Ind	
Throwaway Systems (Dry)						
• Nahcolite/Trona Dry Inject	Dry	Disnosition Limited to Dry Regions	Pilot Work in Progress at GFETC	0	0	Scale Up Tests Would Accelerate
• Lime Spray Dryer	Dry	Improved Process For Eastern Coal	Commercial for W. Coal	9 Util	1 (Riverside)	None (Comm)
				5 Ind		None (Comm)
			Commercial in Ind. Sector F. Coal	0 Util	0	E. Coal Tests Would Accelerate
				2+? Ind	2 (Celanese, Strathmore)	None (Comm)
Gypsum Producers						
• Chiyoda 12T (Gulf 23 MWe)	Gypsum (Salable)		Near Commercial	0	0	Private Sector (EPRI)
• DOWA (Shawnee)	Gypsum (Salable)	AL Reactant	Pilot Testing on Coal	0	0	Private Sector
• Research Cottrell/ Comb. Engr.	Gypsum (Salable)		Commercial	4	1 (Dallman)	None (Comm)
Sulfur/H_2SO_4 Producers						
• Aqueous Carbonate (ESCERCO)	S (Claus)	$NACO_3$ Reactant	Demo Comp in CY82	0	0	None (T&E Only)
• Wellman-Lord	H_2SO_4	NA_2SO_3 Reactant	Commercial	5 Demo?	5 Util (NIPSCO, CHUBU, PSNM Might be considered Demo)	None (Comm)
• Magnesium Oxide (TVA)	S	MGO	Demonstrated	3 Demo?	3 Util (Eddystone Mystic, Dick.) None now Operational)	None, Private Sector
• Copper Oxide Improved (PETC)	SO_2	Use Coal in Lieu of Oil or Methane in Process	Demonstrations Comp.	0	0	Private Sector Pilot
• Citrate (PETC)	SO_2		Sub Pilot Test Comp	0	0	Private Sector
• Direct Reduction with Coal	SO_2		Tech. Base Only	0	0	Private Sector

Mr. MURTHA. What will you do with the remaining $6 million in this activity in fiscal year 1981?

Mr. LEGASSIE. We are essentially focusing now on some continuing work in very advanced systems associated with spray drying and other advanced systems which are not of a character presently being pursued by industry. We are basically following the strategy that we should be in the longer range area and the work that we are heading out of involve those systems which industry has begun to market. We are also looking at combined systems for SO_x and NO_x removal which are quite sophisticated, using electron beams and things of that character. So again we are trying to put ourselves in the part of the territory where we see little industrial activity and which is quite innovative.

W. R. GRACE

Mr. MURTHA. How much of the amount for the W. R. Grace commercial facility design are you requesting to be rescinded?

Mr. LEGASSIE. Three million dollars. That leaves a total for Grace of $9 million considering prior year expenditures for continuing the feasibility study. We made a decision some time ago to tell Grace to do business with the Department of Energy in this way rather than to seek support under the Alternative Fuels program and we are carrying out that commitment; otherwise, they might have gone there. We in fact dissuaded them from doing that.

Mr. MURTHA. What is the total cost of the project?

Mr. LEGASSIE. It is $9 million for the feasibility study in terms of Government funding. I think the total cost of the original study including our contribution and some support costs is roughly $16 million, which is to say they are providing some money of their own into the feasibility study. In addition, they have made a proposal to the Synthetic Fuels Corporation for support of the plant itself.

WILSONVILLE SRC PILOT PLANT

Mr. MURTHA. You are also requesting a million dollar rescission for the Wilsonville, Alabama, SRC pilot plant. When would this pilot activity close down if no other funding were available?

Mr. LEGASSIE. We are in discussion with EPRI regarding the situation because they are also a co-funder and there is some possibility that the pilot plant might continue to run past the availability of Government funding depending upon EPRI's decision as to contribute funds to it. Without some assistance from EPRI, my understanding is that it would close down quite promptly following the Congress' approval of the rescission request.

COAL-OIL MIXTURES

Mr. MURTHA. Your justifications on page 58 state that coal-oil mixture technology has already been demonstrated in past and current DOE and industry projects. Could you please provide examples of such projects?

Mr. LEGASSIE. Yes. Let me for completeness do that for the record but I would mention, among others, that you may be aware of the feasibility test that Florida Power & Light Corporation has

conducted without any Government funds. I understand it has been rather successful. There are not only activities supported by the Government therefore, but private activities as well which have indicated that this is a viable, potential alternative for facilties that are now on oil.

[The information follows:]

CURRENT COAL OIL MIXTURE INDUSTRY AND DOE PROJECTS

Several DOE projects have substantially contributed to the demonstration of Coal Oil Mixtures (COM) with sufficient success that industry is now pursuing commercialization of this technology, These DOE projects are summarized in Table I.

Tables II and III list the industry projects that are now underway as a result of the technical confidence established in the Federally funded activities. Privately sponsored boiler conversions are listed in Table II and COM suppliers are tabulated in Table III. A map is attached which illustrates the geographical location of these various activities.

STATUS OF DOE SUPPORTED PROJECTS

PROJECT	APPLICATION	OPERATION
NEPSCO	UTILITY BOILER COAL DESIGNED (80 MW(E))	1,500 HRS 20% COAL
PETC	INDUSTRIAL 100 HP FIRETUBE BOILER, OIL DESIGNED	3,000 HRS 20 - 30% COAL
PETC	INDUSTRIAL 700 HP WATERTUBE BOILER, OIL DESIGNED	500 HRS 40% COAL
GM (CONSORTIUM)	INDUSTRIAL 120,000 PPH WATERTUBE PACKAGE BOILER OIL DESIGNED	744 HRS 35 - 50% COAL
INTERLAKE	1,200 TONS HOT METAL/DAY BLAST FURNACE	SHORT TEST STILL IN SHAKEDOWN

STATUS OF NON-DOE SUPPORTED PROJECTS

PROJECT	APPLICATION	OPERATION
FPC/DRAVO	UTILITY BOILER 383 MW(E) COAL DESIGNED	33 HOURS 45% COAL
FLORIDA POWER AND LIGHT	UTILITY BOILER 400 MW(E) OIL DESIGNED	PLANNED FOR 120 DAYS
COALIQUID	COM PREPARATION FACILITY (2,500 GPH)	PLANT IN OPERATION SINCE JUNE 1979

NON-DOE COMMERCIAL VENTURES (CENTRAL DISTRIBUTION FACILITIES)

COMPANY	LOCATION/ PROPOSED LOCATION	PRODUCTION CAPACITY	PROCESS	COMMERCIAL STATUS
FLORIDA POWER AND LIGHT	FLORIDA	10×10^3 BBL/DAY	STANDARD GRINDING TO 70% – 200 MESH	OPERATING SINCE 1980
ISLAND CREEK COAL	FLORIDA	15×10^3 BBL/DAY	STANDARD GRINDING; PLANT IS RELOCATABLE	STARTUP IN NEAR FUTURE
ERGON	VICKSBURGH, MISS.; MISS. RIVER AREA	6.0×10^3 BBL/DAY	MICRONIZED GRINDING WITH FLUID ENERGY MILL	PILOT PLANT IN EXISTENCE; PLANNED FOR 1981 OPERATION
ASHLAND OIL	SOUTH POINT, OHIO	0.7×10^3 BBL/DAY	STANDARD GRINDING TO 80% – 200 MESH	UNDER CONSTRUCTION
COALIQUID, INC.	KENTUCKY	1.2×10^3 BBL/DAY	COTTELL ULTRASONIC PROCESS	OPERATING SINCE SEPTEMBER, 1979
COMCO	FLORIDA	2.5×10^3 BBL/DAY	ULTRAFINE COAL; MECHANICAL GRINDING	SHORT-TERM DEMONSTRATION IN 1978. PILOT PLANT CONTINUES. FULL-SCALE PLANT IN 1981.

EXISTING/PLANNED COM DISTRIBUTION FACILITIES

Mr. MURTHA. Are you saying there are ongoing utility demonstrations that will take the place of the Government program?

Mr. LEGASSIE. I am not certain whether the Florida Power & Light Corporation activity is still running at this point. It had been earlier in the year and it may indeed be ongoing. In addition to that, we are aware of other firms which are considering similar tests. With this kind of activity and with data being produced, we don't see the need for investing some $17 million of Government funds in duplicative activity which won't come to fruition until three years from now if we were to proceed with it today.

Mr. MURTHA. Are there other proposed industrial demonstrations that can do so?

Mr. LEGASSIE. Yes. This is an area that can be supported under the Synthetic Fuels Corporation so there is a way for commercial projects to obtain some Government support of a loan guarantee nature as opposed to direct funding. We think the request for rescission, therefore, is quite proper.

Mr. MURTHA. What specific projects will be terminated if the funds are rescinded?

Mr. LEGASSIE. With respect to the rescission request, that was, as I understood it, basically for a new activity. That is, we had a Program Opportunity Notice out to initiate one or two new demonstrations. That would have been the primary application of those moneys. It is our judgment that that should not now be done. We are also closing out other activities in coal-oil mixtures. We have projects with New England Power Service Company and elsewhere in our own facilities, the Pittsburgh Energy Technology Center, for example, which we are winding down in order to redirect those moneys into coal-water mixtures and coal-ethanol mixtures which do not have the same commercial standing as coal-oil mixtures do today. So, yes, some coal-oil mixture activity inside our program is being wound down but that is because we prefer to put the money now on the higher risk technology which we think is quite interesting, exciting and appropriate for Government investment.

Mr. MURTHA. Would you provide a specific list of the projects for the record?

Mr. LEGASSIE. Yes.

[The information follows:]

PROJECTS IMPACTED BY COAL-OIL MIXTURE RESCISSION

The rescission request for $17.35 million of fiscal year 1981 funds in the coal-oil mixture program was intended to support the desgin, modification and operation of a utility oil-fired boiler to burn coal-oil mixtures. The Department of energy had issued a solicitation in September 1979 outlining four categories under which firms could propose coal-oil mixture demonstrations: (1) a utility boiler capable of generating about 100 megawatts of electricity that was originally designed to burn oil and does not have the capability of converting to coal; (2) a similar-sized oil-fired utility boiler designed with later coal conversion in mind; (3) an existing industrial boiler designed to fire oil and greater than 100 million Btu/hr energy input; and (4) a new industrial boiler, greater than 100 million Btu/hr energy input; designed to fire coal-oil mixtures as the primary fuel.

Four proposals were received, two in category 1 and two in category 2. In June 1980, DOE announced it would open contract negotiations with the Jacksonville Electric Authority (Jacksonville, Florida) and the City of Lakeland, Florida, both of which had proposed projects in category 1. Subsequently, however, with the significant private-sector interest developing in coal-oil mixture fuels, DOE determined that the Federally-sponsored demonstration was unwarranted and has therefore proposed a rescission of the fiscal year 1981 funds.

Mr. MURTHA. Do you have proposals in-house to demonstrate coal-oil mixtures in industrial facilities?

Mr. LEGASSIE. The only place may be in the Alternate Fuels Program. There could be a proposal but in our research and development program now unless there is some unsolicited proposal that might be down in the bowels of our system, I am not personally aware of such a thing.

Mr. MURTHA. If you would check and provide that for the record.

Mr. LEGASSIE. We will do that.

[The information follows:]

CURRENT PROPOSALS SUBMITTED TO DOE RELATED TO COAL OIL MIXTURES

No proposals for the demonstration of coal oil mixtures in industrial boilers are now in-house for review.

DIRECTLY-FIRED HEAT ENGINES

Mr. MURTHA. What is the effect of reducing the directly fired heat engine project by $3 million in 1981?

Mr. LEGASSIE. That will affect the number of contractors we would have in place for the future phases of that program. We have been thinking of perhaps having as many as—and you must accept that these numbers are approximate—four or five contractors to whom we might make awards for low NO_x combustor development. With the reduced level of funding, we plan to go with perhaps two. I think my own judgment is that if we pick two good ones, that is quite adequate.

MAGNETOHYDRODYNAMICS (MHD)

Mr. MURTHA. Your rescission request of $6 million for the magnetohydrodynamics program assumes that the program will be terminated in fiscal year 1982. Of the funds remaining after your proposed rescission, how much will be used for closeout costs and where will these costs occur?

Mr. LEGASSIE. If the program termination were initiated on June 1 it would take approximately $20 million for that termination. We would have $26 million available to us after laying out those termination costs which would support the $6 million rescission. There is a large number of contractors in that program, so the disposition of these termination funds would be widespread, and would involve major facilities in Tennessee, Montana and so on.

Mr. MURTHA. When do you expect to begin to start closeout of this program?

Mr. LEGASSIE. Well, we are awaiting the congressional review of the rescission request. We have in our cost calculations used June 1 an approximate date but that is strictly to allow us to make some estimates to be sure that we have adequate funds. We are not, in the meantime, because we see a rather tight situation, initiating some potential new starts that we had under consideration and might have been doing if it were clear the program were going to continue. We are delaying the delivery of a few items so as to minimize possible waste of funds, and we are trying to keep that kind of thing to an absolute minimum.

Mr. MURTHA. At what stage will this proposed rescission and the cancellation of the technology program leave the combustor development program?

Mr. LEGASSIE. Well, it would be terminated also, sir, if I understand your question correctly.

Mr. MURTHA. How about the Advanced Power Train?

Mr. LEGASSIE. Similarly.

Mr. MURTHA. Would you explain the rationale for terminating this long-term R&D program when long-term high risk R&D is supposed to be the focus of the new fossil energy program?

Mr. LEGASSIE. Yes, sir. This is a case where there would be large outlays to conduct a continuing technology base program, which would be the alternative to termination. We clearly think that the present fiscal situation does not support the earlier plan to have an extremely aggressive program that would try to accelerate development to early commercialization and would involve very large outlays in future years. We looked then to the alternative of a continuing technology program. We identified such a program as being in the neighborhood of $35 million to $40 million a year. Then we looked at the funding level that we had in mind for Fossil Energy in total which is around $400 million a year for our technology base effort. The MHD portion would be 10 percent of our entire activities and a rather large single element of the program.

We made a judgment that that is not affordable, sir, under the kinds of fiscal restraints which we think are appropriate in order to assist the President in balancing the Federal budget.

Mr. MURTHA. Do you believe that industry will pick up this program?

Mr. LEGASSIE. Well, not in the central territory of the program. I think there are things that are emerging from the program that are of interest to industry and which they might pursue as particular technological innovations. If your question is "will industry pursue MHD technology on its own at this stage?" I think that unlikely, sir, at any significant level. One must remember that Avco, for quite a long period of time, pursued MHD technology with private funds in the absence of Government activity but these were small amounts of money on a small scale and that was certainly a very innovative company decision.

In terms of the sums of money that would be required to move this technology to commercialization, it is not clear that industry would indeed pick this up. While it does meet, I think, the definition of long-range high risk technology which we do believe is appropriate for Government funding, a second consideration has entered here, and I think appropriately. Like everyone else I am concerned about inflation and this becomes an issue of affordability. As most of our technology base programs are smaller in dollar size, this would be the single largest technology base program as a single entity inside our program if we had proposed its funding.

Mr. MURTHA. I remember learning that the Soviet Union is ahead of us in this area. I have not been a big supporter of it, but is there a substantial potential in this field?

Mr. LEGASSIE. Well, the Soviet Union is engaged in MHD just as we are. They are a large country with large resources. I am always

a little bit leary of people who walk up to me and say, "The Soviet Union is ahead of the United States in this territory so you better fund my project." It is a fact that they have an MHD activity. We are presently in cooperation with them. Our program is connected to their program and so we are aware of what they are doing and they are aware of what we are doing.

The technology's potential is associated with an ability to more efficiently use coal. It is not like fusion where one would be able to get to a large new resource. It would represent an improvement of 10 or 15 or 20 percent, no more than that, in terms of the ability to make energy from coal. We already can use coal, so MHD is an improvement rather than doing something that we can't otherwise do. Therefore, it is a consideration of how much money we can afford to put into it.

Mr. MURTHA. It is only an improvement in efficiency of 10 to 15 percent. I thought it was higher than that.

Mr. LEGASSIE. Well, it is a question of how you are describing this. The thermal efficiency would go up. Say the thermal efficiency of a present power plant is 30 percent. MHD might, in fact, get to levels of 50 or 60 percent, but when you translate that into dollars, which is the way I like to measure things because it does not do any good to be more efficient if it costs you more, then the economic advantage seen out of this is estimated to be 10 or 15 percent at most. Moreover, it takes quite a large scale technological development to be able to achieve that.

Mr. MURTHA. You are saying there is a 50 percent increase in efficiency, but when you add the substantial capital costs, including research and development——

Mr. LEGASSIE. Without including research and development.

When you go to higher temperatures in order to have a higher efficiency machine, then you are paying more for materials, and you are investing more in capital to achieve that efficiency. The right way to test the answer is to say, what does the electricity ultimately cost? There are two benefits. One is it is more efficient. One obtains the environmental benefits of mining less coal to get the same amount of energy. The consumer is looking at how much cheaper is the electricity, and I am saying I think that answer is 10 percent, and that is the result of a lot of hard work in a long period of time. There are benefits to be achieved, but it is a question of the affordability and size of program to go after.

Mr. DICKS. Would the gentleman yield?

Mr. MURTHA. The gentleman from Washington.

SYNTHETIC FUELS CORPORATION

Mr. DICKS. Can you tell me what is the status of the Synthetic Fuels Corporation?

Mr. LEGASSIE. Yes. It is no different than it was a little while ago. We are still awaiting the President's nomination of a Chairman and board members to represent his administration.

Mr. DICKS. Do we have a Chairman and board members now?

Mr. LEGASSIE. There is an Acting Chairman and there are board members who were previously designated by the prior administration. That group of people is in place, they have a staff. My memory is something on the order of 90 people. I was present at a

hearing where Mr. McAtee was testifying so I am going on my memory.

Mr. DICKS. The board has resigned. There is no board and no Chairman.

Mr. LEGASSIE. There is an acting leader though and that is Mr. McAtee.

Mr. MURTHA. Is the General Counsel the Acting Director?

Mr. LEGASSIE. Yes.

Mr. DICKS. What are they doing now?

Mr. LEGASSIE. To my knowledge, and you must remember I am not a member of the Corporation or overlooking their day-to-day activity, they have just completed a solicitation. They had a closure of March 31 on a solicitation for industry to make proposals for projects to be supported by the Corporation. Some 61 proposals were received and I would presume that as of today they have begun to look at those and initiate a process of getting information about them so that eventually they could make some decisions as to which ones to support.

Mr. MURTHA. They would not be able to make the decision?

Mr. LEGASSIE. They talked about as long as, I think, a year before there might be formal selection of projects so I am presuming that between now and then there would certainly be the new Chairman and new board members.

Mr. MURTHA. Let's hope so.

Mr. DICKS. Let me ask you this. There will be much done by the Synthetic Fuels Corporation in this fiscal year, will there?

Mr. LEGASSIE. I think a great deal could be done promptly upon the naming and approval of the new leadership of the Corporation. There is staff on board, and that staff needs leadership from the current administration. I think quite a lot could be done.

Mr. MURTHA. Mr. LeGassie, I hope that we are not cutting back in long-range solutions to problems in order to make up for the budget deficit today. I know your analysis. This MHD which I always had a concern about, seems to be balanced. But I am concerned that the signals that we have gotten from the administration are short-term helps for a budget problem and don't help the energy problem in the country. Some of the signals we are getting worry me.

Mr. LEGASSIE. We tried, sir, in our R&D proposal to you, to project what we think are the most critical and highest priority areas where the Government can make a unique contribution. For example, even as our total budget has come down, we have increased the amount of proposed effort in such things as advanced research and development technology areas and in third generation liquefaction development. So we have reduced our activities primarily in near-term commercialization areas such as the coal-oil mixture program we discussed a few moments ago where we find that other utility companies are doing this without any Government money whatsoever. We think that in the proposal we put forward to you, sir, the money represents the priorities where they need to be.

Mr. MURTHA. You keep saying the money represents priorities and just as in Defense where we have to spend more money and take a chance to keep a balance here to deter a catastrophe, we

have to do the same thing in Energy and it saddens me to see some of these rescissions.

HYGAS

Mr. MURTHA. Have any modifications already been made to the Hygas pilot plant to prepare for operating with peat?

Mr. LEGASSIE. I believe we have made expenditures for that but would not under this proposal be actually proceeding to run the project as contemplated earlier.

Mr. MURTHA. How much of the proposed rescission is related to the Hygas modification?

Mr. LEGASSIE. I believe the number is a portion of the $5 million associated with peat gasification. We are proposing not to proceed with that activity, sir, partly because of the scale of operation that would be necessitated. We question whether that is the kind of activity the Government should be in at that scale. We think to move technology at that scale should be an action of the private sector. We will continue to have a peat program which is addressing some of the longer term areas of interest.

Mr. MURTHA. But you already have a pilot project there.

Mr. LEGASSIE. I don't understand your remark, sir. We have a pilot plant and we could operate it but it costs money to do so. What we are questioning and asking the Congress to agree with us, with respect to this rescission, is that if activities at this scale to commercialize this particular peat gasification project are to be done, they ought to be done by industry since this is the precursor to commercialization. At a lower level of activity we have data on processes which could be used and industry could pick that up.

Mr. MURTHA. Is it your intention to turn this particular plant over to industry?

Mr. LEGASSIE. If industry would like to utilize this plant, to lease it from us, we would certainly work out those kinds of arrangements.

Mr. MURTHA. Do you have anyone looking at it at all?

Mr. LEGASSIE. Well, we are going to have to look at the disposition of that plant and would certainly solicit interest from possible industrial entities before going the ultimate step which would be essentially to mothball the plant or to turn it over to GSA for disposition.

Mr. MURTHA. But you don't have anyone interested at this time do you?

Mr. LEGASSIE. As far as I know we are not actively soliciting that input pending the Congress view of this rescission but let me assure you, sir, that if the Congress agrees with this action we will not simply discard the capability that that plant represents without a very serious effort to see whether there may be other users.

Mr. MURTHA. Would you provide for the record some detail as to what other peat activities will be curtailed?

Mr. LEGASSIE. Yes. I am not aware that we are curtailing other peat activity with respect to any rescission events. We do have, of course, a level of peat support inherent in the rest of our 1981-82 budgets.

[The information follows:]

SURFACE COAL GASIFICATION—PEAT

The $5 million proposed for rescission consists of the monies previously budgeted for the following projects:

	Million
Pilot plant activities—PEATGAS	$4.4
Hydrogasification reactor tests	0.3
PDU activities in support of pilot plant effort	0.2
Biogasification studies	0.1
Total	5.0

It should be noted that all of the funds required to modify the HYGAS pilot plant in preparation for its peat operation were prior year monies and are not part of those proposed for rescission.

The total amount of money spent or obligated in support of the peat gasification program to date is $16.74 million. This amount does not include the $5.0 million being proposed for rescission. An additional $5.8 million has been provided by private industry (Gas Research Industry, Minnesota Gas Company, Northern Natural Gas Co.), in support of cofunded projects.

PEAT GASIFICATION

Mr. MURTHA. Why doesn't it make sense to run peat in a large scale gasification facility to show that the gasification process is a viable option for peat?

Mr. LEGASSIE. Well, I think it should be clear that gasification of peat is a viable activity without having to do it at that scale. There is experience at the lower levels of activity which give one that view. As you move the technology towards commercialization there has to be some point at which the Government says, "We're done, industry; if this idea is any good, you ought to take it on."

Mr. MURTHA. That sounds good but the problem is that nobody is taking it on at this point. I keep worrying about the delay. We can compare it again to Defense spending. We have a certain obligation in the Government to do things for the national security. I see energy as a national security problem and I realize we have economic constraints; you keep alluding to that and I understand your problem.

Mr. DICKS. This in a way is like unilateral disarmament.

Mr. MURTHA. That is exactly right.

Mr. DICKS. Of our energy effort.

Mr. MURTHA. In a sense it is unilaterally giving up and making the statement that, industry is going to take care of it and industry is going to take care of it only until they are assured of making a profit. When they can invest in something that is much more profitable, they are just not going to invest money in some of these areas and peat is an example of an area where there does not seem to be a lot of commercial interest, at least at this point. If we don't go forward as the Government, who is going to pick it up?

Mr. LEGASSIE. Sir, I would at least like to respectfully suggest that I have difficulty making the argument that peat is a national security bastion of the energy problem. I think what we are trying to say to you here is that we think we have preserved and are carrying out those most critical activities. For example, to the extent there is agreement that the problem is a liquids problem, we have very substantial sums still in the areas of coal liquefaction and gasification. I think peat is important regionally and important to some States and important to some companies but no one

really is of a view that in the next five or six years or even ten years that an enormous amount of energy is going to be generated in this country from peat as a resource.

Mr. MURTHA. That is why the Government should be involved in peat, you are absolutely right.

Mr. LEGASSIE. We agree that the Government should be involved in peat. We have a program. I think there is about a million dollars in 1982 in various aspects of peat, but the question here is whether we should operate a rather large pilot plant that costs $5 million to operate, whether that is an effective use of money. It is a judgmental question. I would not want you to have the view that we don't think that there are important activities in energy R&D. We think there are, and we are trying to put our money on the highest priority aspects of those programs.

PROGRAM PRIORITIES

Mr. MURTHA. If you had more money, obviously many of these projects would be funded. You need to go back to the idea you have less money. Under that direction you would make a priority decision and that I can understand.

Mr. LEGASSIE. Sir, I would like you to understand without question that if we asked our people they could readily identify good things for the Government to do at twice the level of the Carter budget submission. It is not a question of being fresh out of ideas. There are a lot of things that the Government might put money on if it chose to, all of which would have somebody who could explain to you why it made sense.

Mr. MURTHA. Do you remember the pressure that was on the Government when the gas lines got long?

Mr. LEGASSIE. Yes, sir.

Mr. MURTHA. Do you remember the movement in Congress and the administration? We are trying to avoid that and this committee has been in the forefront as you know in trying to set forth R&D suggestions.

Mr. LEGASSIE. I think some of that work is paying off.

If you are willing to pause for a moment of dialogue, I know you have more questions and if you don't want to just tell me.

Mr. DICKS. I think we ought to have some dialogue because we are trying to understand this and it is not easy.

Mr. LEGASSIE. I would say that the Committee should take a great deal of pride, for example, in the fact that after a rather long period of time of research and development associated with oil shale, for example, the oil shale industry now seems to be about ready to move on commercially and actually contribute liquid production to the energy needs of this country. I think without some of the historical work that has been funded in oil shale, some of the technological and environmental issues might not have been answered.

Now we are also partly there because energy prices have gone up but it took both of them in my view and I think there is a payoff, sir, and you are seeing it, for example, in that area. You are seeing it in the activities that Exxon is doing, even though it be in Europe, to get some synthetic gas in place, which should mean that the Europeans will have to buy less natural gas from the Russians.

This is something which is of a substantial concern to us, particularly with the Russian pipeline into Europe to supply gas.

Gas is also an effective substitute for oil so this is another case where a historical development program in Fossil Energy is seeing fruition, and I could readily give you some more examples. So we do have ways in which the historic R&D activity is now bearing fruit.

We are now trying to reduce the amount of money we are spending over historic levels and I think that is the thought across the Government as a whole. I think that is the appropriate thing to do. As we pay attention to our priorities we aren't going to see that we significantly suffer from that decision.

Mr. MURTHA. We are not reducing the amount of money being spent, we are just reducing the increase in various areas.

Mr. LEGASSIE. That is true also, sir.

Mr. MURTHA. You have probably seen this article, "Soviet, Its Oil Declining, Looks to Liquid Fuel From Coal," and of course they do not have the same constraints we have but this is an interesting article and I will enter it into the record at this point.

[The article follows:]

THE NEW YORK TIMES -- 15 March 1981

Soviet, Its Oil Declining, Looks to Liquid Fuel From Coal

By THEODORE SHABAD

The Soviet Union, apparently concerned about a slowdown in the growth of domestic oil production, has announced a synthetic fuels strategy similar to one being advocated in the United States.

News of the Soviet program, designed initially to test the conversion of coal to oil in small pilot plants, comes at a time when the future of some American synthetic fuels projects seems uncertain, in the wake of the Reagan Administration's plan to eliminate direct Government subsidies and let private industry carry a larger burden of development costs.

Soviet interest in the development of synthetic fuels, which had not been evident in the past, may reflect a desire in the Kremlin to maintain continued energy independence in the face of tightening domestic oil supplies.

There has been speculation in the West that future shortages of liquid fuels in the Soviet Union may at some point stimulate expansionist tendencies into the Persian Gulf oil-producing region.

Possibly a Last-Minute Decision

The Soviet decision to proceed with synthetic fuels development appears to have been a last-minute decision, possibly made in light of prospects for little, if any, growth in domestic oil production in the 1980's. No synthetic fuels program is mentioned in the guidelines for the five-year plan for 1981-85, published in December and approved by the 26th Communist Party Congress in February with only minor modifications.

The New York Times/March 15, 1981

Program would utilize lignite from Kansk-Achinsk and Moscow basins

The program was disclosed Feb. 23 in a keynote speech by Leonid I. Brezhnev, the Soviet leader, at the party congress. The gathering approved the five-year plan and Moscow's domestic and foreign policies for the first half of the 1980's.

"Looking ahead over the long term," Mr. Brezhnev said, "serious consideration must be given to the production of synthetic liquid fuels based on the coals of the Kansk-Achinsk Basin."

The Kansk-Achinsk Basin, in southern Siberia, is a vast repository of a low-grade type of coal known as lignite, similar to huge lignite deposits in the western United States. Although overall reserves are estimated by the Russians at 140 billion tons, the basin contributes less than 1 percent of the nation's coal production.

The lignite disintegrates while being transported; it tends to self-ignite in summer and a high moisture content causes it to freeze in winter. The main options for large-scale use of Kansk-Achinsk lignite are use at mine-site power plants or conversion to synthetic fuels.

Later in the party congress, Prime Minister Nikolai A. Tikhonov, in discussing the new economic development plan, said the synthetic fuels strategy urged by Mr. Brezhnev would require the combined efforts of the State Planning Committee, the Academy of Sciences, the State Committee for Science and Technology, the Ministry of the Coal Industry and other agencies.

In an interview with Izvestia, the Government newspaper, A. A. Krichko, director of the Institute of Mineral Fuels, said that construction of the first pilot plant had started during the party congress in the Moscow lignite basin, south of the Soviet capital.

The plant, to be built next to the existing Belkovskaya mine near Novomoskovsk, is to be completed in 1983, with a daily capacity to convert 10 tons of lignite into 2.5 tons of liquid fuel, or 18 barrels.

Work on Plant Begins This Year

Dr. Krichko, whose institute was said to have developed the technology to be tested, said that work would begin later this year on a larger pilot plant in the Kansk-Achinsk Basin of southern Siberia.

That facility is to have a daily lignite-processing capacity of 75 tons, yielding 130 barrels of liquid fuel. It is to be built southwest of Achinsk, at the Berezovskoye No. 1 strip mine, one of a series of huge open pits projected for the 1980's along with power plants that would generate electricity for long-distance transmission over extra high voltage lines.

The initial Soviet synthetic fuels projects are both more limited in scope and substantially smaller than the United States effort envisaged last June, when President Carter signed legislation creating the Synthetic Fuels Corporation, a quasi-governmental entity, and set a goal of producing the equivalent of 500,000 barrels of oil a day by 1987.

The American program, unlike that of the Soviet Union, provided for a number of alternative sources of synthetic fuels, including not only coal-to-oil processes, but ways of converting coal to gas as well as extracting liquid fuel from oil shale.

Soviet Has Huge Gas Reserves

The Soviet Union is concentrating its efforts on making liquid fuel from coal. With vast reserves of natural gas in Siberia, it has thus far displayed little interest in commercial coal gasification, although it has done experimental work in that field. Nor do Soviet planners, for the time being, intend to make use of oil-shale reserves, except for an old shale-burning electric power industry in Estonia.

Furthermore, the United States is further advanced in its synthetic fuel program than the Soviet Union. Some American liquid fuels processes have passed the pilot plant stage, in which engineering designs are tested, and are now moving into the demonstration plant phase, intended to demonstrate economic feasibility. Two of the projects authorized by the Carter Administration, and now threatened by budget cuts, are 6,000-ton-a-day demonstration plants, in Morgantown, W. Va., and Newman, Ky.

Mr. MURTHA. The Central Intelligence Agency predicts that the Russians will be looking to import coal or oil very shortly and that will then place more pressure on the market and of course start to pressure the prices and the amount of oil that is available to us. It brings to mind the issue the gentleman from Washington mentioned, the national security issue of all these alternatives.

DEPARTMENTAL ADMINISTRATION

Mr. DICKS. Since you are a principal witness today let me ask you this question. I read here in the budget now that we are cutting back all these things but they are going to add $41 million for general administration for departmental administration activities.

How can the Department of Energy come up here and ask us for $41 million at a time when they are cutting their effort?

Mr. LEGASSIE. My memory is that there is a reduction——

Mr. DICKS. That is not the pay increase, that is $41 million for general administration.

Mr. LEGASSIE. All right. Again you must remember that this is not my responsibility in the Department.

Mr. DICKS. You are a very enlightened leader of the Department and I would like to hear your views.

Mr. LEGASSIE. Thank you very much for those kind words.

Mr. DICKS. I mean it, it is true.

Mr. LEGASSIE. I am told things by virtue of having sat in other hearing rooms or having conversations so I might need to correct the record if I make an error.

Mr. DICKS. Sure.

Mr. LEGASSIE. My impression is, for example, that the General Services Administration has substantially increased the payments that the Department has to make for the space in the Forrestal Building. You are saying what generates an increase of this kind and my memory, which could be in error, is that the number went from eight million to fourteen million between one budget year and another, so the GSA is helping their budget and the Department of Energy is contributing to that. Now it may not be very appropriate but that is an element of that increase. We are talking about postage stamps and telephone service and similar items.

Mr. DICKS. Was there a breakdown of that?

Mr. LEGASSIE. That has been furnished to other committees and I am sure it could be furnished to this committee.

Mr. DICKS. I think this committee would like to know what that is all about. All I can find is the $41 million.

Mr. LEGASSIE. I am sure your concern is that maybe we are just getting fat in our administrative end of things and I think just the reverse is true.

Mr. DICKS. We are not going to have very much to do over there so we are reducing.

Mr. LEGASSIE. We are reducing the number of people in that part of the Department but the increases that you see there are for goods and services, money we pay others for services delivered to us.

Mr. MURTHA. If you would provide that for the record, Mr. LeGassie.

[The information follows:]

$41 MILLION SUPPLEMENTAL

The request for a supplemental of $41 million in the General Administration appropriation is related to changes in funding requirements in Cost of Work for Others and Miscellaneous Revenues. The requested supplemental of $29,362,000 in Cost of Work for Others reflects increased costs of products sold and services performed. This increase is offset by a corresponding increase in related revenues for these products and services. In other revenue areas, however, there has been a $50,475,000 decrease from the original estimate. This reduction is primarily a result of reduced steam revenues because of the strike at N-reactor and slippage in anticipated sales of nuclear material to Italy. In these areas there is no corresponding decrease in the cost of work since they are by-products of activities that are funded by direct appropriations elsewhere in DOE's budget. The result of these events is a net decrease in Miscellaneous Revenues ($11,638,000) and an increase in Cost of Work for Others ($29,362,000) for a total supplemental funding requirement of $41 million.

Mr. MURTHA. There would be a decrease of about several thousand people this year, 1,500 at the most out of 20,000. This is really not a large reduction in personnel this year in the Department of Energy.

Mr. LEGASSIE. Across 1981 and 1982 I think the total is something like 2,500, some of which will occur in 1981 and the rest in 1982, so it is a 12.5 percent decrease.

Mr. MURTHA. Mr. LeGassie, you have defended your administration's policy admirably but this committee hopefully will try to create a priority that you folks in the Department of Energy will be guided by. I remember President Nixon getting up and talking about the energy crisis, as did President Ford, and President Carter. This committee has seen many Department of Energy Secretaries and Federal Energy Agency people and so on voice their concerns. We are not spending the money in an area where I think we should. We could have some setbacks if we continue in this direction, and this worries me. I am not talking about the short run but I am talking about the long run because many of the things that have been done recently in the short run will have an impact.

NATURAL GAS DEREGULATION

Mr. DICKS. Will this administration issue the deregulation of gas?

Mr. LEGASSIE. No, sir, there is no decision on that. There is a study and analytic work in progress which will eventually lead to the formation of an administration view.

Mr. DICKS. Who is doing that analysis?

Mr. LEGASSIE. Much of that analysis is being done in the Department of Energy in the Office of Policy Planning.

Mr. DICKS. When do you think they will be finished with their study?

Mr. LEGASSIE. The work that is in progress now is basically on a two month schedule. That does not mean that at the end of two months somebody is going to have a policy position. There is a period of some unknown length in which data is digested and evaluated and discussions take place among the various entities in this Administration who will contribute to a final administration position.

Mr. DICKS. In your professional view what would be the consequence of deregulation of natural gas prices on the energy picture, speaking more generally now?

Mr. LEGASSIE. Speaking in a general way, the overall result will be beneficial to the country.

Mr. DICKS. Can you explain what would be the consequence in terms of price.

Mr. LEGASSIE. Prices would rise, sir. Although not necessarily to the same degree for everybody, and of course there is some gas which is selling now at high prices. We are importing some very expensive gas and to the extent that that stopped maybe there would be some benefit. In general, though there would be an increase in price reflecting the true value of this energy resource. There would also be undoubtedly a spur to companies in the energy business to seek more gas because now the economics are available to them to go in and explore and find and bring in that gas which today there is no incentive to do. So there would be short-term disbenefits to price increases.

Mr. DICKS. How high do you think that would go? I am told it would increase by 100 percent.

Mr. LEGASSIE. Sir, I don't have a judgment on that. I think if one is looking, of course, at the present Natural Gas Act which has some phased deregulation in it already and one is looking at the——

Mr. DICKS. Does that not give a bit of stability to this area? We have already fought that battle and it seems to me that phased deregulation kind of balances. I am told there was a little drilling underway.

Mr. LEGASSIE. If the formula in that legislation had gotten the price of gas over time up to, say, the energy equivalent of fuel oil, then one could have gone from there to complete deregulation with no really discernible effect. The problem is, of course, that it does not so that one ends up in 1985 with still a very significant difference between the real value of gas and the regulated cost of it and so there is concern about the adequacy of that bill. That is one place one could be.

Another place is complete deregulation on some schedule, either that schedule or earlier schedule, or a later schedule. There is a spectrum of possibilities which needs to be understood and examined and that is what is going on now in terms of what is the best recommendation that could be made.

Mr. DICKS. How long will that be?

Mr. LEGASSIE. It will be two months plus a period for evaluation as I understand it.

Mr. DICKS. Congress would have to take action on this.

Mr. LEGASSIE. Yes, to the extent there is a proposal considered.

Mr. DICKS. Mr. LeGassie, I will tell you the same thing I told President Carter when he recommended a price of ten cent increase for gasoline. There was not much chance of that passing, it got 39 votes. I think natural gas decontrol might get more than 39 but not a lot more than 39. It is about as unpopular an issue as you can have even though it may have some long-range benefit.

Mr. LEGASSIE. Well, one has to balance the popular thing against the right thing sometimes.

Mr. DICKS. Well, in Congress I am talking about votes.

Mr. LEGASSIE. Yes.

Mr. DICKS. The way you pass something, if you get 218 it falls far short.

Mr. LEGASSIE. I understand your point.

Mr. DICKS. Let me ask you this. Would deregulation of natural gas prices help bring on the alternative energy sources in your view?

Mr. LEGASSIE. I think it would certainly be beneficial to that situation because it would relieve the continuing presence of what might be described as an unfair competitor in the energy world.

Mr. DICKS. Thank you, Mr. Chairman.

Mr. MURTHA. If you would Mr. LeGassie, answer for the record some additional questions as well as these questions from Congressman Long, who is quite interested in the peat problem.

Mr. LEGASSIE. I will do so, sir.

[The questions and answers follow:]

Questions Submitted by Congressman Long

SURFACE COAL GASIFICATION—PEAT

Question. What would the $5 million requested for rescission from the Department's peat program have been spent for if the program went ahead? Please provide specific details. Would any of this amount have been spent for parts to modify the HYGAS pilot plant? What is the total amount spend on the peat program to date?

Answer. The $5 million proposed for rescission consists of the monies previously budgeted for the following projects:

	Million
Pilot plant activities—PEATGAS	$4.4
Hydrogasification reactor tests	0.3
PDU activities in support of pilot plant effort	0.2
Biogasification studies	0.1
Total	5.0

It should be noted that all of the funds required to modify the HYGAS pilot plant in preparation for its peat operation were prior year monies and are not part of those proposed for rescission.

The total amount of money spend or obligated in support of the peat gasification program to date is $16.74 million. This amount does not include the $5.0 million being proposed for rescission. An additional $5.8 million has been provided by private industry (Gas Research Industry, Minnesota Gas Company, Northern Natural Gas Co.), in support of cofunded projects.

SURFACE COAL GASIFICATION—HYGAS PILOT PLANT

Question. What are your plans for the HYGAS pilot plant? If you scrap the plant, do you have any prospective buyers? If so, who are they? How much do you expect to receive for the pilot plant if sold? What will be done with the parts that have been purchased to modify the HYGAS pilot plant to run on peat?

Answer. The HYGAS pilot plant was constructed in the early 1970's and has since been used to develop the HYGAS concept of coal gasification. Since this developmental program has been completed, the facility will be declared excess government property and turned over to the appropriate office for disposal according to established regulations and procedures. This facility is located on property belonging to the Institute of Gas Technology (IGT) and must be removed according to the conditions in the contractual agreement existing between DOE and IGT. It is anticipated that the existings property will be made available to other government agencies and interested parties according to the regulations regarding such disposal activities. The parts used to modify the pilot plant for operations with peat would also be included as part of the property offered as excess.

Surface Coal Gasification—Peat

Question. What has been accomplished by the peat program to date?

Answer. The main objective of the DOE peat program to date has been to develop a technology for converting peat into substitute natural gas in an economical and environmentally acceptable manner. Substantive progress has been made in each of the project elements which comprise the peat program.

Gasification Development.—Peat has been demonstrated to be an excellent feedstock for conversion to substitute natural gas. A detailed Kinetics and fluid mechanics data base for peat gasification over a broad range of operating conditions has been developed.

Dewatering.—Wet carbonization, a chemical reaction pretreatment procedure for dewatering peat, has been successfully demonstrated at the laboratory scale. Funds have already been provided for the construction and operation of an integrated process development unit to test wet carbonization at a scale where meaningful engineering data may be obtained.

Resource estimation.—Eleven states now perform DOE supported peat resource assessments. The states are: Louisiana, Florida, North Carolina, South Carolina, New York, Massachusetts, Rhode Island, Maine, Michigan, Minnesota and Alaska. Results to date indicate that the magnitude of the U.S. peat resource is at least as large as originally thought.

Environmental and socioeconomic impact assessment.—As a result of studies initiated and completed, DOE has identified the issues that must be addressed prior to any large scale utilization of peat in the U.S.

It should be noted also that an agreement for the joint development of peat utilization technology is being negotiated by DOE and the Finnish Ministry of Trade and Industry. Cooperative activity will be initiated in the areas of direct combustion, liquids, production, and harvesting.

Question. How much of the funds appropriated for fiscal year 1981 have been spent for peat resource estimation?

Answer. Approximately 1.4 million dollars has been used to support the surveys being performed by eleven states.

Enhanced Gas Recovery

Question. Please provide for the record what projects will be affected by the $1 million rescission in each of the eastern gas shales, the western tight sands, and methane from coalbeds?

Answer. The following list of projects will be modified or cancelled because of the fiscal year 1981 budget rescission:

Eastern gas shales

Reservoir flow properties research at the eastern mineback experiment will be deferred for one year.

All directional drilling research, including water jet systems, will be terminated.

Western tight sands

Diagnostic supporting research (rock fracture mechanics and mass transport studies) for the multi-well experiment will be significantly reduced.

Coring of representative lenticular sand reservoirs leading to development of a regional resource characterization data base will be cancelled.

Methane from coalbeds

The RFP to select a technical support contractor will be cancelled. The agreement with the Colorado Geological Survey to provide coal resource maps will be terminated.

Additional Committee Questions

Surface Coal Gasification—Memphis Project

Question. What are the overall financial provisions for the Memphis gasification project? Is it a fact that if the project is commercially successful, the government will retrieve its total investment at a profit under the current contract? If so, what is the impetus for revising this project and having it apply to the Synthetic Fuels Corporation? Considering that the project would have to be evaluated by the Synthetic Fuels Corporation again and require Board approval before going ahead, how much will the project's schedule slip?

Answer. The contract provisions concerning pay back are attached.

If the Memphis Light Gas and Water Division (MLGW) Industrial Fuel Gas Demonstration plant was constructed and operated under the terms of the present Department of Energy contract, and subsequently purchased by MLGW for commercial operation, the purchase price would be based on the total Phase II (construction) cost now budgeted at $645 million which includes contingency, escalation at 10 percent per year and support costs. There are additional government costs of about $85 million that are not included in the pay back formula. These are Phase I design costs (already expended) and estimated Phase III demonstration operating costs. Because the adjustments are indeterminate, it would be difficult to establish a maximum government pay back at this time. The pay back is limited to an adjusted plant revenue figure as established contractually by an order of priorities. Therefore, the government pay back ranges from a possibility of zero to a tangible maximum, (as much as 90 percent) based on many factors, most important of which is plant operability. The purchase price would be paid to the Government over the 27 years following transfer to MLGW and could be considered to be a 27 year no interest loan. The current estimate of total project cost is $830 million of which MLGW has committed one million dollars in 1980 and is contractually obligated to fund $99 million in operating costs, (in fiscal year 1985 and fiscal year 1986).

Considering that the Memphis project is designed as a commercial module to satisfy a commercial market and there is no intent to expand the capacity for greater production in the future, the Memphis project satisfies the criteria for a project supported by the SFC. Now that the risk has been reduced and the design has been essentially completed under the DOE contract, a satisfactory Memphis/SFC contract based on loan/price guarantees (or other authorities) should be feasible.

After a Synthetic Fuels Corporation (SFC) Board is appointed and confirmed and the Memphis Light, Gas and Water project is approved, the transition of the MLGW project from the Department of Energy (DOE) to the SFC will require a new contract between MLGW and the SFC. Negotiation of that contract could require a considerable delay of the project. In the past, negotiations of DOE contracts for similar projects have required eight to fourteen months.

Division IV

ARTICLE (4) XII—DISPOSITION OF THE DEMONSTRATION PLANT

a. At the completion of Phase III, the Contractor hereby agrees to purchase, and the Government agrees to sell to the Contractor, the Government's interest in the Demonstration Plant. The Contractor's purchase price shall be the total Phase II cost adjusted to delete (1) costs due to changes to the baseline configuration which are solely for the Government's interest, and (2) costs incurred due to the Government's failure to timely fund its share of its costs in accordance with the baseline funding plan;

Less

The Contractor's contribution that shall bear on the Phase II costs as determined by the proportion of the total Phase II costs, as adjusted, to the total of Phase II, as adjusted, and Phase II costs, adjusted to delete (1) costs due to changes to the baseline configuration which are solely for the Government's interest, and (2) costs incurred due to the Government's failure to timely fund its share of its costs in accordance with the baseline funding plan (with a minimum deduction for the Contractor's contribution of $80 million);

Less

Depreciation of the Government's share of such Phase II costs, as adjusted, for the period of Phase III calculated on a twenty-year life, straight line basis (5 percent per year).

The Contractor agrees to notify and provide DOE in writing its rationale within thirty days of the receipt of any written Government request for a change which the Contractor deems to be solely for the Government's interest.

b. Except as otherwise provided for by this Article, the claim of the Government for the purchase price shall be secured by and limited to the revenues and assets of the Demonstration Plant. The payment for the Government's equity (payback price) as determined in paragraph (a) above shall be in 27 annual increments without interest from and after the end of Phase III, unless sooner paid in full. Provided, however, that in the event the Contractor at any time in the future contemplates additional revenue bond financing for the purpose of modernization or expansion of the Demonstration Plant, the plants pipeline distribution system and/or the storage facilities required by the operation of the Demonstration Plant, payments to the

Government shall be subordinated to the payments as hereafter provided in paragraphs (c) 1, 2 and 3 as if they were a part of the original project. The Contractor will forward to the Government a copy of the approved official statement supporting the bond issue which details the financial position of the Contractor and supports the issue of the bonds. The Government agrees that it will execute and deliver all such subordination or other agreements and documents as may be deemed reasonably necessary or advisable by competent bond counsel so as to effectuate the intent and purpose hereof and to facilitate the successful sale of such bonds.

c. In consideration of the Contractor's sole authority to set rates after Phase III operations, the order of priority of claims against revenues from the plant and their disposition shall be as follows:

1. Payment of all operating expenses of the Demonstration Plant, pipeline distribution system and storage facilities.

2. Payment of interest accrual and sinking fund accrual on any MLGW revenue bonds for its share of the Phase II and Phase III program cost, for its cost of constructing and acquiring the pipeline distribution system and storage facilities relative to the plant and for any MLGW revenue bonds subsequently issued for modernization or expansion of the plant, the pipeline distribution system and the storage facilities.

3. Payments to working capital reserve, renewals and replacement reserves as required by the bond resolutions relative to the issuance of revenue bonds as provided in paragraph 2 above.

4. The remaining net revenues shall be divided annually 65 percent to the Government or in such other proportions as may be determined pursuant to item 7 below with a maximum annual payment of 1/20 of the total payback price and the remainder to the City of Memphis.

5. In the event that there is an expansion of the plant, the Government's share of the net revenues shall be the average annual payment to the Government for the preceding three years (but not to exceed 65 percent of the net plant revenues), or 50 percent of the net revenues from the expanded plant, whichever is greater, with the maximum annual payment being 1/20 of the total payback price.

6. From and after payment in full of the Government's share of the total Phase II construction cost without interest, but in any event after 27 years from the date of completion of Phase III, no further payment shall be made to the Government, and the entire remaining net revenues shall be paid to the City of Memphis, regardless of whether the Government's share has been paid in full or not.

7. In the event that there is a cost overrun in the construction of the plant, the Government will be entitled to an increased percentage of the net revenue. For the purpose of determining whether there is a cost overrun, the actual cost of Phase II shall be determined at the end of Phase II and this cost compared to the October 1979 dollars baseline cost estimate adjusted to the point of Phase II completion in accordance with the indices and formula provided in ARTICLE (2) V—FINANCIAL PROVISIONS, paragraph 4 b. A cost overrun will occur only when the Phase II cost as herein provided exceeds such adjusted October 1979 baseline cost by 10 percent. If there is any cost overrun in excess of 10 percent, the Government's share of the net revenues from the plant shall increase by 2 percent for each full $35 million of overrun. Costs resulting from Force Majeure and costs caused by the Government as stated in Article (4) XII (a) shall be excluded from the determination of actual Phase II cost. In no event shall the share of net revenues paid to the City of Memphis be less than 20 percent. In the event that there is an underrun utilizing the same formula for determining an overrun, the Government's share shall be reduced by 2 percent for each full $35 million underrun below 90 percent of the adjusted October 1979 cost. Force Majeure shall mean act of God, strikes, lockouts, or other industrial disturbances, acts of the public enemy, wars, blockades, insurrections, riots, epidemics, lightning, earthquakes, fires, storms, floods, arrests and restraint of rules and peoples, civil disturbances, explosions, or any other cause, whether of the kind herein enumerated or not, not within the control of the Contractor, and which, by the exercise of reasonable care, the Contractor is unable to prevent or overcome.

Provided, however, that in the event the Consumer Price Index published by the U.S. Department of Labor shall increase by 25 percent or more in any consecutive 12-month period during the term of Phase II, the parties agree to enter into good faith negotiations to redetermine the baseline cost in such current year dollars for the purpose of determining the existence of any cost overrun.

d. In the event the Contractor in the course of operation of the plant (after the completion of Phase III) experiences five (5) consecutive years of which the Government's share of net revenues is not a substantial sum and future prospects of increased net revenues are unlikely, the Contractor and the Government will enter

into good faith negotiations to determine whether, by mutual agreement, the remaining unpaid payback price should be reduced or eliminated.

e. In the event the Contractor, while operating the plant (following the completion of Phase III), shall determine that the plant cannot be operated in a reasonably satisfactory economic manner and that it should be sold or salvaged, the remaining unpaid principal balance of all revenue bonds sold by MLGW for the purpose of financing the plant, the pipeline distribution system and the storage facilities, the modernization and expansion thereof, and all interest due thereon shall be paid first from the total available bond and plant reserves and salvage. The remainder, if any, shall be divided 65 percent to the Government and 35 percent to the City of Memphis.

MHD—Rescission of $6 Million

Question. Please provide for the record the specifics of where the $6 million reductions of MHD will take place?

Answer. The rescission of $6 million is distributed between engineering development projects ($4 million) and supporting research ($2 million). Specifically, an uninitiated but planned new activity with Mississippi State University for instrumentation development ($2 million) is proposed to be terminated. it is also proposed to defer or delay the deliver of CDIF test articles planned for out-year testing (including the TRW coal combustor ($600,000), the AVCO B-series channel ($1 million), and the CDIF special test equipment and integration activities associated with out-year testing ($1.8 million). Also small contract scope reductions are proposed at several sites (such as MIT, Westinghouse, and UTSI).

MHD—Rescission Effect on Advanced Power Train and Combustor Development

Question. At what stage will this proposed rescission and the cancellation of the technology program leave the combustor development program? At what stage will the Advanced Power Train be?

Answer. Upon program termination all activities will cease, including the reference combustor development and advanced power train (APT) programs. The proposed rescission will reduce the scope and pace of the APT program in fiscal year 1981 and, in the combustor program, will defer the initiation of the planned design and construction of the CDIF coal combutor (smaller scale combustor testing will be continued in fiscal year 1981).

Enhanced Oil Recovery

Question. Please provide for the record those projects you are reducing in fiscal year 1981 in the enhanced oil recovery program. Your justification states that the rescission will not affect development of enhanced oil recovery technologies since administration, leasing, tax, regulatory and decontrol policies will more effectively accelerate technology in this area. Why then are you merely suggesting delaying the field test rather than reducing them entirely? If they were eliminated entirely, how much more money could be rescinded in fiscal year 1981? At what level are these projects supported in fiscal year 1981?

Answer. The first project proposed for rescission in fiscal year 1981 is an experiment being conducted by Stanford University with the cooperation of Petro Lewis Corporation at a Petro Lewis field in Kern County, California. The purpose of the test is to evaluate the effectiveness of injecting a foam with steam to improve oil sweep efficiency. Stanford has been evaluating foams in the laboratory under DOE funding for several years. Laboratory results of one foam were encouraging enough to conduct an experiment in the field to evaluate its effectiveness under actual operating conditions. The test involved two patterns, one being injected with the steam/foam combination, the other with steam only as a control. This test began in fiscal year 1980. The second project is a field experiment of the in situ steam drive process in a Utah tar sand deposit, the Northwest Asphalt Ridge Deposit near Vernal, Utah. Preliminary steam injection experiments were completed late in fiscal year 1980. The results showed that acceptable steam injectivity rates were possible and that communication could be established between wells. Based on these results a complete steam drive field experiment was justified and is currently scheduled to begin in mid fiscal year 1982.

Although it is correct to conclude that administration, leasing, tax, regulatory, and decontrol policies will effectively accelerate EOR technology, the acceleration of technology will be in the areas of the more proven EOR processes, such as conventional steam drive, carbon dioxide flooding, polymer assisted water-flooding, and surface processing for tar sands recovery. The two tests being conducted by DOE

utilize advanced technologies not yet ready to be applied on a commercial scale. If additives can be developed that improve the recovery efficiency of steam drive from the current 50 percent average of just 60 percent, an estimated additional 2-3 billion barrels of domestic heavy oil can be recovered. As demonstrated by the proposals for tar sand projects to the Alternative Fuels Solicitations of P.L. 96-126, industry is pursuing surface processing. In situ techniques must be developed that can be applied to the 80-90 percent of the tar sand resource too deep to mine. These techniques, if developed, could lead to the recovery of 2-6 billion barrels of the known domestic tar sand resource.

The proposed $1.0 million rescission from the tar sand field experiment is available only due to a 6 month delay of the planned starting date. The test was originally planned to being early in fiscal year 1982, but increased Utah permitting requirements have caused the delay. This new schedule resulted in a reduced level of engineering and site preparation work this fiscal year. However, this test is considered important enough to be recommended for full funding in fiscal year 1982. the $1.0 million was the full amount available in fiscal year 1981 due to the schedule change. No other money would be available in fiscal year 1981 if the test were eliminated due to incurred costs to date and estimated close-out costs. The entire tar sand program ($5.0 million requested in fiscal year 1982) is oriented around planned field experiments.

The proposed $1.0 million rescission from the steam with foam field test was made available by delaying the post test coring, logging, and analysis effort. The funds were planned for obligation in fiscal year 1981, with outlays to occur in fiscal year 1982. Since no funds are being requested for this experiment in fiscal year 1982, this work will be delayed into early fiscal year 1983, which will be an acceptable time frame for obtaining the information. The contract for the field experiment is currently fully funded. Termination of the contract will not provide any additional funds in fiscal year 1981 due to incurred costs and contract close-out costs.

Resource Applications—Alternate Fuels

Question. You are requesting a rescission of $427,000 intended to monitor projects funded under the Alternative Fuels Production provisions of the Interior Appropriations. Your justification states that this activity will become the responsibility of the Synthetic Fuels Corporation. Please explain why you believe the monitoring of projects that have already been funded by DOE is the responsibility of the Synthetic Fuels Corporation and what provisions of its statute call for such monitoring?

Answer. The language of the rescission is misleading in that the monitoring of the projects will remain a DOE responsibility and is not being proposed for transfer to the Synthetic Fuels Corporation

The proposed reduction of $427,000 in the FY 1981 budget for the Coal Resource Management eliminates funding for coal-related studies and assessments conducted in support of private sector commercial initiatives. This is consistent with the Administration's refocusing of Federal funding away from commercialization and toward longer range research. Decontrolling energy prices, providing regulatory certainty and tax programs which encourage investments will do more to encourage adoption of new technologies than Government-funded studies and assessments.

Resource Applications—Alternate Fuels 2nd Round

Question. Please explain your rationale for requesting the rescission of the $300 million for feasibility studies and cooperative agreements. Please summarize the number of kinds of projects which were selected in this second round of awards. Please place in the record a list of the projects, a summary of each, the estimated dollar value and the amount of cost sharing.

Answer. The introduction of new technologies into the market place is a private sector responsibility. Those firms who are seriously interested in commercializing alternative fuel technologies have the technical and financial resources to do these studies. For this reason, the Administration's position is that the planning and study efforts contemplated under the second round of solicitations should more properly compete for financing in the private market along with other energy projects; therefore, a rescission has been proposed for the subject funds. The list of projects is as attached:

U.S. DEPARTMENT OF ENERGY
OFFICE OF PUBLIC AFFAIRS
WASHINGTON, DC 20585

DOENEWS:

FOR IMMEDIATE RELEASE
DECEMBER 11, 1980

DOE SELECTS 79 PROPOSALS IN SECOND ROUND OF SYNFUELS PROGRAM

The Department of Energy has selected 79 proposed alternative fuels projects for awards totaling up to $270 million. This is the department's second round of awards in the nation's program to stimulate production of the equivalent of two million barrels of oil daily in synthetic fuels by 1992.

They involve both feasibility studies of commercial alternative fuels facilities and cooperative agreements between industry and the government to share preconstruction and construction costs.

The projects selected were from among 1,085 proposals submitted. Fifty-six were for feasibility studies (from 848 submitted) and 23 were for cooperative agreements (from 237 submitted).

Projects that are eventually built would use coal, shale, tar sands, lignite, peat, biomass, solid waste and unconventional natural gas to produce gaseous, liquid and solid fuels and chemical feedstocks.

Feasibility studies will determine whether a project is technologically, financially and environmentally viable. The cooperative agreements are to advance projects, the feasibility of which has already been established, by sharing the cost of such activities as designing, financing, permitting, contracting and actual construction.

Solicitations for this round of awards were issued August 1, 1980 with a submission deadline of September 30, 1980. Awards were announced on July 9, 1980 for the first round of solicitations for approximately $200 million in feasibility studies and cooperative agreements. Another solicitation of $30 million has been issued for innovative ways for direct combustion of coal, wood or peat, with a submission deadline of January 12, 1981.

(MORE)

R-80-252

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Of the 103 feasibility studies selected for grant award under round one, 94 have been awarded. In the cases of the 11 projects selected for negotiation of cooperative agreements, 8 have been awarded, 2 are in negotiation and one proposal was withdrawn. The department is currently evaluating proposals recently received in application for loan guarantees, purchase commitments and price supports.

- DOE -

News Media Contacts: Bob White, 202/252-5810
Ed Vilade, 202/252-5810

Note: The department customarily provides, on request, a debriefing to proposers whose proposals were not selected. This debriefing enables proposers to understand the strengths and weaknesses of their proposal and improve future submittals. These debriefings can be held in person in Washington, D.C., or by telephone. To schedule a debriefing, proposers may call 202/633-9817 any work day through December 23, 1980.

R-80-252

PROPOSED COOPERATIVE AGREEMENTS

ALABAMA

BELCHER OIL CO.
MIAMI FL 33152

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$6,384,998	$3,192,499	5,000

THE PLANT IS DESIGNED TO HAVE A CAPACITY OF 5,000 BARRELS PER DAY OF A COAL OIL MIXTURE.
SITE-MOBILE AL

CALIFORNIA

CITY OF GARDENA
GARDENA CA 90247

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$4,000,000	$2,000,000	1,445

THIS PROJECT WILL COMBUST 1,445 TONS PER DAY OF MUNICIPAL SOLID WASTE TO GENERATE ELECTRICITY.
SITE- GARDENA, CA

COOL WATER COAL GASIFICATION PROGRAM
WHITE PLAINS NY 10605

$213,000,000	$25,000,000	4,300

CONSTRUCTION AND OPERATION OF A 1,000 TON PER DAY COAL GASIFICATION PLANT USING THE TEXACO GASIFIER TO PRODUCE MEDIUM BTU GAS AS A PROCESS FUEL FOR COMBINED CYCLE GENERATION OF ELECTRICITY IN AN ADJACENT UTILITY POWER PLANT. SITE - DAGGETT, CA

COUNTY OF SAN DIEGO (SANDER)
SAN DIEGO CA 92101

$4,500,000	$1,980,000	1,560

THE PLANT WILL COGENERATE STEAM AND ELECTRICITY FROM THE COMBUSTION OF 1,200 TONS PER DAY OF MUNICIPAL SOLID WASTE. THE ENERGY PRODUCED IS EQUIVALENT TO 1,560 BARRELS OF OIL PER DAY
SITE- SAN DIEGO, CA

LOS ANGELES BY-PRODUCTS COMPANY
LOS ANGELES CA 90058

$3,472,155	$1,736,077	650

THE PROJECT WILL RECOVER THE EQUIVALENT OF 650 BARRELS OF OIL PER DAY OF LANDFILL GAS FROM AN EXISTING LANDFILL.
SITE-SAN FERNANDO, CA

COLORADO

SUPERIOR OIL COMPANY
ENGLEWOOD CO 80110

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$14,672,000	$7,336,000	15,000

A SURFACE RETORTING PLANT WITH A CAPACITY TO CONVERT 20,000 TONS PER DAY OF OIL SHALE INTO 15,000 BARRELS PER DAY OF SHALE OIL.
SITE - WEST OF RIFLE, CO

* TO BE NEGOTIATED
** BARRELS OF OIL EQUIVALENT PER DAY

PROPOSED COOPERATIVE AGREEMENTS

CONNECTICUT

WYATT, INCORPORATED
NEW HAVEN CT 06510

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$1,956,993	$821,937	2,500

3,000 BARRELS PER DAY OF A COAL OIL MIXTURE WILL BE PRODUCED IN THE PLANNED PLANT.
SITE - NEW HAVEN, CT

GEORGIA

SYNCORP INC
ATLANTA GA 30329

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$1,017,787	$498,715	165

THIS PROJECT INVOLVES THE RETROFITTING OF AN EXISTING DISTILLERY WITH A WOOD FIRED BOILER TO PRODUCE APPROXIMATELY 7,000 GALLONS PER DAY OF ETHANOL FROM CORN.
SITE - ROBERTA, GA

LOUISIANA

COLUMBIAN CHEMICALS COMPANY
TULSA OK 74102

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$94,462,000	$24,560,120	2,886

THE PROJECT WILL CONVERT CORN AND MOLASSES INTO ETHANOL WITH A DAILY OUTPUT OF 121,200 GALLONS OF 200 PROOF ETHANOL.
SITE - NORTH BEND, LA

MAINE

PENCO, INC.
BELMONT MA 02178

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$1,900,000	$950,000	2,469

THE PROJECT CONSISTS OF THE EXPANSION OF AN EXISTING PEAT BOG TO A CAPACITY OF 14.3 BILLION BTU PER DAY.
SITE- JONESPORT BOG, ME

386

* TO BE NEGOTIATED
** BARRELS OF OIL EQUIVALENT PER DAY

PROPOSED COOPERATIVE AGREEMENTS

MARYLAND

CEPO PARTNERSHIP, C/O AMERICAN SOLARHOL
BALTIMORE MD 21224

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$11,700,000	$5,265,000	1,044

THE PROPOSED PROJECT WILL USE A BIOMASS PROCESS FUEL TO CONVERT CORN AND OTHER CELLULOSE MATERIAL TO 43,836 GALLONS PER DAY OF ETHANOL AT AN EXISTING BREWERY.
SITE - BALTIMORE, MD

MICHIGAN

AGRI POWER ALCOHOL, INC.
ADDISON MI 49220

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$70,000,000	$7,000,000	1,429

THIS IS A 60,000 GALLON PER DAY ETHANOL PLANT USING CORN AS A FEEDSTOCK AND COAL AND METHANE AS PROCESS FUELS.
SITE - ADDISON, MI

MISSOURI

BI-STATE DEVELOPMENT AGENCY
ST. LOUIS MO 63101

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$1,341,903	$670,951	2,900

THE PLANT WILL COGENERATE STEAM AND ELECTRICITY FROM 2,250 TONS PER DAY OF MUNICIPAL SOLID WASTE, DISPLACING AN EQUIVALENT AMOUNT OF OIL AND GAS. A SECOND FACILITY WILL PRODUCE 750 TPD OF SOLID FUEL.
SITE- ST. LOUIS, MO AND ARNOLD, MO

MONTANA

TENNECO COAL GASIFICATION CO.
HOUSTON TX 77001

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$39,947,900	$19,973,950	48,400

SELECTED FOR FUNDING IN SUPPORT OF ENGINEERING EFFORT FOR A 280 MILLION CUBIC FEET PER DAY HIGH BTU GAS FROM COAL (LIGNITE) PLANT USING LUROI GASIFICATION TECHNOLOGY.
SITE - WIBAUX, MT AND GLENDIVE, MT (ALTERNATE SITE)

* TO BE NEGOTIATED
** BARRELS OF OIL EQUIVALENT PER DAY

PROPOSED COOPERATIVE AGREEMENTS

PENNSYLVANIA

AMCOM. INC.
VILLANOVA PA 19085

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$2.739.400	$1.369.700	2.760

UP TO 3.000 BARRELS PER DAY OF A COAL OIL MIXTURE WILL BE PRODUCED AT THE PROPOSED PLANT.
SITE- CHESTER. PA

MT. AIRY REFINING COMPANY
CINCINNATI OH 45202

$2.000.000	$1.000.000	1.481

THE PROPOSED PLANT WILL PRODUCE 1.500 BARRELS PER DAY OF A COAL OIL MIXTURE.
SITE- DRAVOSBURG. PA

PUBLICKER INDUSTRIES
GREENWICH CT 06830

$55.637.567	$25.036.905	4.329

AN EXISTING FACILITY WILL BE UTILIZED TO CONVERT 24 MILLION BUSHELS PER YEAR OF CORN TO 63 MILLION GALLONS PER YEAR OF 200 PROOF ETHANOL. COAL IS PLANNED AS THE PRIMARY PROCESS FUEL.
SITE - PHILADELPHIA. PA

TEXAS

HYDRACHEM CORP.
DALLAS TX 75234

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$1.000.000	$420.000	200

THE PROPOSED PLANT WILL RECOVER USABLE LIQUID FUELS FROM WASTE SOLVENTS. THE PLANT CAPACITY IS PLANNED TO BE APPROXIMATELY 8.000 GALLONS PER DAY.
SITE- DALLAS. TX

UTAH

PARAHO DEVELOPMENT CORP.
GRAND JUNCTION CO 81501

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$35.208.102	$17.604.051	30.000

CONSTRUCTION AND OPERATION OF A PLANT TO CONVERT 45.000 TONS PER DAY OF OIL SHALE INTO 30.000 BARRELS PER DAY OF SHALE OIL USING A SURFACE RETORTING PROCESS.
SITE - BONANZA. UT

* TO BE NEGOTIATED
** BARRELS OF OIL EQUIVALENT PER DAY

PROPOSED COOPERATIVE AGREEMENTS

WASHINGTON

COLUMBIA ENERGY RESOURCES
TACOMA WA 98402

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$5,584,000	$2,792,000	721

THE PROJECT ENTAILS A RETROFIT TO AN EXISTING BREWERY TO PRODUCE 10 MILLION GALLONS PER YEAR OF 200 PROOF ETHANOL. CORN WILL BE USED AS THE FEEDSTOCK.
SITE - TACOMA, WA

WEYERHAEUSER CO.
TACOMA WA 98477

$7,969,272	$3,984,636	190

THE PROJECT ENVISIONS THE GASIFICATION OF WOOD RESIDUES FROM LOGGING OPERATIONS TO PRODUCE A LOW BTU FUEL GAS FOR RETROFIT APPLICATION IN A LIMEKILN AND A BOILER WHICH ARE CURRENTLY FIRED WITH NATURAL GAS AND OIL. SITE- EVERETT, WA

WISCONSIN

WISCONSIN SOLID WASTE RECYCLING AUTHRY.
MADISON WI 53713

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$70,120,000	$4,207,200	1,500

THE PLANT WILL UTILIZE MUNICIPLE SOLID WASTE TO PRODUCE UP TO 815 TONS PER DAY OF REFUSE DERIVED FUEL (RDF). THE RDF WILL BE USED IN A DEDICATED BOILER AS A SUBSTITUTE FOR OIL IN AN INDUSTRIAL PLANT DIRECT COMBUSTION APPLICATIONS. SITE - APPLETON, WI

WYOMING

MOBIL RESEARCH & DEVELOPMENT CORP.
NEW YORK NY 10017

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$73,300,000	$25,000,000	38,785

THE PROPOSED PROJECT INCLUDES THE ENGINEERING DEVELOPMENT OF THE MINE, COAL GASIFICATION, METHANOL SYNTHESIS, MTG, LIGHT HYDROCARBON PROCESSING AND PRODUCT DISTRIBUTION FACILITIES, AND THE ESSENTIAL SUPPORTING FACILITIES OF A 40,000 BPSD COAL TO GASOLINE FACILITY. SITE-BUFFALO, WY

* TO BE NEGOTIATED
** BARRELS OF OIL EQUIVALENT PER DAY

PROPOSED FEASIBILITY STUDY AWARDS

ALASKA

SEALASKA CORPORATION
JUNEAU AK 99801

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$848,000	$848,000	3,333

A FEASIBILITY STUDY FOR A 50 MILLION GALLONS PER YEAR PLANT TO PRODUCE 200 PROOF ETHANOL FROM WOOD WASTE.
SITE- KLAWOCK, AK

ARIZONA

CITY OF PHOENIX, PUBLIC WKS. DEPT.
PHOENIX AZ 85004

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$86,474	$86,474	100

A FEASIBILITY STUDY TO INVESTIGATE THE USE OF LANDFILL GAS TO POWER MUNICIPAL VEHICLES.
SITE - PHOENIX, AZ.

CITY OF TUCSON, DEPT. OF OPERATIONS
TUCSON AZ 85714

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$223,414	$196,604	607

A FEASIBILITY STUDY FOR A CONTEMPLATED COMMERCIAL PLANT PRODUCING FUEL FROM SOLID WASTE.
SITE - TUCSON, AZ.

CALIFORNIA

BKK CORP.
TORRANCE CA 90505

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$299,042	$299,042	800

A FEASIBILITY STUDY TO DETERMINE THE VIABILITY OF EXTRACTING LANDFILL GAS FROM AN OPERATIONAL SANITARY LANDFILL.
SITE - WEST COVINA, CA.

PACIFIC GAS AND ELECTRIC CO.
SAN FRANCISCO CA 94106

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$5,696,674	$4,296,674	12,414

A 15 MONTH FEASIBILITY STUDY FOR A LOW/MEDIUM BTU GASIFICATION PLANT PRODUCING FUEL GAS AND ELECTRICAL POWER.
SITE- SAN ARDO, CA

PG&E /SO CAL GAS
SAN FRANCISCO CA 94104

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$341,820	$256,365	775

A FEASIBILITY STUDY TO EVALUATE THE PRODUCTION AND UTILIZATION OF SANITARY LANDFILL GAS PRODUCED BY ANAEROBIC BIODIGESTION.
SITE - SANTA CLARA COUNTY, CA. AND LOS ANGELES COUNTY, CA.

* TO BE NEGOTIATED
** BARRELS OF OIL EQUIVALENT PER DAY

PROPOSED FEASIBILITY STUDY AWARDS

CALIFORNIA

WICKLAND OIL COMPANY
WEST SACRAMENTO CA 95691

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$262,456.	$262,456	16,000

A FEASIBILITY STUDY TO INVESTIGATE THE INCLUSION OF A COAL-OIL MIXTURE PLANT IN A FUELS PROCESSING FACILITY PRESENTLY UNDER CONSTRUCTION.
SITE - SELBY, CA.

COLORADO

SUGAR MILL LTD
ENGLEWOOD CO 80111

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$654,762	$654,762	1,442

A FEASIBILITY STUDY FOR A PLANT PRODUCING 20 MILLION GALLONS PER YEAR OF 200 PROOF ETHANOL FROM CORN.
SITE- LOGMONT, CO.

FLORIDA

CITY OF MIAMI, FLORIDA
MIAMI FL 33133

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$976,087	$585,652	326

A FEASIBILITY STUDY FOR THE UTILIZATION OF CELLULOSIC TRASH TO PRODUCE ETHANOL.
SITE - MIAMI, FL

IDAHO

ROCKET RESEARCH COMPANY
REDMOND WA 98052

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$439,048	$368,800	721

A FEASIBILITY STUDY FOR A PLANT PRODUCING 10 MILLION GALLONS PER YEAR OF 200 PROOF ETHANOL USING POTATO WASTE, POTATO CULLS, AND BARLEY.
SITE - FORT HALL, ID

* TO BE NEGOTIATED
** BARRELS OF OIL EQUIVALENT PER DAY

PROPOSED FEASIBILITY STUDY AWARDS

ILLINOIS

ROCHELLE CORN PRODUCTS, INC.
ROCHELLE IL 61068

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$181,000	$181,000	342

A FEASIBILITY STUDY FOR A 5 MILLION GALLON PER YEAR ANHYDROUS ETHANOL FACILITY USING A CORN AS A FEEDSTOCK
SITE- ROCHELLE, IL

INDIANA

SOUTHERN INDIANA SHALE OIL CO., INC.
SHELBYVILLE IN 46176

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$6,967,404	$6,479,686	10,000

AN 18 MONTH FEASIBILITY STUDY FOR THE CONSTRUCTION OF A PLANT TO PRODUCED SUBSTITUTE CRUDE OIL FROM EASTERN SHALE OIL.
SITE- CLARK COUNTY, INDIANA

KENTUCKY

PYRAMID MINERALS, INC.
GRAYSON KY 41143

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$4,535,516	$4,535,516	30,000

A FEASIBILITY STUDY FOR CRUDE SHALE OIL PRODUCTION AND OTHER ENERGY RELATED BY-PRODUCTS USING EASTERN SHALE.
SITE(S) - LEWIS COUNTY, AND ADAMS COUNTY, OH

LOUISIANA

LA. BIO FUEL INC.
METAIRE LA 70001

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$700,745	$539,573	2,381

A FEASIBILITY STUDY FOR A PLANT PRODUCING 35 MILLION GALLONS PER YEAR OF 200 PROOF ETHANOL USING CORN.
SITE- NEW ORLEANS, LA.

LOUISIANA ALCOHOL FUEL CORP.
NEW ORLEANS LA 70115

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$1,468,524	$969,225	7,238

A FEASIBILITY STUDY FOR A 100 MILLION GALLONS PER YEAR PLANT PRODUCING 200 PROOF ETHANOL FROM CORN.
SITE(S) - ROMEVILLE, LA AND PLAQUEMINE, LA (ALTERNATE SITE)

* TO BE NEGOTIATED
** BARRELS OF OIL EQUIVALENT PER DAY

PROPOSED FEASIBILITY STUDY AWARDS

LOUISIANA

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$3,757,147	$3,419,004	25,000

OCCIDENTAL PETROLEUM CORP.
LOS ANGELES CA 90024

A FEASIBILITY STUDY FOR A SYNFUELS/ENERGY COMPLEX UTILIZING 15,500 TPD OF W. KENTUCKY COAL AND 2,400 TPD OF MUNICIPAL SOLID WASTE TO PRODUCE GASOLINE, MEDIUM BTU GAS, ELECTRICITY, AND STEAM.
SITE - TAFT, LA

MAINE

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$109,000	$87,200	100

ACTON FOODSERVICES CORPORATION
ACTION MA 01720

A FEASIBILITY STUDY TO INVESTIGATE THE TECHNICAL AND FINANCIAL ASPECTS OF A 350 TPD ANAEROBIC DIGESTION SYSTEM TO PRODUCE METHANE FROM POULTRY MANURE.
SITE- TURNER, ME.

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$335,262	$284,973	453

J.M. HUBER CORP., TIMBER & MINERALS DIV.
PORTLAND ME 04112

A FEASIBILITY STUDY TO INVESTIGATE THE FLUID BED GASIFICATION OF WOOD WASTES.
SITE- PENOBSCOT COUNTY, ME.

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$3,505,401	$3,505,401	18,894

WHEELABRATOR CLEANFUEL CORPORATION
HAMPTON NH 03842

A FEASIBILITY STUDY TO DETERMINE THE COMMERCIAL VIABILITY OF AN EXTRACTION AND DEWATERING SYSTEM TO PRODUCE A PEAT DERIVED FUEL.
SITE(S) - PENOBSCOT COUNTY, ME., AROOSTOOK COUNTY, ME., AND WASHINGTON COUNTY, ME.

MASSACHUSETTS

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$3,163,356	$2,688,853	17,000

MASS. MUNICIPAL WHOLESALE ELECTRIC CO.
LUDLOW MA 01056

A 12 MONTH FEASIBILITY STUDY TO EVALUATE THE USE OF MEDIUM-BTU SYNTHESIS GAS, PRODUCED FROM COAL, AS THE PRIMARY FUEL FOR ELECTRICAL GENERATING UNITS.
SITE- LUDLOW, MA

* TO BE NEGOTIATED
** BARRELS OF OIL EQUIVALENT PER DAY

PROPOSED FEASIBILITY STUDY AWARDS

MASSACHUSETTS

	TOTAL COST	REQUESTED FROM DOE*	BOE/D**
WHEELABRATOR CLEANFUEL CORPORATION HAMPTON NH 03842	$982,030	$982,030	2,475

A FEASIBILITY STUDY TO INVESTIGATE THE POSSIBILITY OF USING MUNICIPAL SOLID WASTE IN A REFUSE-TO-ENERGY SYSTEM.
SITE - BOSTON, MA.

MICHIGAN

	TOTAL COST	REQUESTED FROM DOE*	BOE/D**
SASECOL CORPORATION SOUTHFIELD MI 48075	$967,000	$967,000	1,443

A FEASIBILITY STUDY FOR A PLANT PRODUCING 20 MILLION GALLONS PER YEAR OF 200 PROOF ETHANOL FROM CORN CULLS.
SITE- DETROIT MI.

MINNESOTA

	TOTAL COST	REQUESTED FROM DOE*	BOE/D**
NORTHWOOD COMPANY BRAINERD MN 56401	$282,962	$251,836	435

A FEASIBILITY STUDY TO ESTABLISH THE VIABILITY OF USING BIOMASS PELLETS TO REPLACE PETROLEUM FUELS IN THE SMALL INDUSTRIAL AND RESIDENTIAL SECTORS.
SITE- CROSBY, MN.

RED RIVER AG-ENERGY COMPANY FERGUS FALLS MN 56537	$260,000	$223,600	1,167

A FEASIBILITY STUDY FOR A 15 MILLION GALLONS PER YEAR PLANT PRODUCING 200 PROOF ETHANOL USING CORN OR BARLEY.
SITE- FERGUS FALLS, MN

MISSISSIPPI

	TOTAL COST	REQUESTED FROM DOE*	BOE/D**
SUN BELT ENERGY CORPORATION SARDIS MS 38666	$340,144	$289,122	350

A FEASIBILITY STUDY FOR A PLANT PRODUCING 4.4 MILLION GALLONS PER YEAR OF 200 PROOF ETHANOL FROM CORN.
SITE- SARDIS, MS.

* TO BE NEGOTIATED
** BARRELS OF OIL EQUIVALENT PER DAY

PROPOSED FEASIBILITY STUDY AWARDS

MONTANA

PACIFIC HYDROCARBON ENERGY CO.
SEATTLE WA 98121

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$1,000,000	$1,000,000	*6,000

A 12 MONTH FEASIBILITY STUDY TO PRODUCE A BOILER FUEL MIXTURE OF LOW SULFUR SUBBITUMINOUS COAL WITH DOMESTIC CALIFORNIA HEAVY AND ALASKA NORTH SLOPE CRUDES.
SITE - MILES CITY, MT

NEW JERSEY

REDMAR INVESTORS, INC.
SPRING LAKE NJ 07762

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$550,000	$550,000	5,700

A 12 MONTH FEASIBILITY STUDY TO INVESTIGATE THE UTILIZATION OF WASTE LEAVES AND THERMOPLASTIC WASTE (CHLORIDE-FREE) TO PRODUCE A LOW-SULFUR, LOW-ASH SOLID FUEL.
SITE(S)- MIDDLESEX COUNTY, NJ. AND HUDSON COUNTY, NJ.

NEW MEXICO

PUBLIC SERVICE COMPANY OF NEW MEXICO
ALBUQUERQUE NM 87103

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$2,728,657	$2,728,657	3,500

A 15 MONTH FEASIBILITY STUDY FOR THE COMMERCIAL PRODUCTION OF AN ELECTRIC POWER GENERATION FUEL UTILIZING UNDERGROUND COAL GASIFICATION.
SITE - SAN JUAN COUNTY, NM

NEW YORK

BROOKLYN UNION GAS CO.
BROOKLYN NY 11201

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$1,828,231	$1,828,231	5,950

A 20 MONTH FEASIBILITY STUDY TO INVESTIGATE THE DESIGN AND CONSTRUCTION OF A LANDFILL GAS RECOVERY PLANT.
SITE - STATEN ISLAND, NY.

POLLIO DAIRY PRODUCTS CORPORATION
PORT WASHINGTON NY 11100

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$142,272	$120,931	170

A FEASIBILITY STUDY TO PROVE THE COMMERCIAL VIABILITY OF THE PRODUCTION OF METHANE FROM CHEESE WHEY.
SITE- STEUBEN COUNTY, NY.

* TO BE NEGOTIATED
** BARRELS OF OIL EQUIVALENT PER DAY

PROPOSED FEASIBILITY STUDY AWARDS

NORTH CAROLINA

DUKE UNIV.
DURHAM NC 27706

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$161,742	$161,742	30

A FEASIBILITY STUDY TO INVESTIGATE THE POSSIBILITY OF COLLECTING, PROCESSING AND BURNING HIGH-QUALITY ORGANIC REFUSE IN AN EXISTING STOKER-FED FURNACE.
SITE - DURHAM, NC.

NORTH DAKOTA

AMERICAN NATURAL SERVICE CO.
DETROIT MI 48226

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$1,869,922	$1,869,922	20,000

A FEASIBILITY STUDY FOR A PLANT TO PROCESS NORTH DAKOTA LIGNITE TO PRODUCE GASOLINE AND SNG.
SITE- MERCER COUNTY, ND

NORTHERN NATURAL GAS CO.
OMAHA NE 68102

$4,047,538	$3,062,406	43,100

A 12 MONTH FEASIBILITY STUDY OF A PLANT TO PROCESS NORTH DAKOTA LIGNITE TO PRODUCE METHANOL AND SNG. SITE- OLIVER COUNTY, ND

PENNSYLVANIA

GREENE COUNTY COAL OWNERS' ASSOCIATION
WAYNESBURG PA 15370

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$855,840	$855,840	600

A 12 MONTH FEASIBILITY STUDY TO ADDRESS THE TECHNICAL AND ECONOMIC VIABILITY OF RECOVERING METHANE FROM COAL SEAMS.
SITE- GREENE COUNTY, PA

PHILADELPHIA GAS WORKS
PHILDELPHIA PA 19102

$3,432,735	$3,295,425	6,120

A 14 MONTH FEASIBILITY STUDY FOR A COAL GASIFICATION PLANT TO SUPPLY CHEMICAL FEEDSTOCK SYNTHESIS GAS.
SITE- PHILADELPHIA, PA

WESTINGHOUSE ELECTRIC CORPORATION
MADISON PA 15663

$4,813,443	$4,813,443	50,000

A FEASIBILITY STUDY FOR THE DESIGN, CONSTRUCTION, AND OPERATION OF A COMMERCIAL PLANT TO PRODUCE METHANOL FROM PENNSYLVANIA BITUMINOUS COAL.
SITE - BEAVERDALE, PA.

* TO BE NEGOTIATED
** BARRELS OF OIL EQUIVALENT PER DAY

PROPOSED FEASIBILITY STUDY AWARDS

PUERTO RICO

CEA COMBUSTION, INC.
STAMFORD CT 06906

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$731,235	$636,174	1,950

A FEASIBILITY STUDY TO INVESTIGATE THE UTILIZATION OF BIOMASS (AGRICULTURAL WASTES) TO PRODUCE A DRY POWDERED FUEL.
SITE - MAYAGUEZ, PR.

SOUTH CAROLINA

MIDREX CORP.
CHARLOTTE NC 28290

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$1,731,789	$865,895	4,310

A NINE MONTH FEASIBILITY STUDY FOR A COAL GASIFICATION PLANT TO PRODUCE MEDIUM BTU GAS TO REPLACE NATURAL GAS AS A FEEDSTOCK FOR THE DIRECT REDUCTION OF IRON ORE.
SITE - GEORGETOWN, SC.

TENNESSEE

AMERHOL CORPORATION
HUNTSVILLE AL 35803

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$414,540	$414,540	3,310

A FEASIBILITY STUDY FOR A FACILITY PRODUCING 50 MILLION GALLONS PER YEAR OF 200 PROOF ETHANOL USING CORN, MILO, AND WHEAT.
SITE- SPRING CITY, TN

CITY OF BROWNSVILLE
BROWNSVILLE TN 03012

$288,436	$288,436	73

A 12 MONTH FEASIBILITY STUDY TO INVESTIGATE THE FLUIDIZED-BED GASIFICATION OF MUNICIPAL AND INDUSTRIAL WASTES.
SITE - BROWNSVILLE, TN.

KOPPERS CO., INC.
PITTSBURGH . PA 15219

$11,501,549	$5,750,775	40,750

A STUDY TO DETERMINE THE FEASIBILITY OF CONSTRUCTING AND OPERATING A COAL LIQUIDS PLANT. SITE- OAK RIDGE, TN

* TO BE NEGOTIATED
** BARRELS OF OIL EQUIVALENT PER DAY

PROPOSED FEASIBILITY STUDY AWARDS

TEXAS

HEREFORD ENERGY, INC.
WASHINGTON DC 20005

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$835,000	$835,000	1,809

A FEASIBILITY STUDY FOR A PLANT PRODUCING 25 MILLION GALLONS PER YEAR OF 199.2 PROOF ETHANOL UTILIZING GRAIN SORGHUM.
SITE- HEREFORD, TX

TEMPLE-EASTEX, INC.
DIBOLL TX 75941

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$627,089	$627,089	6,767

A FEASIBILITY STUDY TO INVESTIGATE THE PRODUCTION OF LOW BTU GAS AND CHAR FROM WOOD WASTE.
SITE- DIBOLL, TX.

THE ENPEX CORPORATION
LA JOLLA CA 92038

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$12,700,000	$2,307,951	15,000

A FEASIBILITY STUDY FOR THE CONSTRUCTION AND OPERATION OF A FULLY INTEGRATED TAR SANDS PLANT.
SITE- MAVERICK COUNTY, TX

UTAH

GREAT NATIONAL CORPORATION
DALLAS TX 75201

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$3,420,879	$3,420,879	25,000

AN 18 MONTH FEASIBILITY STUDY FOR A COMMERCIAL SITED TAR SANDS PLANT.
SITE- SUNNYSIDE, UT

MTN FUEL RESOUR., CONOCO, MONO, PG&E
SALT LAKE CITY UT 84111

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$7,110,879	$3,555,440	22,000

A FEASIBILITY STUDY (FS) FOR CONSTRUCTING A LARGE-SCALE COAL CONVERSION PLANT TO PRODUCE SNG AND METHANOL.
SITE- EMERY COUNTY, UTAH

PLATEAU, INC.
ALBUQUERQUE NM 87110

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$5,016,100	$4,056,295	10,000

A FEASIBILITY STUDY TO DETERMINE THE COMMERCIAL VIABILITY OF MODIFYING AN EXISTING REFINERY TO PROCESS RAW SHALE OIL.
SITE - ROOSEVELT, UT.

SYNTANA-UTAH
CUPERTINO CA 95014

TOTAL COST	REQUESTED FROM DOE*	BOE/D**
$4,683,000	$3,980,550	30,000

A FEASIBILITY STUDY FOR A SHALE OIL PRODUCTION FACILITY UTILITING WESTERN SHALE.
SITE- BONANZA, UT

* TO BE NEGOTIATED
** BARRELS OF OIL EQUIVALENT PER DAY

PROPOSED FEASIBILITY STUDY AWARDS

VIRGINIA

	TOTAL COST	REQUESTED FROM DOE*	BOE/D**
JAMES CITY COUNTY WILLIAMSBURG VA 23185	$249,432	$249,432	264

A FEASIBILITY STUDY TO DETERMINE THE ECONOMIC VIABILITY OF STEAM GENERATION USING COMMERCIALLY AVAILABLE MASS BURN WASTE-TO-ENERGY TECHNOLOGY.
SITE - YORK COUNTY, VA.

WASHINGTON

	TOTAL COST	REQUESTED FROM DOE*	BOE/D**
WALLA WALLA FARMERS CO-OP, INC. WALLA WALLA WA 99362	$204,224	$187,886	2,012

A FEASIBILITY STUDY FOR A PLANT PRODUCING 10-30 MILLION GALLONS PER YEAR(MMGPY) OF ANHYDROUS ETHANOL USING WHEAT, BARLEY, AND CORN.
SITE- WALLA WALLA, WA.

WEST VIRGINIA

	TOTAL COST	REQUESTED FROM DOE*	BOE/D**
INTERNATIONAL TELEPHONE & TELEGRAPH CORP NEW YORK NY 10022	$4,146,497	$3,747,703	9,700

A 12 MONTH FEASIBILITY STUDY FOR A COAL LIQUIDS (GASOLINE AND LPG) PLANT. SITE- NITRO, W.VA

MOBAY CHEMICAL CORP. PITTSBURGH PA 15205	$1,063,172	$1,063,172	3,700

A FEASIBILITY STUDY FOR A LOW/MEDIUM BTU GASIFICATION PLANT TO PRODUCE INDUSTRIAL FUEL AND CHEMICAL FEEDSTOCKS.
SITE- NEW MARTINSVILLE, W.VA

OHIO VALLEY SYNFUELS PITTSBURGH PA 15222	$5,033,368	$3,875,693	84,200

A 12 MONTH FEASIBILITY STUDY FOR A HIGH-BTU COAL GASIFICATION FACILITY TO PRODUCE SNG AND METHANOL.
SITE- MASON COUNTY, W.VA

WESTINGHOUSE ELECTRIC CORPORATION MADISON PA 15663	$1,933,779	$1,933,779	2,560

A FEASIBILITY STUDY FOR A LOW/MEDIUM BTU COAL GASIFICATION FACILITY TO PRODUCE FUEL GAS AND POWER.
SITE- MARION COUNTY, W.VA

* TO BE NEGOTIATED
** BARRELS OF OIL EQUIVALENT PER DAY

78-608 O—81——26

PROPOSED FEASIBILITY STUDY AWARDS

WISCONSIN

	TOTAL COST	REQUESTED FROM DOE*	BOE/D**
BURGWIN, PASLEY & ASSOCIATES, INC. TOPEKA KS 66614	$40,000	$40,000	200

A FEASIBILITY STUDY TO DETERMINE THE COMMERCIAL VIABILITY OF USING FOREST WASTE AND RESIDUE TO MAKE WOOD PELLETS FOR HOME AND SMALL INDUSTRIAL HEATING.
SITE- CRAWFORD COUNTY, WI.

WISCONSIN DAIRIES BARABOO WI 53913	$473,869	$473,869	280

A FEASIBILITY STUDY FOR THE ANAEROBIC DIGESTION OF CHEESE WHEY AND CATTLE MANURE TO PRODUCE FUEL GAS.
SITE- BUFFALO COUNTY, WI.

400

* TO BE NEGOTIATED
** BARRELS OF OIL EQUIVALENT PER DAY

GENERAL—PAY COSTS

Question. All of your operating expense rescissions are offset by amounts included for pay increases. Could you please provide the Committee with a breakdown of these numbers by subprogram.

Answer.

Pay cost

[In thousands]

Backup decision unit and lower level:	
AECT—Cleanup base technology	$87
AR&TD—Program development and coordination	122
Liquefaction—Support studies/engineering evaluation	297
Combustion—AFB	118
Fuel Cells—Phosphoric acid systems	12
Heat Engines—Central power systems	68
In Situ—Environmental support	60
MHD—Open cycle plasma	33
Mining R&D—Underground coal mining	169
Surface Coal Gasif—Third generation processes	204
Total coal	1,170
APT—Advanced exploratory technology	28
Drilling—Environment and support	9
EOR—Light oil	158
Oil Shale—In situ conversion	103
Total petroleum	298
Gas—Environment and support	50
Total fossil energy	1,518

COAL LIQUEFACTION—SUPPORT STUDIES

Question. Please provide for the record a breakdown of the specific projects and the amounts being reduced in the support studies and engineering evaluations areas in liquefaction. Why would funding for health affects studies be reduced? How much remains to do such work if the rescission is accepted?

Answer. The following table reflects the breakdown of those projects being reduced:

[Dollars in thousands]

	Fiscal year 1981—	
	January 15	Revised
Engineering evaluations	$2,044	$1,878
Environmental and health effects studies	3,600	2,300
Bottoms processing testing	1,534	0

As can be seen from the above table, $2.3 million remains for environmental and health effects studies. These funds are being used to continue the coordinated biomedical testing program underway with DOE's Office of Energy Research. Specifically, toxic effects of coal-derived liquids are being evaluated, the undesirable components are being characterized and the technologies to mitigate the toxic effects are being evaluated.

RESCISSION OF $3 MILLION IN THE 30 MW AFB BOILER PROJECT

Question. You are requesting that $3 million for the Rivesville Combustion Facility be rescinded. What would be the cost of closing the facility down? Where would you get the funds to do this if this money is rescinded?

Answer. The cost to dismantle the Rivesville Combustion Facility would be $1.3-1.5 million. The cost to maintain a fire watch over the facility is $450,000 per year, however this is an unacceptable situation to Monongahela Power Company, owner

of the host site. Funding to dismantle this unit would have to be made available within the AFB program.

$2 Million Rescission for Low Grade Heat Recovery

Question. What is the effect of reducing the low grade heat recovery project by $2 million? If the projects at Paducah and Portsmouth are cancelled, do you expect industry to pick these projects up? If these projects are cancelled, why is the Oak Ridge project not being cancelled?

Answer. The impact of the $2 million fiscal year 1981 rescission on each of the low grade heat recovery projects being planned at the three gaseous diffusion plants and the nuclear weapons processing facility is as follows:

Oak Ridge—fiscal year 1981 funds were to be used to initiate a Program Opportunity Notice (PON) which would identify appropriate program opportunities for the waste heat from the Oak Ridge Gaseous Diffusion Plant. Rescission of $2 million from the fiscal year 1981 low grade heat recovery effort eliminates the $400,000 which was earmarked for the PON. Thus, pending Congressional approval of the rescission, the PON has not been issued. Ongoing work funded through the Oak Ridge program which is not affected by the rescission includes:

Completion of the Low Grade Heat recovery studies with TVA at Watts Bar where commonality between DOE and TVA activities are being identified.

Continuation of the low grade heat recovery technology contract (i.e., heat pumps, etc.) with prior year money toward a logical point for either phase out or completion.

Paducah—fiscal year 1981 funds of approximately $800,000 out of the total $2 million rescission were to be used to initiate conceptual design and analyses for an ethanol plant that would use waste heat from the Paducah Gaseous Diffusion Plant. In anticipation of Congressonal approval of the rescission, no contract has been awarded.

Portsmouth—A central energy management system for utilization of waste heat from the Portsmouth gaseous diffusion plant in an industrial park was to be funded with approximately $800,000 of the proposed $2 million rescission. In anticipation of Congressional approval of the rescission, no contract has been awarded.

Industry support.—It is difficult to assess industry's willingness to pick up any of these low grade heat recovery projects at this point in time. However, with the President's oil price decontrol program that allows the price of energy to rise to its market value, there will be much greater incentives for industry to utilize new alternative energy sources such as waste heat that have in the past been uneconomical because of the relatively low price of energy.

$8 Million Rescission in Mining R&D

Question. Please provide for the record the individual projects that will be terminated in your mining R&D program if the $8 million rescission proposed is accepted.

Answer. The following is a list of projects that are scheduled to be terminated if the $8 million rescission in Mining R&D is accepted by Congress.

Low temperature chlorine analysis project with NASA for $200,000 will be cancelled. This project is in the coal preparation and analysis subactivity.

Surface Miner with impact breaker project with Foster Miller for $200,000 will be terminated. This project is in the Surface Coal Mining subactivity.

Multiple Seam Dragline Operation project with Flour Mining for $195,000 would be terminated. This project is also in the Surface Coal Mining Subactivity.

In keeping with the new Administration's policy of focusing Federal R&D support on longer range, high risk technologies leaving industry to demonstrate the feasibility of near term technologies, the Mining R&D program has been refocused. Hardware demonstration activities and near term technology development will be terminated and an orderly phase out of cost-shared field testing and demonstration will begin. The new program will be committed to developing a technology base that encompasses longer range, high risk projects which offer the potential for significantly improving mining technology and productivity.

Therefore, the projects listed above will be terminated. New starts and reductions to ongoing projects associated with the proposed rescission were not listed.

Mr. Murtha. The subcommittee will now adjourn until tomorrow morning at ten o'clock.

Mr. LeGassie. Thank you, sir.

WEDNESDAY, MAY 6, 1981.

FOSSIL ENERGY PROGRAM (CONTINUATION)

RESEARCH AND DEVELOPMENT

WITNESSES

ROGER W. A. LeGASSIE, ACTING ASSISTANT SECRETARY FOR FOSSIL ENERGY, U.S. DEPARTMENT OF ENERGY
CARL. W. GUIDICE, DEPUTY ASSISTANT SECRETARY FOR MANAGEMENT, OFFICE OF FOSSIL ENERGY, U.S. DEPARTMENT OF ENERGY
ANTHONY LICCARDI, OFFICE OF COAL TECHNOLOGY, OFFICE OF THE ASSISTANT SECRETARY FOR FOSSIL ENERGY, U.S. DEPARTMENT OF ENERGY
EDWARD J. LIEVENS, JR., PROGRAM DIRECTOR FOR PROJECT MANAGEMENT, OFFICE OF THE ASSISTANT SECRETARY FOR FOSSIL ENERGY, U.S. DEPARTMENT OF ENERGY
BENNIE G. DiBONA, OFFICE OF OIL, GAS AND SHALE TECHNOLOGY, OFFICE OF THE ASSISTANT SECRETARY FOR FOSSIL ENERGY, U.S. DEPARTMENT OF ENERGY
ELLISON BURTON, OFFICE OF RESOURCE APPLICATIONS, OFFICE OF THE ASSISTANT SECRETARY FOR FOSSIL ENERGY, U.S. DEPARTMENT OF ENERGY
J. D. BATCHELOR

OPENING REMARKS

Mr. YATES. Mr. Reporter, show the hearing is coming to order.

This is the continuation of the hearing for the Department of Energy on its appropriations for fiscal year 1982, if any.

Appearing in support of the appropriation is Mr. Roger W. LeGassie, Acting Assistant Secretary for Fossil Energy.

Has your name gone up?

Mr. LEGASSIE. No, sir, I will not be the nominee.

Mr. YATES. You will not be? Why will you not?

Mr. LEGASSIE. I am basically a career civil servant, and hope to remain as the Deputy of Fossil.

Mr. YATES. Do you mean a career civil servant can't be an Assistant Secretary?

Mr. LEGASSIE. No, but I do not anticipate that my name will be sent up.

Mr. YATES. Why do you not anticipate it?

Mr. LEGASSIE. Because I am sure that he has many better qualified candidates than myself.

Mr. YATES. Well, I doubt that.

Mr. LEGASSIE. Thank you.

Mr. YATES. I doubt that very much. I better drop it there.

You are accompanied by Mr. Guidice.

For supporting witnesses, we have Mr. Anthony Liccardi.

Mr. LICCARDI. Yes, sir.

Mr. YATES. Mr. Edward J. Lievens?

Mr. LIEVENS. Yes, sir.

Mr. YATES. Bennie G. DiBona. Are you related to Charles?

Mr. DIBONA. No, sir.

Mr. YATES. And Ellison Burton. Mr. Burton.

Mr. BURTON. Yes, sir.

Mr. YATES. And nobody else in this vast crowd belongs to the Department of Energy, just these witnesses?

Mr. LEGASSIE. I am afraid to turn around.

Mr. YATES. All right, Mr. LeGassie, your biography may go into the record at this point.

[The biography of Roger W. A. LeGassie follows:]

ROGER W. A. LEGASSIE

Roger W. A. LeGassie is currently the Department of Energy's (DOE) Acting Assistant Secretary for Fossil Energy, a position he assumed on January 21, 1981. On February 19, 1981, he was also named Director of the DOE Office of Policy, Planning and Analysis. Previously, Mr. LeGassie had served as Principal Deputy Assistant Secretary for Fossil Energy since October 1979. Prior to his Fossil Energy appointment, Mr. LeGassie was Acting Deputy Assistant Secretary of Energy Technology for Planning and Analysis.

Mr. LeGassie began his Federal service in 1952 at the New Brunswick, New Jersey Research Laboratory. In 1955 he moved to the Oak Ridge Operations Office and to the Washington Headquarters of the Atomic Energy Commission in 1962. He played an important role in the development and commercialization of new energy technologies and, in later years, the analysis and evaluation of the U.S. and world energy situation. From 1976 through 1978, he chaired the working group on research and development strategy for the International Energy Agency.

Throughout his Government career, Mr. LeGassie has received numerous special achievements awards. In 1973, he was a recipient of the AEC's Distinguished Service Award—the highest honorary award given to an employee by the Federal Government for distinguished contributions and achievements.

Mr. LeGassie began his professional career in 1948 as a Research and Development Engineer with the Harshaw Chemical Company, working on the design and operation of chemical pilot plants and production installations based on new technology.

He received his B.S. degree in Chemical Engineering in 1947 and his B.A. degree in Mathematics and Chemistry in 1948 from Columbia University.

Mr. YATES. Mr. Guidice's biography may go into the record at this point.

[The biography of Carl W. Guidice follows:]

CARL W. GUIDICE

Carl W. Guidice is the Deputy Assistant Secretary for Management in the Office of Fossil Energy, U.S. Department of Energy (DOE). In this position he is responsible for budgetary and administrative functions including long-range financial planning; budget formulation, presentation, and execution; procurement planning and systems development for both headquarters and the energy technology centers. He was named to this post in 1979 when the Office of Fossil Energy was elevated to an Assistant Secretary level within DOE.

On the formation of the Department in 1977, Mr. Guidice became Director of Program Control and Support, Office of Fossil Energy. Previously, he had held the title of Assistant Director of Planning and and Budget under DOE's predecessor agency, the Energy Research and Development Administration (ERDA). He came to ERDA in 1974 as Chief of Resources Management in the Office of Fossil Energy when a portion of the Department of Interior was incorporated in ERDA.

Mr. Guidice joined the Federal Government in 1966 as a budget and management officer in the Bureau of the Budget (now the Office of Management and Budget). Two years later he became Chief of the Division of Fiscal Service, Department of the Interior, a position he held until 1972 when he was named Chief of the Interior Department's Budget Division.

From 1963 to 1966, Mr. Guidice was a district office supervisor for the American Telephone and Telegraph company. He had served as an administrative officer for the Social Security Administration from 1960 to 1963.

Mr. Guidice is a graduate of St. Vincent College in Latrobe, Pennsylvania, his hometown. In addition to a B.S. degree in business administration he has also done graduate work in financial management at American University in Washington, D.C. In 1973, he was awarded a Princeton Fellowship in Public Affairs from Princeton University.

Mr. YATES. And Mr. Liccardi's biography may go into the record at this point and Mr. Lievens' may go into the record at this point, Mr. DiBona's biography and Mr. Burton's biography all may go into the record at this point.

[The biographies follow:]

ANTHONY L. LICCARDI

Anthony L. Liccardi is presently the Deputy Assistant Secretary for Coal Technology in the Office of Fossil Energy at the Department of Energy (DOE). He is responsible for directing the Federal coal programs in mining research and development, including underground and surface mining and coal preparation; coal utilization, fuel cells, combined cycle systems, heat engines and waste heat recovery; coal processing, including gasification and liquefaction programs; and the magetohydrodynamics (MHD) program.

Since joining the Energy Research and Development Administration (ERDA), one of DOE's predecessor agencies, in December 1975, he has served in the administrative and technical positions of Director of the Administrative Office in the Fossil Energy program, Deputy Director of the MHD Division, Director fo Fossil Energy Systems Engineering, and Director of the MHD Division.

From 1962 to 1975, Mr. Liccardi held a wide range of management and technical positions with the National Aeronautics and Space Administration, including the following: Director of Program Budget and Control for the International Spacelab Program; Technology Manager for the Space Station Task Force; Deputy Manager for the Resident Apollo Spacecraft Program Office where the Apollo Lunar Spacecraft was designed, fabricated and tested; Chief of the Gemini Systems Engineering program, Chief of Gemini Program Control; and Chief of Apollo Systems Integration.

From 1952 to 1962, Mr. Liccardi served in private industry in key roles such as President of his own firm, Mekatronics, Inc.; Chief Engineer for American Chain and Cable Corp., Electro Mech Division, Head of Controls and Instrumentation for Baldwin-Hamilton's Loewy Division; and Project Engineer for the Sperry Gyroscope Corporation.

Mr. Liccardi was born in New York City and received a Bachelor's degree in Electrical Engineering and a Bachelor's degree in Mechanical Engineering from the Polytechinic Institute of Brooklyn. He received a Master of Science Degree in Administration from the George Washington University in 1973 and is also a graduate of the Industrial College of the Armed Forces.

Mr. Liccardi is the recipient of several DOE and ERDA awards as well as awards and commendations from the National Aeronautics and Space Administration, and is a member of Pa Tau Sigma, the honor Mechanical Engineering Society as well as a life member of the Disabled American Veterans (DAV).

EDWARD J. LIEVENS, JR.

Edward J. Lievens, Jr., currently serves as Program Director for Project Management in the Office of the Assistant Secretary for Fossil Energy, Department of Energy (DOE). He is responsible for the design, siting, construction, checkout and operation of designated major projects. These include such projects as the major coal liquefaction and gafification demonstration projects as well as EXXON Donor Solvent and H-Coal pilot plants.

He joined the Department's predecessor agency, the Energy Research and Development Administration (ERDA) in 1976 and has held progressively responsible positions in ERDA and DOE.

From 1970 to 1976, Mr. Lievens served as Director, Office of Program Planning for the National Highway Traffic Safety Administration. From 1962 to 1970, he served in several key posts in the Office of Manned Space Flight at the National Aeronautics and Space Administration.

Mr. Lievens, born in South Bend, Indiana, obtained a B.S. degree with honors from the University of Notre Dame, and an M.S. degree from the Massachusetts Institute of Technology. He also attended the University of Southern California and

Eastern College. He has received many honors and awards including two class valedictorian awards; American Legion Award; Kiwanis Award; Alfred P. Sloan Fellow; five Special Achievement Awards; and is listed in Who's Who in Government.

Mr. Lievens is married to the former Judith Ann Behr and resides with his family in Glenn Dale, Maryland.

BENNIE G. DIBONA

Bennie G. DiBona is the Deputy Director for Oil, Gas and Shale Technology in the Office of the Assistant Secretary for Fossil Energy, Department of Energy (DOE). He has served in this position since October 1980.

Prior to his current appointment, Mr. DiBona was the Director of the Division of Geothermal Energy within DOE's Office of the Assistant Secretary for Resource Applications, from October 1978 to October 1980, where he was responsible for Federal programs directed toward stimulating the development of geothermal resources, including the Geothermal Loan Guaranty Program.

From March 1978 to October 1978, he was Regional Manager, Eastern Geothermal & Gulf Coast Geopressured Programs in the Division of Geothermal Energy. Prior to this he was Chief of the Resource Engineering Branch in the same division from September 1976 to March 1978, and responsible for all geothermal drilling and testing projects.

Mr. DiBona was Director of Industrial Applications at the Atomic Energy Commission's (a predecessor of DOE) Nevada Operations Office from July 1973 to September 1976. He was responsible for drilling and testing programs to determine the feasibility of stimulating production from the western tight gas sand formations, and for drilling several geothermal exploratory wells. From December 1969 to July 1973 he was responsible for underground nuclear testing safety studies in the Environmental Effects Division in the Nevada Operations Office. He joined the AEC in 1966 at the Technical Information Center in Oak Ridge, Tennessee where he developed data management systems for high energy physics and particle accelerators. He began his government service in 1965 with the National Aeronautics and Space Administration as an Aerospace Technological Engineer at Cape Kennedy, Florida.

Mr. DiBona graduated from the University of South Florida in 1964 with a B.A. degree in physics. He has completed graduate courses in physics and mathematics.

Mr. DiBona is a native of Florida and resides with his family in Reston, Virginia.

ELLISON S. BURTON

Ellison S. Burton is in the Office of Resource Applications, Office of the Assistant Secretary for Fossil Energy, U.S. Department of Energy. Prior to accepting his current assignment in 1981, he was Director of Environmental Support, Office of the Assistant Secretary for Resource Applications, a position he held from 1977 to 1981. During this time he was a member of the Special Task Force to write an environmental impact statement for a geological radioactive Waste Isolation Pilot Plant.

From 1975 to 1977, Mr. Burton was the Director of Environmental Analysis, Office of Planning and Analysis, in the Energy Research and Development Administration, a predecessor to the Department of Energy.

Prior to joining the Federal energy program, Mr. Burton was Manager of Operations Reserve, Management Consulting Division of Ernst & Ernst from 1966 to 1971. Prior to that, he was employed in several government and private positions dealing with interindustry economics, military weapons systems analysis, military communications and strategic war gaming.

Mr. Burton is a graduate of Amherst College where he obtained a B.A. with honors in mathematics in 1951. He has done graduate work in mathematical statistics at George Washington University and Cambridge University, in addition to graduate studies in law and regulatory economics.

Mr. YATES. And so they make their way into the pages of history. This is the new 1982 Fossil budget. We have a statement by Mr. LeGassie. It may go into the record at this point.

[The statement follows:]

THE FY 1982 PROPOSED DOE FOSSIL ENERGY BUDGET

STATEMENT SUBMITTED BY

ROGER W.A. LEGASSIE
ASSISTANT SECRETARY (ACTING)
FOR FOSSIL ENERGY
U.S. DEPARTMENT OF ENERGY

TO THE

SUBCOMMITTEE ON INTERIOR AND RELATED AGENCIES
COMMITTEE ON APPROPRIATIONS

U.S. HOUSE OF REPRESENTATIVES

MAY 6, 1981

Mr. Chairman and Members of the Committee:

The Fiscal Year 1982 revised budget request for Fossil Energy has been forged from two basic principles which undergird the Administration's energy and economic policies.

First, we must take unprecedented steps to regain control of the Federal budget. Every federal government program has been examined in detail, and nearly every agency has been required to contribute to the effort to reduce growth in Federal spending. The Department of Energy is no exception.

Second is the nature and extent of the energy problems facing this nation. Our domestic policies must continue to be made within the shadow of an uncertain and increasingly expensive supply of foreign energy. Yet, it is naive to believe that the Federal government can develop and force the introduction of new technologies before the economic or regulatory climate is ready. This is not to say that we cannot allocate enough money to construct some large-scale projects, but the commercial acceptance of these technologies depends on their relative economics. We believe we can expand the development of our vast domestic resources and accelerate the commercial introduction of new and better technology by creating the proper climate for private investments and risk taking.

A key aspect of the President's energy program is to remobilize technological innovation within the private sector to bring about the expanded development and production of untapped energy resources and to foster private allocation of resources to new technologies in both the production and use of energy.

Therefore, this budget reflects a fundamentally different philosophy of the Federal government's role in the field of energy -- a philosophy which we believe improves the climate for technological innovation within the private sector, while allowing the reduction of Federal expenditures.

The system in which private funds are invested at risk with the potential for significant return has served this country well in the past. It can and should be permitted to serve in the rebuilding of our energy security.

The Federal government in turn will focus its support on that longer-term, high-risk research and development which industry has generally been less willing to undertake. Once the conceptual hurdles have been surmounted, the final scale-up and deployment of a new technology will be the responsibility of industry.

This is the foundation on which we have structured the Fossil Energy budget. The $435 million we are requesting in budget authority for Fiscal Year 1982 is money that will be spent in a tightly focused manner. Our primary mission will be reoriented to support longer-term, high-risk programs which have the potential for significant payoffs. These activities will focus on acquiring the technology base necessary for industry to develop and demonstrate hardware without the need for substantial government assistance. Near-term technical support for processes or demonstrations will be limited to cases where the government has a unique resource or facility. Demonstration and commercialization of technology will be the responsibility of industry with, in the case of synthetic fuels, the assistance of the Synthetic Fuels Corporation.

This approach, as reflected by the budget we are submitting, is one that we believe will restore a prudent balance between government and industrial R&D.

Our 1982 budget proposals will have an impact, of course, on the conduct of our program during fiscal 1981. Therefore, concurrently with the submission of a revised budget request for FY 1982, we are proposing appropriate rescissions for portions of the unspent funds in those FY 1981 programs which we are proposing be discontinued or which will be redirected. Including rescissions proposed by the past Administration, we are proposing to reduce the 1981 appropriated budget for Fossil Energy by $322 million.

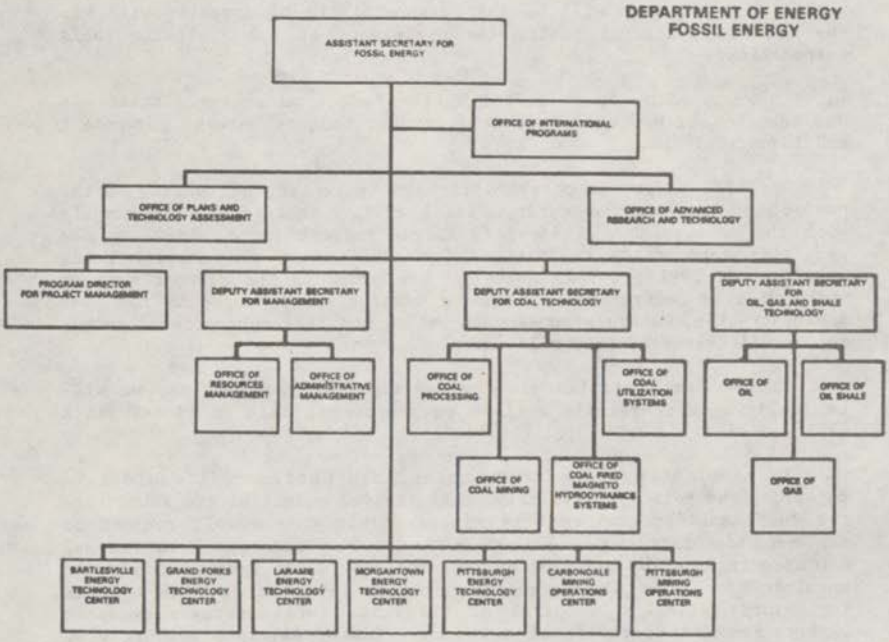
In the more detailed program descriptions that follow, we will be outlining the specific actions we propose to take in fiscal years 1981 and 1982.

In concluding this introduction, Mr. Chairman, I would like to stress one point particularly. The revised budget we are submitting for your consideration must be viewed within the overall context of the new Administration's energy policy. The reductions in Federal R&D spending must be balanced by improvements in the investment climate resulting from the Administration policies in areas such as tax and regulatory relief. Decontrol of oil prices will increase domestic exploration and discovery of new conventional petroleum resources as well as the application of improved recovery techniques. Removal of unnecessarily cumbersome permitting and regulatory policies will unshackle a coal industry that has not yet begun to approach its full potential.

By letting private firms allocate resources among technologic choices, there will be no need in the future to select which projects proposed by private industry should receive Federal support. These judgements can best be made in private markets. The risk of wrong government decisions or the attempt to balance Federal support among competitive firms will no longer be a problem.

ORGANIZATION

The organization of the Fossil Energy office, as shown in the chart below, remains essentially unchanged at the present time from our presentation last year.



As the committee is aware, however, Energy Secretary Edwards announced on February 25 a realignment of the Department to improve management and to reflect a decreased emphasis on regulation and commercialization activities.

A key part of this realignment is the transfer to Fossil Energy of several functions previously conducted by the Office of Resource Applications. Specifically, programs involving coal resource management, oil, natural gas, oil shale, leasing policy, and the interim Alternative Fuels activities will be integrated into the Fossil Energy organization. We will be pleased to report to the Committee specifically on this reorganization within Fossil Energy as soon as the details are in place.

The policy of decentralizing Fossil Energy project management to the field has been successful and is expected to continue. Two distinct functional roles, therefore, are delineated with the Fossil Energy organization: (1) Headquarters is responsible for formulating overall policy and programs; while (2) field organizations, including DOE's Energy Technology Centers, Operations Offices and national laboratories, are responsible for implementing fossil projects and technology base activities.

COAL PROGRAM

More than any other fuel resource, the coal beneath the U.S. is evidence of America's vast energy wealth. Conservative estimates place the total amount at nearly 4 trillion tons. Approximately 2.23 trillion tons are estimated undiscovered resources, and 1.74 trillion tons are identified resources. Included in the latter are about 438 billion tons which are readily mineable by today's methods -- enough to take us well into the 22nd Century. In terms of energy content, the coal we know can be mined is equivalent to almost 10 times the recoverable supplies of oil in Saudi Arabia.

Underground mining could be used for nearly 297 billion tons of the Nation's coal reserve, while an estimated 141 billion tons could be mined by surface methods. The amount of coal that can be recovered from the reserve base, however, varies from area to area. It ranges from less than 50 percent in some underground mines to more than 90 percent at some surface mines. Even subtracting the coal that must be left untouched to form roof-supporting pillars, or that runs through folded, faulted or interlayered rock strata, or that underlies towns and cities, an estimated 219 billion tons of coal can be recovered -- still the largest recoverable coal reserve base in the world.

In 1980, driven by its favorable economics in the face of escalating world oil prices, U.S. coal production topped 835 million tons -- the most ever and 60 million tons more than 1979. Still, the turn toward coal can be accelerated even more, particularly if utilities can acquire the necessary capital to make the necessary equipment modifications and if unnecessary regulatory obstacles can be removed. Coal

industry analysts estimate that the capacity exists to mine at least another 100 million tons annually without major strains on its current productive capacity. Industrial ingenuity will make it possible to use more coal and still preserve our environmental goals. Such technology exists today and even better, more efficient technologies are on the commercial horizon.

With the Administration's removal of price controls on petroleum and the continuing trend towards further natural gas deregulation, the economics of producing and using more coal are improving within the private sector. Therefore, the Federal coal technology program has been refocused to support longer term, high-risk research and development.

We are also focusing both attention and funding within our coal program on the environmental issues associated with increases in coal burning, particularly in the areas of acid rain and carbon dioxide. Presently, for example, it is uncertain what benefits might accrue from any particular strategy to reduce acid precipitation, and DOE is working cooperatively with other groups within both the Department and the Environmental Protection Agency to develop a better understanding of the origins, transport and effects of coal-based pollutants.

The Administration is requesting $381 million in budget authority to carry out coal research and development programs in FY 1982. This represents a reduction of $1.084 billion from the budget submitted by the previous Administration on January 15, 1981, with the major part of the reduction resulting from the restructuring of the Federal government's synthetic fuels program. Concurrently with the revised FY 1982 budget request, the Administration is requesting that $309 million be rescinded in FY 1981 (including $25.5 million in proposed rescissions proposed by the Carter Administration budget on January 15, 1981), thereby reducing the FY 1981 appropriated amount to $735 million.

The following describes briefly the refocused approach applied to each of the activities within the coal technology program:

MINING RESEARCH AND DEVELOPMENT

(BA in Millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$ 59.3	$ 49.5	$ 32.8	$ 41.5	$ 21.8

To improve coal's economic attractiveness, the Department's mining R&D program will focus on these objectives: an increase in the efficiency of labor and capital for the entire coal mine operation; and the improvement of mining technologies which can be applied to currently

uneconomical, inaccessible or underused coals. Research is conducted on both a contract and an in-house basis, making full use of the Department's unique laboratory and test facilities.

Underground Mining

Within the overall mining R&D budget, the Department is requesting that $15 million be allocated to underground coal mining in FY 1982. Major components include (1) mine planning, (2) production, and (3) in-mine transportation.

The selling price of coal is affected directly by the speed with which a mine can be developed, openings cut, and access reached to the coal seam -- each of which can be streamlined by proper mine planning. Mine planning can also assure the health and safety of miners and a reduction in environmental degradation by identifying potential concerns early and then developing the mine in a manner that mitigates the concerns.

In FY 1982, DOE's mine planning activities will continue to develop a technologic data base on major health, safety and environmental concerns. Attention will be focused on improving the mine operator's ability to predict and control gases and fluids encountered in the mine, as well as the evaluation of ground subsidence, techniques to dispose of mine waste, and control of mine effluents.

Underground coal production in the U.S. relies on two principal mine designs: (1) room-and-pillar, which accounts for nearly 95 percent of the Nation's underground mining, and (2) longwall mining, which makes up the remaining 5 percent. In FY 1981, a machine which combines both mining and roof bolting for room-and-pillar operations began its first field trials in Pennsylvania, and a high capacity longwall conveyor was tested in northern West Virginia. In FY 1982, trials will continue on longwall techniques which can be applied to inclined seams representative of many in the East and Midwest and to the thick seams found in the West. Trials will be completed on a prototype longwall shearer control subsystem, a necessary component for mine automation.

The budget level requested for in-mine transport in FY 1982 will permit an underground demonstration of a prototype for an automated rail haulage system.

The Mining Equipment Test Facility at Bruceton, Pa., will be operated at a reduced level to support the underground mining program.

Surface Mining

The surface mining program is also being reoriented to focus on longer-term R&D, and therefore no new funding is requested for FY 1982. Efforts will be directed at completing or phasing out projects with near-term benefits. Since many of the projects are initiated by private companies and since the improvements in productivity would accrue to the individual companies, industry has sufficient incentives to pursue this kind of technology development without continued Federal involvement.

Coal Preparation

The Department is requesting $6 million for its coal preparation program in FY 1982. Coal cleaning is a critical link between the mining and use of coal. While coal cleaning is logistically part of the mining operation, its specific requirements are determined by end use, whether as steam coal, metallurgical coal, or synfuel feedstock.

DOE's coal preparation program includes advanced development of physical processes, in which mineral-bound impurities are separated by their different densities or by magnetic properties, and limited exploratory work on chemical processes, which achieve a much higher degree of coal cleaning including the removal of organically bound sulfur as well as very finely dispersed inorganically combined sulfur. Attention is also given to cost-intensive ancillary operations, such as grinding and and dewatering.

In FY 1982, activities will focus on tests to establish the most cost-effective processes for cleaning selected Appalachian coals to various quality levels. Economic and technical analyses will be undertaken to evaluate the economics of various coal preparation techniques in relation to specific user conditions, such as coal source, location, plant operating requirements, operational cost sensitivitives, environmental regulations, and coal cleaning degree.

Capital Equipment

The $800,000 requested will permit acquisition of specific coal cleaning and analytical equipment, rock mechanics instrumentation for use in subsidence and ground control research; and general test equipment related to the Mining Equipment Test Facility.

The Administration is also requesting an $8 million rescission in the FY 1981 Mining R&D program, appropriated at a level of $49.5 million. The rescission would include $3.0 million from the underground mining budget, $3 million from the surface mining budget, and $2 million from the coal preparation budget.

LIQUEFACTION

(BA in millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$248.9	$521.4	$887.0	$353.9	$105.9

With the recent creation of the Synthetic Fuels Corporation (SFC), the DOE coal liquefaction technology program will be reconfigured to support a number of processes in parallel from the laboratory stage through process development units. Responsibility for demonstration activities will be shifted to the SFC. This is consistent with the Administration's policy to focus the Federal role on long-range research and development while relying on private market forces, with the financial help of the SFC, to set the pace for the introduction of synfuel technologies into the marketplace.

Within the guidelines of this new policy, the Department will complete ongoing operations in FY 1982 at the H-Coal Pilot Plant (FY 1982 request: $20 million) in Catlettsburg, Kentucky. Since last summer, we have made significant progress in overcoming many of the equipment problems encountered during start-up, and the plant has now completed its first long-term continuous operation (45 and one-half days). The plant is currently converting 200 tons per day of Illinois #6 coal into synthetic crude oil suitable for refining. Current plans are to begin processing a sub-bituminous coal in the same mode later this year and then change to the production of boiler fuel at a coal feed rate of 600 tons per day. These test runs will be completed in FY 1982, and no further Federal support for plant operations is planned. If appropriate, DOE will undertake discussions with the project's industrial participants, or possibly other interested firms, should they wish to continue privately-funded operations to support their own commercialization plans.

The FY 1982 request for the Exxon Donor Solvent Pilot Plant ($30 million) will continue the testing program using a limited range of coals. The 250 ton-per-day plant near Baytown, Texas, has been undergoing full testing operations on Illinois #6 coal since January, following a successful start-up last summer. The plant has accumulated more than 3000 hours of coal processing time. Since the FY 1982 request represents a decrease in the Government's commitment, the funding level has been presented to the Sponsors Management Committee (in accordance with the cooperative agreement) for their decision regarding further use or disposition of the facility. We have scheduled a second meeting for May 15 to review these options. Further operation of the facility following FY 1982, if the private participants determine it appropriate, would be financed from private funds.

DOE will also continue efforts in FY 1982 to improve indirect liquefaction technology (FY 1982 request: $14 million). While current processes exist for indirect liquefaction -- where coal is first converted into a mixture of gases, then the gases recombined to form liquids -- the potential and need exists for improving efficiencies, costs, and the capability of meeting U.S. market requirements. Catalyst and process R&D currently underway will be continued in FY 1982,

emphasizing improved product selectivity, integration with advanced gasifiers, and reduced thermal losses. Operations will begin at an internationally-sponsored, 100-barrel per day methanol-to-gasoline pilot plant in the Federal Republic of Germany that will test a more efficient version of the M-gasoline process. The revamping of a liquid phase synthesis gas conversion process development unit at La Porte, Texas, will be completed in FY 1982.

The refocused liquefaction program will continue efforts to develop long-term, high-risk third generation technologies (FY 82 request: $18.3 million). Such techniques include the testing of natural and synthetic catalysts, improved integration liquefaction and upgrading systems in multi-step processes, improved methods for the pyrolysis of coal, and other technology base activities. A common characteristic of these techniques is an increase in the efficiency of hydrogen use which can be valuable in reducing the synthetic gas costs.

DOE will also continue support studies/engineering evaluations (FY 1982 request: $10.6 million) which involve environmental and toxicology R&D, the coordination of environmental data among liquefaction processes, engineering assessments, independent technical reviews; and evaluations of ancillary processes such as hydrogen generation. Much of the environmental-related work is done in cooperation with research efforts conducted by the Department's former Office of Environment and recently shifted to the Office of Energy Research. Funding from this category is also allocated for maintenance of unused liquefaction facilities currently awaiting re-use or disposal.

The major change from the January budget submission is reflected in the liquefaction demonstration plants category (FY 1982 request: $12.3 million in operating expenses, no funding for construction). In 1978, DOE began a program to design, construct and operate single modules of a full-size commercial plant that would demonstrate two variations of the Solvent-Refined-Coal process. Preliminary designs have been completed for both plants, and detailed process designs are now underway.

The Administration recommends that funding for major synthetic fuel construction projects be focused in the Synthetic Fuels Corporation which will be asked to support construction of the plants. Authority to conduct less-than-full scale technical demonstrations is contained within the Energy Security Act of 1980 which created the independent Corporation.

During FY 1981, the Administration is requesting a rescission of construction funds ($157.5 million) appropriated for the SRC-I demonstration plant proposed for Newman, Kentucky. Process design will continue until Congress acts on the rescission request. Should Congress concur in the decision, the project would be terminated on or before the end of FY 1981. This however does not preclude the industrial partners from pursuing the demonstration and commercialization of this technology with funding solely from the private sector, nor applying for financial assistance from the Synthetic Fuels Corporation.

The Administration has recognized the unique international nature of the SRC-II demonstration plant planned for Morgantown, West Virginia. In July 1980, the U.S. signed agreements with the governments of the Federal Republic of Germany and Japan who, with their industrial partners, have proposed to fund half of the current estimated cost of the project. As the Chairman is aware, we have received updated cost estimates for the project from our contractor and have made them publicly available while we continue our analysis of the data. Initial consultations have been held (April 14-15) to determine if the international participants consider it mutually beneficial to continue this project with the potential support of the Synthetic Fuels Corporation. A second trilateral meeting is scheduled for June 4-5 at which time we anticipate that the necessary decisions will be made regarding the future course of this project. Our FY 1981 budget, which includes a deferral of a portion of the $170 million in project construction funds, is therefore structured to ensure that adequate time is provided for a mutual decision to be reached by all participants as required by the international agreement.

The $12.3 million budget request for operating expenses in FY 1982 will support the continued operation of the SRC pilot plant at Ft. Lewis, Washington, should the SRC-II demonstration project move forward under the aegis of the Synthetic Fuels Corporation. In the absence of joint support associated with the demonstration plant, the funds could be used to redirect the SRC pilot plant efforts to long-term research and development.

DOE is also requesting FY 1982 funding for capital equipment (FY 1982 request: $700,000) to provide for laboratory and other equipment for use at the Energy Technology Centers and National Laboratories in support of the liquefaction program.

In addition to the $157.5 million rescission request for the SRC-I demonstration project, the Administration is requesting a $6 million rescission in the indirect liquefaction category in FY 1981. Included in this rescission would be $3 million for the feasibility study of the W.R. Grace coal-to-gasoline plant proposed for Baskett, Ky. Rescission of the funding would leave $3 million in FY 1981 to continue conceptual design of the full-scale plant. Support for this

commercial project must come from private sources or from the SFC where it would compete with other proposals for commercial coal-to-gasoline plants. DOE plans no future financial participation in the project. Also, $3 million is proposed to be rescinded from the $12 million appropriated in FY 1981 for environmental studies and other support, and $1 million is proposed for rescission from the $47 million appropriated for the SRC pilot plant operations.

SURFACE COAL GASIFICATION

(BA in millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$113.3	$159.9*	$216.9	$65.5	$54.0

In similar fashion to the liquefaction program, the surface gasification technology efforts have been refocused to emphasize long-range, high-risk technology. Major demonstration plants supported previously under this budget category will now be proposed for consideration by the Synthetic Fuels Corporation.

The FY 1982 budget request will permit sufficient funds to complete a recently-begun evaluation of the future role of the BiGas Pilot Plant (FY 1982 request: $1.1 million) and to place the facility on standby status.

The FY 1982 budget request contains no specific funding for the peat gasification program. Studies are currently ongoing in 10 states to determine the amount and location of fuel grade peat. The technical feasibility of peat gasification has been demonstrated at the bench scale and process development unit scales with peats which realistically bracket the types expected to be found throughout the U.S. Bench scale testing of peat dewatering technology will be completed in FY 1981, and several studies are being continued this year on peat gasifiers at several levels of capacity. The information generated by these efforts will enable a broad technology data base to be established for use by private firms wishing to pursue peat gasification, therefore no funds are requested specifically to support the production of high-Btu gas from peat. DOE is also proposing a rescission of $5 million from the $13 million appropriated in 1981 which will terminate ongoing efforts to convert the HYGAS pilot plant to utilize peat as a feedstock.

We will continue several peat-related efforts, however, including harvesting and dewatering studies, environmental assessments, and combustion tests with new technologies such as atmospheric fluidized bed.

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*Includes a proposed rescission of $5.0 million for a preliminary design study of a demonstration project based on the HYGAS technology.

Within the FY 1982 surface gasification budget request, funding will be provided for continued operation of technologies for low/medium-Btu gasification (FY 1982 request: $13.2 million). Included in this category is the operation of two configurations of fixed bed gasifiers to produce low/medium-Btu gas for studies of various clean-up and end use systems, a fluidized bed gasifier to test process performance and other factors, and an entrained bed gasifier which will complete its testing program in FY 1982.

Third generation processes (FY 1982 request: $27.1 million) comprise the largest funding category in the refocused surface gasification program. Work will continue on gasifiers which produce substantially all methane within the gasifier -- as compared to currently available gasifiers which require the gas exiting the gasifier to be upgraded to form methane. In FY 1982, data from the 3/4 ton-per-hour hydrogasifier in Canoga Park, Calif. will be analyzed to determine future Government support for this technology.

DOE will continue to participate in the operation of the 1 ton-per-day catalytic gasification process development unit at Baytown, Texas, to improve the data base for several U.S. coals. The continued involvement at this level is expected to complement a redirected program announced by Exxon in 1980 in which the company intends to build a 100-ton per day privately-funded pilot plant in Europe. As part of a cooperative agreement negotiated between DOE and Exxon, the Department will have access to data generated by the pilot plant on two U.S. coals previously studied in the Baytown unit.

In addition to these efforts, DOE will continue work on a high rate entrained flow gasifier, and on those projects that offer the potential for significant advances in components, materials, and instrumentation that would increase the operational efficiency and reliability of coal gasification processes.

The FY 1982 funding level for technical support (FY 1982 request: $12 million) will continue many crosscutting studies and engineering evaluations, environmental analyses and comparisons of pilot plant data, continued development of a gasification data book, and independent evaluations of competing advanced gasification processes.

As part of the restructuring of the Federal synthetic fuels program, the DOE gasification demonstration program will be discontinued and FY 1981 funding will be proposed for rescission. The sponsors of some of the projects currently in the program may decide to submit proposals to receive Synthetic Fuels Corporation support either as synthetic fuel projects or as synthetic fuel modules.

The Conoco Coal Development Company and the Illinois Coal Gasification Group, both selected in 1977 to design high-Btu pipeline gas demonstration plants, will complete their designs this summer. The Administration does not support DOE funding to construct a demonstration plant at the completion of the designs. Sufficient funding is available from prior years to essentially complete the designs; therefore the Department proposes to rescind the $44 million appropriated for FY 1981. Carryover funds from past years will also be used to continue final design work through FY 1981 for a joint project with the City of Memphis to design, build and operate a medium-Btu fuel gas demonstration plant. At the end of this fiscal year, the Administration proposes to conclude direct DOE support for the project. FY 1981 funds ($45.4 million) will be proposed for rescission. The project sponsor has proposed continuing the project under incentives provided by the Synthetic Fuels Corporation.

The Department is requesting for FY 1982 funding for capital equipment (FY 1982 request: $550,000) to provide new or replacement equipment at the Energy Technology Centers and National Laboratories involved in the gasification program. Such equipment includes both analytical and general purpose equipment.

In addition to the rescissions outlined above, DOE is also requesting that $5 million appropriated in FY 1981 for a conceptual design of a HYGAS demonstration plant be rescinded.

IN SITU COAL GASIFICATION

(BA in millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$10.0	$10.0	$10.8	$10.0	$8.6

Today, much of the Nation's vast coal resource is not technically or economically recoverable by conventional underground or surface mining. Gasifying the coal underground, without mining, could significantly increase our recoverable coal supplies. Once the synthetic gas is piped to the surface, it can be used as boiler fuel, upgraded for transport, or converted into transportation fuels such as methanol and gasoline. The technology is amenable to small-scale (3,000-10,000 barrel per day) production of liquid transportation fuels for use locally or regionally.

During the past six years, successful field tests have produced both low Btu and medium Btu gases. One recent test completed in the fall of 1979 produced a medium Btu gas for a 55-day period at a rate sufficient to have produced up to 3,300 gallons of gasoline per day.

Within the FY 1982 budget request, funding will be provided for tests to determine the feasibility of gasifying coal in a 600-foot deep, 47-foot thick seam near Centralia, Washington. In addition, work with Gulf Research and Development Company to study the gasification of steeply-dipping coal beds will enter its last year with an expected 90-day test burn designed to produce medium-Btu gas.

Funding would also be provided for environmental studies, including the monitoring of ground water at the sites of past tests, the prediction and mitigation of subsidence, and permitting activities in conjunction with the Centralia, Washington activity.

Several small studies focused primarily on basic issues impeding the progress of underground coal gasification will also be conducted by university researchers and industrial groups. Under the reduced funding level from the January 15 budget request, a planned cooperative program with the Gas Research Institute will not begin in FY 1982.

ADVANCED RESEARCH AND TECHNOLOGY DEVELOPMENT

(BA in millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$ 56.2	$58.3	$72.6	$58.3	$67.6

Consistent with the refocused Federal energy policy, the Advanced Research and Technology Development activity plays an important role in the Department's Fossil Energy program by developing a sound technology base for coal processes. Through applied and exploratory high risk, potentially high payoff research at DOE's field centers and at universities and industrial laboratories, this activity provides ideas for new processes, improves the fundamental understanding of coal characteristics and reactions, and holds the potential for significant improvements or breakthroughs in the use of coal.

In FY 1982, more emphasis will be placed on developing a better fundamental understanding of the transformation coal undergoes in fossil energy technologies. Process research in coal liquefaction will focus on basic coal conversion concepts and exploratory liquefaction processes that may lead to novel and more efficient technologies. Process research in coal gasification will center on the development of innovative gasification concepts through improved understanding of the basic chemical processes involved, and the development of improved gas stream treatment, and processing.

Direct utilization research will support an expanded effort in fundamental coal and synfuel combustion and generic heat exchanger technology. Modeling procedures and data base development will also be emphasized. These efforts will also provide for preliminary, small-scale investigations of novel combustors and coal-based fuels aimed at retrofit of oil-designed boilers and process heaters for direct coal utilization.

All advanced fossil energy processes and utilization systems require a strong supporting research program in materials and components. Materials research will be directed at developing a basic understanding of the phenomena of materials performance on a micro- and macroscopic scale. Component research will focus on investigations of unique speculative component designs which have the potential for dramatically increased efficiency and life.

The University Coal Research program will continue to insure the influx of new ideas from the Nation's universities while encouraging faculty and students to enter the field of coal technology.

Two major new thrusts will begin in advanced research in FY 1982. Instrumentation and control research will be aimed at developing new instruments capable of functions in the harsh environments of many coal processes. This work will establish the foundation for advanced generic control systems. Technology base synthesis will provide for the coordinated development of advanced research plans and for the seed funding of very long term and fundamental projects as well as high-risk/high-payoff fossil energy initiatives.

The Advanced Research and Technology Development activity also provides for construction at the Energy Technology Centers. Under the proposed funding level, we will complete the design of a program support building at the Pittsburgh Energy Technology Center, however, an assessment will be required to determine whether construction can begin.

ADVANCED ENVIRONMENTAL CONTROL TECHNOLOGY

(BA in millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$38.3	$37.5	$37.8	$34.5	$26.9

Nearly 90 percent of the coal consumed in this country is, and will continue to be, burned directly. Therefore, a primary objective in expanding the use of coal to decrease our over-dependence on foreign oil is to assure that coal can continue to be burned within environmental standards. Sulfur, nitrogen, alkali and halogen compounds, and volatile trace metals are found in varying amounts in coal and are released during the combustion and conversion processes. Besides having harmful effects on health and the environment, these substances can also degrade the performance of key components in energy conversion systems such as turbines and fuel cells.

DOE's Advanced Environmental Control Technology program encompasses three major areas of combustion gas cleanup: (1) flue gas cleanup systems which remove contaminants from the stack gases of conventional combustion systems and (2) gas stream cleanup systems which remove contaminants from the gas produced by coal gasifiers or pressurized fluidized bed combustors before it is used in gas turbines or fuel cells, and (3) clean-up base technology.

The flue gas cleanup activity (FY 1982 request: $6.5 million) will move away from direct participation in near-term lime/limestone scrubber refinement and advanced flue gas desulfurization, both of which are receiving increased private sector emphasis. (A rescission is being proposed for $3 million of the $9 million appropriated in FY 1981 for advanced flue gas desulfurization.) Instead, the research program will extend flue gas technology beyond sulfur cleanup to combined or integrated systems for removal of sulfur oxides, nitrogen oxides and particulates. New filtering techniques for ultrafine particulates will focus on improving efficiency and the ability to operate at higher temperatures. Applied research will also begin on advanced pollutant removal concepts involving the use of electron beams, lasers, or plasma-jets.

As the economic advantages increase for combined cycle systems powered either by a coal gasifier or pressurized fluidized bed combustor, the need is heightened for efficient gas stream cleanup (FY 1982 budget request: $14.4 million) system. Particularly important will be the development of systems capable of operating in the high temperature and pressure environment typical of the gases exiting a coal gasifier or pressurized fluidized bed combustor. These hot gas streams contain contaminants that, if not removed, will erode or corrode downstream equipment or violate environmental emission standards. DOE's program in FY 1982 will concentrate on completing bench scale testing of various particulate removal concepts. The most promising ones will be scaled up and tested at the process development unit scale.

As part of the gas stream cleanup category, DOE will also continue work to determine contaminant effects on fuel cell performance. The studies are expected to lead to a decision as to the desirability of continuing high temperature, clean-up process work.

Also within the gas stream cleanup program is an effort to determine the effectiveness of modifying the combustion or gasification process itself to suppress or remove pollutants. A major effort will be focused on the Limestone Injected Multi-Stage Burner (LIMB), a joint EPA/DOE effort which mates low nitrogen oxide burner technology with the injection of limestone to capture sulfur dioxide. This concept

could provide an environmentally viable approach to retrofitting existing coal-fired boilers to reduce these emissions. Research and development of this concept will be completed in FY 1981.

The clean-up base technology program (FY 1982 request: $5.5 million) involves waste management, applied research and advanced instruentation, as well as technical and economic comparisons on common aspects of flue gas and gas stream clean-up technology. Specifically in FY 1982, DOE's efforts in waste management will continue the development of new techniques for disposing and/or using solid and slurry wastes from clean-up processes; efforts with the Department of Agriculture to determine if spent limestone from fluidized bed combustion might serve as a replacement for increasingly expensive lime for eastern U.S. crops; and several other activities involving wastes associated with combined flue gas cleanup systems currently under consideration.

Instrumentation development will concentrate on improved systems that continuously monitor sulfur dioxide and measuring techniques for determining how the concentration of sulfur, nitrogen, alkali metals, and other contaminants changes during the energy production process.

COMBUSTION SYSTEMS

(BA in millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$50.9	$36.0*	$76.7	$36.0	$38.8

A significant opportunity exists for the increased use of coal in the utility, industrial and commercial sectors, large proportions of which currently rely on increasingly expensive oil and natural gas.

To assist the private sector in developing combustion options, the Department's program involve (1) the fluidized bed combustion of all ranks and grades of coals and (2) the substitution of coal or coal-derived fuels for a substantial portion of the oil burned in existing oil-fired combustors.

Significant results have been achieved in the combustion program, particularly in moving the atmospheric fluidized bed combustion (FY 1982 request: $11.3 million) to the threshold of commercial acceptance. The 100,000 pound/hour fluidized bed boiler on the campus of Georgetown University has now passed its second winter of service. In FY 1982,

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*Reflects $20.5 million in rescissions proposed in the Carter Budget for coal-oil mixtures ($17.5 million) and the Rivesville 30 MWe atmospheric fluidized bed boiler ($3.0 million).

the Georgetown unit will be joined in operation by units of different configurations at the Great Lakes Naval Training Center near Chicago and at Shamokin, Pennsylvania. Because results from the Shamokin project, which is designed specifically to burn anthracite wastes, will available substantially earlier than from a previously-planned second anthracite boiler proposed for Wilkes-Barre, Pa. DOE support for the Wilkes-Barre project will be terminated at the completion of the design and no construction funds are being requested in FY 1982.

DOE will also place the 30 MW atmospheric fluidized bed boiler at Rivesville, West Virginia on "mothball" status until funds are available to begin the required dismantling. Despite problems encountered in the operation of this pioneering facility, the Rivesville unit achieved many of its design goals including a 200-hour continuous test run in 1979. The technology for atmospheric fluidized bed utility applications has now advanced beyond that which can be effectively supported by continuing operations at Rivesville. A $3 million rescission, therefore, is proposed in FY 1981 for the Rivesville project.

DOE will also begin an expanded effort in FY 1982 to design advanced fluidized bed systems, possibly including such concepts as circulating beds, staged combustion, and combinations of fluidized bed gasifiers and char combustors. Advanced concepts can be evaluated at the newly planned Fluidized Bed Combustion Research Facility in Morgantown, West Virginia.

DOE's primary effort in fluidized bed combustion in FY 1982 will be the continued development of the pressurized fluidized bed combustion (FY 1982 request: $17 million) technology which the combustor is pressurized from 6 to 16 times atmospheric pressure. This increases the efficiency of power generation by permitting the combustor to be used in a combined-cycle arrangement, while also increasing the sulfur capture within the boiler. The major portion of the funding in this category would be allocated for continued construction of the 13 MW PFB combined cycle pilot plant at Wood-Ridge, New Jersey. Construction is now scheduled for completion in the second quarter of FY 1983.

Sufficient data should be available from the Wood-Ridge pilot plant to support technology development of the pressurized fluidized bed system in the U.S. Therefore, DOE is not requesting funds to conduct test efforts at the International Energy Agency PFB test facility located in Grimethorpe, England, and will initiate consultations with the United Kingdom and the Federal Republic of Germany regarding appropriate actions to withdraw from the IEA joint program following Congressional approval of this action.

Funding is being requested for the initial design effort of alternate turbine machinery for testing of a U.S. type gas turbine at the Wood-Ridge PFB pilot plant and for the investigation of advanced coal combustor concepts, such as staged slagging combustors.

Funding in the advanced combustion technology program (FY 1982 request: $4.1 million) will focus on new coal combustor concepts for oil-designed utility and industrial boilers and furnaces. A competitive solicitation to begin this effort will be issued in late FY 1981. In addition, this funding would be used for various economic evaluations along with technical feasibility and equipment reliability studies related to advanced combustion systems. Environmental analyses and component development associated with ongoing combustion projects will also be conducted.

With private sector involvement expanding in the preparation and use of coal-oil mixtures, DOE's alternative fuel utilization program (FY 1982 request: $6.4 million) is shifting its emphasis to yet-unproven concepts with significant potential for replacing oil or gas with coal. We concur in the rescission request of $17.45 million in FY 1981 funding for coal-oil mixture demonstration already pending from the January 15 budget request. Efforts will now concentrate on the preparation and combustion of other coal based fuel mixtures, such as coal-water, peat-coal-oil, methanol-coal, and ethanol-coal.

HEAT ENGINES AND HEAT RECOVERY

(BA in millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$50.5	$36.4	$29.5	$31.4	$16.1

By advancing the state-of-the-art, the heat engines and heat recovery program can potentially result in savings in fuel consumption in: (1) central power systems, where DOE estimates that high-efficiency systems will be ready for commercial deployment by the private sector in the 1990-2000 timeframe; (2) dispersed power systems, where more efficient fuel utilization technology for industrial and residential/commercial applications could be available by 1985-2000, and (3) the recovery of waste heat from utility, residential/commercial, or industrial applications.

In the central power systems activity (FY 1982 request: $9.1 million), DOE will concentrate on open-cycle high temperature turbine technology. Temperature goals are in the range of 2600 to 3000 degrees F, a level required to offset energy losses in gasifying and cleaning the coal. The funding level will continue the program begun in 1977 in which four contractors completed Phase I (Program And System Definition Studies), and two were chosen for Phase II (Technology Testing). Phase II will be completed in FY 1981, and current plans are for a single design to be selected for Phase III (Verification Testing). The High Temperature Turbine Technology program has been stretched from the orginally estimated six years to the present schedule for completion in ten years.

The dispersed power systems activity (FY 1982 request: $6.5 million) will continue to support development of stationary diesels and gas turbines specifically tailored to burn coal-derived fuels instead of conventional petroleum. Funding would be used for projects in gas turbine low nitrogen oxide combustors and ceramic coatings, both critical areas for attaining acceptable environmental performance and durability. A rescission of $3.0 million for directly fired heat cycles is being requested for FY 1981, which will leave $2.6 million to continue a reduced effort.

No additional funding is requested in FY 1982 for the heat recovery component technology activity. Feasibility studies on the implementation of heat recovery technology at DOE's uranium enrichment plants will be completed in FY 1982. The proposed rescission of $2 million from the $4.3 million appropriated to the Fossil Energy office in FY 1981 for this activity would still provide sufficient funds to complete these initial design efforts.

FUEL CELLS

(BA in millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$26.5	$32.0	$28.6	$32.0	$28.6

Fuel cells offer and electrochemical approach to energy conversion with the potential of efficiencies well beyond combustion based technology and with little to no environmental impact. The high efficiency of fuel cell power plants at full or modular scales, the negligible environmental intrusion, and the ability to operate using a wide range of hydrocarbons make fuel cells attractive for a variety of applications. If economic targets can be met, fuel cells could find significant use in electric utility applications, industrial cogeneration, and for on-site total energy systems where the utilization efficiency can exceed 80 percent.

DOE's fuel cell program has been shaped as part of a mission-oriented program coordinated by the National Fuel Cell Coordinating Group, an organization made up of government, manufacturer and user representatives who share the costs of the national fuel cell program.

In FY 1981, field tests of a 4.8 megawatt prototype fuel cell utility power plant sited on Manhattan Island will begin. Field testing of the 40 KW on-site phosphoric acid system will also be continued in FY 1982. With these tests underway, current fuel cell efforts by DOE are being devoted to the higher-risk R&D activities necessary to increase power density and reliability.

The phosphoric acid systems development activity (FY 1982 request: $10.1 million) will concentrate on technology development in support of two electric utility powerplant designs (a 10 MW and a 7.5 MW air cooled design), on the development of competitive technical concepts for the key components of the on-site integrated energy systems powerplant ranging in size from 40 KW to 120 KW, and on supporting technology base activities.

The molten carbonate systems development activity (FY 1982 request: $14.1 million) will complete the transition begun in FY 1979 from an applied research program to an effort that is primarily cell and stack technology development. Tests of the first sheet metal cells -- the first of a type suitable for potential economic viability — will continue in FY 1982. In addition, testing will continue on electrolyte structures made by methods suitable to low cost mass production.

The advanced concepts activity (FY 1982 request: $4.4 million) will continue development of solid oxide fuel cells and thermionic energy conversion.

MAGNETOHYDRODYNAMICS

(BA in millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$79.0	$67.0	$60.0	$61.0	$ 0

The Administration is recommending to the Congress that all program activities in magnetoydrodynamics (MHD) power development be discontinued at the conclusion of FY 1981. MHD is a long-range technology whose potential payoffs do not justify its substantial development costs, particularly in the context of a tight fiscal climate. Initial tests will be conducted in FY 1981 at the recently-completed Component Development and Integration Facility in Butte, Montana, and the Coal Fired Flow Facility at Tullahoma, Tennessee. Following these tests, the facilities will be closed and other ongoing research and development efforts will be brought to an orderly conclusion. A rescission of $6 million from FY 1981 funds is also requested.

PETROLEUM PROGRAM

The Department's Petroleum technology program has been fashioned within the context of oil price decontrol. There is no question that the petroleum industry has the technical and financial resources to continue development of new petroleum technologies. Elimination of artificially low domestic oil prices, which have discouraged exploration and production and hindered the commercial development of new technology, will increase markedly private sector initiatives in the development of improved petroleum production techniques.

The Federal program, therefore, has continued its shift toward the development of the longer-term, higher-risk technologies which are not being pursued significantly today by private industry.

At least two out of every three barrels of oil discovered in the U.S. remains unrecoverable by conventional production technology. This amounts to more than 330 billion barrels left in the ground. Tar sands may contain some three to six billion barrels of oil that can be recovered from a resource of almost 36 billion barrels. The Nation's abundant western oil shales have the potential for contributing up to 600 billion barrels to our domestic oil supply, and additional shale oil may be recovered from the leaner shales in the East.

DOE's petroleum technology program encompasses three major activities designed to develop new and improved techniques to recover significant portions of these untapped petroleum resources and to expand the technology base for upgrading the petroleum products for transportation fuels. The three areas are: (1) enhanced oil recovery, (2) oil shale R&D, and (3) advanced process technology.

ENHANCED OIL RECOVERY

(BA in millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$23.1	$18.6	$23.9	$16.6	$20.9

DOE is assisting the development of technologies for recovering petroleum from (1) heavy oil, (2) light oil, and (3) tar sand resources. In addition, the Department is conducting analyses of selected projects initiated under the Economic Regulatory Administration's tertiary incentives test program. This program demonstrates the effectiveness of price incentives. More than 300 enhanced oil recovery projects, many using advanced technology, are planned by industry under this program. The increased taxes which will be paid on the incremental production may produce more revenues than the program's cost.

Within the heavy oil activity (FY 1982 request $7.1 million), work will continue to improve the recovery efficiency of thermal processes, such as steam injection. Improving this efficiency from the current 50 percent to a 60 percent level would add two to three billion barrels of oil to domestic reserves. In addition, DOE is continuing efforts to tap deeper heavy oil reservoirs by developing technologies that allow steam to be injected to as much as twice the approximate 2500-foot depth limit of conventional systems. In Project Deepsteam, engineers are developing a steam generator that can be lowered into the borehole. Surface tests of a prototype were completed last year, and in 1981 the first downhole tests will begin. In FY 1982, an 8-12 month test of the Sandia Laboratory-developed downhole steam generator will be undertaken to determine reliability, performance, and the frequency required for maintenance.

Development of new, low-cost materials for insulating the well casing is planned for FY 1982. Reducing heat losses in deep wellbores could increase domestic oil reserves by one to two billion barrels.

The FY 1982 funding request also reflects a reduced and refocused program of research and development with Venezuela and Canada, the continuation of university research to develop improved heavy oil recovery processes, and the monitoring of three ongoing field experiments testing steam drive with additives.

Improved recovery techniques for light oil (FY 1982 request: $8.0 million) would add from 12 to 23 billion barrels to domestic crude oil reserves. DOE's FY 1982 program will continue support of inhouse light oil recovery research at the Bartlesville Energy Technology Center and the support of university research projects. The focus will be on developing advanced techniques that flood a reservoir with a miscible gas, such as carbon dioxide, or with special chemicals. Analyses will continue on selected tests from the 350 enhanced oil recovery field projects begun by industry following the announcement of the ERA incentives program. Emphasis will be on the analysis of advanced processes. Coupled with the results of 22 previously-funded DOE cost-shared field experiments, these analyses are expected to provide better information for industry to make its decisions on commercial application of improved enhanced recovery processes.

The Department's tar sands program (FY 1982 request: $5 million) will continue development of underground, or "in situ", recovery techniques. Nearly 90 percent of the U.S. tar sand deposits are not recoverable by surface technology, and either steam injection or in situ combustion will be needed to obtain significant amounts of oil from these deeper reservoirs. In FY 1982, DOE will use the information gathered from last year's successful small-scale steam injection test at Vernal, Utah, to conduct the engineering and environmental design of a second tar sand steam drive experiment.

Funding requested for captial equipment (FY 1982 request: $750,000) will be used for such items as stirred reactors, filters, pumps, and chromatographs to be used in the enhanced oil recovery program.

The Administration is also proposing that $2 million be rescinded in FY 1981 funds, including $1 million from the heavy oil activity and $1 million from the tar sands activity.

ADVANCED PROCESS TECHNOLOGY

(BA in millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$6.0	$4.0	$4.2	$4.0	$4.2

Exploratory research in advanced recovery processes, the characterization and utilization of heavy crude oil and synthetic products, and studies of processes for upgrading shale oil, heavy oil and tar sand bitumen are conducted within the Advanced Process Technology program.

Two major microbial processes for enhanced oil recovery will be started in the advanced exploratory research activity (FY 1982 request: $1.0 million). These studies will build on information gathered from research projects begun in 1981 to identify microbe strains that can survive underground conditions while stripping oil from the formation rock.

The product characterization and utilization activity (FY 1982 request: $2 million) will continue the analysis and tabulation of data on crude oils and products, the stability of blends of synthetic and conventional oils, and the correlation of road life with the chemical breakdown of asphalt. These research projects are basic in nature and provide a fundamental data base for advancing petroleum research efforts.

Upgrading processes for heavy crude oil and shale oil will be studied in the upgrading and utilization activity (FY 1982 request: $700,000). Small quantities of specification or reference fuels will be produced and tested for the Department of Defense and made available for industry use. This activity is important in closing the loop between new synthetic feedstocks and fuels and the engines that will use them.

The capital equipment budget request ($500,000) will provide for essential new or replacement equipment needed at the field centers to support the Advanced Process program.

OIL SHALE R&D

(BA in millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$28.2	$33.0	$28.1	$33.0	$17.2

Higher oil prices and the creation of the Synthetic Fuels Corporation have stimulated a surge of private sector activity in commercial projects to tap the huge domestic oil shale resource. These commercial projects could contribute substantially to a reduction in oil imports in the future.

DOE's oil shale program has therefore begun a transition from the support of field projects to the development of a forward-looking technology base program.

Within the in situ conversion activity (FY 1982 request: $15.25 million), DOE's involvement in current field projects with Occidental Oil Shale (Colorado), Geokinetics Inc. (Utah), and the Equity Oil Co. (Colorado) will be phased out in FY 1981, and no new funding will be requested for FY 1982. The technologies being demonstrated in these projects have progressed to the point where completion of existing projects or subsequent development and commercialization would be a candidate for funding from the Synthetic Fuels Corporation, from private institutions or by the developers themselves. DOE's research program will now focus on work at the Laramie Energy Technology Center, National Laboratories, and universities, in such areas as the chemistry and physics of oil shale conversion, instrumentation and diagnostics, oil shale fracturing, and environmental impact mitigation. This research is expected to point the way to advanced and improved processes for extracting oil from shale.

The surface conversion activity (FY 1982 request: $1 million) will carry forward a new effort begun in FY 1981 to develop advanced processes capable of converting lean eastern shales to synthetic oil. This resource is far different from the rich western shales that have been the focal point of research for the past two to three decades. The surface conversion activity will also support a waste management experiment to address problems with disposing of spent western shale.

Funding requested for capital equipment (FY 1982 request: $1 million) will provide for instruments and hardware to monitor in situ shale oil production experiments in the laboratory and at government-owned experimental retorts.

ENHANCED GAS RECOVERY PROGRAM

Natural gas continues to provide one-quarter of all the energy used in the U.S. Four large unconventional gas resources have been identified as having significant potential for development and positive impact on future gas supplies. Research in three of the resources is conducted by the Office of Fossil Energy. The fourth, geopressured aquifers, is part of the Department's geothermal energy program. The three within the Fossil Energy program are:

- o Western tight gas-bearing sandstone and limestone formations. (FY 1982 request: $6.0 million) This unconventional gas resource exists in blanket and lenticular formations in the Rockies, Northern Great Plains and the Southwest. Estimates of the producible reserve base range from 190-570 trillion cubic feet. Because of its huge size and potential for future development, this is the highest priority in the Fossil Energy enhanced gas recovery program. The bulk of this gas is in lenticular formations which cannot be produced with current technology. In FY 1982, DOE will complete drilling, coring, logging and preliminary production testing of three wells at the Multiwell Experiment Site in Colorado. This experiment is a crucial step in developing a better understanding of how to extract gas from these lenticular formations. Also, standardized core analysis techniques will be developed, and acoustic and seismic instrumentation systems will be tested to enable mapping of the geometry of the tight sand rock formations.

- o Eastern gas-bearing shales. (FY 1982 request: $2.6 million) Located in the Applachian, Michigan and Illinois Basins with an estimated producible reserve base of 12-39 trillion cubic feet. The U.S. Geological Survey is working with DOE in a six-year research effort to study geology, geochemistry, rock mechanics, and other research disciplines applied to the eastern shale. In FY 1981, the major resource characterization activities will be completed. In FY 1982, an assessment of the Devonian shale gas resource will be published and an "offset well" test will be completed and data obtained on gas production rates. Excavation will also be completed for a project in which researchers will mine back through a fractured Devonian shale seam to verify visually the effectiveness of fracturing technology and diagnostic instrumentation.

- o Natural gas trapped in coalbeds. (FY 1982 request: $1 million) Technologies for recovering methane from coalbeds in conjunction with mining are relatively well-developed; however, the more attractive, long-term target is recovery from unmineable coal seams, for which considerable technology development and increased fundamental knowledge is required. Estimates of producible reserves range from 25-45 trillion cubic feet. DOE's current program involves some 20 contracts including nine

industry cost-shared efforts to test different extraction and utilization techniques. In FY 1982, lab and field experiments will continue leading to improved designs for hydraulic fracturing of coal seams, and an evaluation will be completed of methane production from deep, unmineable seams at two sites in the Rocky Mountain basins.

Environmental assessments plus technical and cost benefits analyses of the field experiments in the enhanced gas recovery program would be funded in the environment and support activity (FY 1982 request: $400,000).

In refocusing the enhanced gas recovery program on longer-range/high-risk and technology base activities, the Department is proposing rescissions totalling $3 million -- $1 million from each of the three unconventional gas categories in the Fossil Energy program -- from an FY 1981 appropriation of $30.5 million.

RESOURCE APPLICATIONS FUNCTIONS

As indicated on page 2, the recent realignment of the Department transferred several functions to the Office of Fossil Energy that were originally conducted by the Office of Resource Applications. The following is a description of these functions and their budgetary status:

Coal Resource Management

(BA in millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$2.25	$ 0.5	$ 1.2	$ 0	$ 0

Through the Office of Coal Resource Management, the Department has assisted the commercialization of coal synthetic fuel processes that have the greatest potential for displacing imported oil. Assistance has been offered in such areas as permitting and licensing, streamlining regulatory processes at all government levels, and Environmental Impact Statement preparation. This office also provided technical evaluation to determine which proposals submitted under the Alternative Fuels program should be supported and has continued monitoring the selected projects to determine the status of licenses, permits, environmental and socioeconomic efforts. With cessation of activities under the interim Alternative Fuels Program on June 30, 1981, this evaluation function will be completed within DOE.

Many of the analyses conducted previously by this office in support of the near-term commercialization of coal-based technologies either will no longer be required or will be conducted elsewhere. The Administration, therefore, is proposing a rescission of the $0.5 million appropriated in FY 1981 for these efforts.

This activity also includes administering the coal loan guarantee program, authorized by the Energy Policy and Conservation Act of 1975. Under that legislation, the Department may provide financial incentives to small- and medium-sized coal producers to develop, expand, or reopen underground low-sulfur coal mines. The authority was expanded in 1978 to include coal preparation plants designed to reduce the sulfur content of coal. Congressional appropriations in 1978 provided $62 million of loan guarantee authority with a $6 million loan default fund. To date no coal producers have qualified under the guidelines of the Act. No guarantees have been issued, and only two conditional guarantees have been approved. The Administration is proposing to rescind the $6 million of unobligated funds.

The Department has also conducted technical information and guidance programs directed at the revitalization of the anthracite coal industry in the Northeast. Through a combination of public awareness programs and field projects, this activity has sought to improve the prospects for anthracite production and use. With the improving economic climate in the coal industry, this near-term Federal function will be phased out and no funds are requested for FY 1981 or FY 1982. The problems for increased anthracite production are related to its high price. Increases in oil and gas prices due to certain regulatory reforms as well as the tax reduction policies of the Administration are expected to improve the economic climate for the anthracite industry.

Oil and Gas

(BA in millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$ 4.0	$5.1	$1.5	$ 4.2	$ 0

By assisting the private sector through technical guidance, and demonstrations, the Oil and Gas program encourages new, enhanced, and marginal oil and gas production, as well as the opening of restricted or closed areas for oil and gas exploration, and the acceleration of the permitting process for various pipeline and refinery projects. In addition, the program is the focal point for activities undertaken by the National Petroleum Council Federal Advisory Committee, the major conduit for the transmittal of industry's analysis of critical oil and gas issues.

Oil-related efforts have included: a major role in the development of the Economic Regulatory Administration's tertiary front-end incentive regulations that, when combined with other incentives, have resulted in a significant increase in industry enhanced oil recovery activity; appearances before the California Air Resources Board on air quality standards for SOx and NOx emissions which impact thermal oil recovery operations; appearances in refinery permitting cases to demonstrate the importance of new refinery capacity capable of refining heavy sour crudes and producing light transportation products; and the development of an abandoned fields file to be used by industry to develop potential oil resources which now may be economical due to changed economic conditions. The office has also published Trends in Refinery Capacity and Utilization, an authoritative document of future domestic refinery activity and capability to supply U.S. product demands and the growth of foreign refined product export capabilities.

In the natural gas area, the office has: conducted an unconventional gas demonstration program to assist industry in demonstrating the feasibility of utilizing natural gas from Devonian shale and coalbeds in small community and rural development, and provided technical assistance to TVA in the use of unconventional gas for development of an industrial park.

The office has also conducted assessments of the oil and gas potential of lands being considered for withdrawal by the Bureau of Land Management, the Forest Service, and the National Oceanic and Atmospheric Administration (marine sanctuaries).

With the added economic incentives provided the private sector by the decontrol of domestic oil and the trend towards further deregulation of natural gas, in addition to certain regulatory changes such as increased Federal land availability for domestic oil and gas exploration, this activity will no longer be necessary to increase domestic oil and gas supplies. The Oil and Gas program will be phased out during FY 1982 and no funding is requested.

Oil Shale Industrialization

(BA in millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$3.0	$1.5	$5.5	$1.5	$ 0

The Oil Shale Industrialization program was begun in 1978 with the goal of assisting the development of a commercial oil shale industry in the U.S. by pursuing economic, environmental, regulatory, institutional and socioeconomic issues which have constrained past development.

In FY 1981, the program assisted in the start of three commercial projects for oil shale production. An investment tax credit for oil shale equipment was developed and implemented in Department of Treasury regulations issued on January 23, 1981. Grant awards were made to Colorado and Utah for socioeconomic impact planning to prepare for shale oil development. The office was also the Department's focal point on a DOE-DOI Task Force which prepared recommendations resulting in the revision of the DOI oil shale land policies.

Working with the Soil Conservation Service, the office prepared an analysis of future needs by commercial seed growers for seed stock to revegetate oil shale lands. A market analysis of shale co-products was completed to justify leasing multimineral lands and determine the financial feasibility of these projects. Work also began with the Departments of Housing and Urban Development and Agriculture in an effort to provide housing assistance in shale development areas.

Increased oil prices, the creation of the Synthetic Fuels Corporation, and the proposed tax structure revisions have created a favorable climate for oil shale development to continue. Therefore, the oil shale industrialization activity is no longer needed to carry out the development of a commercial shale oil industry. Any constraints which may still exist for commercial oil shale development will be addressed by other Federal programs such as EPA's environmental regulations and DOI's leasing program. The level of private sector investments in the development of oil shale have reached the point where commercial production will clearly result from the improved economic outlook for this resource. No funding is requested therefore for this activity in FY 1982, and the program will be phased out beginning this fiscal year.

Industrialization Planning

(BA in millions)

January 15 Budget		Revised Budget	
1981	1982	1981	1982
...	$0.8	...	...

The Office of Industrialization Planning was originally established in July 1980 to unify the Federal program for the industrialization of diverse energy resources, including energy transportation efforts formerly conducted elsewhere in the Department. With the Congressional passage of the Alternative Fuels program, the focus of the office was subsequently shifted to manage this interim program. Funding for this effort was provided to the Department of Energy under a separate budget category.

With the transfer to the Fossil Energy program, this office will continue to oversee the $200 million in feasibility studies and cooperative agreement awarded during the first round of the Alternative Fuels Program. With respect to the $300 million appropriated for a second round, the Administration believes proposed projects under this program should more properly compete for financing in the private market along with other energy projects. A rescission is proposed for this $300 million. This decision will not effect either the number or quality of projects which are ultimately selected by the SFC.

The Administration will propose no changes in the $5 billion currently available to the Department for its activities in support of the Defense Production Act (DPA) and the Federal Non-Nuclear Energy Research and Development Act (NNA). Negotiations are currently underway with three proposers -- TOSCO, Union Oil, and the Tennessee Synfuels Associates -- under provisions of the DPA, and our evaluation of proposals received under the NNA are expected to be completed by the end of March.

In addition, we are expecting a revised proposal from the Great Plains Gasification Group for its proposed high-Btu synthetic gas project in North Dakota, and we anticipate a final decision on increasing the amount of the conditional commitment for the loan guarantee for this project within a few weeks of receiving the new proposal.

Because the Synthetic Fuels Corporation will assume the primary Federal role in providing the financial stimulus for construction of these commercial projects, no funds will be necessary for this activity in FY 1982.

Federal Leasing

(BA in millions)

	January 15 Budget		Revised Budget	
FY 1980	1981	1982	1981	1982
$ 2.15	$2.78	$3.5	$2.38	$ 0

While we recognize that the Federal leasing program is not part of this Committee's oversight responsibilities, we have included a brief description to provide a complete picture of all functions now conducted by the Fossil Energy office under the recent Departmental reorganization.

During FY 1981, the DOE Federal leasing program will be phased out with a wrap-up of all ongoing activities during FY 1982. In FY 1981, leasing activities will conclude the development of onshore and Outer Continental Shelf (OCS) oil and gas production rate setting procedures and methodology. During FY 1981, the Leasing program will conclude analyses of Federal-State OCS oil and gas along with onshore oil and gas, coal and geothermal permitting barriers. Recommendations to remove onshore energy permitting barriers will be completed in FY 1982 along with the OCS work commitment leasing system. In addition to these leasing program activities, DOE will comply with the U.S. District Court order to promulgate variable work commitment and variable net profit share regulations before July 1981.

All of the DOE Leasing program responsibilities are expected to be transferred to the Department of the Interior in FY 1982; therefore no funding is requested for FY 1982 and a rescission of $0.4 million is proposed for FY 1981 as part of the phase out of the program by the Department.

SUMMARY

In short, the change in strategy reflected in this Fossil Energy R&D and industrialization budget will result in a less costly and more tightly focused Federal program. This budget is a clear signal to private energy companies that they will once again play the primary role in commercializing new technologies. We anticipate that this change in philosophy will not slow down the technological creativity in this country but will in fact stimulate it. In turn, these changes will make it possible to devote more governmental resources to true research needs as the more capital-intensive applied and market-oriented Federal activities are scaled back. In addition, the anti-competitive effects of Government subsidies for commercialization will be eliminated, ultimately benefiting the consumer through lower costs for new energy sources.

The FY 1981 and FY 1982 revised budget proposals are summarized in the attached charts.

Department of Energy
FY 1981 Requests for Rescission
Fossil Energy Research and Development
(Budget Authority in Thousands)

Program	Presently Available	Revised Appropriation	Proposed Rescission
COAL			
Mining R&D			
Underground	$31,000	$28,000	-$3,000
Surface	8,000	5,000	- 3,000
Coal Prep & Anal	9,000	7,000	- 2,000
Liquefaction			
Indirect Liq	18,000*	12,000	- 6,000
Support Studies/ Eng. Eval.	12,000	9,000	- 3,000
Demonstration			
Plants/SRCI-Const	157,500	...	-157,500
SRC pilot plants	47,000	46,000	- 1,000
Surface Gasification			
Peat Gasif	13,000	8,000	- 5,000
Demo. Plants.			
High-Btu Gas-Opex	6,000	1,000	- 5,000**
" " " -Const	44,000	...	-44,000
Low-Btu Gas -Const	45,400	...	-45,400
Adv. Envir. Cntrl Tech.			
Adv. Flue Gas Desulfurization	9,000	6,000	- 3,000
Combustion Systems			
AFB boiler, 30MWe	3,100	100	- 3,000**
Coal-oil mixtures	22,000	4,550	-17,450**
Heat Eng/Heat Rec			
Directly fired heat cycles	5,600	2,600	- 3,000
Low grade heat rec	4,300	2,300	- 2,000
Magnetohydrodynamics			
Engineering Dev	31,800	27,800	- 4,000
Supporting Res	11,400	9,400	- 2,000
TOTAL COAL RESCISSIONS			-$309,350

* Includes $6.0 million appropriated in FY 1981 for the Grace medium-Btu gasoline plant design ($3.0 million of which is proposed for rescission). The project is included in the Surface Coal Gasification activity.

** Also proposed in the January 15 Carter Budget Request.

Department of Energy
FY 1981 Requests for Rescission
Fossil Energy Research and Development
(Budget Authority in Thousands)

Program	Presently Available	Revised Appropriation	Proposed Rescission
PETROLEUM			
Enhanced Oil Recovery			
Heavy Oil	$7,300	$6,300	- $1,000
Tar Sands	5,500	4,500	- 1,000
TOTAL PETROLEUM RESCISSIONS			- $2,000
GAS			
Enhanced Gas Recovery			
Eastern gas shales	12,400	11,400	- 1,000
Western tight sands	12,400	11,400	- 1,000
Methane from coalbeds	5,000	4,000	- 1,000
TOTAL GAS RESCISSIONS			- 3,000
RESOURCE APPLICATIONS (transferred to FOSSIL ENERGY)			
Domestic Energy Supply			
Coal	500	0	- 500
Loan Guarantee	6,000*	0	- 6,000
Oil and Gas	5,100	4,200	- 900
Federal Leasing	2,775	2,375	- 400
TOTAL RESOURCE APPLICATION RECISSIONS (for functions transferred to Fossil Energy)			- 7,800
TOTAL FOSSIL ENERGY RESCISSIONS			-$322,150

* Appropriated in 1978

Department of Energy
FY 1982 Budget Request
Fossil Energy Research and Development
(Budget Authority in Thousands)

Program	FY 1981 Appropriation*	January 15 Budget Request	Revised Budget Request
COAL			
Mining R&D			
Underground Mining	$ 31,000	$ 20,000	$ 15,000
Surface Mining	8,000	2,000	...
Coal Prep & Analysis	9,000	10,000	6,000
Capital Equipment	1,500	800	800
Subtotal	49,500	32,800	21,800
Coal Liquefaction			
Direct Hydrogenation	57,000	65,000	20,000
Solvent Extraction	32,000	63,000	30,000
Indirect Liquefaction	18,000**	22,000	14,000
Third Generation Proc	17,200	18,300	18,300
Support Studies/Eng Evaluations	12,000	14,600	10,600
Liquefaction Demo Plants	384,500	703,400	12,300
Capital Equipment	700	700	700
Subtotal	521,400	887,000	105,900
Surface Gasification			
High Btu Gasification	23,000	8,700	1,140
Low/Med Btu Gasfication	19,000	13,200	13,200
Third Generation Proc	17,000	28,870	27,100
Technical Support	10,000	12,000	12,000
Gasification Demo Plants	95,400	153,600	...
Capital Equipment	500	550	550
Subtotal	164,900	216,920	53,990
In Situ Gasification			
Low/Medium Btu Gas	9,200	3,000	3,000
Gov/Industry Coop Proj	...	2,200	...
Steeply Dipping Beds	...	3,200	3,200
Environmental Support	500	1,300	1,300
Supporting Research	200	800	800
Capital Equipment	100	300	300
Subtotal	10,000	10,800	8,600

* Does not include proposed rescissions listed on the previous pages.
**Includes $6.0 million appropriated for the Grace medium Btu gasoline plant.

Department of Energy
FY 1982 Budget Request
Fossil Energy Research and Development
(Budget Authority in Thousands)

Program	FY 1981 Appropriation*	January 15 Budget Request	Revised Budget Request
COAL (con'd)			
Adv Res & Tech Dev			
Processes	$ 20,400	21,400	21,400
Direct Utilization	9,100	12,800	12,800
Materials & Components	9,000	12,000	12,000
Program Direction & Coordination	7,861	11,500	8,500
University Coal Res	5,000	5,400	5,400
General Plant Projects	3,000	6,000	6,000
Capital Equipment	500	500	500
Construction	3,400	3,000	1,000
Subtotal	58,261	72,600	67,600
Adv Environ Cntrl Tech			
Flue Gas Cleanup	18,000	17,400	6,500
Gas Stream Cleanup	13,000	14,400	14,400
Cleanup Base Tech	6,000	5,500	5,500
Capital Equipment	500	500	500
Subtotal	37,500	37,800	26,900
Combustion Systems			
Atmospheric Fluidized Bed Combustion	12,800	15,300	11,300
Pressurized Fluidized Bed Combustion	21,400	50,900	17,000
Adv Combustion Tech	...	4,100	4,100
Alternative Fuel Util	22,000	6,400	6,400
Capital Equipment	300	...	...
Subtotal	56,500	76,700	38,800
Heat Eng & Heat Rec			
Central Power Systems	22,200	16,500	9,100
Dispersed power Systems	9,900	6,500	6,500
Heat Recovery Component	4,300	6,000	...
Capital Equipment	...	450	450
Subtotal	36,400	29,450	16,050

* Does not include proposed rescissions listed on previous pages.

Department of Energy
FY 1982 Budget Request
Fossil Energy Research and Development
(Budget Authority in Thousands)

Program	FY 1981 Appropriation*	January 15 Budget Request	Revised Budget Request
COAL (con'd)			
Fuel Cells			
Phosphoric Acid Sys Dev...	$ 21,000	$ 10,100	$ 10,100
Molten Carbonate Sys Dev..	9,000	14,100	14,100
Advanced Concepts.....	2,000	4,400	4,400
Subtotal.....	32,000	28,600	28,600
Magnetohydrodynamics			
Open Cycle Systems.....	65,500	59,500	...
Closed Cycle System.....	1,000	500	...
Capital Equipment.....	500	...	...
Subtotal.....	67,000	60,000	...
Program Direction.....	10,818	12,520	12,520
COAL TOTAL .....$	1,044,279	$1,465,190	$ 380,760
PETROLEUM			
Enhanced Oil Recovery			
Heavy Oil.....$	7,300	9,100	7,100
Light Oil.....	5,200	8,000	8,000
Tar Sands.....	5,500	6,000	5,000
Capital Equipment.....	600	750	750
Subtotal.....	18,600	23,850	20,850
Advanced Process Tech			
Adv Exploratory Res.....	1,800	1,000	1,000
Product Characterization.. & Utilization	1,300	2,000	2,000
Shale Oil Refining &..... Utilization	400	700	700
Capital Equipment.....	500	500	500
Subtotal.....	4,000	4,200	4,200

* Does not include rescissions listed on previous pages.

Department of Energy
FY 1982 Budget Request
Fossil Energy Research and Development
(Budget Authority in Thousands)

Program	FY 1981 Appropriation*	January 15 Budget Request	Revised Budget Request
PETROLEUM (con'd)			
Oil Shale			
In Situ Conversion	$ 31,298	$ 25,850	$ 15,250
Surface Conversion	750	1,300	1,000
Capital Equipment	1,000	1,000	1,000
Subtotal	33,048	28,150	17,250
Drilling & Offshore Tech			
Drilling	500	...	...
Offshore Technology	1,300	...	...
Environment & Support	200	...	...
Capital Equipment	370	...	...
Subtotal	2,370	...	...
Program Direction	1,475	1,620	1,620
PETROLEUM TOTAL	$ 59,493	$ 57,820	$ 43,920
GAS			
Enhanced Gas Recovery			
Eastern Gas Shales	$ 12,400	$ 10,900	$ 2,600
Western Tight Sands	12,400	11,000	6,000
Methane from Coal Beds	5,000	5,000	1,000
Environment & Support	248	700	400
Capital Equipment	500	600	200
Subtotal	30,548	28,200	10,200
Program Direction	415	460	460
GAS TOTAL	$ 30,963	$ 28,660	$ 10,660

* Does not include rescissions listed on previous pages.

Department of Energy
FY 1982 Budget Request
Fossil Energy Research and Development
(Budget Authority in Thousands)

Program	FY 1981 Appropriation*	January 15 Budget Request	Revised Budget Request
RESOURCE APPLICATIONS (transferred to FOSSIL ENERGY)			
Domestic Energy Supply			
Coal	$ 500	$ 1,200	...
Oil Shale Industrialization	1,500	5,500	...
Oil and Gas	5,090	1,500	...
Industrialization Planning	...	800	...
Program Direction	5,096	3,000	...
Subtotal	$12,186	$12,000	...
Federal Leasing	2,775	3,489	...
TOTAL RA FUNCTIONS TRANSFERRED TO FOSSIL ENERGY	$14,961	$15,489	...
FOSSIL ENERGY TOTAL	$1,149,696	$1,567,159	$ 435,340

* Does not include rescissions listed on previous pages.

Mr. YATES. Mr. LeGassie, are you the one who is to tell the committee whether the funds for this part of the Department of Energy, as revealed in the 1982 budget, are adequate to deal with the country's energy problems?

Mr. LEGASSIE. With those related to Fossil Energy R&D program, yes, sir.

Mr. YATES. They are. Now, would you say that under oath, or because you are required to do so by the Office of Management and Budget?

Mr. LEGASSIE. No, sir, I say that, I assume I am under oath.

Mr. YATES. You are really not.

Mr. LEGASSIE. But that will not change my testimony.

Mr. MCDADE. Would you yield, Mr. Chairman?

Mr. YATES. I yield to Mr. McDade.

ANTHRACITE COAL

Mr. MCDADE. Roger, I am looking at the chart and I don't see the Office of Anthracite Coal in there.

Mr. LEGASSIE. Yes, sir.

Mr. MCDADE. Was there one?

Mr. LEGASSIE. There was in the Resource Applications organizational unit an Office of——

Mr. MCDADE. You don't put it on a chart anymore? Austerity has really reached the heights.

Mr. LEGASSIE. There certainly will be an overview responsibility for anthracite coal in the continuing Fossil Energy organization.

Mr. MCDADE. What do you mean, "an overview?"

Mr. LEGASSIE. I mean that the——

Mr. YATES. That is a brush-off.

Mr. LEGASSIE. No, I don't mean it to be.

Mr. MCDADE. It shouldn't be.

Mr. LEGASSIE. There will be a monitoring of activity in the anthracite industry carried on by the Fossil Energy——

Mr. MCDADE. Monitor. That sounds good, too. We are going to have fellows sitting around monitoring.

What are we going to do to encourage the Office of Anthracite Coal? That is what the Office was set up for. It is disestablished. The Secretary didn't have any details on it when he came up here.

He said it is not a big item. There are tons of recoverable anthracite sitting there. That's a big item. We certainly aren't devoting many resources to it.

Where is it in this nice little chart?

Mr. LEGASSIE. I believe you are aware that in the former situation, there were two individuals assigned to that task. The question from an organizational standpoint is whether or not it makes sense to have a unit as small as two individuals on the organization chart as an organizational unit.

In general, our present administrative system doesn't think that that is the kind of thing we ought to do. That doesn't mean that the functions associated with that activity will not be carried out.

They will be, with the exception of those activities of the Office that were directly associated with trying to commercialize, or actively participate in near-term commercialization events.

Those kinds of activities, the Department and the Administration think we should not be doing.

But there are many other things we can continue to do.

Mr. McDade. You are doing R&D.

Mr. LeGassie. Right.

Mr. McDade. Where is it? Who is wearing the hat in the chart?

Mr. LeGassie. The chart you are looking at is the organization as it used to exist. We have a new organization proposal.

Mr. Yates. Why did you give us this organization chart, then?

Mr. LeGassie. Because we do not have an approved successor organization chart yet. That is working in the Department.

We hope shortly to be told that that new organization chart is approved, at which time we would show it to you.

We are physically managing the activities that were previously being managed in resource applications in the interim.

These include the functioning of the Office of Anthracite. They are part of our organization. I see Mr. Pell and inquire as to what his current activities are.

Mr. McDade. How is he doing?

Mr. LeGassie. He's fine, but he's concerned about his future. And I try to reassure him about that when I talk to him.

There is an Office of Coal Utilization and Extraction which will contain these functions.

Mr. McDade. As a subdivision?

Mr. LeGassie. A sub-element of that Office, and in the functional statements of that Office, there will be a budget that specifically delineates responsibility, and a concern for anthracite as a functional assignment.

Mr. McDade. Who's the current head of that office?

Mr. LeGassie. Of the Office of Coal Utilization and Extraction? It will be Mr. Liccardi.

Mr. McDade. How much of a budget will the Office have? Put that in the record if you like.

Mr. LeGassie. The budget will be essentially associated with the R&D program, and there is no budget associated with the commercial, activities of the resource application previoulsy conducted.

These are zero in our proposed 1982 budget. As far as funding for specifically identified funding for studies and that kind of thing.

We will have a general budget for studies and analyses. We can, with those funds, direct those studies and analyses, as we have done previously, into particular territories like anthracite.

Mr. McDade. I want a line item. It is without question the nation's highest-grade coal. We ought to be utilizing it.

The problem is expanding it. We have had a series of recommendations that have been pending for I think three years now.

Mr. LeGassie. Yes.

Mr. McDade. Roger, all I am asking you is, what the maximum efficient amount you can spend, including your resources, if it is not line item. Perhaps we can do it for you here.

Mr. LeGassie. We have always, responded with cross-cut information on our expenditures on the anthracite. We could continue to do that, so I certainly cannot urge that there be a line item.

I think we can keep you fully informed on our anthracite expenditures if that is your desire. We do have expenditures associated with anthracite in R&D and in analysis activities.

Mr. McDade. In this area, give me your best estimate as to what you think you can efficiently digest in your budget for purposes of looking at, monitoring, whatever phrase we want to use, the industry toward seeing it play its proper role in the the nation's energy future.

Mr. LeGassie. The monitoring function, of course, involves paying people's salaries which are imbedded in our total personnel request. We don't know yet, and can't respond to the question of the total manpower that is going to be available.

That is still being discussed.

Mr. McDade. When you get there, let me know. Thank you.

Mr. LeGassie. We will stay in continuous and close contact with you with regard to our plans if that is your desire.

[The information follows:]

ANTHRACITE COAL

The decontrol of oil prices will serve as a strong stimulant to the increased use of anthracite coal and other forms of energy. We will continue to maintain cognizance of the supply and demand of anthracite coal and we will continue to make available technical expertise as may be required concerning the production and use of this resource. We will continue to have a capability to respond to inquiries concerning anthracite coal and to make recommendations concerning the effectiveness of legislation which may be proposed. No additional funding or staff years are requested in fiscal year 1982 specifically for this program since the function will be incorporated into the Office of Coal Utilization and Extraction in the new Fossil Energy organization structure. Necessary personnel of funding will be provided from that organization as required.

Mr. McDade. It is. Thank you.

Mr. Yates. Your statement has been made a part of the record, Mr. LeGassie. Tell us about how your shop is operating.

Mr. LeGassie. Do mean how our activities——

Mr. Yates. How well you are doing. Summarize your statement or give us some of the highlights.

Mr. LeGassie. Let me summarize the statement, which is a budget justification for your consideration.

Mr. Yates. Would you rather I ask questions? I can do that. I thought you might want to summarize.

Mr. LeGassie. No, I do have some short remarks I would like to make.

Mr. Yates. All right.

FISCAL YEAR 1982 PROGRAM OVERVIEW

Mr. LeGassie. As you can tell from the statement, we are asking for a total of $435 million, associated with our R&D program and major project activities, and also have activities related to supportive Defense Production Act moneys and Non-nuclear Act moneys.

I would first like to say with respect to the level of the fiscal 1982 funding that both the historic levels and prior requests are difficult to look at, in my mind, analytically, unless you attempt to separate that program into two packages:

One, the amount of money that has been associated with a few very large major demonstration plants, which represent very large sums of money which have gone up and down, depending upon the

position taken about those projects, and two, that money associated with a continuing technology base program.

So I would like to hand you, sir, for use in the discussions, a table which tries to do that for you.

Mr. YATES. Do you have additional copies for other members of the committee? If you haven't, I will have these copied. Ordinarily you would provide 30 copies.

Mr. LEGASSIE. I am sorry. I just thought this might be useful. I have it available in front of me.

Mr. YATES. I am surprised, then, you made it available for the committee.

Mr. LEGASSIE. I should have prepared more copies.

Mr. YATES. All right, Doctor. You are forgiven this time.

Mr. LEGASSIE. I would like to observe that while there are reductions in the technology base activities in other Fossil Energy budgets, that, in fact, our analysis of the level of those reductions are that the base program goes from about $500 million level in 1981 to a $373 million level in 1982.

These reductions are associated and driven primarily by two concepts. One is to withdraw from very near-term research and development activity that had been designed to be on the leading edge of commercialization activities. This is done with the belief that those activities could now better be done by the private sector and would be done by the private sector. This would be especially true given the large increases in crude oil prices that are occurring which tend to make these activities more certainly economically viable in the marketplace.

Mr. YATES. That is fine. But did you take into consideration the time factor? When are the private companies going to undertake the commercial development that you say they are going to?

Mr. LEGASSIE. Well, they are indeed in many areas. One can, for example, look at oil shale, where there are announcements by companies.

SYNTHETIC FUELS PROJECTS

Mr. YATES. What about other synfuels, conversion of coal?

Mr. LEGASSIE. We have not abandoned our participation in the longer-term development aspects of those technologies.

Mr. YATES. I thought you had. I thought that the Administration had recommended the rescission of SRC–I, and deferral of SRC–II.

The estimation given to us, as they appeared before our committee, was that they are commercially viable.

Mr. LEGASSIE. It is not clear to me that that would have been said to you, sir. I don't believe that anyone—

Mr. YATES. But isn't that the thrust of the legislation establishing the Synfuels Corporation was to finance enterprises that were ready for commercialization?

Mr. LEGASSIE. I believe that was intended to be the primary activity of the Synthetic Fuels Corporation.

Mr. YATES. That's correct.

Mr. LEGASSIE. But the legislation that created it and legislative history surrounding it also explicity provided the authority and discussed the situation where the Corporation could fund a demon-

stration module of what might later be viewed as commercial technology.

While the legislation was written so that is not the primary mission of the Corporation, it is within the capability of the Corporation to do.

This Administration is proposing that the Corporation take the responsibility for financing demonstration modules as well as commercial ventures rather than leave some responsibility in the Department of Energy and some in the Corporation. This approach would put all such projects in one location under one management and one intellect.

Mr. YATES. Your table that you just gave us, entitled "Major Projects Versus Technical Base," may go into the record at this point.

[The table follows:]

MAJOR PROJECTS VERSUS TECHNICAL BASE

[In millions of dollars]

Project	Fiscal year—				
	1979	1980	Appropriated 1981	Revised 1981	1982
SRC-I	47.0	47.0	162.5	5.0	0
SRC-II	57.0	54.0	175.0	175.0	0
SRC pilot plants	13.5	15.0	47.0	46.0	12.3
High-Btu "A"	42.0	37.0	8.0	1.0	0
High-Btu "B"	10.0	14.0	42.0	0	0
Low/med-Btu (Memphis)	17.0	0	45.4	0	0
H-coal	33.0	64.5	57.0	57.0	20.0
EDS	34.6	30.0	32.0	32.0	30.0
Major projects—Subtotal	254.1	261.5	568.9	316.0	62.3
Tech. base—Subtotal	506.5	574.3	565.8	504.4	373.0
Total fossil	760.6	835.8	1,134.7	802.4	435.3

Mr. YATES. Continue your statement.

Do you have a question Mr. Murtha?

INDUSTRY COAL R&D

Mr. MURTHA. Mr. Chairman, I have a response from the National Coal Association previously, Mr. LeGassie, to the question that we had asked you when you were before the committee.

You had indicated that private industry would probably pick up much of this research. Let me tell you what they say.

About 87 percent of the total R&D, 35.3 million funded by coal companies in 1978 and 1979, was done by the top 32 companies producing greater than 4 million tons per year.

It is my opinion that 69 companies who responded out of the 608 probably represented most of all the coal companies doing R&D.

Practically no research is able to be done by producers mining less than 4 million tons. Of the 578 companies contacted, only 32 reported they were doing any research.

Clearly, the problem of 99 percent of the companies producing coal, 49 out of 3,464, are not getting any research attention, except that done by the Federal Government.

Now, since our conversation before the subcommittee, I visited Penn State. As you know, they have one of the fine mining schools in the country. They talked about some of the projects, and I unfortunately didn't bring those with me, but some of the research projects which were funded partly by the Federal Government.

The tremendous advantages and advances that were made in the coal industry was because of seed money provided by the Federal Government. I think we are really making a mistake by cutting back in this R&D field.

I do not believe the National Coal Association agrees that there is going to be any funding by coal companies for research to any extent to compare with the real amount of good that was done in this committee under the leadership of the Chairman and Mr. McDade.

We are really making a mistake in cutting these back. I understand the thrust of what the Administration the mandates, but not in this very vital field.

UNIVERSITY RESEARCH

Mr. LEGASSIE. Certainly with respect to university activities, our mission, if anything, is to expand our support of such activities.

We are increasing, even in this decreasing total budget, the amount of money we are putting into advanced research, development and technology in that line in our budget.

Again, I would like to say, what we are trying to retreat from are the very large-scale, very expensive activities such as the operation of very large, high-cost pilot and demonstration plants.

We do see situations in the private sector where those activities are being funded by the private sector. I can give you some examples in a moment.

We are also trying to retreat from those activities where we are deeply involved in marketplace entry activities in the belief that we don't really do that very well.

To the degree we operate in that area, we, indeed, may be counterproductive in the sense of aiding one firm who may be in competition with another firm that does not have government funding.

It is not clear, that this is a wise use of government funds. There is beyond this philosophic matter, which we are discussing, also an affordability question.

I would not want to avoid saying so to you. We have made some decisions about this budget in the light of wanting to make a contribution to the general desire to reduce the Federal budget so as to assist the country in dealing with its economic recovery problems.

So there are some affordability decisions here. There is always more good work that people can propose than can be completely funded under any administration budget.

You have to make judgments, and we have made judgments which we are here to discuss with you. The judgments relate to how much of that work to fund.

SRC DEMONSTRATION PLANTS

Mr. YATES. We are going to discuss them with you, too. Let's start with your table, and start with SRC–I and II. What is the status of those projects?

Obviously, the Administration is withdrawing government support for those projects at this point, because there is nothing in the budget for 1982 for these projects.

That's correct, isn't it?

Mr. LEGASSIE. That's correct.

Mr. YATES. Can you tell us why that decision was made?

Mr. LEGASSIE. Yes. That is a reflection of a desire to have these projects, if they go forward, to go forward under the aegis of the Synthetic Fuels Corporation.

So we have requested the private sector managers of both projects, and the other governments in the case of SRC–II, to consider whether or not they want to forward to the Synthetic Fuels Corporation a proposal to be considered by that entity that could allow them to be selected and funded under the $17 billion available to the Corporation.

Mr. YATES. Can you tell us why it was decided to let them go forward under the aegis of the Synthetic Fuels Corporation? The information we have is that neither of the consortia attends to apply to synthetic fuels.

SRC–II PROJECT

Mr. LEGASSIE. The final decision has not been made in the case of SRC–II.

Mr. YATES. By whom, the Administration or the consortia?

Mr. LEGASSIE. By the consortia. In order for SRC–II to apply, the Governments of Japan and Germany, who have presently signed an international agreement with the U.S. Government, would have to agree that that is what they wanted to have happen.

Then they would ask the contractor, SRC International, whether or not they would be prepared to make a proposal which would be funded by the government.

Mr. MURTHA. Has the U.S. Government signed an agreement with those foreign countries?

Mr. LEGASSIE. Yes, we have an international agreement with Germany and Japan, which was signed last fall, I believe.

Mr. YATES. I don't understand this. If you have this international agreement signed, and the other countries have signed on the dotted line in order to go forward with the United States and the contractor, why do you want to withdraw now?

Mr. LEGASSIE. I understand, sir. It is not a statement we want to withdraw. It is a statement that if we are to proceed, we want to proceed in a way in which all the very large-scale demonstration plants and commercial plants that are being supported by government funds are done out of a single entity, the Synthetic Fuels Corporation.

Mr. YATES. But that decision was taken without the approval of either the Government of West Germany or the Government of Japan and the contractor, in going forward.

Now the question is raised by those governments as to whether they will participate, is that correct?

Mr. LEGASSIE. What appeared in the budget was a proposal on SRC–II and budgeted on the premise that that proposal would be accepted.

Mr. YATES. Accepted by whom?

Mr. LEGASSIE. By the other two governments. And I have met with the representatives of the other two governments to see whether or not they would agree to revise the project in accordance with that proposal of the U.S. Government.

We are certainly able to make a proposal to them, and they are certainly able to decide whether they accept it or don't accept it.

Mr. YATES. Has the information that has come to you been the same that has come to us, namely, that they propose not to go forward?

Mr. LEGASSIE. Well, the information you may be referring to in the press is not the official position of the governments.

Mr. YATES. What is the official position?

Mr. LEGASSIE. The official position of the governments is that they have considered this issue, and other matters such as the status of the cost estimate on the project and are going to meet in Germany on June 4th and 5th to resolve these questions and make decisions.

The press reports are premature in the sense that they indicated decisions have been made. I must tell you that I was the person who met with the representatives of the other governments, and we issued a communique from that meeting which all three governments agreed to.

That communique says that no decisions were made, but they will be made on June 4th and 5th in Bonn in a meeting we now have scheduled.

Mr. YATES. Is the original agreement signed by all the parties still in force and effect?

Mr. LEGASSIE. Yes, it is.

Mr. YATES. What do you think will happen if the Governments of Japan and Germany and the contractor would say, they would like to go forward in accordance with the terms of the original agreement?

Mr. LEGASSIE. Then we would come back to the President and report the view of the other countries, and ask him what Administration positions he wishes to take. We have told the other countries that if they wish to take that position, we will behave that way.

But what is in the budget is a proposal by the U.S. Government as to how it wishes to proceed. Views of the other countries have to be heard.

It is my job to find out what they are and relay them back.

Mr. MURTHA. So you will honor your agreement if they decide that is what they are going to do?

Mr. LEGASSIE. Yes. Well, we have obviously an option to the U.S. Government. If they wish to have the project proceed, but do not

wish to have it submitted to the Synthetic Fuels Corporation, as in any agreement, each party has the right to withdraw.

And the U.S. Government could decide under those circumstances that it didn't wish to have the project proceed outside the Synthetic Fuels Corporation, and we could withdraw from the project, just as either of the other two governments could at any time withdraw from the project if that is what they wanted to do.

Mr. YATES. What is the effect of their signatures, then, on the agreement, if they can withdraw at any time?

What is the purpose of even setting down any contract?

Mr. LEGASSIE. Because the contract says, as long as you are in agreement that you wish to proceed, this is how you will proceed.

Mr. YATES. But you can withdraw at any time, you said.

Mr. LEGASSIE. It clearly would be inappropriate to make a commitment from which we could not withdraw. For example, any commitment would have to be subject to availability of funds appropriated by the Congress.

Mr. YATES. That is not your agreement. As I understand it, you haven't asked the Congress for any funds.

Mr. LEGASSIE. You are asking, why do you sign an agreement from which you can withdraw? I am saying, all three governments are in the same position.

They have to be able to withdraw from any agreement that covers activities for a long number of years, because no single government can commit for that entire time period the availability of funds.

So it is natural to have agreements provide for the participants to withdraw from that agreement at such future date as they wish to.

Mr. MURTHA. Then you are not saying you would go forward with the agreement if they decide they want to go forward?

Mr. YATES. No, that is not true. He's saying they will go forward with the agreement, but the agreement does not require the United States to go forward.

Mr. LEGASSIE. That's correct. We certainly would have to modify the basis of our 1982 budget if we adopted a different view, because our 1982 budget request provides for no funds for this project on the assumption that, if it proceeds, it will proceed through the Synthetic Fuels Corporation.

Mr. YATES. Under the terms of financing under which the Synthetic Fuels Corporation operates. In other words, it would be competing with other agencies for the funds of the Synthetic Fuels Corporation.

Mr. LEGASSIE. That's correct.

Mr. YATES. Those funds might or might not be available, is that correct?

Mr. LEGASSIE. That's correct.

Mr. YATES. Whatever was definite and secure about the agreement prior to last fall, is indefinite now, is that correct?

Mr. LEGASSIE. At this moment, we do not know the future of this project, but in early June, we will know what decisions have been reached.

SRC–I PROJECT

In the case of SRC–I, I am not aware of any plan on the part of ICRC, the contractor in that case, to make a proposal to the Synthetic Fuels Corporation. If they have such an intent, they have not communicated it to me.

Mr. YATES. Is that projected now?

Mr. LEGASSIE. I certainly cannot recommend that that project remain in the Department of Energy's budget. So that would mean that we should proceed with termination if they do not wish to make a proposal to the Synthetic Fuels Corporation.

Mr. YATES. Is that your decision, or your superior's decision?

Mr. LEGASSIE. No, I am reflecting the budget.

Mr. YATES. Oh, yes. Well, that is your superior's decision.

Mr. LEGASSIE. It is not one with which I have disagreement.

Mr. YATES. Oh, really? You don't think it should go forward? That is what I am trying to find out.

Mr. LEGASSIE. I am very concerned about——

Mr. YATES. Are you concerned about the budget?

SRC I AND II COST ESTIMATES

Mr. LEGASSIE. No. I am concerned about another matter with respect to both SRC–I and II, which I think is a matter of record.

I have sent to the Congress the most recent cost estimates that came to me from the contractors in both cases.

I think you will see in the material that I have indicated that the schedules reported to me are still under review by the Department of Energy, and that the contingency amount shown in those cost estimates in both cases in the judgment of the Department of Energy are inadequate.

So I am not at all persuaded that we have at this moment seen a reasonable cost estimate for either one of these projects in terms of our present knowledge.

Mr. YATES. OK.

SRC–I COST ESTIMATE

Mr. LEGASSIE. Now, you may be aware that subsequent to my transmittal of that information to the Congress, ICRC put out a news release of their own in which they came forward with a cost estimate for SRC–I, somewhat higher than that which I included in mine.

Mr. YATES. Roughly $400 million.

Mr. LEGASSIE. And indicated that it reflected discussions with DOE staff. They showed me that press announcement before issuing it and I asked them, as a matter of courtesy, whether they would indicate in their press announcement that DOE management had not accepted these other cost estimates, with the expectation that they would do that.

But for some reason, it did not show up in their press release. So what I am saying is that the reason I am stuck with a difference between the estimates I sent to the Congress versus that which came in from the contractors is that in neither case has there been a government in-house estimating process in which we have sufficient confidence to transmit to the Congress. We did transmit such

an estimate in 1979 to you, saying this is what we, the Department of Energy, think these projects will cost to build.

We are not in a position to provide you a statement of that kind today. It is clear to me, at least it is my judgment, and I speak here not personally, but as a Department of Energy official on this statement, that I think an appropriate cost estimate for both projects is still higher than any estimate which you have yet seen, either in my letter or the ICRC press release.

Mr. McDade. Would you state for the record, what these cost estimates are?

Mr. Yates. I was going to put them in the record. They are right here.

Both these cost estimates, one by the Department of Energy and a press release containing a cost estimate by the contractor, may go into the record at this time.

[The cost estimates follow:]

International Coal Refining Company

FOR IMMEDIATE RELEASE

CONTACT:
Don Alloway
215/481-1353
Maria Zannes
202/466-5060

ALLENTOWN, PA. (May 1) -- International Coal Refining Company (ICRC) today announced a revised cost estimate for the SRC-I solvent refined coal demonstration project undertaken in cooperation with the U.S. Department of Energy (DOE). In announcing the revised figures, ICRC said that discussion of this revised cost estimate with the DOE was initiated on February 7, 1981 when the company submitted to DOE the Fiscal Year 1983 project budget. The submission was made in accordance with regulations governing the contractual agreement between ICRC and DOE.

ICRC noted that since the time of this initial submission, the figures have been discussed extensively by ICRC executive staff and project and program management staff at the DOE. After extensive review and discussion the DOE staff recommended revisions in two areas: 1) a schedule extension (with attendant cost escalation) and 2) the provision of higher estimates for contingency.

ICRC has agreed to these changes because it recognizes that: 1) There continue to be delays in the issuance of the Environmental Impact Statement which are causing delays in the project timetable. ICRC understands that due to attendant inflation, these delays will add to the cost of the project; 2) There are possible additional changes to the process design of the SRC-I Refinery, most notably in the naptha hydrotreating area; 3) The impact of future inflation on project costs is uncertain.

The revised cost estimate is as follows: (see next page)

REVISED COST ESTIMATES - SRC-I PROJECT*

	April 1981 Estimate (Including Contingency) (millions)	Contingency (millions)
Design and Construction		
Phase I - Design	287	24
Phase II - Construction	1,725	352
SUBTOTAL	2,012	376
Operations		
Phase III A - Start-up	150	17
Phase III B - 2 Years Operation	441	
Phase III C - 3 Years Additional operation	813	
Coal Costs	985	90
Revenues	(2802)	
SUBTOTAL	(413)	107
TOTAL	1599	483
Related DOE Support Cost	173	
TOTAL, INCLUDING DOE SUPPORT COST	1772	

*All figures in current dollars

Department of Energy
Washington, D.C. 20585

APR 30 1981

Honorable Sidney Yates
Chairman, Subcommittee on Interior
and Related Agencies
Committee on Appropriations
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

I am enclosing for your information a copy of updated cost information for the Solvent-Refined-Coal Demonstration Plants. During my March 25, 1981, testimony before the Senate Appropriations Committee's Subcommittee on Interior and Related Agencies, I indicated that such information would be available by the end of April. It should be noted that this data has been supplied by our contractors: International Coal Refining Company (SRC-I) and SRC International, Incorporated (SRC-II). These estimates are being analyzed by the Department of Energy and in the case of SRC-II by the governments of Japan and the Federal Republic of Germany. They are being provided to the Congress at this time for information purposes only.

Members of my staff are available to answer any questions that may arise.

Sincerely,

Roger W.A. LeGassie

Roger W.A. LeGassie
Acting Assistant Secretary
for Fossil Energy

Enclosure

SRC-I PROJECT

Costs

The first column presents the estimate previously submitted to the Congress and the second column identifies the contingency contained in that estimate. The third column is the latest Industrial Partner's estimate and the fourth column identifies the contingency contained in that estimate.

Millions of Dollars

	December 1979 Estimate 1/	December 1979 Contingency	April 1981 Estimate 2/ 4/	April 1981 Contingency 5/
Phase I - Design	129	15	292	26
Phase II - Construction	1103	221	1,537	199
Phase IIIA - Start-Up	126	25	118	0
Preoperational Subtotal	1358	261	1,947	225
Phase IIIB - 2 years operation	189	0	401	0
Phase IIIC - 3 years operation	286	0	739	0
Coal Costs	324	0	813	0
Operational Subtotal	799	0	1953	0
Supporting R&D	132	0	0 3/	0
Total Costs	2,289	261	3,900	0
Potential Revenues (5 years)	(801)	0	(2,546)	0
Potential Net Costs	1,488	261	1,354	225

1/ Current year dollars except for Phase IIIB, IIIC, Coal Cost, and Potential Revenues which contain no escalation and are expressed in Constant 1979 dollars. Phases I, II, and IIIA are escalated at 10% per year for FY 1979 and FY 1980 and 9% per year thereafter.

2/ Supplied by ICRC, no DOE analysis and no DOE costs included. All Phases including coal costs and revenues have been escalated at 10% per year.

3/ Does not include $173 Million for related DOE R&D and support costs.

4/ Mechanical completion is estimated to be September 1984. Adequacy of this date is still under DOE review.

5/ DOE believes these contingency amounts to be inadequate in light of the still early stage of design.

Discussion of Increases

A. Phase I - Design

The Phase I cost estimate has increased from $129 Million to $292 Million. Details of the Phase I increase as as follows:

	M$
- Vendor engineering shifting from Phase II to Phase I	24
- Additional engineering costs associated with engineering changes (See engineering change list following Phase II)	23
- Additional ICRC staffing and subcontracts	4
- ICRC G&A	9
- Construction Manager/Constructor costs	9
- Other additional costs due to reporting requirements, Quality Assurance program, procurement regulation compliance, and estimating adjustment due to increased data base	19
- Contingency and escalation adjustment	75
Total	163

B. Phase II - Construction

The Phase II cost estimate has increased from $1,103 Million to $1,537 Million. Details of this Phase II cost increase are as follows:

	M$
- Additional procurement and construction costs associated with engineering changes (see engineering change list below)	156
- Transfer of vendor engineering from Phase II to Phase I	(24)*
- Transfer of commissioning costs from Phase IIIA to Phase II	87
- ICRC G&A and fee elimination	(42)
- Transfer of training from Phase II to Phase IIIA	(6)
- Estimate adjustment	2
- Contingency and escalation adjustment	261
Total	434

Engineering Changes

	M$
- Filters to Critical Solvent Deashing	(44.0)
- Critical Solvent Deashing Unit Changes	7.7
- Site Related Modification	10.8
- Coal Feed System Changes	1.3
- Heat Recovery and Fractionation Modifications	7.5
- Slurry Preheater Changes	25.2
- Building Modifications/Additions	11.9
- Facility Integration Requirements	33.5

*Parentheses denote a cost decrease

-Eliminate Hydrogen Plant for Hydrocracking Unit	(17.6)
-Add Spare Parts and Miscellaneous Modifications	8.6
-Air Plant and Hydrogen Purification Unit Modifications	3.9
-Gasification Process Changes	36.6
-Gasification Unit Contract	4.5
-Gas Treating Unit Modifications	3.6
-Fues Gas Recovery Addition	4.1
-Sulfur Treatment System Modifications	2.2
-Central Control System Addition	8.7
-Utilities System Expansion (Boilers, etc.)	6.6
-Waste Treatment Facilities Expansion/Additions	40.2
-Site Facilities Expansion	20.7
-Barge Dock	4.5
-Coal System Modifications	2.5
-Delete Vendor Engineering	(6.3)
-ICRC Phase II Costs	29.3
-Incorporation of Design Changes into Area Contractors' Scope	(49.9)
Phase II Engineering Chabge Total (rounded)	156.0

C. Phase IIIA - Start-Up

The Phase IIIA cost estimate has decreased from $126 million to $118 million due to cost changes in start-up and commissioning, transfer of commissioning from Phase IIIA to Phase II, Operator training transfer from Phase II and escalation and contingency adjustments.

D. Phase IIIB - Two Years Operation

The Phase IIIB cost estimate has increased from $189M to $401M due to increased power costs, labor and material costs, and escalation adjustment to current year dollars.

E. Phase IIIC - Three Years Operation

The Phase IIIC cost estimate has increased from $286 Million to $739 Million due to increased labor and material costs, and escalation adjustment to current year dollars.

F. Coal Costs

The coal cost estimate for plant operations has increased from $324 Million to $813 Million. The unit coal prices were unchanged

between the April 1981 and the December 1979 estimate. The usage rate in MM Btu's/Hour of design capacity per the contract was approximately 10% lower in the April 1981 estimate. Offsetting this lower coal usage rate however, is higher coal consumption due to attainment of "steady state" operating indices earlier in the April 1981 Phase III estimate and higher coal consumption resulting from the extension of the commissioning schedule as discussed earlier.

G. Potential Revenues

The revenue estimate has increased from $801 Million to $2,546 Million due to earlier steady state, shift in product mix, increased pricing index, and escalation adjustment to current year dollars.

Reduced Plant Size

Plant size reduction as well as changes in design scope to eliminate risk mitigating measures have been considered with cost related to the current 6000 TPD design as follows:

Plant Size (TPD)	Design	Relative Cost %
6000	Risk mitigation components elimitated	86
3000	Size reduction with minimal risk mitigating components	76
2000	Size reduction only	64

This comparison is for INSTALLED COST ONLY. Operating costs, revenues, contingency, schedule, etc. are not considered, so no direct comparison can be made with the April 1981 estimate.

It must be noted that plant size and product volume do not decrease by the same percentage as capital cost. As an example, when plant size is reduced from 6000 to 2000 TPD, or by 67%, capital cost decreases only 36%. Consequently, capital cost required to produce a barrel of product increases which in turn reduces net revenue. These impacts have not been evaluated in detail but smaller plant sizes and elimination of risk mitigating measures do not appear to represent a viable venture based on return on investment through product sale and revenue.

Schedule Comparison

	February 1980[1/] Estimate	April 1981 Estimate	Months Change
Phase I - Design			
Start	October 1979	October 1979	0
Complete	June 1982	April 1983	9
Phase II - Construction			
Start	March 1981	March 1981	0
Complete	September 1984	December 1984[2/]	3
Phase IIIB - 2 Years Operation			
Start	April 1984	June 1985	14
Complete	April 1986	June 1987	14

1/ The first column is the schedule estimate provided to the Congress in February 1980. The second column presents the latest industrial partner's schedule estimate.

2/Mechanical completion for the Plant is September 1984

SRC-II Project

The first two columns present the estimate previously provided to Congress. The first column includes contingencies and the second has the contingency listed separate from the estimate. The next two columns present the latest industrial partner's estimate with the associated contingency separated.

(Millions of Dollars)

	Oct. 1979 Estimate 6000 TPCD 1/	Oct. 1979 Contingency	Feb. 1981 Estimate 6000 TPSD 2/	Feb. 1981 Contingency 3/
Phase I - Design	$ 134	$ 18	$ 292	$ 0
Phase II - Construction	981	179	1,415	202
Phase IIIA - Startup	193	17	286	22
Preoperational Subtotal	1,308	214	1,993	224
Phase IIIB - 2 Yrs. Opns.	130	13	347	19
Phase IIIC - 3 Trs. Opns.	164	4	495	5
Coal Costs	198	0	395	0
Operational Subtotal	492	17	1,237	24
Supporting R&D	150		150	
Total Costs	1,950		3,380	
Potential Revenues (5 Yrs.)	(511)		(1,830)	
Potential Net Costs	1,439		1,550	
Total Contingency		231		248

Footnotes:

1/ Current year dollars except Phase IIIB & C, coal cost and potential revenues which contain no escalation and are in 1979 constant dollars.

2/ Supplied by SRC International, no DOE analysis and no DOE costs included. Current year dollars at 10 percent per year inflation except potential revenues which escalate at 13 percent per year. The 6000 tons per stream day represents 90 percent of stream-day capacity. This is equivalent to Oct. 1979 estimate of 6000 tons per calendar day. Mechanical completion moved from Nov. 1984 to Dec. 1985. Adequacy of this date estimate is still under DOE review.

3/ DOE believes these contingency amounts to be inadequate in light of the still early stage of design.

Discussion of Increases

A. Phase I - Design	(in millions)
1) Schedule slippage	$ 55
2) Additional administrative requirements (patents, filing fees, technology transfers, training, government procurement requirements, reports, office space, construction manager coordination)	41
3) Engineering scope changes (detailed under Phase II)	16
4) Vendor engineering moved from Phase II in the 10/79 estimate to Phase I in the 2/81 estimate	46
Total Phase I Increase	$158

B. Phase II - Construction		(in millions)
1) Schedule slippage		$211
2) Contingency (deletion of $73 million from previous estimate, current estimate includes 25 percent contingency)		(73)
3) Escalation rate adjustment (current estimate utilizes escalation at 12.68 percent/year to 4/81 and 10 percent/year thereafter, 10/79 estimate escalated Phases I, II, and IIIA at 10 percent for 1980 and 9 percent/year thereafter)		118
4) Scope changes		
a) Oxygen Supply System (operability)		
Increased number of trains	$ 58	
b) Utility Systems (Operability)		
Increased boiler capacity and feedwater treating plus storage	34	
c) Fuel and Flare System (Environmental)		
Added ground level flare and add system for recovery of fugitive leaks	29	
d) Electrical Supply and Distribution System (Operability)		
Added power generation turbines	16	
e) Crushed coal surge, mechanical reclaiming from coal storage, and crushed size changes from 30 mesh to 200 mesh	39	
f) Receiving, Storage and Shipping (Operability and Site)		
Increase caused by doubling the number of equipment items, larger tank requirements, plus an allowance for heavy rock instead of medium rock excavation	29	
g) Variety of Changes	19	
Subtotal		$224
5) Transfer of vendor engineering to Phase I		(46)
Total Phase II Increase		$434

	(in millions)
C. Phase IIIA - Startup and Commissioning	
1) Schedule slippage	$ 52
2) Modified startup program	41
Total Phase IIIA Increase	$ 93
D. Phase IIIB & C - Operation	
1) Schedule slippage	$ 53
2) Escalation (10 percent/year)[1/]	277
3) Modified operating program	218
Total Phase IIIB & C Increase	$ 548
E. Coal Cost	
1) Schedule slippage	$ 42
2) Escalation (10 percent/year)[1/]	208
3) Modified operating program	(53)
Total Coal Cost Increase	$ 197
F. Potential Revenues	
1) Schedule slippage	$ 122
2) Escalation (13 percent/year)[1/]	779
3) Increased value of products at current world oil prices (1980 base price $33.64/bbl FOE)	255
4) Modified operating program	163
Total Potential Revenues Increase	$1,319

1/ October 1979 estimate had no escalation. This figure represents the inclusion of escalation according to the October 1979 schedule.

Reduced Plant Size

Plant size reduction has been examined resulting in the following co estimates:

	3000 TPSD Estimate[1] Dated April 1, 1981 ($ in millions)[2]	
Phase I	$ 292	
Phase II	1,002	
Phase IIIA	196	
Initial Capital Requirements		$1,490
Phase IIIB - Operations (2 Yrs.)	250	
Phase IIIC - Operations (3 Yrs.)	354	
Coal Costs	202	
Operation Costs		806
Subtotal		2,296
Potential Revenues		(936)
Subtotal		1,360
Supporting R&D		150
Total		1,510[3]

1/ Supplied by SRC International, no DOE analysis included and are included.

2/ Current year dollars at 10 percent per year inflation excep Revenues which escalate at 13 percent per year.

3/ The impact has not been evaluated in detail but smaller pla and elimination of risk mitigating measures do not appear t a viable venture based on return on investment through pro and revenue.

Schedule Comparison

	Oct. 1979 Estimate	Feb. 1981 Estimate	Months Change
Phase I - Design			
Start	October 1979	October 1979	0
Complete	January 1983	July 1984	18
Phase II - Construction			
Start	August 1980	June 1981	10
Complete	September 1984	September 1986	24
Phase IIIB - 2 Yrs. Opns.			
Start	October 1984	July 1986	21
Complete	September 1986	June 1988	21

SRC–I COST ESTIMATE

Mr. McDade. Could we summarize that question to him, there are apparently three, the original, the contractor and your cost estimate on SRC–I, at least.

Mr. LeGassie. In SRC–I, there was a cost estimate associated with the Phase Zero study, I forget the precise number now, it was on the order of $750 million.

Then there was the Department of Energy's official cost estimate of December 1979 which we transmitted to the Congress and on which we have been proceeding for some time which had a net cost of $1,488,000,000.

You have to understand, because of what comes next, in that estimate all the design and construction costs were escalated in terms of future-year cost.

But when it came to the operating period, the operating costs were not inflated, nor were the revenues inflated.

And, in fact, our estimate was that the operation expenses and the revenues were essentially awash in those future years, and so it really wasn't appropriate to try to inflate them because they didn't contribute anything to the cost estimate.

So the $1,488,000,000 is essentially composed of the cost of design, construction and support R&D which was $132 million.

In the revised estimates, both those which first came to us from the contractor and those which ICRC has subsequently put out on their own, the operating costs and revenues had both been escalated into future-year dollars.

In the estimates presented by the contractor, there is a projection that revenues will substantially exceed operating costs. This factor generates a large negative component to the cost estimate which makes the total net cost estimate look very similar to the $1.4 billion that we used to have.

But in order to get there, you go through a much larger front-end expense in building the plant, and then you have to depend upon being able to generate the revenues to eventually bring the net cost back down.

So I think it is quite misleading to talk about net cost. I think you ought to talk about design and construction, operational expenses, those moneys that you are clearly going to have to spend and which will be at risk in terms of doing the demonstration project.

If you look at those kinds of numbers, then you are seeing very substantial cost increases.

Now the difference between the estimate we submitted and the ICRC estimate, substantively, is that they had discussions with DOE staff and revised estimates after the submission in February of the initial estimate which I did publish and present to you.

And these discussions indicated there were reasons for extending the schedule. That means increasing costs.

There were some design adjustments that ought to be made. And there were other things like that which emerged in the discussion which they had indicated in their press announcement that in many cases, were proposed by the DOE reviewers and which they apparently accepted.

My problem is that I am not ready to call that a final process, because I am not yet convinced that that has enough contingency in it.

Mr. McDade. Have you a current cost estimate?

Mr. LeGassie. No, I have to say the current cost estimate is $1,488,000,000 that we used to have. And I don't have something better to replace it, except I know we are finding in the design process, substantially greater complexity, and the schedule has lengthened certainly by two years.

Whether or not that is enough, I don't know yet.

Mr. McDade. Is the DOE impact statement holding up that schedule?

Mr. LeGassie. I do not believe so, sir.

Mr. McDade. Is the DOE impact statement completed?

Mr. LeGassie. The final impact statement is not completed. The draft was issued on January 16. I might be off a day or two on the date.

And we estimate that the final impact statement will be published about early July. That is a period of seven months from draft to final, which I think is a very reasonable schedule based on all the other impact schedules.

Mr. McDade. The billion four is at what ratio? Are you talking about that as a government exposure, or as the component?

SRC–I COST SHARING

Mr. LeGassie. That is a project estimate. My memory is that the private sector participants are contributing about $120 million within that $1.4 billion estimate.

Their contribution is not a function of what the project costs, so if it is a $2 billion or $3 billion estimate, they are still putting in the $120 million.

Mr. McDade. You want a discount of potential operating receipts. I am not quite clear on that.

Mr. LeGassie. The contractors have said, look at the net costs.

Mr. McDade. Yes. Isn't that a reasonable thing to do?

Mr. LeGassie. Well, we legally have the power to apply those net costs to the project. That has been voted by the Congress. In fact, we recommended it.

But in trying to evaluate what the actual cost to the government will be, I have to ask what is the reasonableness of being able to generate those revenues?

Clearly, that is a function both of how many hours the plant will actually operate, and you must remember, this is a demonstration plant, it is a R&D activity, it is not warranted as a production plant.

So one has to accept the fact that its onstream time is going to be less than a commercial plant.

So the question, how quickly is it going to get started up?

How many hours is it going to be able to be operated after it's started up? And for what price is it going to sell its product?

Mr. McDade. Those are all good questions, but they are questions that inevitably are asked and should be asked of any first-time technology.

Mr. LeGassie. Yes.

Mr. McDADE. It seems logical, also, that they should tell you, when they get going, they expect to produce a product which will have an offsetting revenue.

It's logical for you, as well, to say, this is a first-time operation, and you can't accept that. We have to question.

Mr. LEGASSIE. Yes. And we are having those kinds of discussions. I am trying to express here I am not satisfied that an adequate judgment has been reached.

Mr. McDADE. Aren't you making a good argument that private enterprise will not take this over without government help?

The questions you are asking are questions that must be asked if we are to upgrade technology. In any boardroom in the country, they are going to ask the same questions you are asking.

We should ask ourselves whether or not it is in the national interest for the government to assume part of the risk of a first-time technology that has national consequences to our security.

You are asking legitimate questions with one exception. You are not sitting in a corporate boardroom where your primary motive is the profit motive.

You are sitting in front of a committee of Congress that is looking after people's interests at a time of energy shortage.

Everyone agrees that our long suit is coal. We are trying to decide whether we should upgrade technology that has been in existence for, what, 70 years with taxpayer-at-risk dollars.

FEDERAL ROLE IN FOSSIL R&D

Mr. LEGASSIE. I would like to make two points in reply. I will try to do it very briefly.

The first is that, obviously, you can engage in activities which are very risky and very costly. But there is a different strategy that says, instead of trying to go from experience at 25 tons a day to an adventure at 6000 tons a day, that you take a smaller step, in which the technical risk is reduced and the financial risk is reduced.

It does indeed appear to me that if one intends to go to this size plant that the risk is so large that it can't happen without Federal money. But that doesn't mean that is the proper or best way to advance this technology.

We have other cases where, using an example, a 100-ton a day pilot plant is being built by Exxon, which admittedly is a company with a lot of money, without any government funds in it whatsoever, in order to develop a technology which they believe can and should be commercialized.

One could also propose smaller steps in which the risk is much less.

Mr. McDADE. Are we in any discussions between either the SRC-I or II group to accomplish what you are talking about in terms of scaling down for purposes of affordability?

SRC PLANT SCALE

Mr. LEGASSIE. We have, indeed, looked at both contractors, both I and II, of reduced size plants. In terms of the objectives of the participants, their view in both cases is identical.

They have indicated they are not interested in reduced-size plants. They prefer to stay with the concept of a large plant. Now, this is a judgment they have.

Mr. McDade. May I inquire why you think they hold that view?

Mr. LeGassie. Because part of the present arrangement is the opportunity to buy from the government, not at cost, but at value, whatever that turns out to be, this demonstration plant. And then to continue to run it.

And it's clear that if you build a half-size plant, it is very likely that the costs of running it will exceed the value of the products.

So, therefore, as something to buy from the government at value, a half-size plant is not interesting, because even if you could buy it for a dollar, the likelihood is that you couldn't operate it and make money out of it.

But if the government built you a 6000-ton-a-day plant and then you could sit down and negotiate with the government to buy it at value, whatever that was, there is a possibility that you could make money off of that plant once you had acquired it.

Mr. Murtha. It seems to me that is our goal in the long run, is to have plants that are run by private industry making a profit, rather than plants we give them that don't make a profit.

Mr. LeGassie. But that, sir, is the vehicle which the Synthetic Fuels Corporation provides. The SFC orientation is to make government supported decisions in a competitive way, an appropriate way to decide who is going to get rewarded by initiative and who is not.

It seems the concept of utilizing the SFC to provide support for such projects is valid, indeed, there are proposals made by the sponsors of the H-Coal process which is also a liquefaction process. They have submitted a proposal to the SFC and are going to compete with the other proposers for support. It seems to me there is much to look at here in support of the Administration's idea that perhaps the SFC is the place where everybody ought to go.

SRC–I COST SHARING

Mr. Yates. How much of a contribution is the contractor making in the cost of SRC–I?

Mr. LeGassie. The number is $90 million by the industrial contractor.

Mr. Yates. He has $118 million.

Mr. LeGassie. There is some additional funding coming from the State of Kentucky.

Mr. Yates. $30 million. The total cost now, sorry, did you finish?

Mr. McDade. Yes, Mr. Chairman.

Mr. Yates. The total cost you have computed is $1,488,000,000 and the total, according to the contractor, is $1,700,000,000, approximately.

Mr. LeGassie. What the contractor says, is that you have to spend $4.4 billion and get revenues of $2.8 billion in order to end up with a net cost of a billion seven.

So there could be as much as $4 billion at risk.

Mr. Yates. $4 billion out of which the government would pay approximately $3,750,000,000, as opposed to $120 million by the private sector.

Is the contractor willing to make a greater contribution toward the overall contract cost?

Mr. LEGASSIE. These negotiations are relatively fresh in the sense that they occurred within the last 12 months that led to the present contractural arrangement.

Mr. YATES. Where does that leave the country with respect to progress in liquefaction?

Does this decision by the Administration mean that the country will be without any ongoing research and development in the conversion of coal to liquefaction?

Mr. LEGASSIE. No, sir. If I could briefly describe what the situation would be if the budget is accepted, you would find that there are proposals in front of the Synthetic Fuels Corporation received from companies who would build coal liquefaction plants, using existing technology. Therefore, it is likely that some of those would be supported.

And so, that experience would be being generated not based on new technology, but on technology which is presently commercial.

In addition to that, there are proposals, additional proposals, before SFC for improved technology. I mentioned the H-coal proposal.

Whether or not they would accept that proposal, I have no idea, obviously. We would be completing in the 1982 time frame a substantial and important development experience in the H-coal and EDS, Exxon Donor Solvent, pilot plants, both of which are direct liquefaction technology activities.

We still have available for use the Ft. Lewis pilot plant which is a 25–50-ton-a-day plant, and we have a small amount of money available for that.

There is a Wilsonville pilot plant at 6 tons a day. EPRI is presently funding it and that plant could receive some funding from the Department of Energy in 1983 and beyond.

In our view, we have beyond that a very extensive program associated with third-generation technology where we are looking at innovative ideas on a somewhat longer time frame for advances in both direct and indirect coal liquefaction technologies.

So there would be a substantial amount of continuing R&D. There would be some experience in this country with existing technology, and there is a body of data at the large pilot plant scale which the private sector can look at from EDS, H-coal, other liquefaction projects and design activity from SRC–I and II. Decisions about future private sector activity in those technologies could be made based on this R&D data base.

Mr. YATES. Is Gulf the contractor in SRC–I?

Mr. LEGASSIE. No, it is ICRC, a consortium of Wheelabrator-Frye, Air Products, and I believe there is participation from City Services and Alcoa in that.

Mr. YATES. Gulf is SRC–II?

Mr. LEGASSIE. Together with Ruhrkohle of Germany and five Japanese companies.

SRC–II PROJECT

Mr. YATES. Well, the witness who came in from Gulf some weeks ago to testify before us was very unhappy with the condition of SRC–II.

I gather, as I recall his testimony, he said that, in response to a question that I asked him, that if the government withdrew its support, as it seems to be doing from the present time, although the financial decision hasn't been yet made, that private companies would go ahead.

But that the time frame would be lengthened by about 10 years. We thought that rather than completing the demonstration process in 1988, perhaps it would be 10 years later, in 1998.

Is that your appraisal of the situation, too? Has he told you the same thing?

Mr. LEGASSIE. I think there would be some lengthening of the time frame for very simple reasons.

One is that the private sector interest in pursuing what one might call second-generation coal liquefaction technology is only modest at the present time. This is because the opportunities they have for investing private money are greater in oil shale, because that is more likely to be commercial earlier, and in the application of existing liquefaction technology where the risk is less.

The second reason why the time scale would be lengthened is that the private sector would not, I think, move directly from 50 tons to 6,000 tons, because the risk and the cost of that risk in taking such a move is so high.

They would go in a somewhat more orderly way in which they would have smaller risks, both technically and financially, to take at each stage of the game.

So the government, in supporting these very large projects, is in many ways forcing the system. It is trying to take a very large step. And I believe that was an appropriate view when we thought the risks were lower, and the costs of those risks were lower than I am now beginning to believe they are.

We also had less of an economic climate in this country to help drive investments in oil shale and other investments of that character, which are now assisted in terms of their economic value, both by the existence of the Synthetic Fuels Corporation, which is a new event, the $17 billion the government is making available to that program, and by the increased cost of crude oil.

So I think this is a different world than it was two years ago or three years ago when these projects were conceived and initiated and the very first steps were taken to bring them on line.

I think we need to look at what has changed, both in the environment in which they are living, and in terms of our perception of what it costs to do them.

Mr. YATES. What will be the effect of the increase in the contract costs based on the contractor's statement that he assumes the costs will be in excess of $4 billion?

Mr. LEGASSIE. All I have done in quoting that number was to add up all of the expense side of the ledger, which I get to be $4.4 billion.

And then subtract the revenue side, which is estimated at $2.8 billion. You won't find $4.4 billion written on his page, but if you

add up Phase 1, 2, 3-A, 3-B, 3-C, and coal costs and say these are your expenditures, then that totals $4.4 billion.

Mr. YATES. Based on his figures, what would that result in the cost of the product, assuming the development was successful?

SRC-II PRODUCT COSTS

Mr. LEGASSIE. From the demonstration plant, I have not made that calculation, but you should not expect the demonstration plant product to be commercially available if you amortize the cost of the facility because historically you have many first-time, one-time expenditures in demonstration projects and you are not at commercial scale.

The issue in a demonstration plant sense is it would be nice to be able to run the plant and at least have revenue equal the out of pocket expenses of operating it without trying to recover the capital. The estimate has been that a commercial size plant has to be about 30,000 to 35,000 tons a day.

In the Phase Zero studies, based upon the December 1979 estimate, this should be a more economically viable technology, if successfully developed, than the indirect liquefaction, Sasol, or Lurgi-type technology, because it is technically more efficient and that should translate into cost savings.

That was the objective behind our attempt to develop liquefaction technologies in a variety of processes—H-Coal, EDS, SRC, are all slightly different approaches to the same idea. They operate on high sulfur coal and therefore, have the value of allowing the increased use of that resource.

SYNTHETIC FUELS

Mr. YATES. I gather that you are tilting toward oil shale as being first of the synthetic fuels to come in?

Mr. LEGASSIE. From a commercial analysis standpoint it is my judgment that the most attractive synthetic fuels, aside from alcohol fuels, that are economic because we have a four cent a gallon tax benefit, are coal synthetics and oil shale. In my view, medium Btu gasification such as you see in the Memphis project, or even high Btu gasification such as you see in the ANR project—American Natural Resources Project—and oil shale, all represent attractive opportunities for private sector investment.

I think coal gasification by existing technology is close behind those. But it is less certain as to the crossover point in terms of what those will actually cost and in terms of crude oil prices. So oil shale, and I think there is universal agreement on this, is seen as probably being $10 a barrel cheaper than any coal liquefaction technology, and, therefore, is likely to get a big push by the private sector earlier.

Mr. YATES. What figure is $10 cheaper than synthetic?

Mr. LEGASSIE. I have gone through a history where the oil shale estimate was always $10 more than the current price of crude. When the one went up, the others went up. But numbers that I have heard recently are in the neighborhood of $35 a barrel, which is what crude oil costs us. So if estimates for whatever it costs to build an oil shale plant, and meet the environment and operability

standards, stood up, oil shale ought to be an economic activity in this country.

OIL SHALE DEVELOPMENT

Mr. YATES. How far away are we from the commercial development of oil shale?

Mr. LEGASSIE. Some companies have said they are going to proceed.

Mr. YATES. What does "going to proceed" mean?

Mr. LEGASSIE. Whether or not they obtain federal assistance. We have a number of companies who are seeking support from the government in the form of either a loan guarantee or a price support, a price guarantee, in order to obtain the financing so that they can proceed with oil shale projects promptly.

There are two proposals presently being negotiated under the aegis of the Defense Production Act. One proposal from Tosco and one from Union Oil.

Then in a press release that the Synthetic Fuels Corporation put out, they have listed a number of proposals. There are further proposals from companies such as Occidental which we are evaluating under the Non-Nuclear Act funds with the Department. So there are a substantial number of individual proposals by a variety of companies who say they are ready to proceed with commercial ventures if they can get some protection, in the form of either a loan guarantee or price supports, against certain risks. If this is possible, the government would never have to pay a penny toward financing these ventures.

Mr. MURTHA. Mr. Chairman, for six years this committee has been hearing the same story about oil shale. I remember companies coming in, I believe Armand Hammer was one of them. It is always $2 more than the market. What better assurances do you have now that you are going to be competitive?

Mr. LEGASSIE. I agree with you. That is why when I was asked what the price estimate was, I alluded to the same kind of anomaly. I think what is different is that we are now talking about companies who have come to the government and said "I am ready to sign a contract, and that contract will commit me to spend private funds to put funds and put private equity money to risk, actually proceed to put a shovel in the ground."

Mr. YATES. What are they asking from the government then?

Mr. LEGASSIE. They are asking for example, for a loan guarantee which can only be given up to 75 percent of the estimate costs of a project. So there must be at least 25 percent equity money at risk. Or they are asking for price supports which can be capped. Certainly in the one case there would be private money at risk. In the other case there can be private money at risk if the government is a good negotiator. But the other side of the table is saying, if I can obtain these kinds of commitments from the government, then I commit to go put my money at risk, and in fact to proceed with this project.

SRC DEMO PROJECTS

Mr. MURTHA. Mr. Secretary, then you are saying that the SRC projects are less attractive because there are other projects now which are in the pipeline under the synthetic fuel program which are more attractive. It is not that you are concerned about the government guaranteeing these programs, you are more concerned about other projects which are more attractive. Is that accurate?

Mr. LEGASSIE. No, I think it is apples and oranges. In the one case we are talking about commercial ventures. I think you have to see the SRC activity as a research and development program, not a commercial venture although it could, if successful, turn into the basis of a commercial venture. So talking about investing money with oil shale, I am talking about companies ready to go commercial with the technology, to make a product, 50,000 barrels a day kind of capacity, and they hope they are going to make money and make a profit.

In the case of SRC you are looking at a development task. The question is—there are several questions. But one is there is certainly a perception now that the risk associated now with the development step we have earlier proposed is clearly emerging as greater than we earlier perceived it to be, as exemplified by the cost associated with taking that step.

We see much greater complexity in this process design than we earlier saw. In fact, I would say, I have previously cited to you a 1979 estimate of $750 million which was very preliminary, that we still only have 20 percent of the process design done, and that this cost growth has occurred over the last year as a result of spending some $35 to $50 million, which is only one-fifth of what we have to spend yet in order to find out what it really costs.

So there is an indication certainly that we ought to provide now with this experience for some larger contingency than we earlier thought would be enough. We have used up all contingency we used to have. It is gone now.

OIL SHALE

Mr. MURTHA. Do you have better figures for oil shale? Do you have a better design, more advanced work? What do you have on paper for oil shale?

Mr. LEGASSIE. These figure for oil shale are not mine, they are corporate.

Mr. MURTHA. What do they have then?

Mr. LEGASSIE. They have to make these same kind of judgments. There certainly is some risk in the projects that they are undertaking, or proposing. But they have to reach a judgment that the risks are of a character they are willing to take. Presumably they are reaching that judgment.

Mr. MURTHA. It is entirely possible that their estimates could escalate just like the demonstration projects?

Mr. LEGASSIE. The "just like" phrase is where I would stop. I think they recognize there is a risk that their cost estimates could be underestimated, and I have no doubt that they have provided contingencies in their estimates to cover what they think is the realistic range for that risk. So that when they go to their board of

directors, they always get the question, you know, suppose you underestimate and there is an overrun. You have to eat it. They have made the judgments about that.

They are dealing with a body of data that convinces them they are ready to make commercial decisions. They have come in and put their money on the table and said "I am ready." Exxon, in another case, was ready to make a corporate decision to build a hundred ton a day coal gasification pilot plant. They made an estimate of what it is going to cost. I am sure they had a conversation with their management about how good is your estimate. Maybe it will turn out to be good and maybe it won't, but they are ready to commit their own funds to that activity.

In each case the private sector is measuring, as it always does, how much risk is there and how ready are we to take that risk. I think in the case of the projects which up until now have been government projects, SRC I and II, what I reported to you is that previous assessments of cost and risk have been shown by the experiences of the last year and knowledge learned out of the one-fifth of the process design—not the final design, you do process design, and then you do finally design in the sense of design drawings—is telling us that we really did not well understand.

So I have to ask myself as a prudent government manager, how well do we now understand, given the fact that we are still a long way from having completed even a process design.

Mr. MURTHA. Are we talking about, a delay in the entire synthetic fuels program of ten years, or are we talking about just the SRC program?

DIRECT COAL LIQUEFACTION

Mr. LEGASSIE. We are talking about this particular direct liquefaction technology. The synthetic fuels program is going to proceed. Oil shale is where it is. It doesn't know about this. The existing coal liquefaction technology is where it is. South Africa is running Sasol II and is building Sasol III while running Sasol II.

Mr. MURTHA. There will be no delay in the US program by holding up the SRCs?

Mr. LEGASSIE. I see no delay in the ability of this country to meet its near term need for enhanced liquid production from some technology in this country. It is the glint in the R&D eye that said if we can do this in a given time, and do it well, we might have something cheaper in a shorter time frame. That promise is slipping away from us because we are finding this a little harder to do.

Mr. YATES. Isn't it the nature of the process that when you get into design you find that the nature of the costs are really much greater than you anticipated?

Mr. LEGASSIE. It is not unusual in an R&D program to find cost estimates go up, that is correct.

Mr. YATES. Obviously, if the costs per barrel are going up, then they must have found the costs going up along the line. Either that, or the oil shale industry just matches the costs of crude oil.

Mr. LEGASSIE. You are right. One should not say that just because we are having cost increases, this means there is something bad or something extraordinary happening here. Cost increases can and do happen. They are normal in R&D projects. I think I am

suggesting that the magnitude of these increases are large, based upon only a very small fraction yet of the ultimate design work that has to be done. And that gives concern about trying to arrive at a considered view of what a likely cost would be with today's eyes.

SRC PILOT PLANTS

Mr. YATES. You have told us about SRC I and II. On this list that you have given the committee of major projects, you have SRC pilot plants. And you are going to continue to fund those but at a much lower level apparently. How long do you propose to continue to fund those?

Mr. LEGASSIE. We have not made the decisions yet about Fort Lewis, because if SRC II were to be proposed to the Synthetic Fuels Corporation, then it would be run in support of that project and we don't have that decision yet.

The assumption is that some $30 million would flow from the SRC II project, join that $12 million that is in the DOE budget request, and that would give $42 million. That would pay for the operation of Fort Lewis.

An alternative way in which those funds could be spent might be associated with termination of the Fort Lewis contract. The funding in the fiscal year 1982 budget request is sufficient for these termination costs.

SRC I AND II TERMINATION COSTS

Mr. YATES. Suppose you don't go ahead with SRC I and II. Will there be termination costs to the government?

Mr. LEGASSIE. Yes. In fact, as I just indicated, we might well make the decision to terminate the operation at Fort Lewis, and the funding requested in the fiscal year 1982 budget could essentially pay for the termination costs.

Mr. YATES. Would there be termination costs that would have to be paid to the contractors in SRC I and II, or to the governments of Germany and Japan?

Mr. LEGASSIE. There are termination costs to the contractors. There are some possible intergovernmental transactions in the case of SRC II which we are analyzing, and I can't answer the question for you. The first part of the question I can answer, yes, there are termination costs for SRC I and II. They are in the neighborhood—well, the estimates are continually being reexamined.

Mr. YATES. What has the contractor filed——

Mr. LEGASSIE. We have estimates I will indicate to you.

Mr. YATES. Are these the contractor's estimates?

Mr. LEGASSIE. These are the contractor's estimates which we are looking at, but we have done some scrubbing of them as well. I think they represent the best combined judgment of both parties at this moment. On SRC I we have an estimate of $33.3 million grand total, to all participants for termination.

In the case of SRC II we have an estimate of $29,711,000. So we are looking at essentially the same size termination costs.

Mr. YATES. What is the nature of those termination costs?

Mr. LEGASSIE. I have breakdowns of this and we could provide that for the record, if you like.

Mr. YATES. Yes.

[The information follows:]

TERMINATION OF SRC PILOT PLANTS

The current estimates for terminating the Ft. Lewis and Wilsonville pilot plants are attached. It should be noted that the estimates are from contractor input without the benefit of a complete and detailed analysis.

Fort Lewis pilot plant termination estimate

	Thousands
Prime contractor estimate:	
Cost of termination activity	
Separation, relocation, and vacation	$1,345
Patent, lease, and license fees	
Subcontractor estimate	300
Other:	
Plant disposition and cleanup	2,777
Miscellaneous termination, cancellation, and overhead	
Foregone fee claim	
ORO support cost	
Estimated grand total closeout costs	4,422
Funds available to cover closeout	0
Additional funding requirement	(4,422)

Assumptions: Sept. 30, 1981, expiration date.

Issue: Contractor has provided estimates of closeout costs up to $12M, but DOE has not accepted proposals.

Wilsonville pilot plant termination estimate

	Thousands
Prime contractor estimate:	
Cost of termination activity	$265
Separation, relocation, and vacation	
Patent, lease, and license fees	
Subcontractor estimate	
Other:	
Miscellaneous termination, cancellation, and overhead	
Foregone fee claim	
ORO support cost	
Estimated grand total closeout costs	265
Funds available to cover closeout	265
Additional funding requirement	0

Assumptions: July 31, 1981, expiration date.

Additional costs of $776K are estimated for mothballing the plant. However, under the contract, DOE is believed not liable for such costs.

HIGH-BTU DEMONSTRATION PLANT

Mr. YATES. Let's talk about high Btu "A". Is that the Ohio plant?

Mr. LEGASSIE. I am not sure whether "A" is Conoco or——

Mr. YATES. It doesn't make any difference. You don't want to put any money in the budget for either of them, is that correct?

Mr. LEGASSIE. That is correct. I think indeed, we are in a similar situation in both cases. Conoco has indicated——

Mr. YATES. Didn't your decision send Conoco to Scotland?

Mr. LEGASSIE. Conoco indicated they would likely pursue other ways to commercialize their technology, but if the government wanted them to proceed with the contract they had signed, they would.

Mr. YATES. What do you think will happen in that case?

Mr. LEGASSIE. I think we will complete the design activity phase we are in, produce a nice, tidy package for later use of others, and negotiate a mutually agreeable termination of the contract.

Mr. YATES. When you say produce a nice, tidy package, does that mean design?

Mr. LEGASSIE. Yes, we are doing design in the case of both Conoco and ICGG. We are actually funding design activities right now.

Mr. YATES. Both of them?

Mr. LEGASSIE. Yes.

Mr. YATES. You have told Conoco if you want to go ahead, go to the Synfuels Corporation. Conoco has said no, and is going to the British Gas Corporation instead in Scotland, is that correct?

Mr. LEGASSIE. I can't speak to the very latter part of our statement.

Mr. YATES. That is the word I get.

Mr. LEGASSIE. I can only say they have indicated to us that they would pursue other avenues for a demonstration plant.

Mr. YATES. From what I have heard the other avenue leads to Scotland.

Mr. LEGASSIE. That could well be. It is a British based technology.

Mr. YATES. Can we say "A" is Conoco?

Mr. LEGASSIE. Yes, let's adopt that.

Mr. YATES. Let's turn to "B" Perry County, Illinois.

Mr. LEGASSIE. Perry County, Illinois has recently written the Corps of Engineers a very significant letter. The letter indicates that under the present contractual relationship which talks about receiving a proposal from them for a business relationship which then would be supported in the DOE budget under the prior mode of doing business.

They are indicating to us there are several compelling reasons why they can no longer entertain the possibility of paying half the costs of the project. We had previously been discussing a 50-50 cost sharing arrangement.

They also believe that the incentive for their involvement in this activity has significantly been altered by the present situation with respect to gas supplies and a finding that the court of appeals made with respect to the ANR project, which tended to cast doubt on the ability of a related company to recover the costs of constructing a synthetic fuels project from the rate payers.

They indicate the Illinois Commerce Commission, who would have to give them such approvals in order for their to be a viable project, has questioned whether gas utilities should become involved in synthetic fuels projects.

And they indicate to us that now they believe that if this project proceeds in the light of all of this, the Federal Government should bear the major share of the project cost.

ICGG, I think by this letter, is clearly signaling they don't intend to go to the SFC and if they remained as a government project, they don't intend to proceed any longer under the idea of some kind of 50-50 cost sharing with the government.

Mr. YATES. Was that the originally contemplated arrangement?

Mr. LEGASSIE. It was. So it seems to me that again it is probably in the best interest of the parties involved here for us to, as in the case of ICGG, complete the present design package, which we have agreed upon, and then arrange termination with the participant.

Mr. YATES. May that letter from Conoco be placed in the record.

Mr. LEGASSIE. Yes, we will provide that to you.

[The letter follows:]

ILLINOIS COAL GASIFICATION GROUP,
Chicago Ill., March 6, 1981.

MARK S. SOWELL, Jr.
Colonel, Corps of Engineers,
Huntsville Division, Huntsville, Ala.

DEAR COLONEL SOWELL: The referenced letter asked ICGG to submit "that portion of the cost proposals that relate to your proposed business arrangements for Phases II and III by 1 June 1981." ICGG does not concede that it has an obligation under the contract to disclose to the Government ICGG's business arrangements for Phases II and III prior to the end of Phase I. However, in order to keep the Government advised of ICGG's current position regarding cost-sharing, ICGG wishes to notify formally the Government that ICGG will not offer to proceed to Phase II under an arrangement in which ICGG pays fifty percent (50%) of the costs of Phases II and III. This confirms what ICGG orally advised the Contracting Officer on February 18, 1981.

There are several compelling reasons why ICGG can no longer consider the payment of one-half of the costs of Phases II and III. First, the estimated costs of Phases II and III have escalated drastically. The contract originally contemplated the costs for Phases II and III to be $199,386,000 and $71,138,000, respectively. The direct and corollary effects of inflation, which has been running at a rate much higher than was forecast in the original contract estimate, have caused the current cost estimates for Phases II and III to grow to $474,000,000 and $162,000,000. ICGG never contemplated funding one-half of such estimated costs.

Second, conditions have substantially changed. When ICGG responded to the Government's Request for Proposals in 1976, the parent companies of the ICGG Partners faced uncertain future gas supplies. ICGG tentatively agreed to share project costs because it felt that the project was in the near term best interests of Illinois ratepayers. It is now generally recognized that the short-term gas supply picture is much brighter. Moreover, the regulatory climate in which ICGG operates is uncertain. As you know, the court's decision in the Great Plains case cast doubt on the abilility of a regulated company to recover the cost of constructing a synfuel project from ratepayers. The Illinois Commerce Commission has already publicly questioned whether gas utilities should become involved in costly synthethic fuel projects. Thus, the prospect of substantial subport for the project from the Illinois Commerce Commission is slim.

As you know, ICGG intends to complete Phase I in accordance with the requirements of the contract. ICGG remains convinced that the project is worthwhile and of great importance to the nation. However, because the project is of national import, ICGG believes that the Federal Government should bear the major share of the project's costs. ICGG looks forward to discussing with you at your very early convenience a modification of the cost-sharing ration. Therefore, ICGG formally requests a meeting to renogotiate the cost sharing clause in the contract before ICGG submits its business arrangements as requested in your referenced letter.

Sincerely,

R. J. EBY,
General Manager.

MEMPHIS PROJECT

Mr. YATES. Are they going forward with the Memphis program?

Mr. LEGASSIE. Yes. Memphis has proposed to the Synthetic Fuels Corporation. We are continuing support of the Memphis activity during fiscal year 1981 with the anticipation there would be a Synthetic Fuels Corporation decision by September 30. Memphis could be supported under the SFC money thereafter, if it is successful in its competition for support.

Mr. YATES. Suppose it isn't?

Mr. LEGASSIE. If the Corporation turns down the application we would not propose it under the Department of Energy side.

Why not, isn't it a good process? It would have to be evaluated in the light of other possible uses of government support money by a competent organization under the hypothesis of this question.

Mr. YATES. I suppose really we ought to wait and see what Synfuels does rather than prejudging what their decision would be?

Mr. LEGASSIE. Yes. I am much more concerned about the scenario in which for one reason or another you don't get any decision. I am more concerned about the situation where we march up to September 30, and they haven't said no and they haven't said yes either.

Mr. YATES. Which is extremely likely in view of the condition of Synfuels Corporation at the present time, isn't it? Are they better or worse than the Department of Energy at the present time? Is their condition better or worse?

Mr. LEGASSIE. I have no knowledge of their condition. I can't make a comparative evaluation.

Mr. YATES. I see.

STATUS OF DOE APPOINTMENTS

Mr. MURTHA. Do you have your under secretaries in place now in the Department of Energy?

Mr. LEGASSIE. No sir. We still have acting officials in all jobs in the department except the Secretary himself.

Mr. YATES. The Secretary isn't acting?

Mr. LEGASSIE. No, the Secretary, of course, is confirmed. But the under secretary is acting, and all assistant secretaries are acting.

Mr. MURTHA. Does this cause you any problem at all with the administration of the Department of Energy?

Mr. LEGASSIE. I am sure it gives the Secretary concern in that, as there are many decisions that have to be made by his key staff, which would be my phrase for his assistant secretaries, and those decisions don't go away. They have to be made. So I, as such an official in an acting capacity, have to make that decision. But because I am not the long term resident of that job, I may not be making it the way the ultimate appointee would make it if he had been named and was there. I think that must concern the Secretary.

Mr. YATES. How many long term residents of that position have there been? If my memory services me correctly, none of them was long term.

Mr. LEGASSIE. It depends—but I mean the person who is in fact approved by Congress——

Mr. YATES. That is a better definition.

Mr. LEGASSIE. I think you understand what I am saying.

Mr. YATES. I understand what you are saying.

Mr. LEGASSIE. In terms of my own behavior——

Mr. YATES. It is exemplary.

Mr. LEGASSIE. Well, I do my best to behave in a proper fashion.

Mr. MURTHA. Do we see any quick confirmation? I assume nominations have been made.

Mr. LEGASSIE. In the case of Assistant Secretary for Fossil Energy, I don't believe there is yet a formal designee from the White House, although the newspapers report that there is a name. I have no knowledge of whether that is in fact the case, and I don't believe there is a formal announcement from the White House.

Mr. MURTHA. There has not yet been an assignment or nomination for that particular job?

Mr. LEGASSIE. Right. In other cases there have been. In some other cases there have been official statements. In this case, we are still waiting.

H-COAL PILOT PLANT

Mr. YATES. Tell us about the status of H-coal.

Mr. LEGASSIE. H-coal and EDS are both operating. H-coal has had difficulty. It has gone through a more lengthy period of dealing with equipment failures and design deficiencies and things of that kind—which we will call a break-in period—than we would have liked. We are not certain it is out of that phase at this moment.

Certainly the recent experience has been much better than the early experience. I think it is likely we are out of the break-in phase, and therefore, are making a run now which we hope will last long enough to give us the design information we wanted from the first of two coals we plan to test under the present regime. The money in 1982 is adequate——

Mr. YATES. That is the question. You moved from $75 million down to $20 million. Is that adequate? You said it was adequate?

Mr. LEGASSIE. But I didn't finish the statement. It is adequate to fund, if all goes well, a second coal. There are more things one could do. One could operate that project for a longer period of time, but we think, if we are indeed out of this break-in period in H-coal, that we will have generated with the funds we have asked for, sufficient information to allow some commercial decisions to be made.

That is a matter of judgment, but I think I have to say that it is the basis on which we select $20 million as the number to put in the 1982 budget. Obviously, if we are not out of this break-in period, and we continue to have abortive runs, and that kind of thing, then we won't get the positive information out of the operation with that sum of money. But then it is not clear that we would want to keep putting more money in anyhow. So it may be a success or it may be a failure, as it eventually turns out. We won't know.

Mr. YATES. Is there a possibility you will be asking the committee for more money?

Mr. LEGASSIE. No, sir.

Mr. YATES. What about a supplemental?

Mr. LEGASSIE. I don't see that happening either.

Mr. YATES. What if more money is needed for the purpose? Will the contractor put the money up?

Mr. LEGASSIE. That is an open possibility. It is a theoretical possibility. I would not want to indicate to you that I see it as a hard possibility. Certainly there has been private sector interest in

this technology. There are a number of companies who are participants in the present program, and there is continual discussion about a commercial H-coal plant.

There is a proposal in the SFC along those lines. So if indeed there is a need of that character there is a possibility that there could be some private sector additional funding to ensure that the last bit of data that was necessary from the pilot plant operation was obtained.

Mr. YATES. What do you include in the technical data in that listing?

FOSSIL TECHNOLOGY BASE PROJECTS

Mr. LEGASSIE. In the listing, technology base is the entire R&D program associated with coal combustion, oil shale, and gas technology. These things, everybody else is in the fossil program that is not specifically identified by the names above. It is in the line called technology base, the entire rest of our program.

By the way, in the case of Exxon Donor Solvent—unlike H-coal, where we are not sure what is going to happen—we are in direct conversation with the other participants about ensuring that the originally conceived base program for the operation of the pilot plant is carried out, even though we have reduced our funding participation by this $30 million request from earlier estimates of larger numbers.

It is very likely that the base program for the operation of the pilot plant will be completed even though we have less total dollars in the activity, in that some other activities we had planned to do might be sacrificed to ensure that the pilot plant operation is complete.

Mr. YATES. These are described as major projects versus technology base. What about minor projects, what can you tell us about those?

Mr. LEGASSIE. Within almost all of our programs there are projects of modest size, which is the way you do most of our R&D, in fact. We have designed our program under this budget request to try to protect what we visualize as the most crucial elements of our historic program, and provide for a continuing program which has a sense of priority about it: So that we indeed are continuing to stress within this funding works on advanced gasification of coal.

We are stressing development of the pressurized fluidized bed technology for direct combustion of coal. Essential phasing out of atmospheric fluidized bed because of its status in the market place now.

FUEL CELL PROGRAM

We have a continuing fuel cell program which had got both a utility orientation and a dispersed facility orientation, smaller size fuel cells. But we are trying in that program to operate on the R&D side of the program, looking upon participation by other partners, such as GRI, United Technology, and so on, to fund the demonstration deployment side of that problem.

Mr. YATES. With what success?

Mr. LEGASSIE. Philosophically, with success. These programs are co-funded. I think they are clearly—therefore questions about whether things are proceeding as rapidly as one would like. But we have gone in with a very tight program in terms of our participation and are putting a large burden on the other participants to play what we think is their proper role in this collaborative exercise.

Mr. YATES. You talked about the rate of progress. Tell us more about that. What is happening? Is the rate of progress dependent upon additional funds being made available? Should the government be putting more money in, should the other participants be putting more money in?

Mr. LEGASSIE. I think we have a reasonably based program. It is one in which the basic approach is worked out collaboratively. There indeed we are reaching agreement with the other participants on the program approach and activities.

Mr. YATES. What is lagging? You left a nagging question in my mind when you said the rate of progress wasn't up to what you wanted?

Mr. LEGASSIE. No, I don't——

Mr. YATES. You want to dispel that nagging question from my mind, is that it?

Mr. LEGASSIE. Yes. I believe it is a reasonable program and one certainly which I support, and I think represents philosophic agreement among the participants as to the activities that need to be conducted.

Mr. YATES. I am not sure I understand what you mean by philosophic agreement.

Mr. LEGASSIE. I mean in terms of targets that should be attacked, the things we should be spending money on. We discuss the content of our R&D program with the other participants, and they with us. The idea that we have more of a role in supporting the field tests, and we have more of a role in supporting the R&D is one they have indicated agreement with us on. So I think on reflection I would say this program is heading in the right direction and trying to do the right thing.

Mr. YATES. Would you consider that an adequate progress report? The fact that you say it is heading in the right direction and you are trying to do the right thing. What is the progress? Can you put it in the record? Give us a summary.

Mr. LEGASSIE. Yes, I will do that for the record.

Mr. YATES. Let's do that so we know what is happening in addition to philosophic agreement and the fact it is heading in the right direction and that you are doing the right thing.

[The information follows:]

TECHNOLOGY BASE RESEARCH PROJECTS

Examples of results from the technology base program that have moved beyond the laboratory research stage and are undergoing more extensive development are: (1) research on mineral matter effects in coal liquefaction has led to an extensive development effort on disposable catalysts; (2) laboratory investigation of effects of alkali metal salts on coal gasification rates was the initial phase of the Exxon Catalytic Gasification process; (3) research efforts, on fast heatup of coal in the presence of hydrogen, (following up work done at the Bureau of Mines in the 1960's) led to construction and operation of a continuous flash hydro-pyrolysis unit at Rockwell International for conversion of coal to gases and liquids; (4) exploratory

research on the formation and stability of coal suspended in oil, water and oil-water mixtures had assisted in operation of an extensive testing program on the combustion of coal-water mixtures in large scale equipment; (5) research on the use of shale selective catalysts for converting carbon monoxide-hydrogen mixtures to liquid hydrocarbons led to the development of the promising M-gas process for producing gasoline from coal derived synthesis gas; (6) results of an investigation of catalyst-induced conversion of carbon monoxide to carbon led to the Beacon process for conversion of low Btu gas to SNG. This process is now undergoing further development in semi-continuous units, and a larger process development unit is in the design stage; (7) oil shale measurements have been sponsored by the technology base program national laboratories to determine the retort characteristics and rubblization properties of various modifed in-situ oil shale retorts. This data has been used to construct process models that are now being used to predict the performance of DOE sponsored oil shale development projects such as the Geokinetics horizontal in-situ retorting process; (8) analytical methods developed using petroleum crudes and tar sand oils have been useful in evaluating these materials for shale refining utilization. Several characteristics have been shown to be diagnostic of conditions experienced by the materials. These studies have added to the data base and provide specific means for evaluation of shale oils and the processes that produced the oils; (9) advanced exploratory research related to enhanced oil recovery has resulted in the development of several strains of bacteria that will grow in a five percent sodium chloride liquid medium and produce potentially useful solvents and gases; (10) thermomechanical design principles and analysis techniques have been developed from the Advanced Research and Technology Development technology base materials program which were used in the improved design of the refractory lining for the HyGas gasifier. Earlier designs were susceptible to thermal cracking; (11) the successful DOE improved pressure coring system, developed by Sandia research, utilizes bonding techniques for affixing diamond core bits. This system has a record of higher core recoveries and faster coring than earlier pressure core barrels. This system has been commercialized and is extensively used to study reservoirs being considered for enhanced oil recovery systems.

It should also be remembered that the evolution of research results into process improvements is often difficult to trace. The choice of materials for pilot plants is influenced by corrosion test on alloys and refractories, new instrumental techniques find their way into process control equipment, and data on the thermodynamics of coal liquids leads to improved process design. These are more subtle, but nonetheless real effects of DOE support of meritorious research in fossil energy technical areas.

Mr. LEGASSIE. We have had a strange conversation, but perhaps I should say that that has not always been the case. Previously there has been substantial disagreement among the external participants and the government as to the general course of the program and the general approach. In my view, we have made a lot of progress in that area. We have also made substantial progress which is what you are talking about, and I will put that in the record.

Mr. YATES. I appreciate the fact that your philosophy is in agreement. But I really want to know how the programs are moving.

Mr. LEGASSIE. That we will provide.

Mr. YATES. It is good to know they are all agreed with the philosophy, too.

Let us look at the budget for the year, page 25. You talk about the turbine cleanup systems. What is the commercial timing for development of these systems?

HTTT PROGRAM

Mr. LEGASSIE. In the HTTT program we are about to enter our last phase. I think we are looking at a program that would take place over about a four to five year period. The budget as I understand it, if I am remembering this program element correctly from

my conversation with my staff, is not impacting the timetable of the program.

It does reflect a decision to go essentially with one participant, rather than going with multiple participants, relative to earlier program planning.

ADVANCED ENVIRONMENTAL CONTROL TECHNOLOGY

Mr. YATES. Yes. We are talking about turbine cleanup systems? That is on page 25.

Mr. LEGASSIE. Yes, I have the page here. Again, I need to understand the question you are addressing to me.

Mr. YATES. Are all the systems that you are developing hot gas cleanup systems?

Mr. LEGASSIE. All right. I think perhaps that I should ask Mr. Liccardi to respond to that question.

Mr. LICCARDI. Yes sir. In this particular area, all the systems being developed for gas turbine applications are hot gas cleanup systems. Also under the advanced environmental control technology line item—that is an activity—you will see that there are three subactivities of cleanup systems:

The flue gas cleanup systems; the gas stream cleanup systems for turbines and for fuel cells; and cleanup base technology. So we are looking in the gas stream cleanup area at cleanup methodologies for cleaning up the high temperature gases to insert into the turbines and into the fuel cells.

Mr. YATES. What will the turbines be used for?

Mr. LEGASSIE. The turbines are the components for the generation of the electricity. And we are looking at the increase in efficiency of the overall plant, Congressman, by taking a higher inlet temperature into turbines that are not available today. We are looking at a regime which is truly the government's role in R&D of the 2600 degree Fahrenheit to 3000 degree of inlet temperature.

This will increase the overall efficiency of the plant considerably over today's plant, and will certainly help you in reducing the resource requirement of coal and also get a higher yield in terms of cost of electricity and efficiency.

Mr. YATES. Off the record.

[Discussion off the record.]

Mr. YATES. If, as you state, these systems are conceptually much simpler and require fewer components and do not have to utilize waste water treatment processes as compared to the coal cleanup systems. Why aren't there any in existence?

Mr. LEGASSIE. Why isn't there?

Mr. YATES. Why are there none in existence, assuming the assumptions you have taken?

Mr. LEGASSIE. I would like to keep Mr. Liccardi the speaker.

Mr. LICCARDI. Mr. Chairman, I am sorry. There was a conversation taking place near me and I could not hear the question.

Mr. YATES. If as you state, these systems are conceptually much simpler, require fewer components, and do not have to utilize waste water treatment processes as compared to a coal cleanup system, why aren't there any in existence?

TURBINE CLEANUP SYSTEMS

Mr. LICCARDI. I believe the systems you are referring to, I am trying to follow your trend here, are not developed yet, sir. These are the advanced technologies that we are trying to develop.

Mr. LEGASSIE. It sounds, sir, as if someone is describing the potential advantages seen through a successful development process. Whether those advantages can be achieved or not is the task of the development program.

Mr. YATES. What is the main difference between cleanup systems for the gas from a low Btu gasifier for turbines and those for a fuel cell?

Mr. LICCARDI. The fuel cells electrolyte is susceptible to certain types of contaminants, while the turbine blades are susceptible to different contaminants. Fuel cells are also much more sensitive to sulfur content. So the cleanup system requirements are considerably different, Mr. Chairman.

LIMESTONE INJECTED MODIFIED BURNER

Mr. YATES. Why is it necessary for a government demonstration program next fiscal year for LIMB?

Mr. LEGASSIE. The present program, that we are doing R&D work which would give us information as a basis for a possible demonstration activity. My understanding is that the EPA would be playing a lead role in the event that there was a demonstration program. So that I think one does need to see how this R&D activity comes out that we are now engaged in.

Mr. YATES. Is there any possibility of cost sharing with industry?

Mr. LEGASSIE. Certainly.

Mr. YATES. There is; are you looking for that?

Mr. LEGASSIE. It would be expected that that would be the case when you move to this scale.

Mr. YATES. In what magnitude?

Mr. LEGASSIE. I don't think there is any way of answering that question.

Mr. YATES. Does it vary from contract to contract?

Mr. LEGASSIE. Yes. We would solicit participants in a program, and would select those based upon the evaluation criteria which would include private sector participation.

ADVANCED RESEARCH AND TECHNOLOGY DEVELOPMENT

Mr. YATES. Let's look at pages 30 and 31. Why is it necessary to increase this activity almost $8 million when almost all of our other activities in fossil energy are being reduced?

Mr. LEGASSIE. Well, indeed, this is the line under which we most directly pursue work of an innovative character which is not normally supported by industry. And to that extent, we perceive this as an important federal role. It is appropriate to increase this level of activity in this line.

Mr. YATES. Will this provide any tangible benefit?

Mr. LEGASSIE. Yes, I think over time you believe in the science process just as you believe basically science needs to be supported

by its ultimate benefits and use. That early stages of applied development you see here in the advance research and technology development line will also have benefits.

I have recently looked internally at a substantial list of very interesting accomplishments of this program which strike me as having real value. Some of this work is university work, some of it is done with companies and national laboratories. But it is looking into new areas, looking for breakthrough opportunities at a relatively modest level of funding. I certainly want to strongly support the activity in this area.

Mr. YATES. Can you come back at 1 o'clock?

Mr. LEGASSIE. Yes.

Mr. YATES. Let's have lunch and come back at 1:00.

AFTERNOON SESSION

Mr. YATES. The hearing will be in order.

Have we got a witness?

Mr. GUIDICE. Yes, sir.

INDIRECT LIQUEFACTION

Mr. YATES. Mr. LeGassie, what is the status of the M-gasoline process pilot plant being built in Germany?

Mr. LEGASSIE. That is an ongoing project, sir, which has funding in fiscal 1982. I need to check the status of construction with Dr. Batchelor, who is in the audience.

Dr. BATCHELOR. Construction is under way. The plant should be completed in late summer of 1982.

Mr. YATES. What does that plant do?

Mr. LEGASSIE. That plant is designed to be a step in the development of an improved version of the Mobil process to convert coal to methanol. There is an existing technology which is being proposed in commercial plants in the Synthetic Fuels Corporation, which is a fixed-bed converter.

This technology wants to change that to a fluid-bed type of technology which we believe would be less expensive, and more versatile.

So it is an improved version of an existing technology.

Mr. YATES. What is the extent of cost-sharing by the German Government?

Mr. LEGASSIE. Well, it is a three-way, cost-shared arrangement, one-third by U.S. Government; one-third German Government, and I believe it is one-third Mobil, or private sector consortium.

Mr. YATES. May the committee see a copy of the contract?

Mr. LEGASSIE. I know of no reason why we can't provide that to the committee. We would be happy to do so.

Mr. YATES. We want to see it.

[The information follows:]

Synopsis of BMFT/DOE Agreement on Project for

the Conversion of Methanol to Gasoline

Introduction

The Agreement, which was signed on March 20, 1980, is pursuant to the Memorandum of Understanding on national planning coordination in the field of coal hydrogenation technology signed by German Ministry for Research and Technology (BMFT) and DOE on October 7, 1977. The purpose of the agreement is to pursue a jointly funded project to design, construct, operate and evaluate a 100 BPD Fluidized Bed Methanol to Gasoline pilot plant to be located at Wesseling, West Germany. The Project is based on an earlier study at 4 BPD scale co-funded by DOE and Mobil.

Summary of Features

The BMFT is to manage the project and provide to DOE the results of the project including the information and intellectual property rights stipulated in Annexes 2 and 3 of the Agreement. A steering committee is established, consisting of two representatives from BMFT and two from DOE, to provide guidance and technical advice to the Project. The Steering Committee meets at least twice annually, generally at the pilot plant site in West Germany.

The total cost of the Project is estimated at 63 million DM based on August 1979 price levels with a 6 percent increase per annum built in depending on the projected dates of expenditure. The costs are to be borne by BMFT, DOE, and industry as follows:

BMFT - 1/3
DOE - 1/3
Industry - 1/3

Of the industrial share, 14 million DM has been agreed upon as the value of the catalyst which is to be contributed by Mobil. The remaining industrial share is provided in equal proportions by the German firms URBK and UHDE. If Project costs above 63 million DM are accepted by the Steering Committee, the increase will be borne in proportion to the contributions above recalculated to exclude the 14 million DM contribution of the catalyst. IF BMFT is unable to obtain the increased contribution indicated from industry, the Steering Committee will consider whether to adjust the program of work for the Project to the available funds.

Proprietary rights from the Project and related to the process must be for commercial use on reasonable terms and conditions. Mobil will not be required to license its patents on catalyst manufacture or catalyst compositions so long as Mobil or its licensees provides catalyst in sufficient quantities and on reasonable terms and conditions to reasonably satisfy market demands. Mobil will reimburse the U.S. Government up to 200% of the total money contributed by the U.S. Government to the Project following a royalty sharing formula specified in Annex 2. URBK and UHDE also have royalty rights and reimbursement provisions specified in Annex 2.

Attachment: Copy of Project Agreement

April 7, 1980

Mr. David K. Taylor
Mobil Oil Corporation
1100 Connecticut Avenue NW - Suite 620
Washington, DC 20036

Dear Mr. Taylor:

Enclosed are copies of the English and German texts of the Agreement between the Federal Minister for Research and Technology of the Federal Republic of Germany and the United States Department of Energy on a Project for the Conversion of Methanol to Gasoline. This Agreement was signed in Bonn on March 20, 1980 by Minister Volker Hauff and by Ambassador Walter J. Stoessel on behalf of the Department of Energy.

/s/
Stephen M. Griffith
Office of Technical Cooperation

Encls

cc:
Ernest Blase, ER-9
G. A. Mills, FE-5
Peter Brush, GC
James Denny, GC

File Germany Methanol

IA-22:SGriffith:252-6153:04-07-80

Agreement between
the Federal Minister f
and Techno
of the
Federal Republic of Germany
and
the United States Department of Energy
on a Project for the Conversion of Methanol to Gasoline

The Federal Minister for Research and Technology of the Federal Republic of Germany (BMFT) and the United States Department of Energy (DOE), hereinafter are called the Contracting Parties.

WHEREAS DOE and BMFT have signed on October 7, 1977 a Memorandum of Understanding on national planning coordination in the field of coal hydrogenation technology within the scope of the International Energy Agency where they expressed the desirability of extending this cooperation by an agreement within the scope of the research and development program of the International Energy Agency in the field of coal technology,

WHEREAS the Contracting Parties have a mutual interest in a project for the utilization of coal resources and rapid commercialization of the methanol to gasoline process to meet increased worldwide energy demands (the Project),

WHEREAS DOE has been invited by BMFT to participate in the Project to be performed in Germany as it is defined in the baseline document to be prepared and as accepted in the Statement of Intent of 28 June and 12 July 1979, the Contracting Parties agree as follows:

ARTICLE 1
Subject

1. The Contracting Parties agree on signing this Agreement to cooperate in the Project in accordance with this Agreement.

2. The Project shall consist of a program of research and development for the conversion of methanol to gasoline. The Project shall consist of the following phases:

   a. preparation of a baseline document with all important scientific, technical, schedule and financial items of the Project, incl... ... ...tribution of work and budget;

b) design of the plant;

c) construction of the plant;

d) operation of the plant, including tests at approximately 100 barrels a day;

e) evaluation of the test results;

f) design study for a commercial plant.

The plant shall be located at Wesseling, Federal Republic of Germany.

3. The scope of the Project is outlined in the technical program for a 100 bpd demonstration plant (Annex 1) which is part of this Agreement.

ARTICLE 2
Performance

Aside from the undertakings of the Steering Committee as stated in Article 4, Paragraph 3, responsibility and control for the Project shall be exercised by BMFT. All legal and technical acts required to implement the Project in accordance with the baseline document, this Agreement, significant changes to the baseline document, and all applicable laws, regulations and licensing requirements of the Federal Republic of Germany shall be performed by BMFT. Responsibilities of the BMFT shall include, but not be limited to:

a) executing the program of work as set forth in the baseline document after its adoption;

b) recording the results of the operation of the plant and performing all analyses of these results for submission to the Steering Committee;

c) submitting reports to the Steering Committee concerning the carrying out of the Project, including a list of all contracts, at half-yearly intervals;

d) supplying to the Steering Committee such additional information concerning the Project as the Steering Committee may request;

e) providing to DOE information and intellectual property rights as stipulated in Annex 2.

ARTICLE 3
Delegation

Kernforschungsanlage Jülich GmbH (KFA) has been delegated by BMFT to be its representative in the implementation of this Agreement and as such shall be subject to the provisions of this Agreement.

ARTICLE 4
Steering Committee

1. In order to provide guidance and technical advice to the Project, there is established a Steering Committee consisting of four members of which each Contracting Party shall designate two members. Each Contracting Party shall also designate alternative members who shall represent the Contracting Party if its members are unable to do so. One of the members designated by BMFT shall be the chairman of the Steering Committee. Each Contracting Party shall inform the other Contracting Party in writing of all designations under this paragraph.

2. Up to two advisers designated by each Contracting Party may without further consent of the other Contracting Party attend meetings of the Steering Committee in an advisory capacity.

3. The Steering Committee shall have the following responsibilities:

   a) adopt the baseline document;

   b) review semi-annually the status of the Project and adopt any resulting significant changes of the baseline document relating to scientific, technical, schedule or financial items (The definition of the term "significant" shall be established no later than the adoption of the baseline document and shall be included therein);

   c) propose such rules and regulations, including financial rules, as may be required for the sound management of the Project;

   d) consider any matters submitted to it by the Contracting Parties.

4. The Steering Committee shall carry out its responsibilities in accordance with the following procedures:

a) the Steering Committee may establish such subsidiary bodies and rules of procedure as are required for its proper functioning;

b) the Steering Committee shall meet at least twice each year. A special meeting shall be convened upon the request of any member which can demonstrate the need therefore. The first meeting of the Steering Committee will take place within eight (8) weeks after signing the Agreement;

c) unless otherwise agreed, meetings of the Steering Committee shall be held in the Federal Republic of Germany on a date announced to all members by the chairman and mutually agreed upon;

d) at least twenty-eight days before each meeting of the Steering Committee, notice of the time, place and purpose of the meeting shall be given to each Contracting Party and to other persons or entities entitled to attend the meeting. Notice need not be given to any person or entity otherwise entitled thereto if notice is waived before or after the meeting;

e) with the agreement of each member of the Steering Committee a decision or recommendation may be made by telex or cable without the necessity for calling a meeting. The chairman of the Steering Committee shall have the responsibility of ensuring that the members are informed of each decision or recommendation made pursuant to this paragraph;

f) one member of each Contracting Party shall be present to produce a quorum for the transaction of business in meetings of the Steering Committee;

g) the Steering Committee shall make its decisions by unanimity. This shall require the agreement of each member or alternate member present and voting at the meeting at which the decision is made.

ARTICLE 5
Observers

DOE shall be entitled to nominate observers (not to exceed two at any one time except in the case of short-term visits not to exceed two weeks) at no cost to BMFT or the participating industry to monitor progress of the Project in accordance with rules determined by the Steering Committee.

Article 6
Finance

1. The total cost of the project is estimated at 63 million DM at August 21, 1979 price-levels. These costs shall be borne by the Contracting Parties and industry in the following way:
   BMFT: 33 1/3%
   DOE: 33 1/3%
   BMFT shall arrange for a contribution of 33 1/3% from industry, two thirds of which (14 million DM) shall be in the form of a contribution of catalyst for the Project.

2. The yearly contributions of the Contracting Parties shall be fixed in the baseline document reflecting the need for the Project to have funds to meet commitments as and when they arise in accordance with the yearly program of work.

3. DOE will bring forth its contribution to BMFT by quarterly payments in advance upon receipt of an invoice.

4. The Steering Committee shall adjust pursuant to Article 4 the figure referred to in paragraph 1 above to take account of changing price-levels so as to ensure that the funds available represent a realistic assessment of the funds needed for the purpose of the Project. If there are significant changes in the price-levels, or BMFT is unable to obtain from industry an increased contribution as follows, the Steering Committee shall consider whether to adjust the program of work for the Project to the available funds. Any cost, caused by changing price levels, technical modifications or delay, exceeding the amount of 63 million DM as agreed above and accepted by the Steering Committee for the Contracting Parties shall be borne in proportion to the contributions in paragraph 1, excluding the 14 million DM contribution of the catalyst, with said proportions recalculated to take into account this exclusion.

5. Income accruing to the Project, including that arising from the sale of gasoline resulting from operation of the Project, shall be credited to the Project.

6. Unless decided otherwise by the Steering Committee,

   a) the financial year of the Project shall correspond to the calendar year;

   b) BMFT shall maintain complete and separate financial records which shall clearly account for all funds in the custody or possession of BMFT in connection with the Project;

   c) no charge shall be made to the Project for the site of the plant and access roads.

7. Cash Contributions pursuant to paragraph 1 above shall be paid in Deutsche Mark, except as the Steering Committee provides otherwise. Contributions received by BMFT shall be used solely in accordance with the baseline document and other expenditures approved by the Steering Committee.

8. Each Contracting Party shall bear all costs of its participation in the Project other than the common costs funded by the budget of the Project.

9. BMFT will transmit to DOE a copy of the annual proof for the use of funds within six months following the end of each calendar year and bearing the audit certificate common at BMFT. Overpayments of DOE within a calendar year determined on the basis of the proofs for the use of funds are to be credited to the following year. Overpayments at the end of the Project are to be repaid without delay. For the purpose of this paragraph the contribution of the catalyst shall have the value of 14 million DM.

ARTICLE 7
Information and Intellectual Property

Provisions regarding information and intellectual property are set forth in Annex 2 and Annex 3.

ARTICLE 6

Legislative Provisions

1. Each Contracting Party shall, within the framework of applicable legislation, use its best endeavors to facilitate the accomplishment of formalities involved in the movement of persons, the importation of materials and equipment and the transfer of currency which shall be required to operate the Project.

2. The participation of each Contracting Party in the Project shall be subject to the appropriation of funds by the appropriate authority, where necessary, and to the constitution, laws and regulations applicable to the Contracting Party including, but not limited to laws establishing prohibitions upon the payment of commissions, percentages, brokerage or contingent fees to persons retained to solicit government contracts, and upon any share of such contract accruing to government officials.

3. The obligation of each of the Contracting Parties (other than any obligation to make payment of any moneys as hereinbefore provided) shall be suspended for any period during which such Contracting Party is prevented or substantially hindered from complying therewith, in whole or in part, by any cause beyond its control including, but not limited to acts of God, unavoidable accidents, laws, rules, regulations or orders of any national, state, governmental or local authority, acts of war or conditions arising out of or attributable to wars, strikes, lockouts or other disputes with employees, shortages of materials, equipment or labor or shortages of or delays in transportation. Such Contracting Party shall use all reasonable endeavors to minimize the effects of such prevention or hinderance and shall notify the other Contracting Party promptly after start and finish thereof.

4. All questions related to this Agreement arising during its term shall be settled by the Contracting Parties by mutual agreement.

5. The Contracting Parties will use all reasonable skill and care in carrying out their duties under this Agreement. BMFT shall be responsible for ensuring that the Project is conducted in accordance with all applicable laws and regulations of the Federal Republic of Germany including the regulations [illegible] concerning funding and procurement.

ARTICLE 9
Berlin Clause

This Agreement shall also apply to Land Berlin, provided that the Government of the Federal Republic of Germany does not make a contrary declaration to the Government of the United States of America within three months of the date of entry into force of this Agreement.

ARTICLE 10
Final Provisions

1. Nothing in this Agreement or its Annexes shall be regarded as constituting either a partnership or a contract between any of the Contracting Parties and any of the entities listed therein.

2. Any notice of information required to be served or given to a Contracting Party under this Agreement shall be addressed to the representative of the Contracting Party designated to the Steering Committee and, if sent by first class telex or cable, shall be deemed to be duly given twenty-four hours after being dispatched.

3. Upon termination of Project, BMFT will liquidate the assets of the Project, if any, and the distribution of the value of the assets in the Federal Republic of Germany will be made to BMFT, DOE and industry in proportion of their financial contributions to the assets in the Federal Republic of Germany.

4. This Agreement may be amended any time by the Contracting Parties. Such amendments shall come into force in a manner determined by the Contracting Parties.

5. A copy of this Agreement shall be deposited with the executive director of the International Energy Agency in recognition of that agency's interest in international cooperation in reseach and development in the field of coal technology.

6. This Agreement shall remain in force for an initial period of five years from the date hereof and shall continue in force thereafter on agreement of the Contracting Parties.

Executed at Bonn in duplicate, in the English and German languages, each text being equally authentic,

this 2nd day of March 1980

Vom Hauch Roscoe Starbird

ANNEX 1

TECHNICAL PROGRAM FOR 100 BPD DEMONSTRATION PLANT

I. Summary

II. Introduction

III. 4 BPD Fluid Bed Pilot Plant

IV. Demonstration Plant Program

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B. Technical Program

1. Design and Construction of Demonstration Plant
2. Cold Flow Model Study
3. Demonstration Plant Operation
4. Evaluation of Results and Product Testing
5. Design Study for a Commercial Plant

C. Schedule

Table 1: Yields from Methanol
Table 2: Typical Properties of finished Gasoline
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Figure 2: 4 BPD Fluid Bed Pilot Unit
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Figure 5: Preliminary Fluid Bed 100 BPD Flow Diagram
Table 3: Cost Estimate
Table 4: Estimated Cost-Distribution and Schedule of Expenditure

I. Summary

The Mobil Methanol to Gasoline Process offers a direct route for the conversion of coal to high octane gasoline. The gasification of coal and the conversion of synthesis gas to methanol are commercially proven technologies. The Mobil process is now ready for scale-up to a demonstration plant, and no major problems are foreseen. Thus, this coal conversion route to gasoline is potentially capable of earlier commercialization than other coal liquefaction processes under development.

The feasibility of the fluid bed process for the conversion of methanol to gasoline has been demonstrated in a 4 barrel-per-day (BPD) fluid bed pilot plant. Gasoline yields of 88 wt % were achieved during 5 months of successful operation. Complete methanol conversion was obtained at design conditions, and catalyst stability and regenerability were confirmed. The results have provided a design basis for a 100 BPD fluid bed demonstration plant, which is the next logical step in the scale-up of this process.

A program to design, build, and operate a 100 BPD demonstration plant for the conversion of methanol to high octane gasoline has been formulated. The primary objective is to demonstrate the scale-up of the reactor design. The use of heat exchange pipes for heat removal will be tested, and the effects of reactor diameter and baffles on the fluid bed efficiency will be determined. The feasibility of continuous regeneration and steady-state operation with constant catalyst activity will also be demonstrated. During this study the fluid bed process will be optimized, and the results will provide a sound basis for the design of a commercial size plant for the conversion of methanol to high octane gasoline.

II. Introduction

The Mobil Methanol to Gasoline Process provides a unique route to high octane gasoline from coal. It has an excellent thermal efficiency, lower capital requirements, and superior product selectivity compared to the Fischer-Tropsch process, the only coal-to-gasoline technology practiced commercially.

This process is based on catalyst invented and developed by Mobil during the past decade. Methanol is dehydrated to dimethylether which in turn is converted to high octane hydrocarbons. The reactions can be illustrated schematically as follows:

$$2\ CH_3OH \rightleftharpoons \underset{+\ H_2O}{CH_3OCH_3} \longrightarrow \underset{+\ H_2O}{\text{Olefins}} \longrightarrow \text{High Octane Gasoline}$$

The gasoline consists primarily of paraffins (branched and cyclic) and aromatics with small amounts of olefins.

The manufacture of gasoline from coal with the Mobil process is shown conceptually in Figure 1. Synthesis gas is produced by the gasification of coal, and is then converted to methanol. The crude methanol is used as the feedstock for the Mobil process. Both the coal gasification and conversion of synthesis gas to methanol are proven commercial technology, and represent the major investment cost of this coal-to-gasoline process scheme.

Process development studies of the conversion of methanol to high octane gasoline were conducted during 1975-76 under DOE contract E (49-18)-1773 which was jointly funded by DOE and Mobil. Long-term aging tests of over 200 and 60 days were achieved in bench-scale fixed and fluid bed units, respectively. In addition to the long-term aging tests, optimum process conditions were defined, and the quality of the product gasoline was verified. Due to the high exothermicity of the conversion of methanol to gasoline, two reactors are used in the fixed bed process. Methanol is dehydrated in the first reactor to an equilibrium mixture of methanol and dimethylether which is converted to high octane gasoline over the Mobil conversion catalyst in the second reactor. Only a single reactor is required in the fluid bed process.

The results from the process development studies identified a number of potential advantages of the fluid bed process over the fixed bed process. They include:

Higher gasoline yield
Steady-state operation
Easy temperature control
Smaller recycle ratio
Lower operation costs

In view of the advantages of the fluid bed process, a 4 BPD fluid bed pilot plant was designed, built, and operated under DOE contract EX-76-C-01-2490. As before, it was jointly funded by DOE and Mobil. The details and results of this program are described in the next section.

III. 4 BPD Fluid Bed Pilot Plant

Work on a 4 BPD fluid bed pilot plant for the conversion of methanol to gasoline was started in October 1976. The program included the following tasks:

1. Flow studies in glass model reactors
2. Design and construction of pilot plant
3. Evaluation of fluid bed catalyst in bench-scale units
4. Process studies in pilot plant
5. Evaluation of product gasoline.

The flow studies with non-reacting gases provided necessary information for the design of the pilot plant - effects of gas velocity on bed density, entrainment rate, and reactor inventory were determined.

Capacitance probe techniques were developed to measure fluidization quality. The results of the flow studies contributed significantly to the design of efficient catalyst circulation and recovery systems and feed contributors.

The construction of the 4 BPD pilot plant was completed in June 1977. After a 2-month period for checkout and debugging, methanol conversion runs were initiated in September 1977.

The reactor-regenerator system is shown in Figure 2. The 4" ID x 25' high reactor is equipped with cooling jackets and access ports for thermocouple insertion, emergency flooding with N_2, and capacitance probe insertion.

Six adiabatic zone heaters maintain a zero ΔT between the heaters and the reactor skin. The product stream passes into a disengager where the entrained catalyst is separated, collected, and returned to the bottom of the reactor via an external catalyst recirculation line. Fluidizing nitrogen is introduced at the slating face on the conical section to promote catalyst movement and recirculation.

Catalyst is regenerated isothermally in a batch mode at a rate of 10% of the reactor catalyst inventory per day. Catalyst transfer between the reactor and regenerator is controlled by maintaining a constant differential pressure between the 2 vessels, and a calibrated orifice plate.

A simplified flow diagram of the complete pilot plant is shown in Figure 3. Chemical grade methanol (99.85% pure) is stored in an 8,000 gallon railroad tank car (carbon steel) and pumped into the 400 gallon stainless steel tanks. It is blended with water at this point to simulate crude methanol which normally contains 5-30 wt % of water. The methanol feed is generally charged to the reactor as vapor; however, the pilot plant is capable of co-feeding liquid and vapor methanol simultaneously. The product stream from the disengager is filtered and passed through a three-stage condenser. The light gas for recycle is drawn from the first stage. The effluent from the third stage is separated into gas, hydrocarbon liquid, and aqueous phase.

The start-up of the pilot plant was very smooth, and target operating conditions were reached within several hours. About 109 days of successful operation were achieved in the pilot plant.

Two long-term evaluations were conducted. The first 34-day evaluation was followed by a scheduled turn-around, and the second evaluation lasted 75 days. Exceptionally smooth and continuous operation was achieved during both evaluations. The range of operating conditions were:

Temperature:	730 to 800° F
Pressure:	20 to 40 psig
WHSV, MeOH:	0.5 to 1.5
Gas Super. Vel.:	0.7 to 1.8 ft/sec
Feed Composition:	83 to 100 wt % MeOH

Complete conversion of methanol was achieved at the design conditions for gas superficial velocities of up to 1.8 ft/sec. Heat transfer, stability, and smoothness of the operation were excellent.

A typical temperature profile in the reactor is shown in Figure 4. Despite the highly exothermic nature of the methanol conversion and the unusually large aspect ratio (L/D > 75) of the reactor, a very uniform temperature profile was established. The reactants were introduced into the reactor at 300° F. Within a mixing zone of about 2 ft, back-mixing and recirculating catalyst provided sufficient heat to bring the feed up to the reactor temperature (750° F). There was a complete absence of any troublesome "hot spot". In addition, the transient temperature profiles of the reactor during heat up and cool down were also comparably uniform.

Typical product yields from the 4 BPD fluidbed pilot plant are given in Table 1. As expected, stochiometric amounts of hydrocarbons and water are produced. On a hydrocarbon basis, the raw C_5+ gasoline fraction is 60 wt %. Alkylation of propene and butenes with isobutane increases the total gasoline yield to 88 wt %, which is higher than that from the fixed bed process. As shown in Table 2, the gasoline quality is very good in terms of octane (96.8 RON clear) and distillation range. The durene content is 3.8 wt %, and would not be expected to cause any driveability problems. Previous vehicle tests with durene-doped gasoline showed that durene concentrations up to 4 wt % had no significant effects on vehicle performance.

In conclusion, the major accomplishments during the operation of the 4 BPD fluid bed pilot plant are summarized below:

- Demonstrated steady state operation with 88.0 wt % C_5+ gasoline yield
- Accomplished complete methanol conversion at design conditions
- Demonstrated excellent operability of fluid bed process
- Confirmed catalyst stability and regenerability with 22 regenerations
- Further characterized gasoline quality
- Developed design basis for a 100 BPD fluid bed pilot plant

IV. Demonstration Plant Program

A. Objectives

The broad objective of this program is to scale-up the fluid bed Methanol to Gasoline Conversion Process to a 100 BPD demonstration plant. It is the final development step which will providethe basis for the design and construction of commercial size facilities.

To accomplish the program objective, a fluid bed demonstration plant with a 2' ID x 40' high reactor will be designed and constructed in the Federal Republic of Germany. The plant will be operated for a period of about 21 months during which the essential scale-up data will be collected and analyzed. The gasoline product from the plant will be extensively evaluated, including venicle testing. Based on these results, the design basis for a commercial-sized plant will be formulated.

B. Technical Program

1. Design and Construction of Demonstration Plant

A conceptual schematic of the 100 BPD demonstration plant is shown in Figure 5.

The major process units are the reactor and the regenerator. The reactor will be approximately 60 cm (2') diameter by 12 m (40') high and will be operated adiabatically. The reaction heat is removed through internal or external heat exchange tubes. The tubes will also function as baffles to break up the large bubbles in the fluidized bed and reduce bypassing. To maintain catalytic activity in the bed, a continuous slip-stream of catalyst from the reactor is drawn into the re-generator where coke is burned off. Regenerated catalyst is continuously returned to the reactor. With this mode of operation, steady-state operations can be achieved and optimized.

A fraction of the light gas stream will be recycled back to the reactor. Previous studies in the 4 BPD pilot plant have indicated improvements in gasoline yield by recycle. The design and construction of the 100 BPD pilot plant will be primarily the responsibility of Uhde at a site provided by URBK. Mobil will provide the design basis to Uhde. Mobil and URBK will contribute technical assistance as needed.

2. Cold Flow Model Study

Flow characterization studies will be carried out in a flow demonstration unit with non-reacting gases prior to the final design of the pilot plant reactor. These studies are required, because continuous regeneration and internal baffles were not tested in the 4 BPD pilot plant study. A "cold" flow model reactor will be constructed and employed to design the baffle configuration and reactor/regenerator catalyst circulation system. The results from the flow experiments will also be used to design feed distributors and cyclones. Mobil will conduct this study at Paulsboro, New Jersey. URBK and UHDE may participate in this effort.

3. Demonstration Plant Operation

An operating period of about 21 months is anticipated for this program. The main goal will be to operate the demonstration plant at steady state with virtually complete methanol conversion and continuous catalyst regeneration to maintain constant catalytic activity. Make-up catalyst will be added as needed. Such operation will provide information on the long-term catalyst stability, make-up requirements, attrition characteristics, and regeneration effects. The concept of internal heat exchange tubes in dissipating reaction heat and functioning as baffles will be thoroughly evaluated. External cooling and catalyst recirculation will be studied. The yield advantages of light gas recycle will also be investigated.

The effect of reactor scale-up on conversion efficiency will be determined, and process variable studies will be carried out for further process optimization.

URBK will have prime responsibility for operation of the pilot plant. Mobil and Uhde will participate in this effort.

4. Evaluation of Results and Product Testing

Hydrocarbon yield and selectivity data will be collected along with the corresponding operating data. Methanol will be determined by analyses of the aqueous products. The sensitivity of gasoline yields to key process variables and feed composition will be determined. Product quality, in particular durene concentration, will be monitored closely.

Finished gasoline will be made by blending purchased alkylate with product from the pilot plant. The gasoline product from the demonstration plant will be evaluated by Mobil and URBK. Gasoline properties such as octane ratings and volatility will be determined and compared with the results from the 4 BPD pilot plant.

5. Design Study for a Commercial Plant

The 100 BPD demonstration plant program is the final scale-up step in the orderly development of the fluid bed Methanol to Gasoline Conversion Process. The process and engineering data from this program will provide a sound design basis for a commercial-size plant. An optimal set of operating conditions will be selected. A flowsheet for the plant will be generated. Major and ancillary process units will be identified and specified in terms of design requirements. Heat and material balance calculations and catalyst requirements will also be presented. Economic scoping of the commercial plant will be made.

This work will be conducted by Uhde with assistance from Mobil and URBK.

C. Schedule

Duration for the complete program will be about 5 1/2 years. The design and construction of the demonstration plant will take about 35 months. Shakedown and operation of the plant, along with data analyses and reporting, will span the remaining time. It will be necessary to complete the "cold" model flow studies as early as possible in the contracting period. This will eliminate unnecessary delays in finalizing designs for the reactor and regeneratory system.

TABLE 1

YIELDS FROM METHANOL

Average Bed Temperature, ° F	775
Pressure, PSIG	25
Space Velocity (WHSV)	1.0

Yields, Wt % of Methanol Charge

Methanol + Ether	0.2
Hydrocarbons	43.5
Water	56.0
CO, CO_2	0.1
Coke, other	0.2
	100.0

Hydrocarbon Product, Wt %

Light Gas	5.6
Propane	5.9
Propylene	5.0
i-Butane	14.5
n-Butane	1.7
Butenes	7.3
C_5+ Gasoline	60.0
	100.0

Gasoline (including Alkylate)	
(96 R+O, 9 RVP)	88.0
LP Gas	6.4
Fuel Gas	5.6
	100.0

TABLE 2

TYPICAL PROPERTIES OF FINISHED GASOLINE

Components, Wt %	
Butanes	3.2
Alkylate	28.6
C_5^+ Gasoline	68.2
	100.0

Composition, Wt %	
Paraffins	56
Olefins	7
Naphthenes	4
Aromatics	33
	100

Octane	Research	Motor
Clear	96.8	87.4
Leaded (3 cc TEL/ US Gal)	102.6	95.8
Reid Vapor Pressure, PSIG	9.0	
Specific Gravity	0.730	
Sulfur, Wt %	nil	
Nitrogen, Wt %	nil	
Durene, Wt %	3.8	
Corrosion, Copper Strip	1 A	

ASTM Distillation, ° F	
10 %	117
30 %	159
50 %	217
90 %	337

TABLE 3

COST ESTIMATE

On a preliminary basis the total cost of the facility and program has been estimated to be approximately:

DM 49,000,000
or $ 27,222,000 based on the current exchange rate of
1 DM = $ 0.555
or 1 $ = DM 1.80

The total cost covers the program period of 66 months and is divided as follows:

	DM	$
1. Basic-Engineering	2,175,000	1,208,000
2. Detail-Engineering	5,825,000	3,236,000
3. Plant-Investcosts incl. Engineering, Construction, Start-up, Plantsite-preparation, Plant-Dismantling	24,290,000	13,494,000
4. Operation Concept 1 incl. Manpower, Feed, Energy and Auxiliaries	6,580,000	3,656,000
5. Operation Concept 2	4,875,000	2,708,000
6. Commercial Plant Design, Vehicle, Engine Testing, Report and Documentation	5,255,000	2,920,000
	49,000,000	27,222,000
Mobil Catalyst	14,000,000	
TOTAL	63,000,000	approximately

TABLE 4

ESTIMATED COST-DISTRIBUTION AND SCHEDULE OF EXPENDITURE

(in Thousand DM)

	1979	1980	1981	1982	1983	1984	
Basic Engineering	940	1,145	90				2,175
Detail Engineering	575	5,250					5,825
Plant-Investcosts		4,790	15,135	1,515	2,515	335	24,290
Operation Concept 1				4,015	2,565		6,580
Operation Concept 2					1,540	3,335	4,875
Commercial Plant Design and Vehicle Engine Testing					2,610	2,645	5,255
	1,515	11,185	15,225	5,530	9,230	6,315	49,000

ANNEX 2

Information and Intellectual Property

A. The reporting, distribution, handling and protection of information and intellectual property, and rules and procedures related thereto shall be determined by the Steering Committee to the extent not covered by this Annex.

B. Subject only to temporary restrictions to enable the filing of patent applications the Contracting Parties shall have the right to use and publish (1) all information provided to or arising from the Project except proprietary information, but this paragraph B shall not grant any licenses or other rights under any patent rights to use such information except as specifically defined in this Annex and (2) all information listed in Annex 3.

C. For the purposes of this Annex, proprietary information shall mean information of a proprietary nature such as trade secrets and know-how (for example, computer programmes, design procedures and techniques, chemical composition of materials, or manufacturing methods, processes, or treatment) which is appropriately marked, provided such information:

1. Is not generally known or publicly available from other sources;

2. Has not previously been made available by the owner to others without obligation concerning its confidentiality, and

3. Is not already in the possession of the recipient Contracting Parties without obligation concerning its confidentiality.

D. Mobil, Uhde, URBK and the Contracting Parties shall take all necessary measures in accordance with this Annex, the laws of their respective countries and international law to maintain in strict confidence and to prevent unauthorized disclosure or use of proprietary information provided to or arising from the Project.

E. BMFT shall take care that information arising from or provided to the Project which qualifies as proprietary information under this Annex will be identified and ensure that it is appropriately marked. Proprietary information arising from the Project and proprietary information procured by BMFT or URBK from third parties, from Uhde or from URBK shall be the property of Mobil for the benefit of the Contracting Parties, Mobil, Uhde and URBK in accordance with and subject to the licensing requirements and other provisions of this Annex. Proprietary information shall not be accepted for or utilized in the Project without obtaining the property and licensing rights specified in this Annex, unless expressly approved by the Steering Committee.

F. 1. Each Contracting Party, Mobil, Uhde and URBK shall provide to the Project proprietary information solely owned or controlled by it or which it has the authority to license which is useful in practicing the results of the Project and shall license proprietary information it provides to the Project:

(a) to BMFT royalty-free for use in the Project;

(b) to the United States Government (including its contractors) royalty-free for use in research, development and demonstration programs in the United States in the methanol-to-gasoline field except BMFT, Uhde or URBK;

(c) to each Contracting Party, its government, Mobil, Uhde or URBK and nationals of their countries designated by the Contracting Party for commercial use in the methanol-to-gasoline field in all countries on reasonable terms and conditions with exception of licenses from Mobil to Uhde or URBK.

2. Mobil shall license proprietary information arising from the project:

(a) to BMFT royalty-free for use in the Project;

(b) to the United States Government (including its contractors) royalty-free for use in its research, development and demonstration programs;

3. It is understood that nothing in this Annex shall require Mobil to provide or license proprietary information on catalyst manufacture or catalyst compositions so long as Mobil or its affiliates or licensees shall supply Mobil catalyst suitable for the methanol-to-gasoline process in sufficient quantity and on reasonable terms and conditions (including leasing) to reasonably satisfy market [illegible]

G. Patents solely owned or controlled by a Contracting Party or by Mobil, Uhde or URBK which are needed for the Project shall be licensed to BMFT for use in the Project only at no cost to the Project.

H. Each Contracting Party and Mobil, Uhde and URBK shall license for use in the field of conversion of methanol-to-gasoline and on reasonable terms and conditions all patents solely owned or controlled by it prior to or during the course of the Project but outside thereof which are useful in practicing the results of the Project and have been utilized in the Project to the other organizations and to the other Contracting Parties, their Governments and nationals of their countries designated by the Contracting Parties, for use in all countries with exception of licenses from Mobil to Uhde or URBK; provided, however, that Mobil shall not be required to license its patents on catalyst manufacture or catalyst compositions so long as Mobil or its affiliates or licensees shall supply Mobil catalyst for the methanol-to-gasoline process in sufficient quantities and on reasonable terms and conditions (including leasing) to reasonably satisfy market needs.

I. 1. BMFT shall ensure that inventions made or conceived in the course of or under the Project (arising inventions) are identified promptly and reported to Mobil and the Steering Committee. Mobil shall have the first option to file patent applications and any resulting patents at its private expense, and such patent applications and patents shall be the property of Mobil or the benefit of the Contracting Parties, Mobil, Uhde and URBK in accordance with and subject to the licensing requirements and other requirements of this Annex.

2. BMFT shall, if recommended by the Steering Committee, ensure that patent applications are filed at the expense of the Project on inventions and in countries in which Mobil has not exercised its option to file or indicated its intention to file a patent application within seven (7) months from the conception or reduction to practice, whichever occurs first, of an invention reported to Mobil or indicated its intention to file within a reasonable period of time. Any patents so obtained shall be owned by BMFT or URBK for the benefit of the Contracting Parties, Uhde and URBK and any rights therein shall be apportioned as agreed on by the Steering Committee, Uhde and URBK.

J. Mobil shall license any patents obtained by it on arising inventions to:

1. BMFT royalty-free for use in the Project;

2. The United States Government (including its contractors) royalty-free for use in its research, development and demonstration programs, and

3. Each Contracting Party, its Government and nationals of its country designated by the Contracting Party for commercial use in all countries on reasonable terms and conditions provided, however, that Mobil shall not be required to license any patents relating to catalyst manufacture or catalyst compositions so long as Mobil or its affiliates or licensees shall supply Mobil catalyst for the methanol-to-gasoline process in sufficient quantities and on reasonable terms and conditions (including leasing) to reasonably satisfy market needs.

K. 1. Mobil shall grant Uhde a royalty-free license under the proprietary information of Mobil which arises from and under the Project or which is useful in practicing the results of the Project and under the patent rights of Mobil, to design and engineer plants for the Conversion of methanol-to-Gasoline with the assurance that Mobil will offer to the owners of such plants, at Uhde's request, and on reasonable terms and conditions a nonexclusive license under the aforesaid proprietary information and patent rights of Mobil to the extent necessary for the operation of such plants.

2. Mobil also shall reimburse Uhde in the amount of two and one-half (2 1/2) times the total moneys contributed by Uhde under this Agreement. Such reimbursement shall be available as accrued from 25% of the process royalties received by Mobil for licenses and rights granted third parties for the Methanol-to-Gasoline Process.

3. Furthermore, Uhde will receive a royalty share of one third of 0.1X of the process royalties (as defined in the following sentence which Mobil receives from third parties for grants to them by Mobil for the operation of the Methanol-to-Gasoline Process under arising inventions and arising proprietary information except that Uhde shall receive no royalty share on royalties which Mobil receives for the operation of the Methanol-to-Gasoline Process in the territories of the United States, New Zealand, and South Africa, and only 50% of the above described royalty share for operations within Australia. For the purpose of computing such royalties received by Mobil, if it is assumed that "X" is the royalty for licenses under Mobil patent rights and technical information which does not include rights under arising inventions and arising proprietary information, then licenses to third parties which include rights under arising inventions and arising proprietary information shall be deemed to be "1.1X".

4. It is understood that Mobil w... ... reasonable efforts to maintain the separate identity of arising inventions and the proprietary information arising from the Project and will not authorize third persons to use such arising proprietary information and arising inventions commercially without extending to such third persons a license for such use and paying Uhde the royalty share of one-third of 0.1% specified above on the process royalties received by Mobil for such licence.

5. Mobil shall grant URBK a license, on reasonable terms and conditions, under the proprietary information of Mobil which arises from and under the Project or which is useful in practicing the results of the Project and under patent rights of Mobil which are useful in practicing the results of the Project for use in all countries. Such license shall be royalty-free for the production of up to one million metric tons per year of gasoline from methanol in the Federal Republic of Germany. Furthermore URBK will receive a royalty share of one-third of 0.1% of the process royalties as defined in paragraph K. 3. above for Uhde.

L. Patents owned or controlled by parties other than the Contracting Parties, Mobil, Uhde and URBK, may be procured by or licensed to BMFT to URBK only with the express approval of and under the terms and conditions stipulated by the Steering Committee.

M. Information regarding inventions on which patent protection is to be obtained shall not be published or publicly disclosed by Contracting Parties, Mobil, Uhde, or URBK, so long as such information qualifies as proprietary information as defined in paragraph C. of this Annex 2 and is not listed in Annex 3, but the temporary restrictions of paragraph B. shall apply in any case. BMFT shall take care that Project reports which disclose such inventions are appropriately marked.

N. BMFT shall take appropriate measures necessary to protect copyrightable material generated under the Project. Copyrights obtained shall be the property of BMFT or URBK for the benefit of the Contracting Parties, Uhde, URBK and Mobil, provided, however, that the Contracting Parties, their Governments, Uhde, URBK and Mobil, shall retain a royalty-free, irrevocable, nonexclusive license under any such copyright to reproduce, distribute, and publish such material.

O. Each Contracting Party, Mobil, Uhde and URBK, will, without prejudice to any rights of inventors or authors under its national laws, take all necessary steps to provide the cooperation from its authors and inventors required to carry out the provisions of this Annex. Each Contracting Party, Mobil, Uhde and URBK, will assume the responsibility ... compensation required to be paid tao its employees according to the laws of its country.

P. Mobil shall reimburse the U.S. Government in the amount of 200% of the total moneys contributed by the U.S. Government to the Project.

Suuch reimbursement shall be made out of the total process royalities that Mobil actually receives from third persons for licenses or grants of immunity under proprietary information or patent rights for practaice of the Methanol-to-Gasoline Process in the United States, but excluding any catalyst use charges or royalities received for catalyst use or manufacture. The reimbursement shall be made in the following manner:

1. The first 100% reimbursement to the U.S. Government shall be paid as accrued out of twenty percent (20%) of the above process royalities actually received by Mobil.

2. The second 100% shall be paid as accrued out of ten percent (10%) of the above process royalities actually received by Mobil.

3. Mobil shall license the Methanol-to-Gasoline Process as provided in this Annex. Any loss of royalty in responding to process guarantees (exclusive of liabilites under Mobil's contracts for catalyst supply or engineering) and patent indemnifications in connection with such licensing in the United States shall be shared by the United States Government in proporation to and out of its royalty share or reimbursement from Mobil. In computing process royalties actually received by Mobil, Mobil may deduct from royalties actually received reasonable licensing expenses associated with finding, negoitation and administration of such licenses in accordance with Mobil's standard reasonable practices.

Q. BMFT shall secure the agreement of all organizations participating in the Project to the terms of this Annex. BMFT will transfer its rights in proprietary information and patents licensed to it by DOE, Mobil, Uhde or URBK for use in the Project and its obligations pursuant to this Annex to URBK and will control in accordance with Artaicle 8, Paragraph 5 that URBK will exercise these rights and obligations.

R. The Steering Committee may establish guidelines to determine what constitutes a "national" of a Contracting Party.

S. Mobil catalyst supplied to the Project shall remain the property of Mobil or its affiliates. Mobil catalyst shall not be analyzed unless authorized by Mobil in writing, and shall not be disseminated to others outside the Project or used for any other purpose other than as authorized by Mobil for the Project. BMFT will limit dissemination or Mobil catalyst

to those people who require it for use in the Project. At the conclusion of the Project, all such catalyst shall be returned to Mobil or its affiliates, at Mobil's request, or disposed of as instructed by Mobil.

T. As used in this Annex, the following terms shall have the meanings indicated:

1. "Methanol-to-Gasoline Process" or Conversion of Methanol-to Gasoline" shall mean a fluidized bed process for producting gasoline using a fresh feedstock consisting essentially of methanol in the presence of Mobil catalyst wherein not more than 5% by weight of the hydrocarbon product recovered from the product is ethylene.

2. "Mobil catalyst" shall mean a composition of matter of the ZSM catalyst class suitable for use as a catalyst in the Methanol-to-Gasoline Process and having a silica to alumina mole ratio of at least twelve (12) and a structure providing consitrained access to the crystalline-free space as indicated by a Constraint Index in the approximate range of one to twelve (1 to 12) wherein the term "Constraint Index" is defined in U.S. patent 4,098,836, provided that Mobil catalyst shall not include any such composition of matter to the extent it is actually used in or actually transferred for use in a process other than the Methanol-to-Gasoline Process, nor shall Mobil catalyst include any composition which contains a zeolite crystalline aluminosilicate other than as described hereinabove.

3. "Project" shall mean a program of research and development for the Methanol-to-Gasoline field.

4. As used herein, "Mobil" shall mean Mobil Research and Development Corporation, "Uhde" shall mean Uhde GmbH and "URBK" shall mean Union Rheinische Braunkohlen Kraftstoff AG.

ANNEX 3

LIST OF PUBLISHABLE DATA

1. Design of Demonstration Plant

1.1 Flowsheet and overall material balance
1.2 Process description
1.3 Utility consumption
1.4 Product composition
1.5 Equipment list giving characteristic data, e.g.:
- For vessels diameter, height, design temperature, design pressure, material of construction, weight.
- For heat exchanges heat duty, design temperatures, design pressures, material of construction, weight.
- For pumps and compressors capacity, pressure difference, power consumption, RPM. design temperature, design pressure, material of construction, weight.

1.6 Electrical installations
1.7 Control equipment
1.8 Plot plan
1.9 Description of foundations, steel structures, buildings
1.10 Application to the local authorities for approval of construction (as far as publishable) giving pollution considerations regarding air, water, noise, etc.
1.11 Timing
1.12 Cost of
- equipment
- civil work and erection
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- erected plant

1.13 Plant photos

2. Operation of Demonstration Plant

2.1 Review of events during start-up
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3. Feasibility Study for a Commercial Plant

3.1 Scale-up philosophy for the MTG plant
3.2 Block diagramme and process description of the total plant complex (coal to gasoline)
3.3 Flowsheets of the various process units with process description
3.4 Steam system with description
3.5 Description of utilities and offsite with flowsheets
3.6 Consumption and production figures with analyses
3.7 Estimated cost of the plant complex
3.8 Plant manning
3.9 Product cost versus various cost factors

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Mr. YATES. We are concerned about patents and other provisions that may be in the contract.

Mr. LEGASSIE. We will be happy to furnish you, in addition to the contract, which probably is lengthy, a short summary of those key features.

We will give that to you in addition to the basic contract.

Mr. YATES. Good. Ordinarily, we ask GAO's opinion on the contracts of that type. GAO takes so long, we asked them their opinion on SRC six months ago.

Mr. LEGASSIE. I believe those were prudently negotiated, sir. But we will certainly have no problem in full disclosure.

Mr. YATES. Is there some kind of contribution on cost overruns in that contract, do you know?

Dr. BATCHELOR. The terms of the agreement, and it is an agreement between the U.S. Government and the German Government, provides really two options if the cost of the project has to be increased.

One is to continue at the same pro rata shares, and the other is if the industrial consortium does not choose to continue to contribute, is to adjust the program to reduce the scope to stay at fixed cost.

That is part of the basic agreement which we can provide you.

Mr. YATES. What is the contribution that Mobil makes?

Mr. BATCHELOR. Mobil and two German companies make one-third contribution. The Mobil portion of that is the contribution of the catalyst for the process, including putting together the facility to manufacture that catalyst in this country.

It is not a commercial catalyst for the fluidized bed unit, but it is too much to be made in laboratory quantities.

Mobil is contributing at a specified value the total catalyst requirement.

Mr. YATES. At what stage did you say that project was?

Dr. BATCHELOR. It is in design and early construction.

Mr. YATES. When is it contemplated to be completed?

Dr. BATCHELOR. Late next summer, 1982.

Mr. YATES. Will constrution be completed by summer 1982?

Dr. BATCHELOR. Yes, sir.

Mr. YATES. I assume that is when they try to get it in operation, too?

Dr. BATCHELOR. Yes, sir.

Mr. YATES. Where is that located in Germany?

Dr. BATCHELOR. Near Cologne.

Mr. YATES. Let's turn to page 43 where you say, "Evaluate ongoing catalysts and process developing projects to select candidates for acceleration to large-scale testing."

Why isn't it industry's responsibility to test the catalyst and develop the projects on a large scale?

Mr. LEGASSIE. We believe it is, sir. The work we are doing, I think, is intended to be in a stage and in areas industry is not pursuing to bring things to the point where they can be considered by industry for such larger-scale activity.

So we do not—it would be wrong to read the words in the budget justification to imply that we have in mind moving into large-scale

testing activities of catalyst advances that come out of our development program.

FLUIDIZED BED COMBUSTION

Mr. YATES. What is the reason for having a fluidized bed combustion research facility at Morgantown, West Virginia?

Mr. LEGASSIE. We had started a project in this area that we eventually decided not to complete. We had a substantial investment in the site in a building that had been built there, and reached the judgment we would use the investment in the land and facilities made to date, and convert it into a much smaller-scale and more flexible test development unit, which we are doing.

So that was a cost-effective action in our view associated with a decision to abandon a much larger project.

But we think that the idea we are implementing there has merit in and of itself. It is not a make-work activity. There is value in having a small-scale test unit available to us that we can use to explore advances in fluid bed combustion technology.

This will give us such capability.

Mr. YATES. What kind of systems would be tested in this unit? Is the one you just described the only one?

Mr. LEGASSIE. It is designed to allow you to test a variety of approaches. But again, at that level of detail, I would like Mr. Liccardi or one of his staff to respond.

Mr. LICCARDI. Yes. I think one of the key features of the facility, Mr. Chairman, is that it is very highly instrumented. You do not find this high instrumentation capability normally at the industrial plants.

Secondly, it has the capability to test novel methods of fluidized bed combustion, like two-bed concept and circulating beds.

But on a small, small scale, though.

Mr. YATES. How does it relate to the facility being tested at TVA?

Mr. LICCARDI. No, it would not. It would be supportive from the research standpoint, but not directly coupled.

Mr. LEGASSIE. This is more technology-based activity.

Mr. YATES. Has industry indicated they are interested in such a facility?

Mr. LEGASSIE. We earlier had ideas of a much larger facility with substantial industrial involvement where the testing would have been directly related to industry plans.

We have abandoned that idea, and so this should be seen as more of a research-oriented, university-oriented technology base-oriented activity.

Industry has indicated that they will be interested in the data that comes from that. But we don't visualize cost-shared programs with industry of any substance at this facility.

PFB PILOT PLANT PROJECT

Mr. YATES. When will the pressurized fluidized bed pilot plant be ready in New Jersey?

Mr. LEGASSIE. This is under construction now, and I will ask my staff for a completion date.

Mr. LICCARDI. I believe it is the second quarter of fiscal 1983.

Mr. YATES. If it is operated successfully, how much more scale-up of the components will be necessary to bring it to commercial size?

Mr. LICCARDI. I would suspect, Mr. Chairman, we are talking about a 13-megawatt system. It will take a much larger scale for commercialization. I believe that our role in government is to test it at this level, and have industry pick up the commercialization aspect after the pilot plant operation.

Mr. LEGASSIE. Although we could have, as I understand it, turbine tests and so on, which would be at larger size, and therefore, applicable directly.

There is provision in the pilot plant to engage in such activities in the design as we are putting it together.

We have in mind in later phases of the program that we might actually do that.

COAL-OIL MIXTURES

Mr. YATES. Is there any incentive for utilities or industrial firms to convert to coal-oil mixtures if coal-water mixtures were available in the next four to five years?

Mr. LEGASSIE. Certainly incentives to convert to coal-oil now as opposed to waiting for something that may come in four or five years and may be better and may face a supply situation that has to be worked out are the following: Namely, that there are companies, there is a facility, for example, in existence now that is able to make and deliver coal-oil mixtures.

Presumably, your interest in this is that you are an oil user, and you are facing buying oil at current prices.

To the extent you can use a mixture today and generate a saving as opposed to buying boiler fuel at the price you have to pay for it, the incentive is to do it now. Not to wait just because something better may be coming around the corner later. There is always something better coming.

Mr. YATES. Could the same facility be readapted to handle coal-water mixtures?

Mr. LEGASSIE. I think part of the development program is, in fact, to determine what modifications are really necessary to burn those mixtures.

But I think generically you would anticipate that since there are only modest conversions required to go from oil to coal-oil, that you would also not find extensive requirements necessary to go from coal-oil to coal-water.

Mr. YATES. Are the coal-oil mixtures ready for commercialization?

Mr. LEGASSIE. In the view of many people, the answer is yes. There are companies actively engaging in trying to market such mixtures. There is an existing facility that is trying to enter into long-term contracts with potential users.

There are proposals before the SFC for government support, and there is a substantial private sector activity in this area.

Mr. YATES. Is that why you don't think the government should put up any funds?

Mr. LEGASSIE. We believe from the R&D side of the house that we should no longer be in this territory.

4.8MW FUEL CELL DEMONSTRATION

Mr. YATES. What is the status of the demonstration plant to be operated at ConEd in New York on the fuel cells?

Mr. LEGASSIE. As I understand it, the 4.8 megawatt cell in New York is in a situation in which we are examining some of the components that have been damaged to see what has to be done to make them operable, and we are in the middle of dealing with that situation.

It will take some time and some funds to be able to place it into operation. Let me again ask what a current estimate is from our staff as to when that will be done?

Mr. LICCARDI. I believe we are going on line the latter part of this year.

Mr. LEGASSIE. So we are not dealing with a terribly severe situation, but we have been delayed. And there have been some increased costs incurred as a result.

Mr. YATES. Are any additional funds needed to finance the demonstration beyond the $3 million added by the Science and Technology Committee?

Mr. LEGASSIE. I think the answer to that is no. It may be that the $3 million add-on is excessive in terms of real need.

Mr. YATES. How much do you think would be more appropriate?

Mr. LEGASSIE. I have heard estimates in the neighborhood of $1 million or a million and a half dollars, as possibly being adequate.

But it is actually our intention to deal with the necessary expenditures within the budget level we already have.

So we are not supporting an add-on by the Congress

Mr. YATES. What kind of cost-sharing do you think is involved?

Mr. LEGASSIE. You are talking about the total project?

Mr. YATES. Yes.

Mr. LEGASSIE. I have to check, because this was initiated elsewhere, and then came to us.

Mr. LICCARDI. At present, if you look at the total costs of the test program, GRI's cost-sharing is in a two-thirds/one-third ratio, with GRI proposing to put in more of the funds.

However, the early funds have a higher DOE contribution than GRI.

Mr. YATES. You have enough money to continue the project, then?

Mr. LEGASSIE. Yes, we do.

PHOSPHORIC ACID FUEL CELLS

Mr. YATES. What is the status of the phosphoric acid fuel cell?

Mr. LEGASSIE. The 40-kilowatt program?

Mr. YATES. Yes.

Mr. LEGASSIE. Again, we have a planned field test. We have proposals from a supplier of a number of units which would be deployed, which I believe is in the evaluation process.

And we are about to make a selection. So that we will be selecting that supplier and securing the number of cells.

Mr. YATES. How many units are involved?

Mr. LEGASSIE. The initial plan was for 45 units or thereabouts. But the actual number that we will finally buy will be dependent

upon the proposals we have in hand in terms of the prices actually offered and the degree of financial participation of our partners in the program.

We have a fixed amount of money in our budget that we have allocated to this. We need to know what these will actually cost now that we have the bids in hand and whether or not 45 are bought will be a function of how good those bids are, and whether or not the private sector participants, what their contribution finally turns out to be.

So it could be less than 45.

Mr. YATES. What about the utility industry, are they going to buy phosphoric acid fuel cells?

Mr. LEGASSIE. My understanding is that serious interest continues in the utility industry. There are activities under way in the private sector now.

I have recently talked with a number of the individuals involved, to fund, outside government support, another market study, and to negotiate an arrangement between interested utilities and those companies interested in being suppliers around the commercialization plan.

This activity is planned to go on between now, say, and next November, and they are looking to the government, to ourselves and our program, to stay in place with the R&D and technology base that is necessary to support manufacturing decisions on the basis of present technology and to continue to advance the state of the art for downstream improvement.

So we are not being looked upon as an essential element in the commercialization step, but our R&D is viewed as an important step.

Mr. YATES. The Science and Technology Committee has added $7 million for the systems. Could you use that? What could that be used for?

Mr. LEGASSIE. Obviously any money provided could be productively used.

Mr. YATES. Could that expedite the commercialization?

Mr. LEGASSIE. I doubt it has any bearing on expediting commercialization.

Mr. YATES. What are the real problems standing in the way of commercialization?

Mr. LEGASSIE. The real problems standing in the way of commercialization are still basically how one gets the high, first-of-a-kind costs incurred in putting in a manufacturing capability, covered.

That, in my view and in the view of some of those I have talked to on the outside, needs to be handled through arrangements and negotiations made in the private sector between the electric utility industry and the potential supplier.

That is the central problem. That problem has to be handled. Then there has to be seen by the developer enough of a downstream market to warrant his taking the financial risks involved in building the fabrication facility.

Those are the problems that this activity I just related to you are intended to attack.

MOLTEN CARBONATE FUEL CELLS

Mr. YATES. What about molten carbonate fuel cell systems, are they anywhere near the same stage of progress as phosphoric acid cells?

Mr. LEGASSIE. No, sir, they are a much more advanced concept, much further away from the marketplace reality. But they are in our program because they represent a potential which is worth pursuing over the long term.

But that program is still at a very early state of exploring whether or not there are—there is real potential in pursuing it into potentially larger-scale systems.

We are in the laboratory on molten carbonate.

HIGH TEMPERATURE TURBINE TECHNOLOGY

Mr. YATES. Let's talk about high-temperature turbine level. Do you have enough money to keep it on schedule in your budget?

Mr. LEGASSIE. I am not sure I know what "on schedule" means. We believe we have adequate funds to carry the program out in a reasonable way.

Mr. YATES. Did OMB give you everything you requested for this program?

Mr. LEGASSIE. Probably not.

Mr. YATES. Why did you say you had adequate funds for it, then? Is OMB's judgment better than yours in this respect?

Mr. LEGASSIE. No. My experience, I am certain yours is also in the budget process, that one can readily propose useful program elements to be funding in a budget.

In the course of refining that budget to its final version, many programs are often reduced in amount. What you do in the light of those reductions is you trim away the less important elements of what you propose to do.

Mr. YATES. How important——

Mr. LEGASSIE. So I don't believe any reductions that were made relative to earlier year requests would have affected the significant central core of the program effort at all.

I know that in the case of this development, this may be the case in point that I referred to earlier where we had at one time plans to go with more than one participant in a competitive way.

And the funding decisions that have been made have led us to make a decision to go with a single participant.

Mr. YATES. When are you going to ask for proposals for the next phase?

Mr. LICCARDI. The proposals will go out sometime in June.

Mr. LEGASSIE. The RFP will go out then.

Mr. YATES. How many proposals will you fund?

Mr. LICCARDI. A single one, Mr. Chairman.

Mr. YATES. Why only one? Is that all the money you have?

Mr. LEGASSIE. Yes.

Mr. YATES. Should you be funding two?

Mr. LEGASSIE. I think we have satisfied ourselves that the risk of going with one is a reasonable risk to take in light of serious budget stringency that this country has in terms of the Federal funding.

Mr. YATES. Suppose you sat on this side of the table, would you put money in for two?

Mr. LEGASSIE. No, sir, I would not.

Mr. YATES. Okay.

Mr. LEGASSIE. I really am——

Mr. YATES. Serious.

Mr. LEGASSIE [continuing]. Not uncomfortable with the posture we are in.

LOW GRADE HEAT RECOVERY

Mr. YATES. Do you expect any results to come from your low-grade heat-recovery program before it is ended?

Mr. LEGASSIE. I don't see any significant forthcoming accomplishments.

IN SITU COAL GASIFICATION

Mr. YATES. Let's turn to page 74.

Have we progressed so far that you can say that we are nearing commercialization for in situ gasification of coal?

Mr. LEGASSIE. I think it is possible that there will be some commercial applications based on the work that the government has funded to date.

If you look at the proposals made to the Synthetic Fuels Corporation, and also those made to the Department in rounds one and two of the feasibility study and cooperative agreement program, there were a substantial number of proposals, five, six or seven, I don't remember the exact number, for a diverse number of applications from different companies, thus indicating that there is some serious industrial interest.

There are indications of activities proceeding even without government support in the real world. So that our perception of the need that the government can fill in this area is to try to finish our program with Gulf on the steeply dipping bed concept. The funding we provided will allow us to do that and to bring that data base to the point where it can be picked up for application. We will then proceed to basically try to work the phenomenology area, that is, the fundamental understanding of what is happening in the application of this technology.

But I don't see us moving back into attempts to have large-scale joint government-industry adventures of the kind we had queried the industry previously on in a PON that we put out that you may remember.

There is evidence, I say, in the SFC activity of some companies prepared to move on the basis of loan guarantees. There are other kinds of assistance of that character the SFC can provide.

Mr. YATES. Can eastern coals be gasified successfully?

Mr. DIBONA. Yes, we did that in one test in West Virginia. It was a small test.

Mr. YATES. What others can be used?

Mr. LEGASSIE. Most of the work has been in the West. Again, there have been a number of successful burns.

Mr. YATES. Have there been any adverse environmental effects from your burns yet?

Mr. LEGASSIE. Well, you are always concerned——

Mr. YATES. I know you are, but have you found any?

Mr. LEGASSIE. We have found impacts. Let me ask Mr. DiBona to amplify.

Mr. DIBONA. From my recollection, I don't think there are any significant impacts. We do have a large environmental monitoring program going on at all the burn sites.

I don't know of any significant adverse impacts.

Mr. YATES. You would have known if there had been?

Mr. LEGASSIE. Oh, yes. Clearly the industrial evaluation of these impacts is that they are manageable or you wouldn't find proposals being made to the SFC for real projects.

MAGNETOHYDRODYNAMICS

Mr. YATES. What is your estimate of magnetohydrodynamics? Apparently it is not very much. You don't want any money for it.

Mr. LEGASSIE. This is a case where there are two factors that bear on the decision not to continue this program.

Mr. YATES. One is the budget.

Mr. LEGASSIE. One is the question of affordability, because to carry on this program even in a technology base way in my view, as I have testified earlier, involves a continuing commitment at the level of about $30 to $40 million.

Inside a total budget of some $435 million, that is 10 percent in a single item. So it would be a very large piece relative to other technology-based programs we are conducting.

The second consideration is that is what you get as a product. Obviously, the interest in the MHD technology lies in two areas: To what degree would it give you an improvement in the cost of electricity, and to what degree do the environmental consequences of using that technology represent an advance over other technologies.

In this case, we have a series of other approaches also directed at clean coal combustion which are in our program. The combined-cycle concept, pressurized fluidized bed concept, fuel cell concepts, all are aimed also at getting higher efficiency than current direct combustion systems, and also aimed at reduced environmental impacts.

When we look at how much better MHD might be if we carried this program all the way through to some kind of conclusion, versus how many dollars it takes to do that, and compare that with the other cases, we believe there is not an overpowering case to be made in terms of the necessity of continuing to support MHD in our budget.

The efficiency objectives for fuel cells are on the order of 50 to 55 percent. That is the kind of number you are looking at for MHD.

The anticipated environmental impacts of combined cycle are probably superior to those that you could get with MHD, although both MHD and that technology are better than current technology.

So we have to look at what it costs, what you get for what it costs, and your ability to afford a variety of competitive programs in the same area.

In the light of all of those factors, we made a collective judgment that we would move out of the MHD area.

Mr. YATES. Do you know anything about the Soviet energy program with coal?

Mr. LEGASSIE. Yes. And I am aware that they have a very serious interest in MHD.

Mr. YATES. I know they do. But do they have a serious interest in fuel cells, as well?

Do they have a serious interest in other activities of the kind you have described in comparison with MHD?

Mr. LEGASSIE. To my knowledge, they have activity going both in fuel cells and in fluid bed concepts.

I would have to look to my staff to see whether they have greater knowledge about the relative seriousness.

Mr. YATES. If they are going ahead with their programs, why are we dropping MHD? As I understand what you just said, you have a better chance of success with the others, and you can't keep going with MHD.

I wonder why the Soviets could do it and we couldn't?

Mr. LEGASSIE. Obviously we are not in a position to rationalize——

Mr. YATES. We are not as wealthy as the Soviets?

Mr. LEGASSIE. I wouldn't assert that at all.

Mr. YATES. What would you assert, then?

Mr. LEGASSIE. I would assert they have looked at the same set of considerations and come to a different conclusion. But if you were to ask me how they would explain that to you on the basis of what part of my explanation they fundamentally disagreed with, I can't tell you what they would say.

Mr. YATES. In this program, there has been an investment of over $400 million.

Mr. LEGASSIE. That's correct.

Mr. YATES. If I read your budget correctly, you say it is nevertheless proposed that the program be phased out. Phased out as a part of the restructuring of your policies and programs.

Are you going to throw $400 million down the drain?

Mr. LEGASSIE. Yes, except for what we have learned.

Mr. YATES. What good is what you have learned if you don't intend to go forward with it?

Mr. LEGASSIE. I think there are, you know, significant technical knowledge that come out of any development effort that go beyond the particular application you are pursuing.

We have learned a lot about high-temperature combustion and things like that that are applicable in a broader way to technologies not limited to MHD that have come out of the MHD experience.

I wouldn't for a minute say we have wasted all of the $400 million. It is true, I mean, I think the general point you may be trying to make is that there is a large investment and we are——

Mr. YATES. Look at what you say on page 78.

A major U.S. investment has been made in the MHD program, a third of a billion dollars. The program is currently at the point of initiating the critical component and subsistence tests which will confirm the engineering feasibility of the MHD power plants and provide the basis for the further decisions by the private sector regarding commercial scale-up.

If that statement is correct, why are you not asking for money now? Why don't you at least have those tests before you phase it out?

You spoke in earlier testimony about winding up support programs. But what you are doing in those programs is investing money to complete the designs so that you have some basis for commercial build-up.

If the rule was present then, why is it not equally present here?

Mr. LEGASSIE. I think you have to read that statement in the budget justification as representing the leading edge of a long process of confirmation and development.

That is to say, if it were true that by spending only 10 more million dollars after you have historically spent 400, and you would have the grand answer, that we would have budgeted that $10 million.

But I think if you look at the information we provided in a capability statement that Mrs. Heckler asked for which we have furnished, that, in fact, to get to the point where a significant set of confirmatory experiments have been done, at the next major decision point that a program like this might have, would require the expenditure of about an additional $100 million.

Mr. YATES. Is it worth it? Suppose it did cost $100 million? You have already invested $400 million.

Is the information you would receive valuable enough to warrant the expenditure? Apparently you think not.

Mr. LEGASSIE. Yes, that is exactly the basis really on which we concluded not to proceed further.

Mr. YATES. Expenditure of $100 million over how long a period of time?

Mr. LEGASSIE. I believe the program we described in the capability statement in response to your questions represented a level of, started with $37.8 million.

So let's say $35 million a year for about three years, at the end of which time you would have, if that program stayed on schedule and within cost, a body of data which will allow the next major decisions to be made, either by the private sector or the government, depending upon how the data came out.

Mr. YATES. You need about $37 million this year to continue it, is that right?

Mr. LEGASSIE. If one were to adopt that approach, which we do not recommend, then the level that is defined—that defines a rational, well-constructed program is on the order of $35 million.

Mr. YATES. Do you have any recommendations, other than those contained in the budget you have presented for 1982?

Mr. LEGASSIE. No, sir.

Mr. YATES. If you didn't have the sword of Damocles over your head posted by OMB, would your answer be the same?

Mr. LEGASSIE. I would only say to you, sir, that we gave serious consideration inside the Department and engaged in discussions with OMB as to the possibility of funding a program of this kind, and when we began to discuss total budgetary levels for the Fossil

Energy program, we then had to ask ourselves, if we did this program, what will we not do?

And which of those alternatives was most important to us. We came to the conclusion you see reflected in the budget, that we would not fund the MHD program at 35 million and terminate $35 million of other things that are inside our budget.

Mr. YATES. Of course. In other words, OMB gave you a lump sum as it has proposed to give the States, and told you this is what you have. Now, distribute it among the various programs.

Mr. LEGASSIE. Well, the total government process is one in which we have tried to place a limit on spending throughout the Department and throughout agencies of the government.

Mr. YATES. Yes, but what about the national interests of the country?

Mr. LEGASSIE. I think it is possible, and I think we have attempted to design our own program——

Mr. YATES. Based upon the Reagan budget.

Mr. LEGASSIE. Based on the highest priority——

Mr. YATES. How much did OMB give you?

Mr. LEGASSIE. $435 million.

Mr. YATES. How much did you have last year?

Mr. LEGASSIE. Well, in the same technology base area, 504 or so is the comparable.

Mr. YATES. 506 for 1979, 574 for 1980. The Carter budget had 565, and you have 373, is that right?

Mr. LEGASSIE. That's correct.

Mr. YATES. Apparently the Administration doesn't think very much of your energy program.

Mr. LEGASSIE. I think the Administration thinks that within all programs, we need to fund only the highest-priority activities so as to minimize total government expenditures.

And that is what we are doing in our proposals. And in that process, MHD fell out.

Mr. YATES. Along with a few other things.

Mr. LEGASSIE. Yes, sir.

Mr. YATES. If the approximately $30 million of funds were provided by the committee, which is the committee's prerogative——

Mr. LEGASSIE. Yes, sir.

Mr. YATES [continuing]. What kind of program could be done, a meaningful one?

Mr. LEGASSIE. Yes. As I say, we have given you, I believe, a written capability statement. It defines a program at the level of $37.8 million.

Mr. YATES. You haven't really given us the statement. We suggest you put the statement in the record, as well as the statement you gave Mrs. Heckler.

Mr. LEGASSIE. They are one and the same. We will provide that for the record.

[The information follows:]

CAPABILITY STATEMENT

Agency/Bureau: U.S. Department of Energy-Fossil Energy.
Appropriation: Coal Technology (4501)/Magnetohydrodynamics (4514).
Activity: Magnetohydrodynamics (MHD).

Proposed amendment: Allocation of $37,800,000 to continue the development of an MHD technology base in fiscal year 1982 at a minimal level.

Current program.—The present DOE MHD program is a commercialization-oriented, fully-integrated program focused on the development of the entire coal-pile to busbar MHD combined-cycle plant, encompassing the full R&D spectrum from research to large-scale commercial demonstration. The end objective of the program is to demonstate the commercial feasibility of MHD power plants. The program has been pursued at an accelerated pace with the objective of having a commercial prototype plant (the ETF) on-line by the early 1990s.

Amount budgeted in fiscal year 1982.—None.

Feasibility.—The Administration is recommending to the Congress that all program activities in MHD power development be discontinued at the conclusion of fiscal year 1981. This decision reflects the fiscal austerity necessary to effectively deal with the current national economic situation, and a recognition that under the circumstances the Federal Government cannot afford to pursue all potentially promising long-term options. Accordingly, direct government funding of the activity is not proposed for fiscal year 1982. The development of other very promising advanced coal technologies—such as high temperature gas turbines and fuel cells—will be continued and are expected to provide the capability for the improved utilization of coal in the electric power sector in the future.

Capability.—The Administration's fiscal year 1982 budget request provides for a balanced overall fossil energy program. The proposed $37,800,000 amendment would permit the continued development of coal-fired MHD electric power systems at a technology base level. With the expectation that private industry should shoulder more of the large-scale precommercial actions needed to bring advanced fossil energy technologies (such as MHD) into the commercial market place, the reduced MHD program would focus on the completion of the ongoing tests and on establishing a suitable MHD technology to allow industrial commercialization of MHD power plants in the future.

Bench scale experiments will be carried out to define key technical/engineering considerations of power train and heat recovery-seed recovery components. Laboratory studies will be conducted to develop an improved understanding of the underlying phenomena governing key elements of a coal-fired MHD system. These efforts will be guided by the results of preliminary engineering analysis, systems studies, the inputs from two industry-led MHD power train technology development teams, and the National Users Group on MHD. At a constant per annum funding level of $35 to $40 million, it will require approximately 2½ to 3 years to complete the described tests.

The results of the technology base program will provide the data base for a key programmatic decision point—whether or not to:

(1) Terminate the MHD program;

(2) Phase out of a major Federal Government MHD development role (with continued development to be pursued by industry);

(3) If the data base is not sufficient for industry to take over MHD development but the test data is encouraging, proceed with the operation of a 3 MWe integrated PDU for the purpose of a "proof of concept" demonstration. The B-Bay of the already constructed CDIF facility is ideally suited to be utilized in a PDU mode. The successful operation of a 3 MWe PDU may be sufficient to allow industry to then pursue the next phase of MHD development.

The specific programmatic elements would consist of the following:

(1) *1 MWe Bench Scale Test Program* (Coal Fired Flow Facility):

a. Power Train testing will be carried out to gain a better understanding of the key engineering considerations.

b. Heat Recovery-Seed Recovery (HRSR) testing will continue to gain a better understanding of the key technical issues associated with the subsystem (i.e., heat transfer, seed recovery, emission control, materials, etc.).

(2) *Scaling Confirmation Testing:*

a. The 250 MWt AEDC testing program will be phased out in fiscal year 1982 following completion of the ongoing test series.

b. The IA test series in progress at the CDIF will continue. Completion of the entire IA test series using "current" hardware and at a reduced level of effort would occur in the fiscal year 1983/1984 time frame.

(3) *Base Technology-Limited Experimental* work in support of 1 and 2 will be pursued at a scale of up to several hundred kilowatts to gain a better understanding of the key MHD technical issues—e.g., electrode durability, channel performance, combustor performance and durability, boiler durability, seed recovery, etc.

(4) *Laboratory Studies*—Laboratory investigations will continue with the objective of developing an improved understanding of the underlying phenomenon which

govern key elements of a coal fired MHD system. Efforts will be focused on combustion kinetics, seed ionization kinetics, NO_x formation and control, electrochemical erosion, magnetoacoustic instabilities, etc.

The MHD funding would be distributed in the following manner (by category):

Open Cycle MHD:	
CDIF project	$10.0M
Engineering (technology) development	22.6M
ETF project	0.0M
Systems engineering	1.0M
Supporting research	4.0M
Subtotal	37.6M
Closed cycle MHD	0.2M
Grand total	37.8M

Outlay effect.—Fiscal year 1982: $35 million.

Mr. YATES. Does the utility industry have any interest in MHD?

Mr. LEGASSIE. Yes, it does.

Mr. YATES. Not to the point where they would be willing to finance part of it.

Suppose at the conclusion of the expenditure of $100 million, which you just testified to, you had good answers.

Would the utilities be interested at that point? Or is it still too early in the development stage to talk about participation by others?

Mr. LEGASSIE. As we see it, one of the possibilities is that the private sector would be able to move at that point.

Mr. YATES. They might be interested?

Mr. LEGASSIE. They might be. We also allow for the possibility that the analysis at that time would indicate that we weren't there. But I mean the possibility is certainly there.

There are indications in the utility industry today that they might be willing to provide private funding into a program.

There was, I believe, a feasibility study proposal on the part of a particular utility company under the Alternate Fuels Program for government assistance around an MHD concept.

So there is at least one utility company that has taken that step.

The interest is there, but it is also, I must say, still a very long way to go technically.

Mr. YATES. Is that true of the Soviet processes, too? Are they more advanced than we?

Mr. LEGASSIE. I think we are more knowledgeable than they are in terms of the power plant application, given that we have moved now into the CDIF.

That is the Component Development and Integration Facility in Montana. You may be aware that we have made electric power at the CDIF the last few days.

Mr. YATES. How would your funds be distributed if the committee made available the amount you have suggested?

Mr. LEGASSIE. We have shown a distribution based on a preliminary analysis of about $10 million to the Montana facility, $22 million to a variety of contractors in the engineering development line, which would include, for example, continuation of work at the Tennessee coal facility, which is an equally important test facility at our present program.

About a million dollars to system engineering, and the other $4 million to supporting research.

MINING R. & D.

Mr. YATES. Let's talk about mining R&D now. You don't want any money for research and development of productivity increases, do you, in surface mining?

Mr. LEGASSIE. Regarding our surface mining activities—presently we are looking at issues of how you proceed under the environmental and safety limits that have been laid on.

We think that the actions now to clean up the regulatory aspects of surface mining really make our program less relevant.

We believe we should limit our program to underground mining.

Mr. YATES. If surface coal mining research is discontinued, for example, what would happen to the Engineering Technology Center at Carbondale?

Mr. LEGASSIE. That would probably be closed.

Mr. YATES. In view of the large unobligated balance and large uncosted obligations in the coal mining R&D area, what steps have you taken to redirect the program?

Mr. LEGASSIE. I don't understand the thrust of the question.

Mr. YATES. What is the overall effect of the reductions? You have large unobligated balances in this program.

Mr. LEGASSIE. You may be looking at the end of 1980 unobligated balance data?

Mr. YATES. Yes.

Mr. LEGASSIE. There was a particularly large unobligated balance at the end of fiscal year 1980 because of the procurement activities that took place at the very end of the year, which meant towards the end of the year we signed a lot of contracts, they are on the books as obligations but we had no expenses.

The first thing I would say to you is that we are not repeating that experience in fiscal year 1981.

In fact, we are very concerned about the lateness of that procurement activity in 1980.

Mr. YATES. So you don't have any large unobligated balance?

Mr. LEGASSIE. We have brought the unobligated balances down to a more manageable and appropriate level.

PEAT PROGRAM

Mr. YATES. What about peat? You are moving upwards to zero in that one, too, aren't you?

Mr. LEGASSIE. Well, the line that is zeroed is an activity that was intended to adapt a particular pilot plant and process to the gasification of peat.

In our judgment, that is not the way to proceed with a peat program.

Mr. YATES. How do you want to proceed with a peat program?

Mr. LEGASSIE. We would like to put most of our money in peat in the areas that we think——

Mr. YATES. What do you mean by most of your money? You have a zero.

Mr. LEGASSIE. No, we have, just as we had an anthracite program, if I can say so, sir, we have a peat program, as well.

Mr. YATES. Do you? For how long?

Mr. LEGASSIE. I believe there should be a peat program. There is a peat program in our budget.

You have to find it by a cross-cut.

Mr. YATES. By what?

Mr. LEGASSIE. By a cross-cut, because the funding associated with peat is distributed in various places in our budget under more generic lines.

We are funding and have money to fund some resource assessment activity. Our present analysis of the peat situation is that attention really needs to be directed at how you harvest peat, how you dewater it, and the preparatory steps to its utilization.

The big costs, and those costs which are making peat uneconomic for present application, lay in that area more than they do in the question of whether you can gasify peat.

So that the operation of a relatively large pilot plant on a process that is not industrial, doesn't seem to me to be the way to proceed.

Peat is easier to gasify technically than coal most ways you would test it. There are all kinds of gasifiers out there that are being sold and used by the industrial sector.

If I was seriously, myself, in the private sector in the business of wanting to gasify peat, I would go do business with one of those gasification processes they could buy from a manufacturer on a warranted basis and know what it costs and have operating experience.

Mr. YATES. Is that possible today?

Mr. LEGASSIE. It certainly is.

Mr. YATES. Do you mean we have reached that stage with the burning of peat?

Mr. LEGASSIE. I am aware of companies that are pursuing exactly that question on the outside. I sincerely do not believe that the attempt to adapt the Hygas process as a gasification process, which is an in-house government process, to peat gasification is the way to spend money on peat.

I would rather spend money on peat in trying to find through R&D ways to reduce the costs of harvesting and steps of that kind, which I believe are the real barriers economically to peat's application.

HYGAS PLANT

Mr. YATES. What will result from the experiment of the research burn at the Hygas pilot plant?

Mr. LEGASSIE. One will probably find that the Hygas gasifier is able to gasify peat.

Mr. YATES. Which is what you have told us could be done.

Mr. LEGASSIE. I would be very surprised to find any other answer than that. I would also say I know of many other gasifiers, a number of which I think are probably better than the Hygas gasifier.

The only reason in my view that we have been talking about that gasifier and that process is because it happened to be availa-

ble. From the private sector standpoint, I don't think that that is the proper role for the government or the action for the government to be taking.

Mr. YATES. Why is it necessary to have two gasification-complexes?

Mr. LEGASSIE. Two?

Mr. YATES. Morgantown and Grand Forks.

Mr. LEGASSIE. Grand Forks is specifically associated with the use of low-rank coals for all purposes, including gasification. Morgantown is the only center responsible overall for coal gasification.

When you talk, therefore, about the gasification of low-rank coals, which is where the intersection occurs, you find Grand Forks in a support position to Morgantown because Morgantown has the overall responsibility for gasification.

There is a very excellent gasifier at Grand Forks, a facility which is able to contribute significant information of an R&D character to understand the gasification of low-rank coals and even to deal with some generic questions of coal gasification.

In that mode, Grand Forks is, with the left hand, in a support role to Morgantown, who is overall for coal gasification, and with the right hand, is in a lead role specifically looking at how we maximize the use of low-ranked coals.

Mr. YATES. Will these clean-up systems be able to help industry in providing cleaner gases?

Mr. LEGASSIE. I believe they will, sir. I would like to mention, also as you are aware, the ANR project is in the general vicinity of Grand Forks, and also using a low-ranked coal.

We have been establishing a technical relationship between Grand Forks and that project, which we think we are hearing from the other side they perceive there to be some value in that and we perceive there to be some value in that relationship.

So we think we are doing the right things in that area.

PETROLEUM PROGRAM

Mr. YATES. Let's turn to petroleum technology. Why doesn't DOD have its own research and development program in oil shale?

Mr. LEGASSIE. We do have——

Mr. YATES. The Department of Defense.

Mr. LEGASSIE. Oh. The Department of Defense views itself as a customer of products from oil shale.

Mr. YATES. Does industry pay for the testing of reference fuels or does DOD do that?

Mr. DIBONA. DOE does.

Mr. YATES. Is that because you have more money than DOD?

Mr. LEGASSIE. No, I think it reflects an understanding of our role. That is, DOD is the customer; we are the developer.

The testing of a reference fuel is a technical activity, and therefore, on the DOE side where presumably the technical expertise resides.

ENHANCED OIL RECOVERY

Mr. YATES. What is the current estimated amount of enhanced oil recovery, barrels per day, in this country?

Mr. DiBona. 400,000 barrels a day.

Mr. LeGassie. Mr. DiBona is saying—

Mr. Yates. Out of the air?

Mr. DiBona. About 300,000 is in thermal recovery, steam. Primarily.

Mr. Yates. With steam.

Mr. LeGassie. We are trying to remember data tables we have looked at from time to time. We do have the information on that. We do follow it.

Mr. Yates. What about the down-hole steam generator test at Sandia, is that successful?

Mr. LeGassie. I believe that is showing every indication of being a major success for the program.

Mr. Yates. Is industry interested?

Mr. LeGassie. Yes, they are showing interest in that.

Mr. Yates. How do you know that? Are they writing to you or sending scouts out?

Mr. LeGassie. One of the ways we see it is that they are hiring people away from Sandia Laboratory.

Mr. Yates. Why don't you hire them back?

Mr. LeGassie. That may be, indeed, a view of success because that is one way of getting technology transferred. But I am very hopeful that when we complete this year's program for the down-hole steam generator, we are going to find we have a major success that program.

Mr. Yates. We talked about steam being used for enhanced recovery. What about micellar-polymer flooding?

Mr. LeGassie. There are a whole variety, micellar-polymer, which is a particular variety.

These technologies vary, I mean, they represent a spectrum from proved to unproved from a technology certainty point.

We have got cases where one technology will work in Field A and doesn't work in Field B. A lot of our program at the moment is directed at trying to capture the data coming out of the actual field test, to understand what that data is telling us, and to enable us to develop models of what is happening so the ability to predict how these technologies will work in particular fields and become a lot more secure than it presently is.

It is presently a very spotty situation in terms of being able to predict the actual outcomes. That is, we think, a technology-based, generic type of thing that can be done at the government level, looking across all these experiments that is otherwise difficult for industry to do for itself.

OIL SHALE R & D

Mr. Yates. Now, let's talk about the oil shale R&D effort. Are you terminating the contracts with Occidental, Geokinetics and Equity in 1982?

Mr. LeGassie. That is our intent.

Mr. Yates. Why?

Mr. LeGassie. We are having discussions with each of the three towards that end.

Mr. YATES. Has the research really moved forward so far as to justify eliminating further research? What do your partners say on the termination of government money?

Mr. LEGASSIE. One can always make a justification for further research. It is the nature of the beast——

Mr. YATES. Do you want to try it?

Mr. LEGASSIE. No, sir, I do not. I think we are making the correct decision at this point because the status is as follows: First, Occidental is in a different situation than the other two, Geokinetics and Equity.

Occidental is on a major lease tract. They have made a proposal under the Non-Nuclear Act to proceed towards construction of a 50,000-barrel-a-day project.

They have made a similar proposal to the Synthetic Fuels Corporation and they have indicated that they are very serious about proceeding.

There are some that think they might proceed even if they got no government support.

Mr. YATES. Are you one of them?

Mr. LEGASSIE. I don't know how to form such a judgment. I have to be in a reportorial mode here. I don't have an independent judgment. Occidental has clearly said that, in their judgment, the technology that they have been pursuing in the development program with us is ready to move into the commercial world.

Mr. YATES. Is this modified in situ?

Mr. LEGASSIE. This is modified in situ, yes. Given that judgment, there really is little reason for us to continue in a developmental support mode where we have other kinds of support modes available.

I think to continue in that mode would subject us to charges of really providing kind of a hidden subsidy to the Occidental project.

Mr. YATES. Are you saying they are ready to go to Synthetic Fuels Corporation?

Mr. LEGASSIE. Yes, for a loan guarantee, price support. In fact, they have a proposal in front of us in the Non-Nuclear Act. With respect to Geokinetics and Equity, they are not in such condition. They have not made such proposals. They have not indicated they are prepared to proceed, but our evaluation of the state of the projects is that there is an adequate data base, or will be upon the completion of the work we have scheduled to do in 1981, closing out in 1982, that if private sector does desire to pick up those versions of the technologies, there is an adequate base there for such a private sector decision.

It is our intention to bring the work to that state before closing it out. We do not see the basis of continuing to carry forward rather large and expensive programs with individual companies in oil shale when there are six or seven other companies who are about to go commercial.

Mr. YATES. You are going to have $15 million left over for your oil shale activities. Why is it necessary to have such a large internal component when your field-testing is no longer being supported?

Mr. LEGASSIE. I hope by "left over," you are not referring to the budget we plan to spend.

If you are, I would respond this way. We plan to continue an oil shale program as we have in other technologies, but to address that program now in more generic issues. Rather than invest money with specific companies in specific projects or specific technologies that this individual company is trying to push, we should put that money into the generic issues of oil shale development.

Such matters include, for example, what do you have to do when you have finished operations on a particular tract to close it up and leave it in an environmentally acceptable manner, what is the basic understanding of the flame front if you are in a modified in situ kind of mode where you are having phenomenon occur underground?

Those kinds of matters are of generic value to a number of companies in a number of projects and to the government as an environmental regulator. These matters also represent information that can be gained by R&D expenditures of broad applicability, and is probably outside activity we see being pursued by any particular company.

We think there is a government role. We put it at $15 million in this budget.

COAL LEASING ACTIVITIES

Mr. YATES. Have you considered submitting legislation to transfer leasing activities which the law requires be undertaken by the Department of Energy to the Department of Interior?

Mr. LEGASSIE. That matter is under consideration within the Department. I have asked for a decision paper that I might look at to see whether we need to submit proposed legislation to the Congress on that point.

It is a matter that we need to address promptly, and I am trying to move that along. I can't say that there is a position I would espouse today beyond the basic posture of the budget.

RESOURCE APPLICATIONS

Mr. YATES. What is the purpose of the $2.5 million in program direction funds in energy production demonstration and distribution that you want for 1982?

Mr. LEGASSIE. That represents funding for the salaries of people who have previously been conducting those programs. I think I would describe it to you as a total sum of money to support all the people in the Department.

In the case of Fossil Energy, this shows up in individual line items representing personnel salaries, benefits and travel that properly occur on that line.

At the same time, as you certainly know, there is a re-examination in the Department of the totality of Department needs. There is a reorganization of the individual components.

I refer to the fact that Fossil Energy itself would be reorganized. We have made a proposal to do that. We are awaiting a response from central personnel on our proposal.

These and a number of matters will affect the ultimate number of people employed in different programs, headquarters and field.

This is very much an in-process matter. I think we have to look at the budget request. The most recent examination we made is that we would say we would need those funds as part of the total funds throughout the budget to pay the salaries of the number of people we think we are going to end up with.

FOSSIL ENERGY PERSONNEL

Mr. YATES. Would the people be absorbed in other activities, or is this a cost for a reduction in force?

Mr. LEGASSIE. We very likely will have a reduction in force within Fossil Energy. We are right in the middle of examining a personnel plan to see if that can be avoided.

I doubt it can be. I believe it will be necessary.

Mr. YATES. For how many people?

Mr. LEGASSIE. In the neighborhood of 380 people in my judgment, or thereabouts, out of a total on board of something like 1,455 that we now have.

Of course, we have attritions day by day.

Mr. YATES. About a third.

Mr. LEGASSIE. About a third. But the specifics of that, I am in the very process of making the final judgments so that we can discuss these matters with our Personnel Department and get their agreement on how we want to proceed.

Mr. YATES. How many personnel do you have now?

Mr. LEGASSIE. I believe the number is 1,455.

Mr. YATES. What is your target for the end of fiscal year 1982?

Mr. LEGASSIE. We had an earlier target of 1,075, which would have generated the 380 number I mentioned to you. I am sorry, did you ask me in fiscal year——

Mr. YATES. 1982.

Mr. LEGASSIE. Then 1,075 is the number we have been working against. That subtracts to 380. But I would say that that 1,075 number is being re-examined and could change slightly.

TRAVEL FUNDS

Mr. YATES. If it does, let us know. Considering the fact that you are reducing so many activities, why is it necessary to increase the appropriation for travel from $650,000 to $966,000?

Mr. LEGASSIE. We are probably looking at increased costs.

Mr. YATES. I think that is true. I know the costs have gone up in my travel, but I didn't think it affected you.

Mr. LEGASSIE. We are not engaged in some view that we should double the amount of travel we are taking.

Mr. YATES. I have a number of questions I would like to have you answer for the record.

Mr. Murtha has some questions, and Congressman Hansen has asked us to submit some questions to you to answer for the record.

[The questions and answers follow:]

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Additional Committee Questions

Demonstration Plants

Question: Your April 15 press release refers to the three governments conferring on SRC-II.

-- What is the attitude of the industrial partner toward the project at this point?

-- What role has the industrial partner played in the discussions with the foreign governments?

Answer: The attitude of the industrial partner at this point in time is that they desire the project to continue but will not increase their monetary contributions. Dr. Richard A. Flinn, Vice President of Development, SRC International, Inc., stated before the House Subcommittee for the Environment, Energy, and Natural Resources on February 17, 1981, that due to technical problems such as corrosion, erosion, preheater life, etc., that Gulf could not continue the project in its present form should the government pull out. "With returns on our investment not expected to come until the 1990's, this is not the sort of thing private involvement could do alone." If the government were not involved, Gulf would continue R&D on a very small scale such as a 1 ton/day experimental unit.

The U.S. industrial partner did not attend the meetings in Japan, however, Gulf did meet prior to the meetings with the Acting Assistant Secretary for Fossil Energy, Program Director for Major Projects, Director of the SRC-II Program Office, and the Project Manager at Oak Ridge to discuss the agenda and options that were and are available. The industrial partner has usually been present at decision meetings with the foreign partners. Representatives of the Japanese industrial partners were present at the meeting in Japan.

Demonstration Plants

Question: Your revised budget (page 48) shows an approximate $35 million reduction for the SRC pilot plants supporting these two projects in fiscal year 1982.

-- If both projects were terminated, what would the remaining $12.3 million fund?

-- If SRC-I were the only one to continue, would both pilot plants be needed? If so, what would the cost be assuming the government provided the total funding?

-- How much would the cost be for the Fort Lewis, Washington, plant versus the Wilsonville, Alabama, plant?

Answer: If both projects were terminated, these funds would be used to close down the Ft. Lewis pilot plant and support research and development operations at the 6 TPD Wilsonville facility. The cost to shut-down Ft. Lewis is currently estimated by the Government at $4.4 million (based on a Sept. 1981 termination). The remaining funds will be used at Wilsonville, with EPRI co-funding to evaluate performance and operability of new process developments using industrial prototype (not scale) equipment. This would represent a return of Wilsonville to its original role as a process development facility (PDU).

Wilsonville contains a solvent deashing unit and an ebullated bed hydro-treater, as well as the coal deashing section. These units provide a unique capability to obtain critical process and engineering data to evaluate new technology coming from the laboratory in one facility.

As an example, this facility would be used to advance the results of a recent bench scale effort that indicated a most promising approach to improving the economics of direct coal liquefaction by reducing hydrogen consumption and increasing liquid yields by separately optimizing the coal dissolution and the coal extract upgrading step. In second generation technologies, these are accomplished in the same reaction vessel. The advanced approach is to dissolve the coal at low severity (low hydrogen consumption) and then upgrade the deashed extract selectivity using heavy oil catalytic hydrocracking technology.

No, only the Wilsonville Pilot Plant is required to support the SRC-I Demonstration Plant. However, it should be noted that currently the Ft. Lewis Pilot Plant is supporting both the SRC-I and SRC-II Demonstration Plants. Continued operation of Ft. Lewis through several months of FY 1982 is desirable to obtain the additional data for the SRC-I Demonstration Plant but not critical. If the Ft. Lewis plant is operated for several months during FY 1982, an additional $11 million would be required.

The Department had originally requested $47 million in FY 1982 for operation of both pilot plants. Approximately $12 million would be required to fund Wilsonville and $35 million for Ft. Lewis in FY 1982.

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Demonstration Plants

Question: What is the status of the Illinois Coal Gasification Group plant?

-- Has the consortium indicated whether they will make a financial commitment to go ahead with the demonstration plant?

-- When will the design for this facility be completed?

-- Once that work is completed, how long would it take to get a definitive cost estimate and a proposal from the consortium as to how much of the total cost they would be willing to fund?

-- Would the facility as envisioned be able to operate on a commercial basis if expanded on the same site or would a totally new plant need to be constructed?

-- Is this a commercial size module of a larger plant or would it have to be scaled up again?

Answer: Considering recent developments in the effort to complete the design and Phase I of the contract, including the circumstances described below, we intend to begin negotiating an agreement with the Illinois Coal Gasification Group (ICGG) to terminate their High Btu Pipeline Gas Demonstration Plant contract on or about July 15, 1981, based on a completed design package.

The ICGG has made no formal commitment regarding its financial contribution to plant construction. In a letter dated March 6, 1981 (attached), ICGG has formally stated that a 50/50 cost share would not be acceptable.

Design of the plant is nearing completion and a final design review is anticipated in mid-June 1981. The review comments would be incorporated in the design as appropriate. Following the completion of design, preparation of construction bid packages would be required. In the latest (March) monthly financial report, ICGG has predicted slippage of the completion of Phase I (availability of construction bid packages) to January 1982 at a cost of $59,567,000.

A definitive cost estimate will be available in mid-June 1981. The ICGG contract states that the Government and ICGG must agree regarding their willingness to proceed with Phase II within 15 days after completion of Phase I and mutually agree on the terms of proceeding or not within 60 days. This is predicated on current 50/50 cost sharing. Thus, a change in cost sharing would require a contract negotiation which could take several months to conclude since there are other significant contract provisions which would have to be negotiated simultaneously if a mutual agreement is to be reached.

Additionally, before proceeding with Phase II or negotiating a revised contract, DOE must be assured of a new ICGG management team for the remainder of the project.

The demonstration plant might be operable on a commercial basis if no return on capital investment is expected, i.e., total write off of capital costs as R&D. Otherwise, a totally new plant would be required to be operable on a commercial investment basis.

A commercial plant has a greater capacity. Therefore the Demonstration Plant Project would require further scale-up in the gasifiers and methanation section, although there is little or no risk associated with such scale-up.

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Advanced Environmental Control Technology

Question: Your revised budget (page 24) terminates the program for advanced flue gas desulfurization "because the private sector is rapidly moving toward commercialization in this area."

-- What evidence do you have that this is the case?

-- Could you provide a listing of the various units and types of systems in place or under development by the private sector for in the record?

Answer: The attached table summarizes the commercial status of advanced scrubber systems. Perhaps the greatest progress has been made by industry in the commercialization of the lime spray dryer. A total of 14 units for application by the industrial and utility sectors using low sulfur western coal have been sold. These units manufactured by Joy/Niro, Babcock and Wilcox, and Research-Cottrell range in size up to 600 MW. One unit is operational to date, the Riverside station of Northern States Power Company in Minnesota using a spray dryer provided by Joy/Niro that went on line in September 1980. A proposed major thrust in our FY 1981 program was to accelerate the development of the spray dryer for utility applications with eastern coals of higher sulfur content and this effort was to be completed in FY 1982. This plan was altered in early 1981 when it became evident that the momentum building in the private sector was beginning to penetrate the eastern coal industrial market and a decision was made to rely on this momentum to carry into the utility sector without major governmental assistance.

Completion of our ongoing spray dryer activities and publication of this data for industry's use will be our remaining efforts in the spray dryer activity. Gypsum producing scrubber systems are well on the way to commercialization. Research-Cottrell has sold four of its double-loop systems to utilities with one being currently operational. The development of the Chiyoda 121 process is being sponsored by the Electric Power Research Institute (EPRI) with a 23 MW prototype demonstration plant currently in operation at Gulf Power Company's Sholz station in Florida. The DOWA processes have been tested at Shawnee at the 10 MW scale in an effort sponsored by EPRI, TVA and UOP. The Aqueous carbonate process under development by Rockwell International yields an elemental sulfur product. A 100 MW demonstration plant funded by Rockwell, EPRI, the Environmental Protection Agency (EPA), NYERDA, and the host utility is currently under construction at the Huntley Generating Station of the Niagara Mohawk Power Corporation in New York.

COMMERCIAL STATUS OF ADVANCED SCRUBBERS AND REMAINING DEVELOPMENTAL NEEDS

SYSTEM	WASTE	COMMENTS	DEVELOPMENTAL STATUS	COMMERCIALIZATION STATUS: UNITS SOLD	COMMERCIALIZATION STATUS: OPERATION	GOVERNMENT ROLE & DEVELOPMENTAL NEEDS
Throwaway Systems (Sludge)						
• Lime/Limestone Slurry						
- Adipic Acid (Shawnee, Springfield, MO)	Sludge	Improved SO_2	Commercial Ready	0	0	Private Sector
- Forced Oxidation (Shawnee, Widows Creek	Stable Sludge		Commercial	4 (Widows Creek Tampa, Muscatine)	1 (Dallman)	None (Comm)
• Dual Alkali (CIPS, SIGECO)	Stable Sludge	NA Reactant	Commercial	3+? Util	3 Utility (SIGECO, LG&E CIPS)	None (Comm)
				10+? Ind	10 Ind	
Throwaway Systems (Dry)						
• Nahcolite/Trona Dry Inject	Dry	Disposition Limited to Dry Regions	Pilot Work in Progress at GFETC	0	0	Scale Up Tests Would Accelerate
• Lime Spray Dryer	Dry	Improved Process For Eastern Coal	Commercial for W. Coal	9 Util 5 Ind	1 (Riverside)	None (Comm) None (Comm)
			Commercial in Ind. Sector E. Coal	0 Util	0	E. Coal Tests Would Accelerate
				?+? Ind	2 (Celanese, Strathmore)	None (Comm)
Gypsum Producers						
• Chiyoda 121 (Gulf 23 MWe)	Gypsum (Salable)		Near Commercial	0	0	Private Sector (EPRI)
• DOWA (Shawnee)	Gypsum (Salable)	AL Reactant	Pilot Testing on Coal	0	0	Private Sector
• Research Cottrell/ Comb. Engr.	Gypsum (Salable)		Commercial	4	1 (Dallman)	None (Comm)
Sulfur/H_2SO_4 Producers						
• Aquaout Carbonate (ESECERCO)	S (Claus)	$NACO_3$ Reactant	Demo Comp in CY82	0	0	None (T&E Only)
• Wellman-Lord	H_2SO_4	NA_2SO_3 Reactant	Commercial	5 Demo?	5 Util (NIPSCO, CHUBU, PSNM Might be considered Demo)	None (Comm)
• Magnesium Oxide (TVA)	S	MGO	Demonstrated	3 Demo?	3 Util (Eddystone Mystic, Dick.) None now Operational)	None, Private Sector
• Copper Oxide Improved (PETC)	SO_2	Use Coal in Lieu of Oil or Methane in Process	Demonstrations Comp.	0	0	Private Sector Pilot
• Citrate (PETC)	SO_2		Sub Pilot Test Comp	0	0	Private Sector
• Direct Reduction with Coal	SO_2		Tech. Base Only	0	0	Private Sector

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Advanced Environmental Control Technology

Question: Please explain the significance of the combined flue gas cleanup activity (page 24).

-- Are there any systems in existence in this area or are they all in the R&D stage?

Answer: The combined flue gas cleanup activity serves to develop a new breed of simple, low cost, reliable processes which will accomplish the combined control of the total spectrum of regulated pollutants, i.e., NO_x, SO_x and particulates in a single integrated process. The availability of such systems will permit and encourage the higher use of coal for power, steam and heat production in lieu of premium fuels while protecting and in some cases enhancing the environment.

There are no existing processes which accomplish the simultaneous capture of both NO_x and SO_x in a single reaction. Systems can be configured which combine NO_x capture stages with conventional flue gas desulfurization (FGD) and particulate capture stages to accomplish the combined control, however, they lack the inherent simplicity and advantages of simultaneous capture. In the past, DOE has funded the pilot evaluation of the HITACHI-ZOSEN catalytic ammonia injection NO_x control stage and the SHELL-UOP copper oxide process which employ ammonia injection as a NO_x capture stage.

The emphasis for future work in this area will be on simultaneous capture systems. The SULF-X Process which is being developed by Pittsburgh Environmental and Energy Systems, Inc. is one simultaneous capture system which is presently being developed and which has been supported under the combined NO_x / SO_x program. More recently, we have initiated efforts assisting the private sector in developing simultaneous capture systems employing electron irradiation. These longer term developmental efforts have the potential for developing simple low cost combined control and in one case producing a fertilizer by-product.

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Advanced Environmental Control Technology

Question: Will the low Btu gas in a combined cycle power generation plant be able to be cleaned with existing systems or must it use systems under development in this program?

Answer: Low Btu gas for combined cycle power generation can be cleaned using commercial low temperature processes. Hot gas cleanup offers potential cost and efficiency advantages for application to second generation combined cycle systems.

Essentially all of the work performed in the turbine cleanup systems area is in support of hot gas cleanup systems development. However, work on the characterization of gasifier gas streams and instrumentation for ammonia measurements in these gas streams is also applicable to low temperature cleanup.

There are two primary reasons why we are focusing on the development of hot cleanup systems. One is technical risk. At this point, technical feasibility has yet to be demonstrated. The second reason relates to the uncertainity of the potential market. First generation gasifier-combined cycle systems will be implemented using commercially available coal cleanup systems. Although it is recognized that hot cleanup for gasifiers is still in its infancy, the fact remains that there is sufficient technical risk in the implementation of these first generation systems so that compounding that risk by use of a developmental hot gas cleanup system, assuming availability, would be unwise. Therefore, the market potential for hot cleanup will not become defined prior to implementation of these first generation systems.

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Advanced Environmental Control Technology

Question: How much of your work in cleanup base technology (page 27) is involved in developing improved instrumentation?
-- What is industry doing to improve existing instrumentation?

Answer: Approximately 12 percent of the FY 1982 cleanup base technology funds will be utilized to support tasks involved in developing improved or new real-time (on-line) instrumentation for continuous process monitoring to provide data currently required to understand and improve new process development and for positive, automated control over the processes. The principal thrust of this activity is the development of instrumentation capable of measuring process variables during process operation at the conditions existing within the process stream, where no such device can be obtained from industry.

Historically, industry has been involved in developing and/or improving specific detection devices or measuring instrumentation with potential high return on investment. Very few, if any, of the industrial instrumentation developers and manufacturers can afford to develop, test, and qualify on-line instrumentation for advanced technology process control systems. They are willing to provide or even modify existing devices on a cost plus basis for use by the developer of a given process but they are not eager to invest in the actual on-line development testing without some assurance of a market potential.

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Advanced Research and Technology Development

Question: Please state briefly what some of your most significant accomplishments have been in this activity and provide a more detailed listing for the record.

Answer: The information requested is as follows:

Liquefaction:

- Discovery of Integrated Two-Stage Liquefaction (TSL) Offering Higher Yields, Better Quality, and Less Hydrogen Use (Lummus/Cities Service, Sandia, PAMCO, Sandia, Catalytica): Improved two-stage liquefaction (TSL) has been found to produce a higher quality syncrude and a higher (per-ton-of-coal) syncrude yield with less hydrogen consumption than that possible with the processes currently under pilot plant development (EDS, H-Coal, SRC-1, and SRC-II). TSL has been studied extensively in the past, but the new highly flexible TSL processing scheme differs in that it exploits the synergistic effects of several variables on reactivity/selectivity.

  The new process is of importance in offering reduced capital outlays by lowering hydrogen plant, gas cleanup/handling, and reactor size requirements and reduced per unit operational costs by lowering hydrogen consumption due to lower gas make-up and raising liquids yield per unit of feed coal. This is in comparison with current direct liquefaction processes (EDS, H-Coal, SRC-1 and SRC-II).

- Discovery of Novel Catalyst Having a Ten-Fold Higher Reactivity for Fischer-Topsch (F/T) Synthesis of Diesel Fuel (PML, BNL): A novel liquid slurry phase, bimetallic, supported F/T catalyst offering a ten-fold higher reactivity than conventional gas phase F/T heterogeneous catalyst has been discovered. F/T catalysts are used to convert synthesis gas (CO and H_2) to a linear, saturated hydrocarbon mixture having properties similar to those of petroleum-derived diesel fuel.

  F/T catalysis is used on a commercial scale in South Africa today and has been studied extensively. A ten-fold increase in reactivity with this catalyst allows use of a smaller reactor size, and could mean a reduction in capital outlays and operational costs.

- Tagged Catalyst Helps to Identify H-Coal Activity Problem (SNL): Nuclear activation of catalyst has been utilized in two H-Coal runs to determine catalyst deactivation associated with this liquefaction process. Catalyst samples, of known residence time, with drawn from the PDU have shown a marked decline in activity within a few days. Catalyst circulation phenomena have also been measured.

  The use of nuclear activation to tag a small portion of catalyst with easily detectable radioactive species has proved to be an excellent way to follow freshly added catalyst through the system. There are virtually no changes in chemical and physical properties in the catalyst because levels of induced radioactive species are so low. Thus the tagged catalyst did not perturb the system and withstood reactor conditions, yet its concentration in the presence of untagged catalyst was easily determined.

A technique for following a catalyst charged continuously or periodically to a flowing system has been demonstrated to be very effecitve. The technique, while applied only in the H-Coal process development unit, is applicable to other catalytic coal conversion units.

- Activation Energy of Coal Liquefaction Determined (Pennsylvania State University): It has been determined that the activation energy for uncatalyzed conversion of coal to liquid increases as the conversion approaches its ultimate value. The activation energy required to liquefy coal can increase by 35 to 50 percent as the extent of coal liquefaction increases from 20 to 80 percent.

  Coal is a heterogeneous material and its various components do not react with equal ease. The most reactive components liquefy first leaving a higher proportion of the less easily liquefiable material in the unconverted coal. The activation energy required for liquefaction, a measure of the ease of coal liquefaction, had not been determined at different stages of conversion heretofore.

  The information could be useful in the design of reactors for coal liquefaction and for evaluating catalysts that reduce the activation energy needed to convert coal to liquid products.

- Sulfur Contaminants in Aqueous Wastes from Coal Conversion Analyzed (Pennsylvania State University): A procedure for quantitative analysis of the major inorganic sulfur compounds in waste water from coal conversion processes has been developed. A combination of differential pulse volametry, thermodynamic enthalpy titration, and classical methods are employed in the procedure. On several test samples, 100 percent of the total sulfur present in a waste water is accounted for quantitatively by the procedure.

  Aqueous wastes from coal conversion processes contain a large variety of sulfur compounds. Identification and quantitative analysis of the individual compounds has not been routinely feasible heretofore. Penn State's procedure can be used for quantitative analysis of the major sulfur compounds at a reasonable cost in time and money.

  The waste water treatment processes currently in practice or under development are empirical. They are based on gross properties of the waste stream rather than on molecular composition. The treatment processes are therefore susceptible to upsets by the arrival of a new molecular species in the waste stream, the presence of which may not be apparent from the gross properties of the stream. Availability of the detailed analysis will lead to the development of improved processes for waste water treatment and reduce the chance of environmental insult.

- Structure of Asphaltenes and Preasphaltenes (University of North Dakota): It has been found that the distribution of oxygen in preasphaltenes is significantly different from that in asphaltenes. While both contain approximately the same concentration of acidic oxygen, the concentration of other types of oxygen is three times greater in preasphaltenes than in asphaltenes.

  The structures of preasphaltenes and asphaltenes, intermediate products in the conversion of coal to liquids, are not known. The findings of the scientists at the University of North Dakota comprise new knowledge relevant to reactions required to liquefy coal.

  The conversion of coal to preasphaltenes is the first step in coal liquefaction. It occurs quite rapidly, and the presence of a catalyst does not affect the rate of this conversion. However, the subsequent conversion of preasphaltenes to asphaltenes and oil do not proceed rapidly without a catalyst. An understanding of the structures of preasphaltenes and asphaltenes wil lead to improved methods for converting them to oil, the desired end product of coal liquefaction.

Gasification:

- Development of Beacon Technology (TRW/SOHIO): This is a novel process concept whereby low-Btu gases from air blown gasifiers are converted catalytically to medium- or high-Btu (SNG). In the process, the carbon in the low-Btu gas is first deposited on the catalyst and then reacted away with steam to form methane. Catalyst screening resulted in promising catalysts that were tested further in bench-scale runs. Parametric data under transient conditions were generated.

  The promise of this process concept is to improve the economics of manufacturing SNG from coal. This would be achieved by eliminating the need of an oxygen plant and by realizing significantly higher thermal efficiencies in the cogeneration of power through combined cycle operation.

- Hot Gas Cleanup (Westinghouse): The novel concept here is to employ solid aluminosilicate getters adsorbers to reduce the concentration of alkali in hot low- or medium-Btu gas. The getters, along with particulates from the coal gasification, are then removed by conventional means before the gas is used in turbines, etc. The gettering performance of kaolin, char ash, and gasifier ash was determined in bench-scale, fixed-bed experiments. Preliminary assessment of system performance using a kaolin fixed bed indicated alkali and particulates removal at relatively low cost.

  This development would fill a technological gap in evolving an advanced low- or medium-Btu gasification system for integration with a combined cycle power generation plant. Removal of alkali and particulates is necessary to prevent corrosion, erosion, and deposition problems on turbine materials.

- Catalytic Gasification of Coal (Battelle-Columbus, Sandia, PETC, LASL, GE, SRI, Rockwell): These various studies have the collective objective of learning the effects of inherent mineral matter and of added catalysts such as sodium and potassium on the catalytic gasification of coal. The major accomplishment was to put these projects in place. The Battelle project was the first started and gave a base line for a coal pretreatment process using lime and sodium hydroxide to enhance gasification while preventing agglomeration of caking coals.

  Catalytic gasification offers the promise of gasifying bituminous caking coals in a fluidized bed without the need of an oxygen plant.

- Gas-Phase, Fluidized-Bed Technology Successfully Applied to Combined Shift-Methanation Process (BCR): A gas-phase, fluidized-bed catalytic process approach to combined shift-methanation chemistry has been developed. In this work various commercial catalysts were fluidized in a 6-inch, I.D. reactor with a mixture of hydrogen and carbon monoxide to produce methane (Synthetic Natural Gas) by the combination of shift and methanation reactions.

  Previous processes have depended on other techniques for keeping these heat-producing reactions under control, such as dilution of the reactant gases with recycled product gas, which is deleterious to process economy. BCR has demonstrated extended operation of their gas-phase, fluidized-bed approach with no difficulty in controlling temperature or maintaining excellent chemical conversions, in the absence of product gas recycle or high steam injection for shift chemistry.

  The process developed under this contracted work has significant potential for adaptation to existing high-Btu coal gasification schemes. Unlike liquid-phase or fixed-bed processes, it is not constrained to operation at lower temperatures or higher steam inlet flows.

- Pittsburgh Seam Coal Stronger Sorbent for Methane than Activated Carbon (SUNY): Research is underway on a low-energy process for separating methane (Synthetic Natural Gas) from hydrgen and other gases produced by coal gasification. In this process, the gas mixture to be separated is passed through a column packed with coal or heat-treated coal.

  In older gas separation technology, expensive activated carbons have been used as adsorbents. Recent experiments have shown that methane has a substantially higher heat of adsorption on Pittsburgh bituminous coal than on a commercial activated carbon, resulting in a smaller temperature gradient in the adsorption-desorption cycle, and consequently a lower energy requirement.

  If further research confirms these findings, they could lead to a low-energy process, utilizing an inexpensive adsorbent, for separating the gas mixtures produced by coal gasification.

- Fuel Gas from Coal Desulfurized with Dolomitic Stones in the Coal Reactor (MIT): Research is determining the effects of hot solids on the removal of sulfur from the rapid pyrolysis products of coal. In this study coal is heated rapidly in the presence of a fluidized bed of inorganic particles to produce a fuel gas.

  Various processes have been tested in which the hot fuel gas is passed through a separate bed of solid sorbent to remove sulfur, but there has been a lack of information on removal of sulfur in a fluidized bed of a mixture of coal and hot solids. MIT has found that a fluidized bed of coal and hot dolomitic stone yields a fuel gas that is virtually free of the major sulfur pollutant, hydrogen sulfide.

  This solids-coal fluidized-bed process has promise for utilization as an effective but inexpensive means of producing fuel gas that requires no further sulfur removal.

- Carbon Conversion Increased with a Premixed Coal-Oxygen Primary Stream in Entrained Gasifier (BYU): A highly instrumented and sophisticated 8-inch I.D. entrained gasifier has been developed for accurate prediction and measurement of optimum operating conditions for entrained coal gasification processes. During tests with this gasifier specially designed water-quenched probes withdraw samples, while rapidly terminating chemical reaction, so that a complete analytical profile of the entire entrained-bed is obtained.

  In other entrained gasifiers it has been difficult to determine the individual performances of the primary and secondary oxygen streams as they are introduced and mixed with the entrained coal. BYU has found with their gasifier that the conversions can vary substantially with the mode of oxygen distribution, and that the use of a premixed coal-oxygen primary stream increased the carbon conversion 30 percent.

  This work could identify ways of optimizing entrained coal gasifier reactions and operation, and through mathematical models predict details of entrained coal gasification.

- Coal-Water Slurry (Atlantic Research, Gulf & Western, Germantown (Pa.) Labs., Dadaelean, Adelphi Uniersity): After several years of advanced research funding, coal-water slurry moved as a project into the coal utilization program because of its considerable potential to greatly improve the economics of the domestic and export coal transportation, storage, and distribution systems.

  In the laboratory, a thixotropic mixture of 60 wt % finely ground coal and 40 wt % water with additives has been discovered and preliminarily tested that is safe, storeable, transportable, and burnable. If further tests in larger scale equipment bear out these findings, a way will have been developed to handle coal as a liquid with all of the conveniences and economies associated with liquid fuels.

- Combustion Characteristics of Full Droplet Arrays (United Technologies Research Center): A significant advance in synfuel combustion technology is now possible through the discovery that droplet spacing in the synfuel air mixtures is the dominant factor in controlling burning time.

  The finding is expected to lead to greater efficiency of utilization of alternative liquid fuels, whether it be synthetic fuels or coal-oil mixtures, through improved design of atomizers, burners, and combustor configurations.

- Rates and Mechanisms of Pulverized Coal Combustion (Sandia, Livermore): A relationship was found between burning characteristic and rank of coal which can lead to increased combustion efficiency of pulverized coal through the integration of rational combustion design with coal type.

  Coals of various ranks, lignite through anthracite, were burnt. Significant differences in the devolatization process were observed between the low-rank lignite or subbituminous coals and the higher-rank bituminous coal. A general correlation was found between fixed carbon content of the coal and the molecular complexity of condensed material originating from the gaseous devolatization products. This discovery has useful consequences in that it underscores the importance of considering coal type in combustor design.

Materials:

- Role of Chlorides in Corrosion by Coal Derived Liquid (ORNL): An understanding of the mechanism of corrosion of structural alloys by coal derived liquids was gained by identifying the role of chloride species in the attack. Prior work on corrosion by organic fluids had not addressed chlorides since they are generally removed from petroleum liquids by washing and are overshadowed by the presence of sulfurous acids, such as polythion. This improved understanding is of importance since corrosion of coal liquefaction fractionation columns has been observed and associated with the presence of chlorides in the coal.

- Microstructural Effects in Abrasive Wear (University of Notre Dame): A program of research has helped to more clearly identify the role of microstructural features of hard alloys in resistance to abrasive wear. The role of carbide size, distribution, morphology and composition in hard facing alloys of varying compositions has been detailed and provides the groundwork for rational design of alloys. The abrasive wear of hard alloys is an everpresent form of deterioration in all fossil solids handling. An improved understanding of the phenomena will allow the development of alloys with longer lifetimes and thus enhanced plant operability.

- Thermochemical Studies Show Importance of Oxygen Pressure in Performance of Chromia Refractories (Pennsylvania State University): Solubility of chromia in coal slags has been found to be highly dependent on oxygen pressure. This finding will assist in selecting optimum refractories for use in slagging gasifiers.

  The hot molten slag in slagging gasifiers tends to corrode and erode the refractory lining of gasifier vessels, limiting the refractory life to only a few hundred hours in some cases. Since high chromia refractories have the best resistance to attack by coal slags, it is important to understand the chemical reactions between chromia and coal slags.

  The recent findings show the importance of considering oxygen pressure as a variable in studying refractory performance and the need for controlling oxygen pressure in the gasifiers if refractory life is to be predicted.

- High-Chromia Refractories Extend Lifetime of Liners for Slagging Gasifiers (ANL): A variety of commercially available refractories have been exposed to slag representative of that which would result from the gasification of both Eastern and Western coals in slagging gasifiers. These studies have provided significant insight relative to the selection of optimum refractories for use in slagging gasifiers. In general, it has been found that the refractories with higher chromium content provide the best performance during exposure to coal slag. Microstructural examination of exposed refractories has led to the identification of the reaction products and the development of new refractory compositions which minimize corrosion by the molten slag.

  If confirmed in larger scale tests, the high-chromia commercial refractories identified by ANL and the new refractory compositions being developed by industry will lead to significant improvement in the lifetime of refractories in slagging gasifiers.

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Advanced Research and Technology Development

Question: Please provide for the record the approximate amounts of Advanced Research and Technology Development funding that go to the Energy Technology Centers, industrial organizations, and universities. Please also provide a trend over fiscal years 1980, 1981, and 1982 in the breakout of this funding.

Answer: The information requested is as follows:

Location	FY 1980	FY 1981	FY 1982
Energy Technology Centers	3,356,000	4,573,000	6,611,000
Universities	12,100,000	12,400,000	13,900,000
Industrial Sector	32,044,000	34,388,000	39,589,000
Total AR&TD & Univ.	47,500,000	51,361,000	60,100,000

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Advanced Research and Technology Development

Question: Your revised budget on page 36 decreases funds for planning and policy by $2.5 million indicating that such planning activities will be performed in-house.

-- Who performed such activities in the past? Please provide some detail for the record.

Subsequent to that, your justification requests $1,100,000 as an increase to provide funding for coordinative planning and research.

-- Please explain how this is different than the planning and policy item just discussed.

Answer: In the past, planning/policy documents have been written in-house, using supporting analyses developed in-house (including the Energy Technology Centers), or supplied by private contractors and national laboratories. In FY 1981, approximately 30 percent of the supporting analysis in the $2.5 million budget was performed by national laboratories, with the remaining done by private contractors. The private contractors ranged from architect-engineering firms to firms specializing in broad strategic analysis issues.

The former policy and planning activity ($2.5 million), as indicated earlier, was primarily related to projected market analyses of new technologies with short- to mid-term implications and the development of general policy guidance and strategies for the entire fossil energy program. Particular emphasis in this program was placed on development and demonstration processes with near-term to mid-term implications. These studies were conducted with the help of DOE staff at Energy Technology Centers, headquarters staff, and contractors with unique expertise. Under the new administration, there will be less involvement of the FE Program in policy related to market analysis of mature development processes. Therefore, contract support has been reduced accordingly. Some of this effort may continue to exist and it will still be necessary to handle this by both the in-house FE staff and staff of DOE's Office of Policy and Planning.

The new $1.1 million research and planning effort (called Technology Base Synthesis) is directed toward a different type of activity. It is directed at long-term fundamental and exploratory research and is not concerned with engineering development or marketing questions. This activity is particularly concerned with identifying, encouraging and supporting generic, cross-cutting technical areas that provide information fundamental to a number of potential processes. For example, fundamental aspects of multi-phase flow phenomena are common to combustion, gasification, oil-shale retorting, and coal preparation. In order to determine the most critical research needs, staff at the FE Energy Technology Centers, DOE national laboratories, headquarters, and outside university and indutrial experts will be utilized. Seed funds will be provided to support the most critically needed research investigations. The previous program, in general, did not support R&D activities.

A different set of staff and non-DOE experts participate in the Technology Base Synthesis program compared with the former $2.5 million Policy and Planning Activity.

House Appropriations
May 7, 1981

Liquefaction

Question: An April 22 press release indicates that both the H-Coal pilot plant and the Exxon Donor Solvent pilot plant have been running successfully.

— For H-Coal, what testing program will be able to be completed with the funds available in fiscal year 1981 and your revised fiscal year 1982 request?

— Will you be able to complete substantial runs on a western coal in the synthetic fuels operation rather than in the boiler fuel mode?

— What would be learned by running the coal in a boiler fuel mode?

— Would it be more useful to do this or to test another coal in the plant?

— What additional work could be done with the $10 million recommended to be added in fiscal year 1982 by the House Science and Technology Committee?

Answer: With the funds available in FY 1981 and the revised FY 1982 request, we expect to complete two modes of operation on the H-Coal pilot plant and dismantle the plant. It is possible that some additional operations can be accomplished but doubtful that the full Phase III scope of work (3 operational modes) could be completed. A comprehensive review of the budget is currently underway betwen DOE and the contractor to determine the full extent of operations that can be completed with the funds expected to be available. However, there will be no extended operational phase for the pilot plant.

In April 1981, DOE and the seven other participants unanimously agreed to interchange the order of the Illinois #6 boiler fuel and Wyodak Syncrude modes of operation. The Wyodak (western coal) syncrude mode is now second and will be started following completion of the Illinois #6 syncrude operation. As indicated, we fully expect to complete the Wyodak run within the anticipated available funding.

The Wyodak syncrude operation and the boiler fuel mode were interchanged because the results obtained from testing the deashing unit (an integral part of the boiler fuel process) at the Ft. Lewis Pilot Plant (an integral part of the boiler fuel process) have been inconclusive. Delay of the boiler fuel operation at the H-Coal Pilot Plant will allow time for further evaluation of the deashing unit. Factors included in the decision were the inconclusive results from smaller scale testing as well as the intention to obtain as much information as possible from the pilot plant within the anticipated funding. However, the anticipated funding does not appear to be sufficient to permit testing of the boiler fuel mode at the H-Coal Pilot Plant even if more conclusive results are obtained on the deashing unit.

Operation of the H-Coal process in the boiler fuel mode would demonstrate the flexibility of the H-Coal process to produce a wide range of liquid products. Major advantages of the H-Coal process are its ability to process a variety of coals and produce a range of products. Operation of the pilot plant in the boiler fuel mode will demonstrate one of those advantages.

The present scope of work, which includes the three modes of operation, resulted from months of negotiation between all of the project participants (including DOE) and is considered to be the optimum schedule for the funds available. Changes to the scope of work at this time would involve a comparable set of negotiations and would not necessarily improve the current program.

If an additional $10 million were to be added to the H-Coal project, there would be a greater assurance of successful operation in the syncrude mode. If the two syncrude modes are successfully completed within the present schedule, the additional $10 million would permit operation of the boiler fuel mode to be undertaken. Money would be retained for plant dismantling and there would be no extended operational phase.

House Appropriations
May 7, 1981

Liquefaction

Question: For the Exxon Donor Solvent plant, how many coals will you be able to run?

-- What can be done with the money you have now and the $30 million requested in fiscal year 1982?

-- Will any of the funding be used to process the solid residues or bottoms as originally expected?

-- What is its significance of the processing of the residues in comparison to the overall process?

-- What has been Exxon's reaction to the proposed reduction in government support?

Answer: As explained below, we will be able to complete three coal tests as originally planned.

A number of options have been proposed that will attempt to accommodate the reduction in FY 1982 funding. These options, some of which are listed below, will be discussed by the Sponsors Management Committee on Friday, May 15, 1981. However, all of these options would involve contractual modifications that will hopefully be resolved at the meeting.

o The full program as currently defined provided that the industrial participants will assume DOE's projected funding shortfall of about $17.0 million.

o A partial program involving three coal tests but excluding bottoms processing.

o A partial program which would include only one coal in both the pilot plant and the bottoms processing (Flexicoker) unit.

o A modified program without Flexicoking which would include the following:

- a toxicology program
- additional hybrid boiler studies and tests
- additional POX studies and tests

Funding could be used to process the solid residues as mentioned above. However, this issue is unresolved at this time and will require the approval of the Sponsors Management Committee.

The development of bottoms processing is generally believed to be essential to the economic viability of EDS or any other liquefaction concept. The amount of unconverted coal which would otherwise be unusable is significant enough to determine the overall economic viability of liquefaction processes.

Exxon has generally indicated support for the Economic Recovery Program. However, some of the other participants have indicated they feel DOE should honor its existing agreement with modifications applicable to future work. The foreign participants have indicated that they support the Economic Recovery Program since it has no direct bearing on their interests. However, they too have strongly indicated that they believe the U.S should honor its legal commitments.

House Appropriations
May 7, 1981

Liquefaction

Question: Original plans for these facilities called for an extended program of several years duration.

— What is the difference between the amount of information that will be gathered under your current plans versus that which would have been gathered under your previous ones?

Answer: H-Coal: The information gathered under the current plans will come from successful operation with a typical bituminous coal and a typical subbituminous coal in the syncrude mode. The process information derived therefrom, coupled with the information on plant equipment performance, is expected to demonstrate the general commercial readiness of the process in the syncrude mode.

The original program including extended operations was intended to operate the pilot plant, in return for cost sharing, with an industrial consortium for further large-scale evaluation of the H-Coal process and for processing specific coals in support of commercial designs. The support of commercial designs was expected to reduce the risks involved in commercial scale-up through validation of specific process designs to generate additional information on equipment performance. In addition, a process improvement program would be carried on concurrent with pilot plant operations to improve the commercial potential of the H-Coal process.

EDS: The base program, as originally planned, would have resulted in the advancement of the EDS process to a state of commercial readiness with three coals and bottoms processing. Extended operations would have concentrated on the testing of specific coals most attractive to initial commercialization projects.

It should be noted that upon completion of the currently planned operation, the plant will be available for operation by principle participants for a period of two years. Following this period, the plant will be disposed of and any proceeds resulting from this disposition will be distributed among the participants in proportion to their funding.

House Appropriations
May 7, 1981

Liquefaction

Question: What is the significance of the liquid phase methanol pilot plant and what will you gain from its operation (page 43)?

Answer: The liquid phase methanol facility will provide critical process development information required to develop a process design, evaluate economic potential and allow scaleup to commercial operation. This liquid phase reactor concept shows promise as the only available method for converting low cost, low hydrogen content coal derived synthesis gas to methanol. Consequently, the liquid phase methanol process, if successfully developed, is ideally suited for coal to methanol production.

In addition, our analysis indicates that the greatest potential for lower cost indirect liquids lies in the direct conversion of low hydrogen synthesis gas from second generation gasifiers to quality hydrocarbon fuels. Work is underway at the research scale to identify promising catalysts for this approach. The best candidates will be selected for process development and evaluation in the liquid phase reactor system.

House Appropriations
May 7, 1981

Liquefaction

Question: Why is there such a large increase in fiscal year 1982 in disposable catalyst hydrogeneration (page 44)?
-- What projects would be involved and where are they located?

Answer: The apparent increase in disposable catalyst hydrogenation is due to an accounting shift in which funding related to this technology in the process research/technology development line is being consolidated with other direct liquefaction work in the disposable catalyst line in FY 1982. Overall funding for this technology is therefore essentially level from FY 1981 to FY 1982.

The major projects involved and their location are:

1. Merriam Laboratory, Pittsburg and Midway Coal Mining Company, Merriam, KS - Integrated bench scale evaluations of promising catalysts.
2. Air Products Laboratory, Allentown, PA - Development and evaluation of synthetic catalysts.
3. Pittsburgh Energy Technology Center, Bruceton, PA - Catalyst evaluations, kinetic studies and short contact time liquefaction studies.
4. Grand Forks Energy Technology Center, Grand Forks, ND - Disposable catalyst evaluation with low rank coals.

House Appropriations
May 7, 1981

Liquefaction

Question: What is the significance of the development of pyrolysis processes in liquefaction (page 45)?

-- Why hasn't this technology been developed to a greater extent in the past?

-- What advantages or disadvantages does it have over the solvent systems or indirect liquefaction?

Answer: When coal is heated to elevated temperatures in the absence of oxygen (pyrolysis), volatile hydrocarbons ranging from methane to heavy coal liquids are evolved from the coal. The yield of these materials and the composition of the liquids are dependent on the coal used, the temperature, the time at temperature and the presence of other reactive constituents such as hydrogen. Pyrolysis, then, is basically a "skimming" operation concept to recover liquid products from coal.

An early low temperature version of this technology has been used in the first half of this century to produce "smokeless" solid fuel and coal tar distillates for which an extensive technology base exists. However, studies have shown that substantial improvements may be possible by conducting coal pyrolysis at higher temperatures with very short heat up times and the present research and development efforts are focused in this area.

Relative to both the solvent systems and indirect liquefaction, pyrolysis processes have simpler process schemes and can produce coal liquid materials with little or no external hydrogen consumption (conceptually, at least). This potentially translates into lower cost liquids. The disadvantages are that both the yield and quality of the liquids produced are low relative to the other process concepts. In addition, substantial amounts of coal char containing ash and sulfur is produced. The economic value and marketability of this char is questionable.

House Appropriations
May 7, 1981

Liquefaction

Question: Please provide for the record additional details of your environmental studies and other support (page 46).

-- How many unused facilities do you have in the liquefaction area that you are funding under this activity and how much is the cost to keep these facilities in mothballs?

-- What is the advantage to keeping these facilities?

-- On an overall basis in the fossil energy program, what facilities do you have in such status?

-- How much do they cost and where are they funded?

-- Have you initiated any steps to dispose of these facilities?

Answer: These following projects support the overall coal liquefaction program and include generic studies applicable to any of the technologies under development.

o Certain components of coal-derived liquids exhibit toxic properties with laboratory animals, as do components of coal tars. A coordinated biomedical testing program is underway with DOE's Office of Energy Research. The undesirable components are being characterized and techniques to mitigate the toxic effects are being evaluated. Mitigation techniques must be compatible with liquefaction processes.

o R&D support is provided to help improve selected key mechanical components such as slurry pumps and valves identified as critical problem areas for future plants.

o Experienced architect-engineering firms review and appraise the technical status and ultimate commercial feasibility of new processes under consideration for study to help assure that only the most promising are supported. Analysis of data from operating pilot plants and process development units provides the data base for future developments. Economics and engineering aspects of two stage liquefaction and advanced indirect processes were analyzed during FY 1981.

The two unused facilities in the liquefaction program are the Cresap Test Facility and the Bruceton Process Development Unit (PDU). Both facilities have been maintained at an annual cost of approximately $350,000 for two years while their potential for other uses were being evaluated. It has not been possible to utilize these facilities as operating units and the program decision has been made to dispose of the facilities in accordance with Federal regulations.

There are four other unused facilities in the total FE program all of which are under the purview of Surface Coal Gasification. The facilities are the Synthane Pilot Plant, Steam Iron Gasification Pilot Plant, CO_2 Acceptor Gasification Pilot Plant and the Battelle Agglomerating Burner PDU. The combined cost of maintaining these four facilities is approximately $650,000 annually.

Steps have been initiated to utilize or dispose of these unused facilities. Offices associated with two of the facilities located on the site of the Pittsburgh Energy Technology Center (PETC) have been transferred to PETC which has an urgent need for the space. Under regulations, the equipment will be available to DOE for program use, other Federal agencies and GSA for final disposition. One facility will be relocated at another site for use in an existing liquefaction project.

House Appropriations
May 7, 1981

Combustion Systems

Question: Please explain how your advanced combustion technology program (page 56) would differ from your advanced fluidized bed concepts program (page 55).

Answer: The Advanced Combustion Technology Program's primary goal is to retrofit existing oil designed industrial and utility boilers to combust 100 percent coal (pulverized coal on coal slurries) in a manner that will eliminate or minimize the need for derating and overall system efficiency losses. The most promising concepts to date are add-on slagging type burners/combustors which are in the research stage of development. Hence, the Advanced Combustion Technology Program addresses the traditional existing and new oil designed units for 100 percent coal use, where the Advanced Fluidized-Bed Concepts Program is geared to advancing the state-of-the-art in fluidized bed technology. Industrial units of the bubbling bed type are being offered on the commercial market. Fluidized bed systems using circulating beds, turbulent beds, and staged beds are still in the developmental stages. These concepts offer significant advancements in both economic and environmental areas and could provide for a wider market penetration for AFB systems (e.g., industrial process heaters). The advanced Fluidized-bed concepts program will provide for the evaluation and subsequent research and development on these systems/concepts.

House Appropriations
May 7, 1981

Combustion Systems

Question: Please explain the relationship between the pressurized fluidized bed project and the PFB turbine testing program (page 66).
-- How many turbines will be tested in the program?
-- When is it expected that this testing will take place?
-- What is the expected ultimate cost of this part of the program?

Answer: Construction of the PFB pilot plant was initiated in June 1980. At present the foundation has been completed, and structural steel for the facility has been fabricated and is being delivered to the site for erection starting June 1981. The PFB combustor is being fabricated with erection scheduled for July 1981. As of April 1981, approximately 36 percent of the engineering and procurements for the construction were complete.

Construction of the pilot plant is planned to be completed in February 1983.

Pilot plant components are approximately 1/2 the size of commercial scale components. The PFB combustor will increase in diameter from 15 feet to 30 feet. However, the height and diameter of the heat exchange tubes will remain the same with only the number increasing. The commercial plant will require approximately four times the number of feed points than were needed for the pilot plant.

The objective of the Alternate Turbine Test is to obtain operating data and provide an independent integrated systems facility for testing high velocity, high load factor gas turbines at high inlet temperatures in a PFB coal combustion environment with high performance tertiary gas cleanup. Gas turbine reliability and degradation mechanism in a high temperature, high efficiency PFB combined cycle is a major uncertainity. The purpose of the alternative turbine test is to better represent the spectrum of available U.S. industrial turbines operating in PFB systems by obtaining degradation data and information on erosion and corrosion mechanisms with blades which represent a major segment of U.S. commercial gas turbines.

It is presently envisioned that the alternate turbine test would utilize a high velocity, high stage load gas turbine in order to determine the application of this type of machine. This type of gas turbine could be installed at the Curtiss-Wright Facility in FY 1984. It is presently estimated that the funding requirements for installation will be $16 million. Operation will require about $7 million per year additional funds.

House Appropriations
May 7, 1981

Combustion Systems

Question: Your revised budget deletes funding for the IEA test facility in Grimethorpe, England.

-- Please explain what can be gotten with the currently available funding.

-- What could be gotten with the additional $11 million added by the House Science and Technology Committee and what is the overall difference between the two levels of funding in terms of overall information available to the United States?

Answer: The following tabulation is a comparison of the technical information which could be obtained with currently available funding (Case 1) and with the additional $11 million funding added by the House Science and Technology Committee (Case 2).

Case 1	Case 2
(Operations Through April 1982)	(Operations Through Feb. 1983)
Test Series I	
Scope	
400 experimental hours using U.K. coal	360 experimental hours using U.K. coal
Accomplishments	
Characterize Plant Performance for: - Combustion and Sulfur retention efficiencies - Elutriation and particle breakdown characteristics - In-bed heat transfer - Cyclone collection efficiencies - NO_x emission	Same, except Alkali emission data is obtained
Test Series II	
Scope	
740 experimental hours using one German coal and one U.S. type coal (370 hours each)	1650 experimental hours using one U.K. coal for 250 hours and 2 U.K. and 2 German coals for 350 hours each
Accomplishments	
Same as above except that Case II would run with an alternate tube bank "C" while Case I would be run with same tube bundle configuration as Test Series I. The other two funding partners have not agreed to proceed with Case I Test Series II to date. They would rather proceed with Case II.	

Test Series III

Scope	
Deleted	400 experimental hours with U.K. coal
Accomplishments	
N/A	- Examine turn-down Dynamic Response Rates - Determine Transient/Load following behavior

Test Series IV

Scope	
Deleted	300 experimental hours with U.K. coal
Accomplishments	
N/A	Test alternative components

The differences in overall information obtained with the additional $11 million in funding (Case 2) but not obtained with currently available funding (Case 1) can be summaried as follows:

- Reduced research instrumentation and no tube bank "C" -- reduces relability of results and ability to optimize and characterize detailed combustor behavior.
- Use of 2 coals only in Test Series II — eliminates any chance for extrapolating performance data between extreme coal types.
- Deletion of Test Series III and IV -- eliminates key data linking Grimethorpe to commercial plants (transient/load-following behavior and optimized design).

House Appropriations
May 7, 1981

Fuel Cells

Question: What would be the effect of the reduction of $4.1 million in the area of molten carbonate fuel cell systems as suggested by the House Science and Technology Committee?

Answer: Molten carbonate fuel cells (MCFC) offer significant efficiency improvements over phosphoric acid fuel cells (PAFC). The higher operating temperatures (1200°F versus 400°F) result in improved fuel cell stack efficiencies and permits much higher bottoming cycle efficiencies as well as practical recovery of waste heat for cogneration. These higher efficiencies will make MCFC powerplants more cost competitive as higher capital costs will be possible for equivalent costs of electricity and will allow coal-derived fuels to be utilized with environmental acceptability. As with all fuel cell technologies, MCFC is not a combustion process and thus emissions such as NO_x m CO, and unburned hydrocarbons are not a problem. MCFC offers the added advantages of having operating efficiencies which allow for the practical removal of sulfur compounds from the fuel stream, and of readily accepting carbon monoxide in the processed fuel stream. This allows coal to be used as a fuel and can result in significant quantities of oil and natural gas being displaced by coal.

The MCFC program is currently scaling up the small laboratory and bench scale hardware and fabrication techniques that have been used to investigate basic phenomenology and engineering feasibility. Technical feasibility has been verified and technical issues have been identified. Resolution of these issues requires a focused, sustained effort with application of a "critical mass" of resources. The FY 1982 budget meets the minimum requirements for dealing with the technical issues in a well balanced and coordinated manner.

House Appropriations
May 7, 1981

Fuel Cells

Question: At what stage of development is the solid oxide fuel cell work (page 63) compared to phosphoric acid and molten carbonate fuel cells?
-- Of the $4.4 million in advanced concepts (page 63), how much is for solid oxide fuel cells and how much is for thermionic energy?

Answer: Solid oxide fuel cell (SOFC) development lags molten carbonate fuel cell (MCFC) development by approximately five years and phosphoric acid fuel cell (PAFC) development by approximately ten years. SOFC shares many of the advantages of MCFC with potentially even higher efficiencies, higher power densities and lower manufacturing costs. The high performance potential has been shown and feasible materials, technical barriers, and associated design concepts identified. Proof of feasibility of these design concepts is presently underway.

Of the $4.4 milion in advanced concepts, $1.5 million is budgeted for SOFC and $2.9 million for thermionic energy conversion. At the present time, MCFC technology lags PAFC technology by approximately five years.

House Appropriations
May 7, 1981

Fuel Cells

Question: To what extent is there any cost sharing being done by the industrial developers in fuel cell technology?

-- To what extent is there any cost sharing by GRI?

-- To what extent is there any cost sharing by the Fuel Cell Users Group?

-- Please provide for the record a listing of who is in the Fuel Cell Users Group.

-- What is the group's overall function?

Answer: Fuel Cell technology development and demonstrations are being cost shared between funding orgnizations (DOE, Electric Power Research Institute, Gas Research Institute and Tennessee Valley Authority), manufacturers (United Technologies, Westinghouse, Energy Research Corporation, Engelhard and General Electric Company), and gas and electric utilities. The range of cost sharing varies by program. In general, DOE provides the majority of program funds. Typical examples are cited below:

4.8 MW Phosphoric Acid Fuel Cell Demonstrator to be Operated by Consolidated Edison Company, New York City

- Total program cost - approximately $71 million
- DOE share - approximately $40 million
- Con Ed share - approximately $6 million
- Electric Power Research Institute share - approximately $12 million
- United Technologies Corp. Share - approximately $13 million

40 KW Phosphoric Acid Fuel Cell Field Test

- Total program cost - approximately $46 million
- DOE share - approximately $13 million
- Gas Research Institute - approximately $21 million
- Gas Utilities - approximately $12 million

Molten Carbonate Technology Development Activities in FY 1981

- DOE share - approximately $9 million
- Electric Power Research Institute - approximately $2 million
- Gas Research Institute share - approximately $.5 million
- General Electric Company share - approximately $.5 million
- Electric Utilities share - approximately $6 million

The Gas Research Institute (GRI) is cost sharing the 40 MW phosphoric acid field test project and it is anticipted that they will also cost share with DOE and the manufacturer in the companion 40 KW technology development project. Cost sharing by GRI for the 40 KW field test project is cited above. In addition, GRI is contributing approximately 0.5 million in FY 1981 for molten carbnate technology development.

There are two Fuel Cell Users Groups: On-Site Fuel Cell Users Group, and the Electric Utility Fuel Cell Users Group.

Member utilities contribute to both technology development and field test demonstrations. For example, for the 40 KW on-site field test project, approximately 22 gas, or combination gas and electric utilities are each contributing approximately $500,000 for power plant site selection and field operation. For the Electric Utility Fuel Cell Users Group individual member utilities both separately and through the Electric Power Research Institute expend approximately $20 million per year on fuel cells.

Membership in the On-Site and Electric Utility Fuel Cell Users Groups is as follows:

On-Site Fuel Cell Users Group:

Columbia Gas Distribution Company
Connecticut Gas Company
Connecticut Natural Gas Corporation
Consolidated Edison Company of New York, Inc.
Equitable Gas Company
Gasco, Inc.
Memphis Light, Gas & Water Division
Mountain Fuel Supply Company
National Fuel Gas Distribution Corporation
New Jersey Natural Gas Company
Northwest Natural Gas Company
Osaka Gas Company, Inc.
Pacific Gas and Electric Company
Peoples Gas Light and Coke Company
Peoples Natural Gas
Philadelphia Electric Company
Public Service Electric and Gas Company
San Diego Gas and Electric Company
Southern California Gas Company
Tokyo Gas Company, Ltd.
UGI Corporation
Washington Natural Gas
Washington Water Power Company
Wisconsin Gas Company

Electric Utility Fuel Cell Users Group:

Adams Electric Cooperative
Allegheny Electric Cooperative
American Public Power Association
Arizona Public Service Company
Baltimore Gas & Electric Company
Basin Electric Power Company
Boston Edison Company
Carolina Power & Light Company
Central Illinois Light Company
Consolidated Edison Company of New York, Inc.
The Dayton Power & Light Company

Electric Utility Fuel Cell Users Group: (cont'd)

Easton Utilities Commission
Edison Electric Institute
Green Mountain Power Corporation
Hoosier Energy Division, REC, Inc.
Hydro-Quebec
Lee County Electric Cooperative
Lincoln Electric System
City of Martinsville
Massachusetts Municipal Wholesale Electric Company
Memphis Light, Gas and Water
Mississippi Power & Light Company
National Rural Electric Cooperative Association
Niagara Mohawk Power Corporation
Northeast Utilities Service Company
Northern States Power Company
Ohio Edison Company
Philadelphia Electric Company
Portland General Electric Company
Public Service Electric & Gas Company
Rural Electrification Administration
Santa Clara Electric Department
Seminole Electric Cooperative
Southern California Edison Company
Taunton Municipal Lighting Plant
Tennessee Valley Authority
United Power Association
Central Hudson Gas and Electric
Ebasco Services, Inc.
Idaho Power Company
Missouri Basin Municipal Power Agency
Ontario Hydro
Seattle City Light
Southern Co. Services, Inc.
Tacoma Dept. of Public Utilities
Tokyo Electric Power Company

The purpose and function of the On-Site Fuel Cell Users Group are:

- To represent the members interests in the development and commercialization of on-site fuel cell energy systems.
- To represent the members to governmental entities, the manufacturer and consumers on commercialization issues of On-Site Fuel Cells.
- To provide a means for members to coordinate, cooperate and exchange information with non-participating gas or combination utilties and with public or private organizations concerned with the development and utilization of on-site fuel cells.

- To complement GRI's role in moving the on-site fuel cell concept from the R&D phase into commercialization and provide input to GRI regarding fuel cell development.
- To provide member advocates for the on-site full cells applications, benefits, market potential and other related factors.
- To define the "user requirements" for the commercial on-site fuel cell.
- To provide the basis for a business decision by the members to commercialize on-site fuel cells.

The Electric Utility Fuel Cell Users Group was created to:

- Exchange information within the utility industry and with other public and private organizations concerned with fuel cell development and use.
- Coordinate and help members identify, sponsor, support and participate in the development of system requirements and the conduct of research, development, engineering, demonstration and use of fuel cell energy systems.
- Provide a body of potential users to help fuel cell developers define system characteristics for electric utility applications.
- Determine the potential market for fuel cell systems.

House Appropriations
May 7, 1981

Heat Engines

Question: Please explain why you are deleting your activity in closed-cycle central power systems (page 69).

-- Will you have completed the development of the heater technology which is phase II of the work?

-- What would phase III have been?

Your justifications state that "It is anticipated that future development of closed-cycle systems for industrial cogeneration applications will be sponsored by private industry."

-- What indications do you have that this will be done?

Answer: The subsystem that is technically limiting the further development of closed cycle systems is the high temperature coal-fired primary heater. Phase II of the heater technology effort will be completed in late FY 1982 using FY 1981 and prior year funds. It is anticipated that further developments leading to the commercialization of closed-cycle central or industrial cogeneration systems with the benefit of an improved heater subsystem would be undertaken by the private sector.

Phase III would have shown the "Technology Readiness" of the closed cycle gas turbine primary heater modules. It would have provided for the design, fabrication and construction of factory built heater modules which would be required for a full-scale multi-module advanced closed cycle gas turbine plant burning coal.

We do not have specific indications that the private sector will commercialize this technology for U.S. cogeneration applications. However, there are about four closed cycle systems in commercial service in Europe with a coal firing capability. The primary heater technology improvements that will be developed by the end of the current DOE Phase II program will permit systems to operate at greater efficiency and better economics than the present commercial systems. Thus, the incentive will exist for the U.S. private sector to commercialize this technology if it desires.

House Appropriations
May 7, 1981

Heat Engines

Question: Please explain what was done in your prototype systems assessment in fiscal year 1981 (page 70).

Answer: In Fy 1981 the major efforts in prototype systems assessment activity involved initiation of site-specific studies of advanced coal-fired cogeneration systems. These studies will permit a detailed economic and technical comparison of advanced Atmospheric-Fluidized Bed (AFB)/gas turbine cogeneration systems with AFB-steam cogeneration systems. The results will permit definition of technology development requirements for these systems and will be used to structure our out-year technology development activities. Study completion should be in about one year.

House Appropriations
May 7, 1981

In Situ Coal Gasification

Question: You request funds to do a test in Centralia, Washington (page 74).

— How does this differ from previous tests and what is its overall goal?

Answer: The work in Centralia, Washington, differs from and extends previous technology base development work in several respects. In closely adjacent areas the same coal seam is available as an isolated outcrop allowing field laboratory studies and as a 47 foot thick, high ash, 500 foot deep deposit where generic studies of technical and operational parameters can be made at conditions expected of early commercial ventures. The major differences in this test are the ability to study early cavity growth, coal ignition characteristics and linking and propagation studies at low cost near the surface and then verify the near surface tests in the same coal at depths too deep for commercial mining.

The goal of the Centralia field work is to extend the existing technology base applicable to flat-lying subbituminous coals to the point where all information necessary for commercial development is available by the late 1980's.

House Appropriations
May 7, 1981

In Situ Coal Gasification

Question: You are requesting funds to complete a contract with Gulf Research and Development Company on steeply dipping beds, stating that the result will be the second steeply dipping bed test in the U.S. and longest production of medium Btu from underground coal gasification in the world (page 75).

— After the test is completed, would you expect industry to move forward to commercializing the technology?

Answer: The Gulf T2 SDB test will be only the second test in the United States in steeply dipping coal beds and the first test to utilize steam/oxygen injection in that type of coal over an extended period of time. While numerous technical and operational questions will be answered if the test operates as designed, industry may require further confirmation prior to commitment of major development funds in commercial operation of underground coal gasification in steeply dipping beds. Therefore, it would be premature to predict whether successful completion of this test will lead to commercialization.

House Appropriations
May 7, 1981

MHD

Question: The design of a coal combustor had just been awarded to the TRW Company.

-- How much would it cost to develop that combustor and test it in one of the existing facilities?

Answer: The TRW Company was selected from three competing industrial organizations to complete the design, development, and initial testing of a 50 MWt (thermal) combustor. As a part of this effort, TRW would continue the development testing of a 20 MWt coal combustor to provide for the design and development of continuous slag removal and electrical isolation subsystems.

A TRW coal combustor could be developed and tested in one of the existing facilities for a total estimated cost of $10 million to $20 million (over a 3-year period) depending on the size of combustor and the amount of test facility support required.

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Mining R&D

Question: Your justifications on coal mining (page 82) state that principal activities in mine planning in fiscal year 1982 will be "development of the technologic data base on the major health, safety, environmental concerns..."

-- How much funding will be expended in this area and for what purposes?

-- Why isn't this a Bureau of Mines responsibility rather that DOE?

-- Wasn't Health, Safety and Environmental Research left to the Bureau and DOE charged with production research?

-- What interface do you have with the Bureau of Mines in developing such programs?

Answer: The funding for this area will be approximately $750,000 for FY 1982. These funds will be used to continue to develop engineering information for the mining community to use in planning and controlling subsidence associated with future mining operations, to develop an understanding of the relationship between the design of hydrofracs to recover methane from coal seams and the effect of such hydrofracs on future coal production from those areas of the mine, and to develop techniques to predict the variation in sulfur and ash within a coal seam to permit mining companies to plan their mining sequences to optimize coal quality.

The work falls within the charter of the Department's Mining R&D program and is consistent with the high-risk/long-range research strategy. To the best of our knowledge such work is not conducted by the Bureau of Mines.

This work was not left to the Bureau. The research program transferred from the Bureau of Mines/DOI to the DOE under P.L. 95-91 was the coal production and coal preparation research effort. This left the Bureau responsible for its ongoing health, safety and environmental research responsibilities. However, as part of the Department of Energy, the mining program found itself also charged with DOE's organic responsibilities including (a) exercising central responsibility for the management of research and development programs with respect to the extraction phases of all energy sources, (b) engaging in and supporting environmental and safety research related to the development of energy sources, (c) conducting a comprehensive program of research and development on the environmental effects of energy technologies, and (d) the conduct and promotion of mining technologies which provide alternatives to surface disturbance and for safety and health in the application of such coal mining technologies.

The potential that this overlapping responsibility presents for duplication has been pointed out by the Congress, industry and by both affected agencies a number of times in the past. It has also been noted that the nature of mining/preparation R&D is such that production, productivity, cost, health and safety, environmental and resource recovery concerns are so intimately related that they cannot be parcelled out as separate and divisible considerations.

The DOE and the Bureau of Mines entered into a formal Interagency Agreement in September 1979. The purpose of this Agreement was to provide a positive mechanism for the elimination of duplication. Periodic formal meetings are held and each agency reviews the future research program of its partner agency in detail. Any element which presents the possibility for duplication is discussed until the potential duplication is resolved.

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Mining R&D

Question: Your justifications on page 81 list a considerable number of accomplishments of the program to date.

— What contribution will these accomplishments make to overall productivity in the mining industry?

-- If these are significant accomplishments, why are you redirecting the program away from the development of such equipment and processes to long-term development?

-- Please explain what types of projects would be involved in long-term development and how they would eventually be picked up by the mining industry.

Answer: The accomplishments cited are largely milestones in the development of advanced mining systems and respective subsystems and methodology tests. Thus most of these represent unfinished research. However, anticipating their being brought to target objectives as the program proceeds, the adoption by industry of these technologies, fitted to their exacting mining conditions, is expected to lead to productivity benefits industry-wide in the order of 50 percent or more.

It is the policy of the Department that the proper role of the Government is in the long-range/high-risk area and that shorter range R&D is best left to private industry. In those cases where development has proceeded to the point where industry can adapt the new technology with only short-term effort, or where low risks or payoffs are present, DOE attention is being reduced and being redirected to longer-range/higher-risk projects in earlier phases of development.

The combination of reduced budget and the concentration on long-range R&D dictates that the bulk of the effort be directed at the development of technologic information needed by the industry. This includes studies of mining techniques; research on the fundamentals of coal/rock fragmentation, rock mechanics, etc.; assessment of novel subsystems and a limited amount of proof of principle testing of new concepts to improve the mining process. Results of these studies and testing will be published and desseminated through technical reports, the industry media, seminars, conference papers and the like.

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Mining R&D

Question: Please provide for the record a breakdown of the major project areas and their costs for coal preparation and analysis. (Page 83)

Your justifications on page 83 state that "principle FY 1982 activities include the initiation of tests to establish cost-effective processes for cleaning selected Appalachian coals to three quality levels, including the best achievable through commercially viable methods."

-- Why is this a government function?

-- What is the cost of such activity?

Answer: The major project areas are as follows:

a) Evaluation and characterization of selected, commercially important intermediate and high sulfur coals - $3.0M.

b) Development of advanced physical cleaning technologies to remove up to 80 percent of the inorganic sulfur and ash from the selected coals - $0.6M.

c) Development of advanced physico-chemical processes to remove 90 percent of the total sulfur (inorganic plus organic) and 90 percent of the ash from the selected coals - $1.2M.

d) Development of improved cost-effective technologies to grind the selected coals to the fine particle sizes required for superior cleaning and for handling the cleaned finely divided product coal, i.e., dewatering and preparation of marketable forms - $1.2M.

A Federal R&D function is required to achieve enhanced coal quality objectives of the DOE program. These quality goals exceed the limits of existing industrial technology as applied to the vast reserves of intermediate and high sulfur/ash U.S. coals. The intensive, coordinated R&D work required is beyond the capacity of private industry since coal producers, for the most part, do not possess the required R&D resources to undertake the task. The DOE program, by contrast, focuses on a variety of U.S. coals of greatest potential importance to the growth of coal usage by U.S. utilities, synfuel producers and exporters. The program is necessary to establish, as early as possible, the firm technology base required by coal producers, coal users, and Federal and State officials to realistically assess the economic and environmental advantages of superior coal quality for site specific applications, i.e., boiler conversion, new plant design, transportation analyses, export requirements, and the like, over the 1985-1995 time span.

The cost of the Appalachian coal portion of this work is estimated at $3.9M.

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Mining R&D

Question: Previously the mining technology group was located at Pittsburgh and reported separately to Headquarters.

-- Will it continue to do so or will it be under the overall supervision of the Pittsburgh Energy Technology Center?

Answer: At the present time, Pittsburgh Mining Technology Center receives administrative support from Pittsburgh Energy Technology Center but remains a separate DOE organizational entity. This arrangement is being reviewed as part of our overall assessment of the ways the DOE organization can be streamlined and made more effective.

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Surface Coal Gasification

Question: The House Science and Technology Committee added $6.9 million for the continued operation of the Bi-gas pilot plant in Homer City, Pennsylvania.

— With the addition of this money, how many total months will the facility be operated in a fully integrated fashion?

-- How does this compare to the operational times involved in H-Coal and donor solvent for example?

-- Once the current facility testing is completed, either on your schedule or on the increased schedule of the Science and Technology Committee, what possible uses are there for this facility?

-- Is it not correct that this is a fully integrated plant which has many possible uses?

-- What are the disadvantages to continuing the use of this plant?

Last year you were provided with funds to do a study on possible alternative uses of the facility.

— What is the status of that study?

Answer: The addition of $6.9 million would permit fully integrated operation and testing for 8 months. At the end of this time an additional $1.4 million will be required for termination (sub-contract liabilities and personnel reduction-in-force) costs. An estimated additional $2 million would be required for physical plant decommissioning to a mothball condition.

Actual on-stream operating time during the last year of Bi-Gasdevelopment activity has been 40 percent. With respect to comparative on stream times, the Exxon Donor Solvent (EDS) pilot plant has a 1981 operating plan calling for 11 months of plant operation and 1 month of down-time. Of this 11 months for operation, the on-stream factor is about 65 percent. The H-Coal pilot plant has a goal to operate the pilot plant continuously. The longest run to date has been approximately 45 days. The on stream factor over the 1st year has been approximately 65 percent.

There are a number of possible uses for the Bi-Gas facility which fall into two major categories:

1) Operate the plant in a fully integrated manner to:
   - o enhance entrained bed gasification data base
   - o study management of char and slag systems
   - o establish environmental data base
2) Operate the integrated plant in a component, equipment, and materials test mode for evaluation of:
   - o pumps for coal slurries
   - o valves (control and block) for high-pressure, high-temperature and "dirty" applications
   - o instruments for multiple-phase flows, pressures, temperatures, etc.
   - o refractories for control of slags
   - o acid gas removal, e.g., Selexol
   - o materials of construction
   - o potential alternate advanced concept gasifiers and processing sub-system scale-ups.

It is correct that the Bi-Gas facility represents the only completely integrated gasification pilot plant in the U.S. which is capable of developing data base information in the multiple uses listed in the above.

The disadvantages to continuing use of this facility include:

- o relatively high cost of operation
- o other existing facilities, although dispersed, may be more economical and suitable for component/material testing as well as for development of entrained-bed scaling data.
- o the gasification data base obtained by operation of Bi-Gas may be too narrow if limited only to existing subsystem evaluation

Last year we were provided $250,000 to do a study on possible alternate uses of the facility. As a result of that effort, a preliminary draft report and cost estimate are due to DOE May 15, 1981. The final report and cost estimates are scheduled to be completed by June 30, 1981.

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Surface Coal Gasification

Question: Please provide for the record the extent of funding for the three gasifiers described in fluidized bed gasification (page 90).

— Is it expected any one of these plants will be continued beyond 1982 or industry will pick up the development of the gasifiers, such as the Westinghouse gasifier at Waltz Mill, Pennsylvania?

Answer: The funding profile for the three fluidized bed systems is as follows:

		(dollars in thousands) Prior Years	FY 1981	FY 1982
Tri-Gas				
(Bituminous Coal Research, Inc.)		4,561	0	0
Fast Fluid Bed				
(Hydrocarbon Research, Inc.)		5,754	544	0
Pressurized Agglomerating				
(Two Stage) Fluid Bed				
(Westinghouse Electric Corp.)				
	DOE	42,001	6,453 1/	4,000 1/
	GRI	5,375	2,775 1/	1,333 1/
	Industry	4,053	0	1/
		51,429	9,228	5,333

1/ Negotiations are currently being conducted in regard to firm funding levels.

Current program plans reflect that process development at small scale for all three of the above projects will be completed during or prior to the end of FY 1983. However, it is proposed to fund continuing gasification research and technology work using the gasifier plant at the Westinghouse Waltz Mill site at Madison, PA. This continuing effort will be directed to longer term, higher risk research for the advancement of fluidized bed gasification technology.

It is unlikely that development of the Tri-Gas process will be continued by industry. The process does not appear to have sufficient potential for commercial application.

The Fast Fluid Bed gasifier is currently at a point in the development process at which a judgement on commercial potential cannot be made with any real accuracy. The development effort to be done during 1981 should provide information to allow such judgements.

The development of the Pressurized Agglomerating (two stage) Fluid Bed process has been quite successful thus far, and the process is considered to have excellent potential for industrial applications. It is, indeed, hoped that commerical interests will undertake the scale-up and further development of the process at demonstation or commercial plant size. The technical risks to be encountered in going to a larger scale plant should be reduced by the continuation of ongoing small scale development to a point acceptable to industry for scale-up.

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Surface Coal Gasification

Question: What are the overall results of the gasification pilot plant at Windsor, Connecticut operated by Combustion Engineering? (page 91)
-- How many coals have already been run and how much has the facility cost?

Answer: The construction of the Combustion Engineering Pilot Plant was completed in 1978. This pilot plant was designed to establish the feasibility of converting caking coals into a low Btu fuel gas (85-160 Btu per standard cubic foot) in an atmospheric, entrained, slagging bed gasifier using a design based on proven combustion boiler technology. To date, only one type coal has been tested, Pittsburgh No. 8. Future plans call for testing a Western subbituminous coal and a Midwesern high sulfur bituminous coal.

Testing during the period 1978-1981 has generated the following results from 3500 hours of gas making operation:

1) Demonstrated operation of a completely integrated system (coal feed, gasifier, ash separation, sulfur removal, gas boiler operation) for a period of over 135 hours.

2) Demonstrated feasibility of removing slagged ash at high carbon conversion (99+%).

3) Demonstrated operation with low nitrogen oxides emissions.

4) Demonstrated removal of greater than 99% hydrogen sulfide with a Stretford sulfur removal unit.

5) Demonstrated use of a mathematical model for predicting product gas, heating value, gas compositions, heat transfer rates and temperature and amount of product gas production.

However, steady-state opeation of the gasifier at the maximum design conditions has not yet been obtained. Also, low heating values of the product gas has become a problem. Modifications have been proposed to overcome these problem areas so that the compilation of the data base can be accomplished.

The capital cost of the facility to date is approximately $14.5 million. The operating cost is in the range of $6-7 million per year. The total cost of the project to date (including capital and operating) is $48.8 million. The specific details of this total cost on this cofunded project is as follows:

(Cumulative dollars in thousands)

Fiscal Year	Total Cost	Government Share	CE/EPRI Share
1979	31,840	21,227	10,613
1980	38,838	25,425	13,413
1981	48,830	32,553	16,277

Cost Sharing Distribution

Government	66.7%
EPRI	19.4%
CE	13.9%

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Surface Coal Gasification

Question: Please explain your rationale for continuing to support the Exxon catalytic gasification project when Exxon intends to build a pilot plant of it own in Europe? (page 92).

— How much of the total cost of the PDU will be picked up by DOE?

-- How much will be picked up by the Gas Research Institute?

— Why is it necessary for the Department of Energy to provide funding for what is essentially a fully funded effort by Exxon to develop is process?

-- What would be the result of the Department not providing funding for this program?

Answer: The Department of Energy is currently involved in preparing a cooperative agreement to jointly fund with Exxon the continued research and development of the catalytic coal gasification process including the operation of the 1 ton per day process development unit. By continuing to participate with Exxon in this effort, DOE will accrue several benefits that would not be obtainable otherwise. Perhaps the most important of these benefits will be the acquisition of performance and operating data from the testing of two coals (one U.S. coal, at least) in the large pilot plant in Europe. Data on the testing of these same coals in the PDU will also be available so that evaluation of the scale-up data can be made and applied to U.S. coals. Another benefit to be derived is the right to select three other U.S. coals for testing and evaluation in the PDU. This will substantially add to the data base being gathered for the application of this technology to a variety of U.S. coals. Other benefits include DOE sharing in royalties for this process and Exxon's agreement to assist in third party licensing of the process as it might be commercialized in the U.S. Even if Exxon had no intention of commercializing this process in the U.S., the technology will be available for licensing. Also, certain advantageous considerations will accrue (no royalty and technical assistance) to the industrial concern that implements the first commercial plant constructed in the United States based on this technology.

DOE will cost share the estimated $153 million eight year program with Exxon based on a 20% DOE, 80% Exxon split. This results in an estimated total cost of $30 million over the eight year period, or about $3.75 million a year. The Gas Research Institute (GRI) has requested to share in the DOE portion of costs on the basis 2/3 DOE and 1/3 GRI. Thus, over the eight year period, DOE's share would be reduced to $20 million if GRI provides its $10 million. This would result in an average cost of $2.5 million per year for DOE participation.

As pointed out previously, if DOE does not participate in the continuing effort, all of the listed benefits would be lost. When the benefits of this participation are weighed against the low cost of participation, it is overwhelming in favor of continuation. The royalties alone will provide an opportunity to make up for all the costs of participation in this catalytic gasification program. The access to data coming from Exxon's $375 million pilot plant effort is essential to commercialization of this technology in the U.S. and will be available without providing any funding to the pilot plant.

Also, the availability of data showing the performance of U.S. coals with this new catalytic gasification technology will put U.S. coals in a favored position for sales to industry interested in applying the technology.

One major impact of the Department not continuing the funding of this catalytic gasification program is that Exxon would inherit the benefits of all prior DOE funding without further obligation to the government, and other industrial entities would be limited in their access to this promising technology.

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Surface Coal Gasification

Question: Please provide for the record a breakdown of the funding for Process Research/Technological Development (page 92) which increased almost $12.3 million in fiscal year 1982.

— Please explain why the Department is funding a new gasification system developed by Mountain Fuel Resources.

— What is the unique feature of this system?

— How much will the total cost to the government be?

— What is the amount of cost sharing?

— How much money has already been committed to this project?

— In view of the Department's expressed intent of removing itself from the large scale development of company-specific processes and instead concentrating on generic technology development, why is the Department initiating this effort?

Answer: The increase in funding for Process Research and Technology Development does not reflect an increase in the total dollars requested for the Surface Gasification Program but rather a shift in funds within the program to support projects that are responsive to the objectives of DOE. These projects are those that reflect long-range and comparatively high risks technology efforts that can result in substantial return in the long-term. The individual projects included in this category are given in the following table.

Process Research and Technology Development Projects

Project	Proposed Funding, FY 1982 (Dollars in Thousands)
1. Studies of Advanced Gasification Concepts	$ 1,000
2. Development of High Rate Entrained Down Flow Slagging Gasifier (Mountain Fuel Project)	1,500
3. Development of Molten Salt Gasifier (Rockwell)	1,550
4. Studies on Utilization of Coal Fines	650
5. Development of Instrumentation and Gasification Process Operational Control Systems	2,825
6. Investigation and Development of Components Critical to Opeation of Gasification Processes	4,450
7. Investigation of Materials Behavior in Coal Gasification Systems and Development of Candidate Materials for Use in those Environments	1,300
8. Study and Development of Fluid Handling Systems	1,575
9. Investigation of Advanced Gasifier Fabrication Techniques	250
10. Fundamental Studies for New and Promising Techniques for Syngas Processing (shift, methanation, etc.)	1,500
11. Comparative Studies of Slag Protection Systems in Entrained-Bed Gasifiers	400
Total	$17,000

It should be noted that the process (High-Rate, Entrained, Down-Flow, Slagging Gasifier) now being developed at the Process Development Unit (PDU) level under a cofunding arrangement with Mountain Fuel Resources and Ford, Bacon & David is not a process conceived or developed by Mountain Fuel Supply. This concept was conceived and developed as part of the Surface Coal Gasification Program. Indeed, the fundamental patent (Patent #3,988,123, "Gasification of Carbonaceous Solids," granted October 26, 1976) has been assigned to and is the property of the U.S. Government.

The development of this concept was begun at the bench scale under the Office of Coal Research as a new concept that could be more generally applied to all U.S. coals to produce a versatile product (a syngas) that could be used as a medium-Btu fuel gas methanated to a high-Btu gas or used as a synthetic feedstock. Since that time, the development has continued to show promise and indeed was selected by the cofunders as a gasifier concept that they believed had more potential for their end uses than other gasification systems under development. The cofunders have been willing to support their choice through a cofunding arrangement to insure that the development of this concept is continued through the PDU level.

While this gasifier is a high capacity unit, there are two unique features that deserve further development. These are first: a dry coal feed system as compared to the slurry feed systems that are being used in other gasifier development programs; and second, an integral new and novel heat recovery system that offers the opportunity to achieve greater operational efficiencies than can be obtained in other similar units.

The dry feed system will eliminate a number of operational problems and limitations associated with the slurry feeds. In addition, the heat recovery section has been designed and submitted for patent consideration by the Ford, Bacon & Davis Company. This is an A&E firm that has extensive abilities in this area and which believes that this new system will exceed the operational performance of other similar units. The development of such a heat recovery system is essential to application of coal gasification combined cycle technology to the generation of electricity at increased efficiency.

The total estimated cost of this project is $6.0 million of which the Government would fund 80 percent. Thus, the Government will spend $4.8 million to complete the design, construction and operation of this facility. At the completion of this activity, this gasifier concept will be developed through the PDU stage and sufficient data will be available for the industrial sector to decide its merits, and whether or not it should be commercialized.

The industrial partner in this cofunded development effort will provide 20 percent of the total cost of the project which represents a funding commitment of $1.2 million. The industrial partner has made these funds ($1.2 million) available for use at the front end of this project. In addition, the Surface Coal Gasification Program has obligated $1.1 million of FY 1981 funds to the program. Thus to date, $2.3 million have been committed to the project.

As noted above, this process is not a company-specific process and studies are proceeding only at a PDU level of development (30 ton/day coal feed). Not only is it a concept that in itself must be considered generic gasification technology, but the associated systems (dry feed, advanced heat recovery systems) must be developed for this kind of coal gasifier to be used to its maximum capability as a very flexible system suitable for converting coal into a large number of clean alternate energy products.

Indeed, the Department is initiating this effort as a key component of the Surface Coal Gasification Program.

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Surface Coal Gasification

Question: What are the other significant projects in the process research and technology development area?

Answer: A complete listing of all studies or development programs included as part of this budget line has been given as part of the answer to Question 61. All of these individual efforts are considered as significant projects that will generate data essential to the advancement of the state-of-the-art in coal gasification technology.

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Surface Coal Gasification

Question: Please provide for the record the funding for both 1981 and 1982 for the major activity in the technical support area (page 93).

-- Please explain how this support is different than that in the previous category, process research and technology development.

-- Why is there a need for increased funding in this area?

-- Who are the major contractors that are involved in these activities?

Answer: As can be observed by a comparison of the projects listed in the table attached showing the major efforts included as part of the technical support activity with the list of those projects included as part of Process Research and Technology Development, there is considerable difference in the objectives of the projects included in the respective lists. While the Process Research and Technology Development funding is used to support projects directed at understanding, establishing the feasibility or development of key processes, systems or components, the funding in the area of technical support is indeed used for support activities as engineering evaluation, data correlation and exchange, modeling studies and environmental assessments and health and safety studies which are generic or crosscutting the entire Surface Coal Gasification Program.

It should be noted, however, that one project has been included as part of this technical support activity that should be more properly included as part of the Process Research and Technology Development effort. This project is the study of parameters key to the operational performance of coal gasification clean-up systems operating under transient conditions imposed by an end use application. This work being performed by the General Electric Company has been included in this category due to its relationship to other environmental efforts supported by the funds designated to this budget line.

As noted in the attached table, considerably more attention (project/funding) is being given to the environmental aspects of coal gasification. This increased activity is the result of a number of activities (Alternate Fuels feasibility studies; EPA and their guidance documents; gasification projects initiated or about to be initiated (ANR, Allis Chalmers, TVA, etc.) that have imposed a requirement for an accelerated acquisition of the data needed to evaluate and mitigate the potential environmental impact associated with coal gasification. Most of the increase can be attributed to this increased environmental effort.

The contractor for each of the projects included in the list of major activities that are supported as part of the Technical Support budget category has been listed on the attached table below each activity.

Funding for Major Efforts
In the Technical Support Activity

Effort	Funding in Thousands FY 1981	FY 1982
1. Data Acquisition and Correlation for Technical Data Book-Coal Gasification (Contractor: Institute of Gas Technology)	1150	1000
2. Evaluation (Joint Effort) of Waste Waters and Waste Water Treatment Systems		
a. Grand Forks Energy Technology Center-Slagging Gasification	350	500
b. Morgantown Energy Technology Center-Fixed Bed Dry Bottom Technology	400	500
c. Pittsburgh Energy Technology Center-Organic Containments	300	400
3. Environmental Engineering Support Studes (Contractor: Carnegie-Mellon, Environmental Research, Inc.)	425	925
4. A&E Support Services for the DOE/GRI Combined Program (Contractor: Pullman-Kellogg)	1500	2000
5. Computer Modeling Studies (Contractors: Jaycor, Systems Science and Softwears)	450	600
6. A&E Support to the Surface Coal Gasification Program (Contractor: Universal Oil Products/ System Design Corp)	850	875
7. Evaluation of the Performance of Coal Gasification Clean-Up Systems Operating Under Transient Conditions (Contractor: General Electric)	1500	2000
8. Engineering Analysis/Evaluation of Coal Gasification Scale-Up Criteria (Morgantown Energy Technology Center)	900	750
9. Program Office Support Activities (Contractor: Computer Sciences Corporation, Sterling Systems Inc., Mitre, Systematics General Corporation)	0	1500
10. Maintenance/Security of Mothballed Pilot Plants (Contractor: Stearns-Rodger, IGT and Lummus)	700	0

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Advanced Process Technology

Question: Please explain the significance and the amount of funding for the evaluation of thermodynamics of nitrogen compounds and the study of processes for demetallization of heavy fuels in your advanced exploratory research activity (page 115).

Answer: Thermodynamics of Nitrogen Compounds: This product focuses on a signficant R&D areea by measuring the thermodynamic properties of the organic nitrogen compounds and their hydrogenation products that are very important in shale oil and heavy oil processing. The objective of the work is to produce tables of thermodynamic properties of the organic nitrogen compounds that occur in heavy petroleum and shale oil--data that is urgently needed in defining the optimum conditions for their economic removal by hydrogenation during processing. These materials must be removed in processing because they poison catalysts, lead to instability and gum formation in fuel storage, and form NO_x upon combustion in engines. When large volumes of shale oil or heavy oil must be processed, the removal of nitrogen to levels that meet fuel specifications will be increasingly difficult. The thermodynamic studies will help researchers understand the processing conditions needed for their efficient/economic removal. The data obtained will be published in the open literature.

The proposed funding level is: FY 1981 - $200,000 and FY 1982 - $200,000.

Demetalization Processes: The difficulty of producing acceptable refined fuels increases generally as the resources move from light to heavy petroleum to syncrudes. Removal of nitrogen, metals and the conversion of heavy aromatics are limiting requirements of upgrading and refining, and no practical alternative to relatively costly hydrogenation is in sight for these steps. The products are very complex mixtures which reflect the character of the raw material resources as well as the degree of refining required for a wide range of new or improved processes required to remove and recover metals from heavy crudes and shale oil. Removal of metals prevents contacting and poisoning catalysts and reactor systems. Recovery of metals provides a potential economic advantage for demetallization processes.

The funding proposed level is: FY 1981 - $125,000 and FY 1982 - $100,000.

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Advanced Process Technology

Question: Please explain why you work on the properties of asphalt and how many dollars are involved in this activity (page 115).

Answer: The objectives of this project are to determine chemical and physical properties for effective utilization of high-boiling liquid and residual products and by-products obtained from processing and upgrading of fossil fuels; determine development of use for syncrude products and by-products that are undesirable or unfit for more conventional fuel use; and perform research on fundamental properties needed to develop new areas of product utilization. Many industry spokesmen predict future asphalt shortages. Thus, development and evaluation of alternate non-petroleum pavement products are needed. Preliminary studies show that products and by-products from processing and upgrading shale oil, tar sands, and coal may be suitable replacements for petroleum products in pavement applications and often possess properties superior to their petroleum counterparts. Although utilization of syncrude products has been emphasized, continued chemical and physical property studies aimed at preserving and extending the useful life of the Nation's vast inventory of asphalt pavements is needed. This is essential to provide state-of-the-art information for effective technology transfer in the utilization of syncrude products as petroleum product replacements.

The proposed funding level is: FY 1981 - $282,000 and FY 1982 - $310,000.

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Enhanced Oil Recovery

Question: Please provide for the record a breakout of the funding of individual projects in the heavy oil activity for both 1981 and 1982 (page 121).

Answer: The breakout of funding in the heavy oil activity for FY 1981 and FY 1982 is as follows:

	($ Million) FY 1981	FY 1982
Project Deepsteam	$4.8	$4.0
Advanced Heavy Oil Recovery Technology	1.5	1.1
International Agreements	0	2.0
	$6.3[a/]	$7.1

a/ Includes deferral of $1.0 million.

The current test being conducted of the downhole steam generator is significant because it will be the first actual downhole test of the prototype unit. The unit was tested on the surface in a shallow heavy oil deposit for four months last year. This preliminary test was considered successful as the unit ran reliably, showed significant reductions in air emissions by injecting the gases into the formation, and showed no signs of causing reservoir plugging under actual field operating conditions. The current test will actually run the unit down a 2500 foot well and test it under actual field operating conditions. If successful, the experiment will last about one year to determine the long term effect on generator components and materials of construction, and the maintenance requirements of the unit. If this one year test is successful, it is felt that industry interest is sufficient to take over commercial development of the unit, and DOE will then phase out downhole generator work except for a low level of advanced combustion research aimed at burning crude oils in the generator instead of the diesel fuel currently burned.

Industry interest has been very high in this program, especially since the successful surface test last spring. Five oil producers approached the Department to offer their sites for the current downhole test. Most of the oil producers are very interested in utilizing these units, but seem to be waiting to see if the DOE test is successful before making commitments. Based on this high level of industry interest and the marketing ventures already initiated, we are quite confident that a successful DOE downhole test will stimulate an aggressive industry effort to commercially utilize downhole steam generators.

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Enhanced Oil Recovery

Question: What are our programs in conjunction with Venezuela and Canada with regard to heavy oil (page 121).

Answer: In 1979 and 1980, the Department of Energy executed formal agreements with Canada and Venezuela, respectively, for a joint R&D effort in heavy oil and tar sands. The heavy oil resources of Canada, Venezuela, and the U.S. are beginning to be viewed as increasingly important source of future petroleum liquids. The heavy oil resource in the Orinoco region of Venezuela alone is estimated at 1-3 trillion barrels, more than all of the oil in Saudi Arabia. Canada has 1-2 trillion barrels of heavy oil in the province of Alberta. For comparison, the U.S. heavy oil and tar sand resource is about 100 billion barrels.

There are six technical areas of cooperation with Venezuela which relate to fundamental R&D on extraction and upgrading of heavy oil. The joint R&D covers such areas as: joint characterization of heavy crudes; evaluation of past and ongoing EOR projects; determination of residual oil saturation; thermal recovery processes; and supporting basic research at universities, Technology Centers, and National Laboratories of both countries.

Similarly, there are six technical areas for cooperation with Canada, also in R&D relating to extraction of heavy oils and tar sands. These are in the areas of: parametric analysis of tar sands and heavy oil characterization; comparative economics and sweep efficiencies of steam flooding and in situ combustion methods; permeability enhancement methods; and joint design of laboratory and field experiments.

The FY 1982 budget request for these agreements is $1.5 and $0.5 million for Venezuela and Canada, respectively. Both agreements are based on the premise that costs are shared equally by the participants.

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Enhanced Oil Recovery

Question: Please provide for the record a breakdown of the projects for both fiscal year 1981 and 1982 in the light oil category (page 122).

-- Why is this category increasing in 1982 by some $2.6 million?

-- Do you have any results from the 22 DOE cost-shared field experiments which have been undertaken in the past?

-- Could you provide the Committee a record of each of these experiments and their results to date, plus when they will be completed?

-- What research is the Department conducting in miscible gas flooding and micellar-polymer flooding in view of the fact that industry is already undertaking such recovery techniques?

Answer: Condensed breakdowns of EOR project categories for FY 1981 and FY 1982 are as follows:

	$000	
	1981	1982
Miscible Gas Flooding	$1750	$1200
Chemical Flooding	1975	4100
Advanced EOR Data Analysis	1475	2700
	$5200	$8000

The increase in FY 1982 in the light oil category stems from the fact that some of the chemical flooding R&D at Bartlesville Energy Technology Center was obligated in FY 1980. Actual expenditures for FY 1981 were close to the FY 1982 level.

Although most of the 22 cost-shared field tests are still ongoing, in the contracts in five cases have expired but data continues to come to BETC. A summary of the tests including completion date and technical status is given in the attached table. It can be firmly stated that in most cases, enhanced oil has been obtained and placed in the public domain, and the tests have generally been done several years earlier because of DOE cost sharing.

The BETC quarterly report publishes data on all of these field projects. The ongoing 17 projects will terminate in FY 1982 or 1983, with the exception of one in both 1986 and 1988.

Fossil Energy R&D on miscible gas and micellar/polymer technologies emphasizes fundamental work on certain advanced, not well understood concepts of the two technologies. The industry's approach is very much development oriented and geared to the solution of site-specific problems of short-term nature. Examples of current program include: R&D on foams and other agents for improved mobility control for both the chemical and CO_2 flooding systems; quantification of physical behavior of CO_2 - crude oil systems; development of mathematical models for prediction of displacement efficiency in CO_2 and chemical flooding systems; study of the problem formation damage due to CO_2 injection; basic studies on the distribution of residual-oil ganglia and its relationship to oil recovery characteristics; determination of capillary number required for mobilization of residual oil over a large range of permeability, porosity and initial oil saturation; and the effect of wettability on oil recovery.

The emphasis of research work done by Fossil Energy either inhouse or in universities is on advanced process technology of the longer range type. A few exceptions are in parallel with industry work, but on different oils. Industry is also working on advanced process technology, but the emphasis is generally in short term solutions.

LOCATION AND STATUS OF DOE/OGRST COST-SHARED EOR FIELD TESTS

Program	Company	Location	Completion Date	Status
Chemical Flooding	Aminoil USA	Huntington Beach, CA	Dec 1980[a]	TETT[b]
	Cities Service Co.	El Dorado, KS	Nov 1982	Oil production promising
	City of Long Beach (Alkali)	Wilmington Field, CA	Sept 1981	TETT[b]
	City of Long Beach (M. Polymer)	Wilmington Field, CA	Dec 1980[a]	Successful-producing oil
	Conoco	Big Muddy Field, WY	Dec 1988	TETT[b]
	Energy Resources Co., Inc.	Storms Pool Unti, IL	Dec 1983	First oil show, Mar 81
	Gary Energy Corp.	Bell Creek Field, MT	June 1981[a]	Successful-producing oil
	Gulf Oil Expl. & Prodn.	Stanley Stringer Field, OK	June 1979[a]	Successful-producing oil
	Marathon Oil Co.	Robinson Field, IL	Dec 1986	Successful-producing oil
	Penn Grade Crude Oil Co.	Bradford Field, PA	Dec 1980[a]	Tachical failure
	Phillips Petroleum Co.	Burbank Field, OK	Aug 1979[a]	Uneconomic oil production
Miscible Gas	Columbia Gas	Granny's Creek Field, WV	June 1980[a]	Technically successful
	Gulf Oil Expl. & Prodn.	Little Knife Field, ND	May 1982	TETT[b]
	Pennzoil Co.	Rock Creek Field, WV	Dec 1982	Engineering problems
	Shell Oil Co.	Iberia Parish, LA	March 1981	Successful-producing oil
Thermal Recovery	Cities Service Co.	Bellome Field, LA	June 1982	Highly successful
	CLD Group, Inc.	Ventura, CA	Sept 1981	TETT[b]
	Getty Oil Co.	Cat Canyon Field, CA	May 1981	Successful-producing oil
	Mobil CG Corp.	Lynch Canyon, CA	Sept 1983	Successful-producing oil
	Petro-Lewis/Corco.	Bakersfield, CA	Oct 1982	Promising
	Sandia-City Long Beach	Wilmington Field, CA	Dec 1981	TETT[b]
	Santa Fe Energy Corp.	Midway Sunset Field, CA	June 1983	Successful-producing oil

a/ Continuing to receive data.
b/ Too early to tell.

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Enhanced Oil Recovery

Question: Of the $5 million requested for tar sands (page 122), how much is for the beginning of second tar sand steam drive experiment?

-- What was the result of the first?

-- If successful, what is the potential of steam recovery of tar sands?

-- How much more difficult is it to recover tar sands by this method than heavy oils?

Answer: The entire tar sand program budget is primarily aimed at supporting the field experiment program in some manner. The direct cost of the second steam drive experiment in FY 1982, including associated environmental support and detailed site analysis, is about $4.0 million. The remainder of the funds are planned for projects characterizing the bitumen and produced products from previous field experiments and lab tests, examining processes for upgrading tar sand bitumen, and research on novel extraction processes.

The first steam experiment was intended to be a preliminary trial to determine if steam drive was feasible in the tar sand deposit. The main objectives were to determine if required steam injection rates would be accepted by the formation and if communication could be established between injection and production wells. Secondary objectives were to evaluate the use of produced bitumen as fuel for the steam generator and to evaluate the advantages of using insulated tubing in the steam injection string. All test objectives were successfully accomplished and the results were favorable. These results justify the second experiment, which will be aimed at determining the actual performance of a steam flood in a confined pattern by evaluating such factors as how much bitumen can be recovered, the real sweep efficiency of steam, and the amount of heat input per barrel recovered.

It has been estimated that about 80-90 percent of the three to six billion barrels of domestic tar sand resource is too deep to surface mine, and hence some type of in situ technique is required. No in situ techniques have been successfully demonstrated yet in tar sand deposits to reliably estimate their recovery potential. In heavy oils, both steam and in situ combustion techniques can currently recover about 50 percent of the oil in place. If these processes can be successfully adapted to tar sand deposits, this same recovery rate should be a long range goal. The immediate goal is strictly a technical one, and that is to develop an in situ process that is effective.

The main difficulty with recovering tar sands compared to heavy oils is their much higher viscosity, which is a measurement of their resistance to flow (water viscosity equals 1.0cp). Heavy oils will flow a little under reservoir conditions and typically have viscosities under 10,000cp. Tar sand bitumen is usually totally immobile at reservoir conditions and most of the major deposits have viscosities over 1,000,000cp. This requires a much greater heat input to raise the bitumen to a temperature where it will flow, and also requires special efforts to create a flow path for the mobile bitumen to reach production wells.

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Oil Shale

Question: The reduction of this funding still leaves over $15 million in oil shale to be spent mainly in DOE facilities.

-- Please provide some detail of the location and amounts of funding in this area.

Answer: The oil shale R&D budget allocated to the Energy Technology Centers and National Laboratories, as illustrated in the table below, represents our continuing technology base program. The generic data produced is beneficial to improvements in a variety of oil shale technologies rather than being process specific. The reduction in FY 1982 and minor shifts in relative funding allocations between laboratories reflects the moving away from specific industrial projects. For instance, the shift of fracturing research by Los Alamos National Laboratory (LANL) from an industrial mine site to our Anvil Points mine, with increased assistance in this project by Sandia National Laboratory (SNL) and reduction of SNL instrumentation research at industrial sites, is illustrated by the shift of funds in the table. Some increase in advanced process concept research at Laramie Energy Technology Center (LETC) and through universities is coupled with decreased funding requirements for management of major demonstration projects. It is also anticipated that increased emphasis will be placed on testing environmental control technologies and, to the extent that agreements can be reached, this will include tests at industrial sites.

	($ in thousands) FY 1981	FY 1982
LETC	$ 4,712	$ 5,275
LANL	1,684	2,000
SNL	3,923	2,800
LLL	3,000	3,400
LBL	660	600
TOTAL	$13,979	$14,075

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Oil Shale

Question: What is the extent and cost of your activity in the testing of spent shale? (page 127)

-- Please explain what has been done in the past in this area and who has done tests on spent shale, what problems have been discovered, and problems your program will address.

Answer: Spent shale is produced from both surface and in situ retorting of oil shale. However, the problems associated with each type of spent shale are different. Extensive studies of spent shale disposal from surface operations have been conducted, and disposal methods such as piling these solids on the surface or backfilling mined out caverns have beenproposed. This work was conducted by the Department of Energy (CSU, US, LBL and LETC), Woodward Clyde Associates, and U.S. Army Corps of Engineers Waterways Experiment Station (both under Bureau of Mines' contract) and private developers.

The work that has been done on spent shale from in situ retorts was primarily in the area of leaching of the abandoned retort and the development of spent shale grouts. The work was conducted by LBL, LETC and private developers.

This work has identified several problem areas. These are the objectives of the Department's Environmental R&D Program and include the need for engineering design specifications for surface waste disposal piles, stabilization and vegetation procedures for surface disposal piles, retort abandonment strategies, and subsidence control strategies for in situ retorts.

The Department's approximate funding profile is given below:

FY 1978	FY 1979	FY 1980	FY 1981	FY 1982
$200K	$350K	$450K	$650K	$200K

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Enhanced Gas Recovery

Question: Please explain the signifiance of the "mineback facility" in eastern gas shales (page 138).

-- Did the original Carter budget call for actually operating the facility in fiscal year 1982?

-- How many more funds were provided for that purpose in the Carter budget than in the current budget?

-- What is the overall significance of the delay if funds are not provided for the actual stimulation of wells in this test?

-- Please also explain the significance of the offset well test you will do in this area.

-- What is the significance of eliminating the second offset well that was in the Carter budget?

Answer: The "mineback facility" will permit direct observation/measurement of shale reservoir properties under in situ conditions and the effect of various stimulation techniques (formation damage, fracture containment, proppant distribution). The facility will also permit calibration of diagnostic tools and verification of mathematical reservoir models. These data will provide the basis for optimum stimulation treatment design for vertical shale wells.

The FY 1982 budget transmitted to the Congress in January 1981 provided for completion of the facility by the 3rd quarter of FY 1982 and initation of the experimental program during the fourth quarter. The original budget submission provided $2.2 million more than the current budget. Due to the problems encountered in obtaining a lease for the facility, the planned experimental program would not be delayed significantly.

The offset well test is significant in that it will provide data relative to the mechanism of gas production, storage and release in closely spaced producing wells. Coupled with the observed reservoir characteristics available from the "mineback" experiments, this data will allow definition of the optimum well spacing and enable producers to ascertain whether in-field drilling can increase the efficiency of gas recovery.

The significance of eliminating the second offset well is that having data from only one offset well will not convince industry of the validity of the measurement technique (i.e., are the test procedures only valid for that site?). A second offset well, in a geologically similar environment, would double the information data base and verify the soundness of this test procedure.

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Enhanced Gas Recovery

Question: Please explain the significance of the multiwell experiment in the western tight gas sands (page 138).

— Also, what is the significance of the mineback experiment now being cancelled in the western sands project?

-- What is the overall effect of delaying both this and the multiwell test in terms of providing industry with the tools needed to better recover western gas sands resources?

Answer: The multiwell experiment will provide a reasonably well controlled test environment at a site which is geologically representative of lenticular tight sandstone reservoirs. Drilling, stimulation and production testing of single wells completed in lenticular tight sandstone reservoirs has yielded inconsistent and often unsuccessful results. There has been insufficient data to identify the various factors which actually produced the results; specifically there was no way of knowing why the results were good or poor. A minimum of two wells, located only 200-500 feet apart, will be drilled, cored, and tested. Numerous geophysical diagnostic techniques, stimulation procedures and formation testing programs will be conducted. The goals of the experiment are to obtain a comprehensive geological/engineering characterization of typical lenticular sandstone reserviors and develop diagnostic and production technology in order to optimize recovery of gas from these reservoirs.

The mineback experiment at the Nevada Test Site (NTS) enabled scientists to empircally verify laboratory rock mechanics data at actual field scale. This work has resulted in the modification of many fundamental rock mechanics concepts. Cancellation of these experiments will delay the refinement of accurate rock mechanics models.

Both the multiwell experiment and NTS mineback facility are unique undertakings which will not be available to the industry. Delaying these research activities may delay the transfer of technology to the industry by at least one year.

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Energy Production, Demonstration, and Distribution

Question: Please explain what activities will not be undertaken as a result of reducing the domestic energy supply activity from $11.9 million in 1981 to zero in 1982 (page 151).

Your budget justifications on page 155 through page 159 list the activities that will be undertaken in this area in fiscal year 1981.

— Do you plan to absorb any of these activities in the regular fossil energy budget? Specifically, please explain what was done in the unconventional gas demonstration program and why it is not necessary to continue it.

Answer: Three activities were included in the $11.9 million FY 1981 budget for domestic energy supply:

Coal	$ .5
Shale Oil	1.5
Oil & Gas	5.1
Personnel Support	4.8
	$11.9

For the Coal program, the $.5 million in FY 1981 was to support the completion of the voluntary coal conversion effort with nine selected utilities in the Northeastern United States. In FY 1982, these efforts were to be analyzed and disseminated to other utilities nationwide to encourage further voluntary conversions. In the FY 1981 budget, further support was to be given to a systems effort to collectively examine the effects of various types of coal utilization in a specific region of the country, whether from synthetic fuel processing or increased direct coal combustion. Upon completion of this effort, an analysis was to be done to determine the relevance of the system approcah to other areas of the country that will be impacted by increased coal use.

For the Shale Oil program, the shift in emphasis will also be away from any direct efforts to assist or motivate industrial developers through contracting of support studies or awarding planning grants to impacted areas. In FY 1982, the emphasis will be shifted to utilizing the in-house staff to monitor industrial progress towards achieving the 1990 production goals, and to assist in the reduction of regulatory, environmental and land use hurdles to rapid oil shale development.

For the Office of Oil and Gas Development, the completion of the local grants in FY 1981 to develop sources of unconventional gas will shift in FY 1982 to a program of staff assistance to distribute the results of these studies to other communities. In FY 1982, other areas such as technology transfer and assistance in mitigating institutional and environmental impediments to oil and gas development will also be undertaken.

Unconventional Gas Demonstration Program: The UGR Demonstration Program is a grant to the American Public Gas Association. The project involves demonstrating the technical and economic feasibility of producing gas from coalbeds and shales for purposes of small business, community and rural development. To date, all but one site has been drilled, demonstration is underway, and the project is scheduled for completion in November 1981. No extensions or cost overruns are anticipated; thus, no requirements for FY 1982.

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Energy Production, Demonstration, and Distribution

Question: If the transfer of leasing activities to the Department of Interior were not allowed, what level of activity would be necessary to meet your statutory requirements?

Answer: The minimum level of activity for FY 1982 to meet the DOE statutory requirements would be 12 full-time permanent positions and a total budget of $980,000. In addition to satisfying the leasing policy responsibilities specified under the DOE Organization Act, activities would include the analysis of the production of energy minerals located on Federal lands to serve as guidance to Federal leasing policy and as an integral part of the energy supply and demand analysis for the National Energy Plan. Procedures established for setting production rates for Federal energy resources, as prescribed by the DOE Organization Act, would include accelerated production as part of emergency preparedness programs. These activities would be coordinated with national energy planning and energy policies developed and would bridge between DOE's research and development and emergency preparedness actions and the Department of Interior Federal land leasing and administration responsibilities.

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General

Question: Please provide for the record a detail of that target by general areas of the budget.

-- Considering that the scope of many of your activities is being reduced, why is it necessary to increase the travel for fossil energy coal programs (page 98) from $650,000 to $966,000, an increase of 50%?

Answer: The revised FY 1982 budget submission forwarded to the Congress contains a preliminary distribution of personnel for budgeting purposes. The distribution by program areas of FY 1981 and FY 1982 remains an open issue pending a definitive determination of the organization, ceiling levels and methodology required to meet the adjusted ceilings. Fossil Energy presently has an organizational and personnel staffing proposal under review by the Department's Office of Administration. When these matters are settled, we will inform the Congress concerning the distribution by resource areas for the Headquarters and field organizations.

The increase in travel funding for coal program direction from the FY 1981 level of $650,000 to the FY 1982 budget request of $966,000 is primarily to provide funding to approximately the level of FY 1979. The FY 1981 amount of $650,000 remains essentially unchanged from the FY 1979 funding of $629,000, and is actually a reduction from the $667,000 in FY 1980. The dramatic cost increases associated with travel, coupled with the continuing complexity of Fossil Energy's research and development program including the necessary interactions with national laboratories and industrial contractors, generates the requirement for additional travel funding in FY 1982. The Fossil Energy program's change of direction and refocusing in FY 1981 and FY 1982 will require substantial travel, despite the change in scope, in order to assure a smooth transition, implementation, and management structure for future years.

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General

Question: Please provide for the record a breakdown of the number of personnel in each field organization as well as headquarters, and how those numbers will be reduced from 1981 to 1982.

Answer: The current personnel levels in Fossil Energy and those for the end of FY 1981 and FY 1982 are shown in the table below.

The employees from the former Office of Resource Applications are integrated into the Fossil Energy organization during FY 1981. Therefore, the identity of RA personnel no longer surfaces in the FE Headquarters organization.

FY 1982 totals reflect full-time equivalents (FTE) as the control for personnel as opposed to full-time permanent positions (FTP) for FY 1981. The FTE represents the total number of paid employee-years available to the organization in the fiscal year.

Location	On-Board	FY 1981	FY 1982
Headquarters:			
Fossil Energy	265	-	-
RA	143	-	-
	408	356	289
Field			
Bartlesville ETC	159	148	140
Grand Forks ETC	65	63	63
Laramie ETC	141	134	128
Morgantown ETC	234	219	207
Pittsburg ETC	370	343	318
Carbondale MTC	24	14	2
Pittsburgh MTC	27	26	23
Total Field	1,020	927	881
Grand Total	1,428	1,283	1,170

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General

Question: Please provide for the record for total fossil energy programs the amounts of dollars allocated to energy technology centers, universities, national laboratories, and industrial organizations in both fiscal year 1981 and fiscal year 1982.

Answer: The information requested is as follows:

Location	FY 1981	FY 1982
Energy Technology Centers	51,533,000	39,252,000
Universities	33,068,000	21,500,000
Laboratories	77,186,000	48,682,000
Industrial Sector	471,008,000	293,306,000
Program Direction	12,708,000	14,600,000
Total Fossil Energy	645,503,000	417,340,000

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General

Question: Please place in the record a listing of the general plant projects for both fiscal year 1981 and 1982 by individual energy technology center.

Answer: The information requested is on the attached charts.

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GENERAL PLANT PROJECTS -- FY 1981

BARTLESVILLE

Ventilation Building 6 (design, & test-cell #1)
Renovation Building 13 (design, interior demol, expansion)
Roof Building 1
New storage building (design, site prep, shell)
Renovation Building 4

GRAND FORKS

Hazardous materials storage facility
Bulk storage and handling facility
Monitoring and control system
Coal Preparation Facility modifications
Gasifier extension, laboratory
Power filters/UPS change order
Upgrade shower and locker facilities

LARAMIE

Facility mods (water/fire hydrants) - RIFLE
Electric modification for 150-ton retort
Solvent storage bunker
GFI distribution centers
Fire blocking for pipe chases
Gas detection/monitoring - MAIN
Gas detection/monitoring - NORTH
Exterior door modification
"Task 6" fire/safety/vent modifications

MORGANTOWN

Waste water treatment system
Laboratory fixtures
Electrical distribution system
Roadways for Building 12
Header replacement Building 5

PITTSBURGH

Safety/security/energy management retrofit
Code compliance program - Coal Prep Lab
Renovation of Buildings 58/84
Renovation of Building 83
Emergency electrical tie circuit, Bldgs 58/84
Replacement obsolete service piping - PETC
Renovation of cooling water system
Emergency electrical recircuiting Bldgs 83/84
Soil stabilization around hydrogen gas storage tank

May 1981

GENERAL PLANT PROJECTS — FY 1982

BARTLESVILLE

Ventilation Building 6 (test-cells #2 and #3)
Renovation Building 13 (install. of spectrometry lab)
Renovation H/V/AC Building 13
New storage building (interior work)
Resurface parking lots
Improve North Acres
Renovate Building 6 laboratory

GRAND FORKS

Expand contractor facilities
Warehouse
Elevator for pilot plant
Pave storage area

LARAMIE

Radioactive materials storage facility
Mobile equipment maintenance facility
Sewage treatment - RIFLE

MORGANTOWN

Shop ventilation
Segregated change room
Waste water treatment
Replace sewer lines
North fence security
Security for real-estate addition
Process water system
Electrical panels Building 4
Upgrade transformer stations

PITTSBURGH

Emergency ventilation fans, Building 85
Electrical renovation, Building 85
Asphalt paving, various locations
Emergency electrical supply/recircuiting, Bldgs 86/93
Emergency air compressor, Building 93
Utilization of steam from 700 hp boiler
Upgrade cranes to OSHA standards, Bldgs 83/84
Renovation of blow-out walls, Bldgs 83/84
PETC emergency evacuation communication system
Renovation hydrogen/synthesis gas system

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Surface Coal Gasification

Question: Does the December 1979 Phase I (design) estimate of $129 million reflect the best estimate available from ICRC at that time or was their estimate for Phase I reduced by DOE?

Answer: The December 1979 Phase I estimate of $129 million was not the latest or most current estimate available from the International Coal Refining Company (ICRC) at the time of submission. In November 1979, ICRC provided DOE with a $168 million estimate for Phase I. However, the $168 million estimate had undergone no DOE review. The $129 million estimate was provided in August 1979 and had undergone DOE review. The reviewed estimate of $129 million for Phase I was the estimate that was forwarded to Congress.

ICRC is responsible to continually assess adequacy of funds to cover the contract work scope as is provided typically in the "limitation of funds" clause in most government contracts. When a re-estimate is forwarded to the government by the contractor, the appropriate DOE field office having contract administration responsibilities must independently evaluate the estimate to determine its validity and that costs would be allowable under the contract.

ICRC had provided an estimate of $129 million in August 1979. This estimate was subjected to the required reviews and was found acceptable. It was accordingly used as the basis for the new estimate that was reflected in the DOE press release of January 1980. ICRC had in November 1979 forwarded a revision to this estimate for Phase I (design) of $168 million. This estimate was still under review by the DOE through January and accordingly could not be officially used.

Liquefaction - SRC-I

Question: Isn't the cost growth for Phase I overstated in the DOE May 1, 1981, press release (based on the above figures)?

Answer: The cost growth for Phase I is not overstated in the DOE May 1, 1981 press release when compared to the $129 million estimate that had undergone DOE review. When compared to the November 1979 estimate of $168 million (no DOE review) or the Phase I contract value of $170 million (August 1980), the cost growth is overstated.

The May 1,1981 press release reflects the change in official DOE numbers that had been previously released. In a project with the magnitude of SRC-I, it is typical to experience several contractor re-estimates because of the dynamic nature of the process for cost and schedule on large projects of a R&D nature. This process is required by Federal procurement and major acquisition regulations and procedures, which require that contractors continually reassess required funds for work accomplishment. However, DOE can only reflect changes officially approved once a re-estimate has been reviewed by the appropriate executive agency offices such as the DOE Contracting Officer, Controller, etc.

Questions Submitted by Congressman James Hansen

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General

Question: What criteria or rationale did you use in making cuts in the Fossil Energy Research and Development (R&D) budget?

Answer: The Fossil Energy budget is based on the philosophy that the government will concentrate on providing a sound technical base by focusing on longer-range, high risk research and development. Government assistance will focus on energy options that are truly beyond the capacity of private industry and thus do not pre-empt private initiative or benefit individual firms. Where the risk is sufficiently high and the promise sufficiently great, a primary government role may be justified. Once the conceptual hurdles have been surmounted and the commercial benefits are evident, the final scale-up and development of new technology will be the responsibility of industry.

Activities for which there is a need for a Federal R&D role must also be assessed based upon a number of other criteria which can be employed to derive Fossil Energy strategic priorities which are also consistent with National energy priorities and energy R&D requirements. These additional considerations include:

- The urgency of the specific aspect of the Nation's energy problem which the activity addresses. Urgency here is construed to include National security, economic, and environmental considerations.
- The urgency of the need for an improved technologic and environmental knowledge base from R&D to enable the private sector to proceed with use of the technology or resource. This includes the value which the R&D results can provide in narrowing the range of critical uncertainties which prevent energy supply and demand markets from working in an economically efficient manner.
- The urgency for technical and environmental constraint removal through new technology resulting from R&D as compared to the urgency for the roles which other instruments for National policy implementation can play. These other instruments include particularly: reductions in regulatory uncertainty, regulatory reform, tax and other economic incentives, institutional changes, and the establishment of market mechanisms and prices which efficiently allocate resources.
- The insurance or hedge value which the R&D results could provide against uncertain future situations with high downside risks. Downside risks are construed to mean unacceptable or highly undesireable security, economic, or environmental impacts. R&D on technologies which remain critical to achieving National energy goals over a wide range of projections for alternative futures are given priority recognition for their contribution to a robust technology portfolio. This consideration includes recognition of the potential for contribution by highly uncertain technologies (high-risk) and technologies which, although they may not be central or key in the best-estimate projections of the future, become important in some future scenarios. Their importance may be due to the high priority energy problems which would exist absent that technology or due to "technologic failures" of other higher priority technologies to make their potential contributions.

Subject to the general rationale stated above, four strategic priorities were established:

1. Highest priority was assigned to R&D activities which can achieve high payoff in the development of the technology base necessary for the private sector to directly reduce U.S. vulnerability to the economic and security implications of reliance upon imported sources of oil.

2. The second priority was assigned to R&D activities which can make significant contributions to achieving the goal of increased public confidence in and acceptance of the ability to sustain an adequate longer-term supply of supplemental gaseous fuels in an environmentally acceptable manner, and at costs which can effectively provide a backstop supply that breaks the link between gas prices and oil prices. This can be accomplished by establishing the technology base for a diversity of domestic supply sources which together can cap gas prices well below expected oil prices. This priority contributes to increased National security/vulnerability reduction goals by complementing other non-R&D actions underway to reduce oil use through displacement with gas.

3. The next priority was assigned to R&D activities which can provide the foundation for the greatly increased use of coal and other abundant fossil energy resources with high payoffs in potential economic improvements; improved efficiency and flexibility of coal use; and improved environmental performance.

4. The next priority was assigned to R&D activities which address the technology base for extraction, conversion, and utilization of less abundant fossil energy resources; to technologies that address highly specialized applications or smaller market sectors; and technologies that provide hedges or insurance for other technologies already included in higher priority categories.

These four categories are not all-inclusive. For example, applied sciences for coal, shale, oil, and gas will need to be extended to provide an adequate understanding of the relationship between resource properties and process variables for extraction, conversion, and utilization processes and to provide industry the knowledge base necessary for applications to the full-range of coals, different shales, and types of petroleum and to establish the basis for entirely new processes and concepts. These generic areas of Advanced Research and Technology Development and Advanced Process Technology have been given high priority.

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Oil Shale

Question: What rationale or criteria did you use in cutting back the oil shale R&D budget?

Answer: Essentially the budget cuts reflect termination of major technical demonstrations which had progressed to the stage where financing for completion of the existing projects or subsequent developmental projects could be obtained from the Synthetic Fuels Corporation, or from private institutions.

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Oil Shale

Question: What is the FY 1982 budget for basic oil shale R&D, as opposed to process development research?

Answer: The Oil Shale program does not get into process development as such. The bulk of our work involves technology base activities which provide the basic understanding of the key elements involved. For example, the research includes establishment of the geochemistry of the oil shale, reaction kinetics, and mechanisms of conversion techniques as a function of operating parameters and oil shale properties. Promising concepts evolving out of the technology base efforts are then taken through a concept development stage to the point where a determination can be made as to whether development is warranted. Subsequent development would be a function of industry with the assistance of the Synthetic Fuels Corporation or with private financing.

Typically, concept development involves laboratory and benchscale experiments and testing of small process development units to provide sufficient input to experimentally determine technical feasibility at larger scale and economic potential. To support the projects involving innovative conversion concepts for Eastern shales initiated in FY 1981, approximately $800,000 has been requested in FY 1982. Some concept development on a very small laboratory scale will be undertaken at Laramie Energy Technology Center to pursue two very promising conversion concepts with an estimated cost of $600,000. The balance of the funding is for technology base activities.

78-608 O—81——40

House Appropriations
May 7, 1981

Oil Shale

Question: On page 33 of the Fossil Energy R&D justification document (which is volume 6 of the Revised Congressional Budget Request - FY 1982) under the heading of Advanced Coal Research and Technology Development and the subheading of Coal Liquefaction, it states that: "significant progress has been made in understanding the mechanism and kinetics of coal dissolution and the role of coal mineral matter in coal liquefaction." This statement and the paragraph it comes from constitute a glowing assessment of the state of the art of basic research on coal for liquefaction purposes.

— Can anything nearly so positive be said about the state of basic knowledge or research on oil shale?

-- Is it appropriate to compare coal liquefaction with oil shale since both represent potential replacements for liquid fuel?

Answer: In answer to the first part of the question, it can be firmly established that the governments' oil shale research program has provided the retorting reaction kinetics and mechanisms and other essential technology base information that enables industry to launch its first commercialization attempts. Industry has relied heavily upon and continues to rely upon the work done by Laramie Energy Technology Center and the Lawrence Livermore Laboratories on the chemistry and physics of shale conversion. Also, the government program conceived and tested the gas combustion retort which is the forerunner of many of today's retort technologies. This same type of research activity is necessary now to establish a basis for technology that will allow full realization of the resource potential. This technology development is necessary to mitigate environmental impacts that may limit shale oil production and to enable increased resource recovery.

As to the second part of the question, it is difficult to compare oil shale and coal liquefaction because the conversion technologies are drastically different as are the properties of the end product. Oil shales are suited to middle distillate fuels, such as jet and diesel fuels whereas coal liquids are suited to heavy fuel oil and components of gasoline. Both technologies are needed to provide the cross section of liquid fuels required.

House Appropriations
May 7, 1981

Oil Shale

Question: What is the oil shale potential for this country? Is it true that the oil shale resource in the United States is estimated to be in the trillions of barrels of oil, and that the recoverable oil shale resource is much greater than all of the oil reserves of the Middle East?

If so, how do you justify the dramatic funding reductions in FY 1982 for oil shale?

Answer: The oil shale resource is divided into the Western resource, which is characterized by relatively rich deposits of 25 gallons or more per ton and the Eastern resource, which is characterized by relatively lean deposits of 5-20 gallons per ton. In the west there exists the equivalent of an estimated 2.2 trillion barrels of equivalent shale oil of which up to 600 billion barrels are considered recoverable. These resources are primarily found in the Western states of Colorado, Utah, and Wyoming. Colorado has by far the greatest portion of the resource with lesser amounts in Utah and in Wyoming. In addition, 80 percent of this Western resource is currently owned by the Federal Government with the remaining 20 percent in private ownership.

The leaner shale in the east has been estimated at approximately 2.6 trillion barrels of oil, although the certainty of this estimate is less than that of the Western resource. The Eastern resource is found in many states including Tennessee, Kentucky, Indiana, Ohio, Michigan, Alabama, Ohio, Illinois, and Oklahoma. There is no generally recognized estimate for the recoverable reserves of Eastern shale, although the Institute of Gas Technology has recently published articles in which they estimate a recoverable resource of approximately 400 billion barrels of equivalent oil.

In the Western shales region, industry is taking the lead based on previous technology base research conducted under our program. Our role now is one of providing the technology base research to address those problems which may limit the production. In the Eastern shales area we are just beginning to lay the groundwork in the chemistry and physics of conversion for these very different oil shales. Present funding is sufficient to support the technology base activities. The funding reduction in FY 1982 is due to termination of three major technical demonstrations that had progressed to the stage where financing for completion of the existing projects or subsequent developmental projects could be obtainable from the Synthetic Fuels Corporation, or from private institutions.

House Appropriations
May 7, 1981

Oil Shale

Question: How do you reconcile increasing the Advanced Research and Technology Development budget, which funds development of the technology base in coal, with the reductions by almost half in oil shale funding?

Answer: Both the coal and oil shale development and demonstration portions of the FY 1982 budget have been cut. This is consistent with the Administration's goal of allowing industry to participate more heavily in these areas, where necessary. In contrast, the coal Advanced Research and Technology Development budget and R&D portion of the revised Oil Shale budget deal with research on long-term, exploratory, high-risk or fundamental concepts. Neither of these budgets were cut. Thus, a consistent approach has been followed for both coal and oil shale.

House Appropriations
May 7, 1981

Oil Shale

Question: Would you please compare funding for FY 1981 and FY 1982 allotments for oil shale R&D to the DOE national labs.

— Of specific concern is which labs, in FY 1981, will receive an increase over FY 1981 levels of funding for oil shale R&D activities?

-- What increases will they receive?

-- What changes, if any, are projected in the nature of activities undertaken in FY 1982 by the national labs in the area of oil shale R&D?

-- Have some of the national labs picked up some of the money and some of the activities of the oil shale in situ field projects?

Answer: The following is a tabulation of funding allotments to the National Laboratories for FY 1981 and proposed allotment for FY 1982:

($ in thousands)

Laboratory	FY 1981	FY 1982
LANL	$ 1,684	$2,000
Sandia	3,923	2,800
LLL	3,000	3,400
LBL	660	600
TOTAL	$10,117	$9,000

Our National Laboratory effort remains one of technology base activities. As reflected in the funding, there is no increase in funding or addition of activities involving field project operations. The National Laboratory component of the oil shale R&D budget, as illustrated in the table, represents our continuing technology base program whereby generic data is produced that is beneficial to improvements in a variety of oil shale technologies rather than being process specific. The reduction in FY 1982 and minor shifts in relative funding allocations between laboratories reflects shifts in emphasis of specific projects. For instance, the shift of fracturing research by Los Alamos National Laboratory (LANL) from an industrial mine site to our Anvil Points mine required increased funding. Sandia National Laboratory (SNL) instrumentation at industrial sites will be decreased in FY 1982. This accounts for the overall decrease in funding.

House Appropriations
May 7, 1981

Oil Shale

Question: Page 124 of the Fossil Energy R&D justification document contains a statement that oil shale "production is currently significantly limited by economic and environmental constraints."

-- What are some of the environmental constraints?

-- What are some of the economic constraints?

Answer: The following is a brief summary of potential environmental constraints to shale oil production:

1) Retort Abandonment -- Spent shale remaining in underground retorts after product recovery contains salts and carbonaceous residues that can be reached by groundwater and thereby contaminate aquifers. Also, some caving in from the weight of overburden may occur resulting in subsidence at the surface. In this regard, mitigation measures must be developed.

2) Health and Safety -- Operations of an oil shale industry will introduce a new set of industrial working conditions and possibly public health risks as a result of plant operations or product distribution. Research is need to examine the potential health and safety risks, and to develop protective measures.

3) Solid Waste Management -- Surface processes produce extremely high volumes of solid waste in the form of spent shale. Stabilization of the waste piles and control or prevention of toxic lechate formation is essential. To date, no large scale waste management experiment has been performed.

4) Water Treatment -- Reuse of process water is essential in view of resource limitations and basic economics. To do so requires removal of toxic substances. Research is aimed at characterization of the substances as a function of the retort process and development of clean-up systems. Different oil shale processes will also be examined as the consumptive requirements.

5) Emissions -- The volume of emissions from the projected shale oil plants will be significant and because the process is different from known plant operations, the emissions are different. Little has been done to characterize these emissions but the work that has been done indicates the existence of sulfur species not affected by best available control technology. Also, the presence of other components in the gas stream may adversely affect performance of existing control devices. Extensive work is needed on emissions characterization and control technology development. Based on emissions projections from the industrial sector for regulated pollutants, oil shale production would be limited to 400,000 barrels per day.

6) Ecology -- Work needs to be done to assure that proposed environmental impact mitigation procedures are in fact adequate to prevent damage to the ecology. Little work has been done in this area.

The economic constraints are due to the following:

o The required high initial capital investment estimated at $2.5 to $3.0 billion at current 1980 dollars for a 50,000 barrel per day surface plant. The potential is as high as $6.0 billion in spent dollars based on the industry projection of an 8% rate of inflation.

o The uncertainty in the performance (from a reliability and maintainability standpoint) of any known available process - when scaled to commercial size (both surface and modified in-situ).

o The uncertainty of world oil prices.

House Appropriations
May 7, 1981

Oil Shale

Question: Apparently, there are two basic processes for oil shale recovery: surface and in situ.

— Which technology is considered to be most advantageous environmentally? Why?

-- Which technology is considered to be most advantageous economically? Why?

Answer: True in situ processes that require no mining, and modified in situ processes that require less mining for a given volume of oil production than surface processes, offer the benefit of reduced surface disturbance, lower particulate emissions, and avoid the water requirements associated with surface disposal and revegetation of spent shale thereby providing a potential reduction up to 50 percent of estimated surface process net water requirements. To the extent that shale is mined for a modified in situ process, developers will need less surface processing facilities than for a comparable sized plant based on total surface retorting. However, in situ processing has unique potential environmental problems of its own that may render in situ techniques unsuitable in certain locations. The primary question pertains to control of leaching of in situ spent shale so that fresh water aquifers are not contaminated. Also, some in situ processes produce substantially larger amounts of pollutant-containing gases per barrel of oil, adding to the environmental control costs relative to surface retorting. Thus, there are environmental trade-offs that each developer will have to evaluate for the particular geology and hydrologic conditions at his site.

The technology considered to be most economically advantageous depends on site geology. In general, in situ processes offer lower front-end capital costs but may have higher operating costs. One developer has stated that their studies indicate that where open pit mining is feasible, surface processing is the cheapest followed by vertical modified in situ, and that underground mining with surface processing is most expensive. A study of Federal Lease C-b in Colorado by Shell Oil Company indicated that modified in situ was cheaper than surface processing, but that best overall economics would include surface processing of the portion of shale that is mined. Most of the very deep shales characteristic of the government's lands in Colorado underlying the Mahogony Zone are considered uneconomic to mine for surface processing. However, shale deposits near the Basin outcrop, where mining can be used to selectively mine the Mahogony Zone, may be more economic to exploit by surface retorting. Such deposits are characteristic of the sites of the Colony and Union projects.

House Appropriations
May 7, 1981

Oil Shale

Question: On page 126 of the Fossil Energy R&D justification document it states that "overall resource recovery can be improved since in situ retorting could be used to process oil shale which cannot be economically processed any other way -- shale which is too deep to mine or too lean to economically process." Since the in situ process has, again quoting from your justification document, "fewer environmental impacts and decreased costs" as compared to surface retorting of oil shale, how do you justify dramatically reducing program funding for in situ conversion, especially when you propose an increase in federal funding for surface conversion projects?

Answer: Our budget request includes a strong continuing program of cross-cutting generic technology base research to provide the basis for improvements of in situ processes. The proposed reduction is in direct support of large-scale demonstrations of specific processes. These projects will have accomplished their principal R&D objectives by the end of FY 1981, and the Administration considers that the further demonstration objectives of projects such as these should be left to private industry or proposed to the Synthetic Fuels Corporation for support.

House Appropriations
May 7, 1981

Oil Shale

Question: On page 125 the justification document states three primary objectives of oil shale funding, as follows: 1) develop the technology base for oil shale development, 2) develop innovative processes for shale to reduce environmental impacts and to make leaner shales exploitable, and, 3) obtain environmental data on oil shale development impacts. On that same page you zero out funding for a process specifically designed to develop such lean shale deposits with minimum environmental impacts, the Horizontal Modified In Situ (HMIS) retorting process of Geokinetics, Inc. Why have you chosen to zero out a project of such direct significance to your primary research objectives and which have a project life of only one more year before it will have developed a data base sufficient to feasibly apply for private funding?

Answer: The Geokinetics project is not directed to lean shale. This project is concerned with demonstration of a process for the relatively-rich Mahagony Zone deposits that lie near the surface in Utah. Geokinetics is now in the second year of Phase 6 of a development and demonstration in situ oil shale project. As originally negotiated, the ultimate demonstration phase (Phase 6) was expected to be a 24 month effort involving demonstration of two to five demonstration-sized retorts (120 feet wide, 50 feet thick, and 250 feet long). The project in earlier phases progressed through a series of increasingly larger retorts, and has now substantially exceeded original objectives. The first of two demonstration-size retorts is now burning; a second has been rubbled and burning will be substantially completed using FY 1981 funds. These retorts are approximately 210 feet wide, 240 feet long, and are the full thickness of the Mahagony Zone shale bed at the project site. It is also planned to test improved rubblization of a third retort of this size with FY 1981 funds.

We believe that these FY 1981 demonstration tests will have placed Geokinetics in a position to seek funding for either further development or commercialization from private industry or the Synthetic Fuels Corporation. The research and development objectives of DOE regarding this process will have been accomplished under the FY 1981 funding.

House Appropriations
May 14, 1981

Coal Liquefaction - Flash Hydropyrolysis

Question: On page 45 of the Fossil Energy R&D justification document a budget of $5.4 million is allocated to Rockwell International for pyrolysis work. These funds are to be used in FY 1982 to support pilot plant, and assessment of raw products to be refined from such a plant.

a. How do you reconcile funding of these activities with your policy shift away from government involvement in pilot plant and commercialization operations?

b. Why is no mention made here of a projected phase-out or completion of Department of Energy involvement in these operations?

Answer: The budget request of $5.4 million is for flash pyrolysis and hydropyrolysis. A portion of this funding was allocated to continue the Rockwell International Flash Hydropyrolysis project. The reference to their facility as a pilot plant is inaccurate because the experimental facility has a very limited capability. It currently can process up to one ton of coal per hour for a period of six to twelve hours. Some of the requested funding would have been used to substantially modify the facility in order to allow longer term operation of up to one month's duration. Gas recovery and liquid/solid separation facilities would be upgraded. These modifications would give the facility the normal capabilities of a Process Development Unit (PDU). This revamp would greatly enhance the quality of the data, improve product recovery and allow the technical validity of the process concept to be verified.

Engineering assessments and product quality studies are very important in the early stage of a project since the information they provide orients the course of the experimentation so that the most critical unknowns are defined early.

Project phase out has not been mentioned because it is expected that the modified facility will produce data on the longer term operability of the process and its components which are critical to any proof of concept. However, scaleup to a much larger pilot plant or commercial venture is not part of the project and would be left to the private sector.

House Appropriations
May 14, 1981

H-Coal Pilot Plant

Question: On page 42 of the Fossil Energy R&D justification document a budget of $20 million is allocated to an H-Coal liquefaction project.

a. What activities are the $20 million budgeted there expected to support in FY 1982?

Answer: With the funds available in FY 1981 and the $20 million requested for FY 1982 we expect to complete two modes of operation on the H-Coal pilot plant and dismantle the plant. It is possible that some additional operations can be accomplished but doubtful that the full Phase III scope of work (three operational modes) could be completed. A comprehensive review of the budget is currently underway between DOE and the contractor to determine the full extent of operations that can be completed with the funds that are expected to be available.

Question: b. Would these activities change if the industry consortium, which includes Standard Oil, Conoco, Mobil, and others, continued to fund the project after phase-out of DOE participation?

Answer: The activities listed in (a) above are a portion of an agreed upon scope of work by all participants, including DOE. We intend to accomplish as much work as possible during the remainder of Government involvement. However, any activities that may be pursued after phase-out of DOE participation would depend upon the scope of work developed by the remaining participants and negotiations with the pilot plant operator.

Question: c. How do you reconcile funding of this process development and pilot plant with your current policy shift away from government involvement in such projects?

Answer: The funding is for an operating pilot plant which represents a prudent effort to achieve a return on the Government's investment of prior years. In addition, a significant amount of information is obtained for a relatively small amount of additional money. The funds requested for FY 1982 are expected to end the Government's financial support for the pilot plant in conformance with current policy. If there are no additional funds forthcoming from private industry to continue plant operations, the plant will be dismantled.

House Appropriations
May 14, 1981

Combustion Systems

Question: On page 107 of the Fossil Energy R&D justification document $47 million is budgeted for construction of a pressurized fluidized bed pilot plant with the aim of producing a conceptual design for a commercial-size plant. What is the propriety of DOE, with its new funding guidelines, now funding such a project?

Answer: The aim of the Pressurized Fluidized Bed (PFB) Pilot Plant is to provide operating data on system performance which will provide the private sector with the necessary technical information for commercialization. It is not the intent of the program to produce a conceptual design for further DOE demonstration.

More specifically, the objective of the PFB program is to develop improved combustion systems which allow for the displacement of oil and natural gas in the industrial and utility sectors with coal and coal based fuels in an environmentally and economically acceptable manner. Pressurized fluidized-bed systems have been selected by DOE as a long term, high risk, high benefit technology to meet these objectives. PFB systems have the capability of meeting these present new source performance standards as well as anticipated performance standards through the year 2000. In addition, PFB has the capacity for substantially reducing capital costs versus pulverized coal-fired boilers. This reduction in capital costs when combined with its improved efficiency (whereby the coal required to produce a kilowatt hour or electricity is reduced 15 percent), results in a savings of the cost of electricity.

Construction of the PFB pilot plant was initiated in June 1980. At the present time, the foundation has been completed, structural steel for the facility has been fabricated and is being delivered to the site for erection starting June 1981. The PFB combustor is being fabricated with erection scheduled for July 1981. As of April 1981, approximately 36 percent of the engineering and procurements for the construction were completed. The pilot plant components are approximately 1/2 the size of commercial scale components.

The pilot plant is designed with the capability of serving as a site for alternate gas turbine tests. Gas turbine reliability and degradation mechanism in a high temperature, high efficiency PFB combined cycle is a major uncertainity. The purpose of the alternative turbine test is to better represent the spectrum of available U.S. industrial turbines operating in PFB systems by obtaining degradation data and information on erosion and corrosion mechanisms with blades which represent a major segment of U.S. commercial gas turbines.

By reducing the technical risk to a point allowing private sector assessment of PFB performance, this project is entirely appropriate to the new DOE guidelines.

House Appropriations
May 14, 1981

Mining R&D

Question: What obstacles prevent private industry from carrying out the activities funded by the $15 million budgeted for underground coal mining R&D?

Answer: The obstacles to private sector mining R&D are a combination of risk and the inability of technology developers to obtain an economic return on the R&D investment. This latter point is related to the fact that mining technology does not generally involve high volume/high technology products that can be easily protected and marketed. The more research oriented the effort, the greater the risk and the less in incentive. Industry has been and must continue to be involved in adaptation of mining technology (which has been proven in principle) to the wide-range of U.S. mining conditions. This will consist of evolutionary technologic improvements in the absence of an active research pipeline. With the pipeline, there can be major advances in mining technology and thereby a solution to the industries perennial problems of cost, resource recovery, health and safety, productivity, and environmental protection. This is the product the Department is addressing with our effort.

QUESTIONS SUBMITTED BY CONGRESSMAN JOHN MURTHA

Effects on Production of Oil Decontrol

Question. Since the controls on gasoline etc. have been removed, how has this encouraged domestic production?

Answer. Domestic petroleum production was subject to price controls from 1972 through January 1981. Decontrol of oil began in 1979 with complete removal of con- trols from newly discovered, heavy crude and incre- mental tertiary crude oil production and phased decontrol of other categories of oil.

The removal of such petroleum price controls encour- ages domestic oil production by increasing financial incentives for production of more expensive forms of oil such as enhanced oil recovery and heavy oil and by encouraging drilling activity in more difficult and costly places like Alaska and offshore areas.

Effects on Discoveries of Oil Decontrol

Question. How much additional petroleum have we discovered since the controls have been removed?

Answer. While oil controls were in effect, domestic drilling activity and discoveries of new oil were unusually low. Total annual petroleum drilling footage fell as low as 76 million feet in 1973, far below the peak of close to 200 million feet per year back in the 1950's. Similarily, reserve additions or the sum total of new discoveries, revisions and exten- sions, contributed significantly less to total proved reserves between 1972 and 1978 than any other period in recent history.

The removal of controls plus the doubling of world oil prices led to a 33 percent increase in drilling footage and a 39 percent increase in completed oil wells from 1979 to 1980. Completed oil wells increased another 22 percent from the first quarter of 1980 to the first quarter of 1981. Along with greater drilling activity, additions to proven reserves increased dramatically from 1.3 billion barrels per year in 1978 to 2.2 billion barrels per year in 1979. While 1980 data on reserve additions is not available, preliminary estimates indicate they will be as large if not larger than in 1979. These increases in reserve additions will translate into higher future oil production than would have occurred if controls on crude oil and product prices had been continued.

Government Policies Have Exacerbated Energy Problems

Question. (1) You say, "There is no question that the Nation's energy problems are serious and that some Government policies have exacerbated those problems." Please expand on that issue -- what government policies are problems, and what has been done to correct these problems?

Answer. Three classes of government policies have created or exacerbated energy problems: (1) long-standing price controls, (2) the allocation mechanisms made necessary by the price controls, and (3) excessive government involvement in the later stages of the commercialization process.

The problem with price controls is that they are, at best, short-term responses to short-term problems. As the letter clearly states, price controls were placed on oil in order to cushion the effects of rapid price increases on the Nation's economy and on those individuals least able to afford price increases.

But price controls serve merely to suppress symptoms; they do not attack causes. And, as we have seen in the case of oil, price controls can interfere with the orderly adaptation of energy markets to new realities. The fundamental cause of the energy problems of the 1970s was the coincidence of two mutually supporting trends: the increasing market power and cohesion of the oil exporting nations, coupled with the declining flexibility in the domestic oil industry. Our high oil import levels made us vulnerable to the pressures created once the exporting nations chose to act by raising prices and by (temporarily) restricting output.

It must be recognized that the United States does not -- and can not -- set prices in world oil markets. While we can have some influence by our actions, that influence erodes with increasing vulnerability.

Price controls could be imposed only on domestic oil. As a result, producers were discouraged from making the investments necessary to produce oil at levels that would be economic at world oil price levels. And consumers continued to use oil at

Only with the acceleration of decontrol in the late 1970s did the trends begin to change. President Reagan's action of January 28, 1981 to decontrol the prices of crude oil and

petroleum products is designed to allow the marketplace to function efficiently, and to promote increased energy efficiency and vigorous domestic production.

The second class of policies causing problems are those which seek to allocate scarce supplies. Allocation becomes necessary when price signals are not available to bring production and consumption into balance. When, because of price controls, the "invisible hand" of the marketplace is not allowed to exert its discipline, government must substitute its own judgment on the merits of competing claims for the limited supplies available at controlled prices.

It is not surprising that allocation is difficult to do well; the attempt to give priority to emergency uses and to certain classes of users, and the attempt to redress certain perceived inequities, serves merely to exacerbate imbalances, and to create other inequities, elsewhere. Overreaction to shortages more perceived than real contributed significantly to the disruptions and gasoline lines of recent years.

The President's action in removing price controls will allow markets to work efficiently and will obviate the need for allocation in most situations.

The third class of government policies causing problems is the government's attempts to make commercialization decisions which can be made better by individual entrepreneurs. The government should conduct that long-term high-risk research which private enterprise would not undertake because it could not expect to achieve returns commensurate with its expenditures. But, once a technology has been proven, private enterprise is in a much better position than government to judge the attractiveness of a particular decision to invest in that technology. Excessive government involvement at the commercialization stage stifles -- rather than encourages -- private initiative and may lead to the adoption of technical approaches that are far from optimum from the standpoint of both characteristics and scope.

The Administration's budget proposals envision reducing Federal presence in the commercialization phase, and thus leave the way clear for private enterprise to make appropriate commercialization decisons.

One characteristic of all three kinds of inappropriate government action -- price controls, allocation, and commercialization -- is the uncertainty they create with regard to both future developments and future administrative action. Uncertainty is the enemy of investment, and the climate of

uncertainty created by the inevitable frequent adjustments in federal pricing, allocation, and commercialization policies and programs tends further to discourage entrepreneurs from making those energy production and conservation investments which otherwise would be considered economic.

By setting energy policy on a predictable, market-oriented course, this Administration is helping to create a stable environment more conducive to sound, positive investment decisions.

78-608 O—81——41

International Shipping

Question. Explain the following: (a) The authors discussion of the sale of fuel oil to foreign owned ships omits some pertinent information. (b) To restrict sales of bunker fuels to foreign ships would threaten one of the basic conditions supporting international trade.

Answer. Ships involved in international trade and traveling between ports in different countries must be able to refuel. If any country restricts foreign flag ships from refueling, that country will likely have similar restrictions placed on its ships. The inablility of ships to refuel represents a fundamental threat to international trade.

OPEC Control of U.S. Prices

Question. "You say price controls increase our reliance on foreign, insecure, expensive oil supplies. Doesn't it now mean we are tied to the price mechanism of the OPEC Nations, especially since they produce much more petroleum than we do? We are no longer in control of our own pricing of petroleum.

Answer. It is true that because OPEC owns a large part of the world's oil reserves they can exercise a great deal of control over the world oil price. However, the way to under- mine OPEC's strength is not by holding oil prices in the U.S. artificially low. This only increases our use of OPEC oil and OPEC's leverage over prices. It is important to remember that OPEC has a large amount of oil. If they attempt to force the price above what the market is willing to pay, they run the very real risk of not being able to sell all of their oil before demand changes significantly and substitute sources of supply replace OPEC oil. Thus, the price we will be tied to is the price set in the market place by the demand and supply of oil.

Following is a listing of some of the powerful adjustments occurring in the U.S. market as a result of decontrol:

1 Decontrol reduces U.S. demand for oil imports. Lower imports improve our balance of payments deficit, put downward pressure on world oil prices, and reduce our political and economic vulnerability to oil supply disruptions.

2 Decontrol increases U.S. oil production above the amount that would have been produced under price controls. This additional production will further reduce U.S. oil imports.

3 Decontrol encourages the development and use of non-petroleum fuels. By making oil substitutes more competitive, decontrol will increase the contribution of nuclear power, coal, natural gas, and solar energy to reduce U.S. dependence on insecure and expensive foreign oil.

4 Decontrol increases U.S. oil conservation efforts. Decontrol discourages inefficient and wasteful oil consumption, and encourages technological innovations that will allow the U.S. to more efficiently use the oil it does consume.

5 Decontrol increases efficiency, competition and productivity in the domestic oil industry. By eliminating regulations favoring certain firms, decontrol introduces the rigors of competition back into the domestic oil industry. U.S. consumers will benefit directly from the lower operating costs of these operations.

6 Decontrol increases efficiency and productivity in the U.S. economy. Consumer purchases and capital investments will now be made with the clear understanding that oil prices will not be held artifically low by the Goverment. Thus, consumers will demand and industry will insure that new investments will be energy efficient. In addition, decontrol allows valuable capital resources to move from less efficient activities in the oil industry, such as refining and marketing, to more productive and profitable activities in other parts of the oil industry, or elsewhere in the economy.

7 Decontrol does not increase consumer prices by the full amount of the increase in crude oil prices. Although price controls were intended to pass lower crude prices on to consumers in the form of lower petroleum product prices, the controls were not completely effective. Many domestic refiners, distributors and retailers were able to capture some of the benefits intended for consumers in the form of higher profits, or to cover unnecessarily high operating costs. Since decontrol consumer prices have only increased slightly, reflecting greater competition in the industry and consumer unwillingness to pay higher prices.

Demand for Residual Fuel

Question. You state that the demand for high-sulfur "bottom of the barrel" oil is not great. What are the uses of this grade of oil?

Answer. High sulfur residual fuel is used in utility and industrial boilers, and ocean-going ships. The use of high sulfur residual fuel by utilities and industry in the United States is limited by environmental sulfur emission restrictions. Utilities and industry are switching to other fuels and ships are becoming more fuel efficient. As a result, the demand for high sulfur resid is declining. Indeed, the demand for all residual fuel fell by a greater percentage over the last year than any other major fuel.

DOMESTIC COAL USE

Question. Your letter states that each ton of coal used by our international trading partners displaces 3 to 4 barrels of oil thus reducing the pressure on world oil markets and helping to prevent additional price increases -- I agree with that, but if our international trading partners are using coal, what is prohibiting our Nation from using more coal, which would lead to less dependence on foreign sources of energy, and put us in control of our energy destiny?

Answer. Domestic coal use has increased as both utilities and industrial plants either convert old facilities to use coal or construct new coal burning facilities. The shift from oil or natural gas to coal has, however, been slower than might be expected. There are four basic reasons for this delay. First, the overall poor health of the economy, including inflation, has discouraged investment in coal burning facilities which are more capital intensive than facilities using oil or gas. Second, Federal control of oil and natural gas prices have kept these prices below market value. As a result, the price difference between oil or natural gas and coal has been smaller than if prices of these fuels had not been controlled. Significant market distortions against coal use and conservation have resulted. Third, state regulatory commissions have been reluctant to provide utilities with a rate of return on their investments that is adequate to finance new construction and conversions. Fourth, heavy Federal regulation of coal mining and use have caused uncertainties and delays in private sector decision-making and have raised the cost of using coal. The current administration is taking positive steps by addressing the overall economic problems of the Nation, reducing Federal-spending, and proposing tax reforms to encourage productivity. As of January 1981, oil prices were completely decontrolled by President Reagan, and the Department of Energy is currently reviewing the legislated schedule for decontrol of gas prices. The Administration is also reconsidering existing regulations regarding coal mining and use with the intent of removing burdensome, excessive, and counterproductive requirements.

COAL TRANSPORT FOR EXPORT

Question. DOE expresses their desire to export more coal - what is the Administration doing to solve the transportation problems connected with the exporting of coal -- (highways,

rail, ports, etc.)

Answer. Transporting coal for export or for domestic use is a private sector responsibility. DOE has been concerned about ensuring that there are no Federally imposed barriers to more efficient delivery of coal to the ports and awaiting vessels. There appear to be none. The private sector has been responding to the increased demand for coal exports. Ad hoc solutions to increase loading capacity have been instituted by the ports. The Port of Baltimore's use of the Curtis Bay terminal to load barges which are then taken to awaiting vessels at Port Covington is an example of this. In addition, both the Chessie System and the Norfolk and Western Railroad are instituting reservation systems to reduce the extent of demurrage at the Ports of Baltimore and Hampton Roads where this problem has been most extensive. As a result of numerous such efforts, coal exports in March 1981 (9,593,220 short tons) rose 41.9 percent over February and 72.4 percent over March 1980. More long-term solutions to the transportation/export problem are also being undertaken by the private sector. Projects under construction will increase loading capacity by 23 million tons in the next two to three years. Projects planned for completion by 1985 would increase coal handling capacity by nearly 80 million tons.

Surface Coal Gasification

Question: Why are you (Administration and DOE) cutting back on some of the pilot plants when they are approximately 80 to 90 percent completed with their research? (Homer City Bi-Gas pilot plant and Combustion Engineering's Low-Btu Gasification Program at the Windsor, Connecticut process development unit).

Answer: The level of funding requested for the pilot plants should not be considered as any indication of cutting back, but rather an indication that they are indeed nearing the end of their respective development programs. In both projects mentioned, the experimental schedule indicates that the principal objectives should have been achieved during or prior to 1981. The funding levels requested for FY 1982 are to bring each development program to a logical conclusion with sufficient data available to evaluate each concept from an economic and technical point of view and to support any scaleup or continued development by industry.

The maturity of these development programs is reflected also by the fact that in the case of the Combustion Engineering and Westinghouse gasifier concepts, both have been proposed for use in projects underway either in the Demonstration Plants Program or as proposed to the Synthetic Fuels Corporation. In both cases, these activities reflect the opinion of industry that they have been developed to a point that the risk is acceptable for continued development at a larger scale approaching commercial size and that industry is ready to join in the support of such development.

Mining R&D

Question: Why has DOE cut back on the Mining Research and Development?

Answer: In general the cutback reflects a refocusing of the program to a longer-range, higher-risk effort. Activities effected by this cutback include: efforts in hardware-related work for high-speed in-mine development (such as entry driving, tunneling, etc.); follow-on work on roof bolters and miner-bolter support (no field tests of three proof-of-principle prototype machines); and longwall studies (continue ongoing tests but no new starts). We believe that the Administration's program will provide a better climate for the mining community to conduct these near term activities, thereby negating the need for continuing Federal research funding at previous levels. For example, regulatory reform affecting surface coal mining (PL 95-87) should simultaneously provide the nation with the intended measure of environmental protection, assure that regional concerns are met by giving the States a greater role in the process of establishing regulations, and reduce unreasonable and non-productive burdens on the mining companies. Similarly proposed changes in tax regulations will, for example, allow mining companies to depreciate equipment faster allowing them to purchase the equipment required to increase coal production.

House Appropriations
May 14, 1981

Mining R&D

Question: The Secretary said that the coal companies could spend their own money for coal R&D. It is my understanding in talking with the mining community that the "pure coal companies" are not able to afford R&D work. Please elaborate on the Secretary's statement, and provide all of those figures for the subcommittee.

Answer: We believe that the Administration's program will provide a better climate for the mining community. For example, regulatory reform affecting surface coal mining (PL 95-87) should simultaneously provide the nation with the intended measure of environmental protection, assure that regional concerns are met by giving the States a greater role in the process of establishing regulations, and reduce unreasonable and non-productive burdens on the mining companies. Similarly proposed changes in tax regulations will, for example, allow mining companies to depreciate equipment faster allowing them to purchase the equipment required to increase coal production. We have no specific figures that indicate the coal mining companies will be able to afford to spend money for R&D. These figures would in any case be very difficult to obtain because of the proprietary nature of questions about company finances.

Mr. YATES. Mr. AuCoin, do you have any questions you want to ask?

Mr. AUCOIN. Mr. Chairman, I had a couple of questions on fuel cells. I recognize you have covered that subject, but I wonder if you might be willing to let me return for a question.

Mr. YATES. Sure. I want to ask one question also.

Is there anything else you want to tell us that you haven't told us so far? I am sure there are many secrets that you want to tell us.

Mr. LEGASSIE. No, sir. I think we have covered the territory very substantially.

Mr. YATES. I will certainly write a letter to OMB telling them you have carried out their mandate admirably.

Mr. LEGASSIE. I am not sure that that would be beneficial, sir. That might make them very suspicious.

Mr. YATES. I can understand that, too. Excuse me.

FUEL CELLS

Mr. AUCOIN Mr. LeGassie, I understand the presiding chairman explored the fuel cell subject rather thoroughly. I was unable to be here at the time.

I just have a couple of questions because of my own personal interest in this issue that I would like to ask you at this time before we conclude this hearing.

The Administration's 1982 budget request for fuel cells substantially reduces the level of federal support for phosphoric acid fuel cell development.

I would like to know, and I think the subcommittee would like to know if you haven't already responded to this question, how the Department would make use of additional funds, if the subcommittee chose to provide amounts above what was recommended by the Administration?

Mr. LEGASSIE. We have submitted some capability material along those lines to the Congress. We could be sure that this committee has that information available as well, if you do not.

Mr. AUCOIN. Has that been submitted for the record?

Mr. LEGASSIE. Yes, what I am saying is to the extent that that might have been provided to some other committee rather than to this one, I will ensure that it is submitted here for the record as well.

Mr. AUCOIN. Fine.

[The information follows:]

MARCH 19, 1981
Insert for the Record
May 7, 1981

CAPABILITY STATEMENT

Agency/Bureau:	U.S. Department of Energy - Fossil Energy
Appropriation:	Fossil Energy Research and Development
Activity:	Fuel Cells
Proposed Amendment:	Increase the FY 1982 budget for the Phosphoric Acid On-Site/Integrated Energy Systems research and development to $16,000,000.

Current Program:

The DOE Fuel Cell activity for FY 1981 includes three research and development subactivities devoted to: 1) Phosphoric Acid Fuel Cells, 2) Molten Carbonate Fuel Cells, and 3) Advanced Concepts. The phosphoric acid full cell subactivity supports research and development of multi-megawatt electric utility systems, multi-killowatt on-site/integrated energy systems, technology base, and exploratory investigations of fuel cell applications to defense and transporation systems.

This proposed amendment deals with the on-site/integrated energy systems element of the phosphoric acid subactivity only.

The emphasis in FY 1982, under the current program, for on-site/integrated energy systems research and development will be on high risk technology development activities in support of the National Fuel Cell program which was defined in FY 1980 by the National Fuel Cell Coordinating Group. This includes technology development of cell and stack technology of the 40 KW on-site power plant at United Technology, Westinghouse/Energy Research Corporation and Engelhard Industries.

The private sector is expected to support the continuation of the 40 KW field test program (which was initiated in FY 1981) and the remaining technology development and commercialization activities defined in the National Plan for total power plant system development.

Amount Budgeted in FY 1982:

Total budget allocation for the phosphoric acid subactivity is $10,100,000. The on-site/integrated energy system element of the phosphoric acid subactivity is budgeted at $3,200,000.

Feasibility:

In FY 1981 agreements were made with the private sector participants that DOE will focus on techology base and research support and the private sector will fund all the field test and demonstration activities within the National Plan beginning in FY 1982.

In view of the agreements reached regarding the DOE and private sector roles in the total phosphoric acid subactivity priorities, the proposed increase of $12,800,000 (from the current $3,200,000 to $16,000,000) would be used to displace private sector funding for the field test program and the technology commercialization program with government funds.

Capability:

In FY 1981, multi-year contracts were initiated in cost sharing with the private sector to implement the National Fuel Cell Program.

The participants' share of the program was based on the pace which would be dictated more by technical implementability than by funding constraints. It is estimated that, at most, the government funding share in the on site/ integrated energy systems program could be increased from $3,200,000 to $7,700,000. As noted earlier, this increase in government share would come at the expense of a decrease in private funding.

Outlay Effect:

An increase of $4,500,000 in the FY 1982 budget request would increase the outlay estimate for FY 1982 by $3,000,000 and FY 1983 by $1,500.000.

HOUSE APPROPRIATIONS
MARCH 19, 1981
Insert for the Record
May 7, 1981

CAPABILITY STATEMENT

Agency/Bureau:	U.S. Department of Energy - Fossil Energy
Appropriation:	Fossil Energy Research and Development
Activity:	Fuel Cells
Proposed Amendment:	Increase of $19,900,000 for the phosphoric acid fuel cell budget for FY 1982 from $10,100,000 to $30,000,000.

Current Program:

The DOE Fuel Cell activity for FY 1981 includes three research and development subactivities devoted to: 1) Phosphoric Acid Fuel Cells, 2) Molten Carbonate Fuel Cells, and 3) Advanced Concepts. The phosphoric acid full cell subactivity supports research and development of multi-megawatt electric utility systems, multi-kilowatt on-site/integrated energy systems, technology base, and exploratory investigations of fuel cell applications to defense and transporation systems.

The emphasis in FY 1982, under the current program, for on-site/integrated energy systems research and development will be on high risk technology development activities in support of the National Fuel Cell program which was defined in FY 1980 by the National Fuel Cell Coordinating Group. This includes technology development of cell and stack technology of the 40 KW on-site power plant at United Technology, Westinghouse/Energy Research Corporation and Engelhard Industries.

The private sector is expected to support the continuation of the 40 KW field test program (which was initiated in FY 1981) and the remaining technology development and commercialization activities defined in the National Plan for total power plant system development.

Amount Budgeted in FY 1982:

The current FY 1982 budget for the phosphoric acid subactivity is $10,100,000. This amount is allocated as follows:

Electric Utility Systems	$5,200,000
On-Site/Integrated Energy Systems	$3,200,000
Technology Base and Field Cost	$1,700,000

Feasibility:

The proposed increase of $19,900,000 envisioned continued DOE funding of the 4.8 MW field test demonstration at a cost of approximately $5,000,000 to DOE. The Administration believes that this demonstration activity can and should be more properly conducted by the private sector. Of the remaining $14,900,000, $4,500,000 would be allocated to the on-site/integrated energy system program. In FY 1981, agreements were made with the private sector participants that DOE will focus on technology base and research support and the private sector will fund all the field test and demonstration activities within the National Plan beginning in FY 1982.

In view of the agreements reached regarding the DOE and private sector roles in the total phosphoric acid subactivity priorities, the proposed increase of $12,800,000 (from the current $3,200,000 to $16,000,000) would be used to displace private sector funding for the field test program and the technology commercialization program with government funds.

In addition, $3,200,000 could be utilized to accelerate technology base and other applications. However, the program division considers the current program schedule to be acceptable, particularly in view of the need to reduce federal spending to control inflation.

In summary, if additional resources were made available, a revised funding level would be as follows:

Phosphoric Acid Research and Development Area in Order of Priority	Current Level Funding	Amended Funding Level
Electric Utility Systems	$5,200,000	$10,300,000
On-Site/Integrated Energy Systems	$3,200,000	$7,700,000
Technology Base and Other Applications	$1,700,000	$4,900,000
Total Phosphoric Acid	$10,100,000	$22,900,000

Because the Fuel Cell program is executed on multi-year contracts, any increases in FY 1982 funding will require increases in the outyears, if the benefits of increased FY 1982 funding are to be achieved. The FY 1982 increase would require corresponding increases shown in the chart below.

Capability:

In FY 1981, multi-year contracts were initiated in cost sharing with the private sector to implement the National Fuel Cell Program.

The participants' share of the program was based on the pace which would be dictated more by technical implementability than by funding constraints. These contracts, however, were designed to accommodate to the maximum extent possible funding constraints by any of the participants via schedule changes maintaining the National program mission-oriented and maximizing cost effectiveness.

The program has the personnel and management capability to manage an increased funding level. However, an increased funding level would not necessarily lead to a larger overall program or to an acceleration of specific program activities, because it would, for the most part, merely displace private sector investments.

Outlay Effect:

An increase of $12,800,000 in the FY 1982 Budget Authority would increase outlays by the following:

($ in millions)

FY 1982		FY 1983		FY 1984		FY 1985		FY 1986	
B/A	B/O	B/A	B/O	B/A	B/O	B/A	B/O	B/A	B/O
22.9	18.6	41.2	29.6	49.2	40.4	32.5	36.2	23.0	29.2

HOUSE APPROPRIATIONS
MARCH 19, 1981
Insert for the Record
May 7, 1981

CAPABILITY STATEMENT

Agency/Bureau: U.S. Department of Energy - Fossil Energy
Appropriation: Fossil Energy Research and Development
Activity: Fuel Cells
Proposed Amendment: Maintain budget at current level for Molten Carbonate Fuel Cells.

Current Program:

The program is currently scaling up the small laboratory and bench-scale hardware and fabrication techniques that have been used to investigate basic phenomenology and to establish engineering feasibility. This involves developing methods for producing larger components at costs that are compatible with the economics of power generation. Two major contracts at UTC and GE comprise the bulk of the present program. In FY 1981, a "critical mass" of molten carbonate fuel cell technology base activities was maintained by delaying more expensive stack development activities until FY 1982 and FY 1983.

The objective of these two contracts is to establish readiness to proceed into the next program phase, fullscale stack technology. Two smaller efforts, at ANL and ERC, are aimed at developing backups and alternatives to the concepts being developed by the major contractors. Technology base programs funding at universities and small businesses are also included.

Amount Budgeted in FY 1982:

The revised FY 1982 budget request includes $14,100,000 for Molten Carbonate Systems Development.

Feasibility:

The molten carbonate fuel cell power plant affords an option for obtaining efficiencies of 50 percent on gasified coal principally because of the performance potential of the fuel cell and the availability of high quality heat (1200°F) for a bottoming cycle. Efficiencies of 60 percent and higher are expected on methane, naphtha and methanol. The high temperature also provides broad applicability for industrial cogeneration. Previous applied research has indicated that technical development is feasible and has identified the technical issues. Resolution of these technical issues requires a focused, sustained effort with application of a "critical mass" of resources.

The current program is configured to achieve this level. A critical mass has been maintained in the FY 1981 budget by focusing on small-scale experiments and deferring higher cost stack development until FY 1982 and FY 1983. Technical progress has been excellent in the small-scale efforts resulting in a need to address the problems of a full-scale fuel cell (especially stacks). The FY 1982 and FY 1983 budget meets the requirements for dealing with these technical issues.

Capability:

This statement is based on current budget projections which represent a balanced program in Molten Carbonate Fuel Cell development. Project management for contracted efforts is provided through the DOE Chicago Operations Office with the technical assistance of Argonne National Laboratory. Current manpower levels are adequate for the necessary management of the program.

Outlay Effect:

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FUEL CELLS

The first preprototype 40 KW power plant was assembled in April of 1980 and is now being used to verify the adequacy of the system design. This provided an opportunity to uncover technical problems, some minor and some which may require substantive design changes.

DOE also executed a contract with United Technology Corporation (UTC) on September 30, 1980, to procure three initial field test units which will incorporate some design modifications warranted by the results of the preprototype test experience and will be used as the first units for the field test program.

In parrallel, a detailed critical path plan was defined in cooperation with NASA and the Gas Research Institute (GRI) for the 40 KW program, both the field test and R&D components. The 40 KW program integrates the R&D and the field test incorporating technology improvements accrued in the R&D program in the various stages of the field test activity to continue upgrading the design ameliorating any technical difficiencies the present configuration may have.

NASA, in support of DOE, issued a Request for Proposal procuring up to 45 additional field test units to UTC, received a proposal and completed technical proposal evaluations and will be proceeding with final negotiations with UTC as soon as the DOE/GRI agreement is formally executed.

DOE transmitted to GRI a General Council approved agreement on April 14, 1981 for ratification and it is expected that final negotiations and execution of the agreement will be in May of 1981. Clearly this schedule depends on resolution of any legal or programmatic issues that GRI may raise regarding the April 14, 1981 agreement language.

Given cooperation by UTC in the NASA contract negotiations, particularly regarding manufacturer cost sharing and unit price for the 40 KW power plants, the contract could be signed for the procurement of up to 45 units by July of 1981.

78-608 O—81——42

Mr. LEGASSIE. I must first say that we believe that the budget we proposed is adequate and are not seeking additional funds.

Mr. AUCOIN. I understand that. But if the subcommittee were to feel that it were inadequate in some ways and provided some additional funding we would like to know the Department's intentions.

Mr. LEGASSIE. Then, as in most cases, as in almost every program, and fuel cells is not unique, there is a capability to spend additional funds in a rational way.

We have delineated in this capability statement how we might divide that money. I would like to make a few comments, though, if I could.

There is in any such action—our view is that we should not be spending money in the area of the field test activity and in the area of the commercialization edge activity of the fuel cell program.

Our view is that we want to be with others in a total program whereby GRI and other co-funders address those commercialization activities, and the Department's role is a supportive one in the area of research and development, which we think is the more appropriate government role.

So that given additional funds, our first preference is to place those funds where we are the spender of the funds in the R&D line.

To the extent that there is some transitional event which is overrunning, and I am speaking, for example, of the question of what it really takes to finish off the 4.8-megawatt fuel cell in——

Mr. AUCOIN. How far from completion is that plant?

Mr. LEGASSIE. We expect it to go into operation in some six months or so.

However, there are some problems with the operational equipment there that we have to spend some time on.

Mr. AUCOIN. Is it about 75 percent?

Mr. LEGASSIE. I think it is further than that.

Mr. LICCARDI. It is 90 percent complete, although we may have to replace some of the cells that have been sitting there some period of time.

Mr. LEGASSIE. I believe in the total program, whatever costs are associated in that area do need to be addressed.

But I have a preference to see those costs addressed by the private sector side of the situation, is my first preference, so that the government funds can go to R&D.

And it seems to me that to the extent you provide the Department more money, you make it possible for the other participants in the program to thereby minimize their expenditures, and are making a trade between the money that they might spend and that which the government spends.

So, in our view, our budget, while tight, is based on the premise that they will be substantial partners and make substantial contributions. That is principle one.

Principle two is that we ought to be putting our money in the R&D area, and, if given more money, that is really where we would like to put it, although we could see an argument for addressing additional government money to some problems that are of a tran-

sitional or historical character that otherwise haven't gotten tended.

Beyond that, the capability statement speaks more specifically to these areas. But to the extent that the Congress might seriously be considering adding money, I would first like to urge that you don't.

Secondly, I would like to urge that, if you do, that you consider the principles I am suggesting here.

Mr. AuCoin. I understand your response. It is a question of a commitment to long-range R&D as opposed to shorter-term federal investments in partnership with the private sector on things that might come on line much sooner than any technology that would be developed from the R&D.

Which of those two avenues offers the greatest prospect of the continued partnership in funding these projects with the private sector?

One could reach the conclusion that if we abandon a further commitment to the shorter-term projects that are more practical today, you will have fewer financial commitments from the private sector slowing down the development of fuel cells.

Mr. LeGassie. We might have misunderstood each other. I wasn't trying to speak about a phosphoric acid versus molten carbonate, for example.

They are two separate programs. There is no question in my mind that the phosphoric acid program, because it is nearer-term in terms of its capability of contribution to energy systems, is a more important program.

The molten carbonate program is by definition a much longer, higher-risk, longer-range program and one, it seems to me, to make decisions in molten carbonate about the pace at which you want to pursue, this has a long-term gleam in the eye.

So, what I was making remarks about our preference being in the R&D mode, I was speaking within the phosphoric acid program, and the attention there between an R&D developmental role for succeeding technological improvements, and expenditures associated with field testing and with the completion of the 4.8-megawatt demonstration. I would like to see those demonstration and field testing expenditures carried on by our private partners, and I would like to see the government funding in phosphoric acid essentially directed at improved phosphoric acid technology.

Mr. AuCoin. I understand. But my concern is with this plant in question. If we were to not go forward on a partnership basis and finish this plant, then you might very well have utilities backing away which are currently showing you amazing and delightful interest in this technology.

And the whole development would suffer.

Mr. LeGassie. We have no intention of abandoning the 4.8-megawatt demonstration. The funding will be there to get that project in operation and to allow a period of demonstration of that technology.

I don't think we would be sympathetic to government funding of extensive follow-on demonstration at that scale, but rather, would hope that the period of operation which we have in mind would provide adequate input into the next phase.

We certainly have no intent of abandoning that project.

Mr. AuCoin. Is your commitment to long-range R&D that you have stated not to the exclusion of a continued final commitment to a plant such as the 4.8-megawatt plant?

Mr. LeGassie. No, but obviously, you see, it isn't the technology that is in the 4.8, it is not that which is going to be commercialized because we already have better technology out of prior development that exists.

The intent of those who want to go forward in this is to still further improve that technology whose first version is in the 4.8 to the point where the status of that technology would truly be economic, salable, et cetera.

We have a generic role which we have agreed to play in funding the continued development of that technological area for improved versions of that technology. And we are prepared to do that.

Most of the funds in the $5.2 million are associated within the utility line, they are those kinds of activities.

What I am concerned about is that others may be suggesting to you that substantial sums should be provided for more demonstration and more field testing to be funded by the government.

I think that is a role in which we do not perform well. I would rather see that role carried by our private sector participants, and not by us.

Mr. AuCoin. Everyone wants to see private utility development of fuel cells. I think everyone would agree that that is the ultimate goal.

How important is the successful operation of this 4.8-megawatt test plant of ConEd's in a scenario that would lead to that kind of support by private utilities?

How important do you think that is?

Mr. LeGassie. I think to have knowledgeable utilities, probably not very important. But to a much broader set of less knowledgeable utilities, they would look for some visible thing of that kind that could be pointed to.

There is a certain amount of practical knowledge. We have the knowledge now about building and installing it. There is some practical knowledge, also, to be gained out of operation, which I wouldn't discount.

But I am not sure that that is, indeed, the critical element in the commercialization process. In the earlier discussion, I indicated I thought that the truly critical element in the commercialization process was the question of how the one-time costs of the fabricator are borne. Before customers could be built up to the point where he can get a fabrication facility built of adequate scale to serve a market at a reasonable price, there are very significant one-time costs which have to be incurred, and somebody has to pay for it.

They have to be shared somehow by a variety of people. And then there has to be the assurance that there is a market once you have done that in order to justify the bearing of those costs.

To my knowledge, there are some further activities in progress in the private sector which are trying to address both of those issues.

I have recently talked to some of the participants who indicate that they are about to fund privately another market study, a

rather rapid one, but another quick look at what the market situation really looks like today, to address point one.

And that there are active negotiations going on between a group of potential utility customers and the supplier which are addressing the issue how the one-time costs are paid for.

That is in the middle of an iterative process. I think the true road to commercialization is through resolution of those discussions, and presumably, if they can be adequately resolved, that full set of people will be talking to the Department of Energy and saying, please keep your R&D program in place.

That is something we are, I believe, fully prepared to do.

Mr. AuCoin. I have no further questions. I am told that Congressman Dicks is enroute, and he does have some additional questions that he would like to ask.

So pending his arrival, the committee will stand in recess in place for five minutes. I will see you the next time you come before the committee.

Mr. LeGassie. Thank you.

[Recess.]

Mr. Dicks [presiding]. The committee will come back to order.

SRC–I PROJECT

I want to ask you some questions about SRC–I. Do you think some of the problems inaccurately projecting project costs would be solved if the construction management contract were consented to by DOE and this contractor could participate in the preparation of the project cost estimate?

Mr. LeGassie. I think participation of people with construction background in the cost-estimating process would help improve the quality of the cost estimate.

The present barrier to that is less any position taken by the Department of Energy in that we did in the case of SRC–II provide through a letter contract route access to an appropriate limited staff from the selected construction manager to provide such assistance.

And I think we could do the same thing in SRC–I. The problem is one of trying to deal with expenditure levels. It is my understanding that in discussions we have had with ICRC, where this matter has come up, they have indicated that to maintain costs under control in the current period while Congress is considering the various questions around SRC–I, they would prefer to expend funds on behalf of ongoing activities and the existing staff, rather than to incur the additional costs of bringing more staff from the construction manager on board.

So the answer to your question is yes. But I would like to note that the reason that has not yet happened is not fundamentally because there is any philosophic problem that the Department of Energy has with such an action.

Mr. Dicks. But you do think it would help you in projecting the project accurately?

Mr. LeGassie. Yes. I started with a yes.

Mr. Dicks. I appreciate that. I need a little help on that. ICRC, on May 1, indicated that there had been extensive discussions with

the DOE staff regarding additional provision for escalation and contingency.

They also indicated their agreement to the recommendations made by the DOE staff.

Do you agree with those DOE recommendations?

Mr. LEGASSIE. No, sir, I do not.

Mr. DICKS. Why?

Mr. LEGASSIE. I think that the present information that I have and the ICRC press release with respect to the included contingencies that they have indicated there as having come out of the discussions in my opinion and judgment represent still inadequate amounts of contingency, given what the present stage of design and what we have learned about the design we have done over the last year.

So while they may reflect, and I am sure they do reflect discussions that have occurred at a staff level with Department representatives at Oak Ridge Operations Office, and perhaps the program manager at headquarters who is my employee, they do not reflect DOE management judgments as to adequate numbers.

And, indeed, when ICRC showed me this press release before they put it out, I asked them, as a matter of courtesy, because they referred to these extensive discussions with DOE staff, to include an indication that this had not been agreed to by DOE management.

I don't know why they didn't include that relevant information in their press release.

Mr. DICKS. Has ICRC worked with the DOE staff in a satisfactory manner, regarding projected project costs on schedule?

Mr. LEGASSIE. I think they have been an adequate contractor and that our communications and interactions with them are as good as they are with many contractors.

They may even be better than we are with some. So I have no serious complaint to make about those relations.

I also think, to make a complete statement, that we would be hopeful of even better performance than we have been getting, but that is because our standards are pretty high and because this is a very costly and complex project.

And they have not fully performed to our satisfaction. On the other hand, that doesn't mean their performance has been inadequate. And it has been better than many.

Mr. DICKS. What is your opinion of ICRC's ability to manage the SRC-I project? How do they compare to other companies doing similar project management functions for DOE?

Mr. LEGASSIE. We have indicated that there are many ways in which, if I were to compare ICRC and Gulf, for example, who is on the SRC-II project, that I would say ICRC has been doing a little better job.

On the other hand, I must reiterate there are still deficiencies we see in their performance where we are seeking improvement.

FUEL CELLS 40KW

Mr. DICKS. For the last two years, Congress has provided funds for the implementation of a cost-shared 40-kilowatt fuel cell field test.

Despite explicit report language directing the Department to get this program under way, there is still no agreement between the Gas Research Institute, and the Department of Energy, and there is no contract for the procurement of hardware.

What is the status of the 40-kilowatt field test negotiations in DOE?

Mr. LEGASSIE. I understand that we are at this moment evaluating proposals on the procurement of the hardware, and that we intend to complete that action in a timely fashion.

I also understand that there is basic agreement with GRI on the approach. I couldn't say to you that there may not be some detail that may still be negotiated in that arrangement. But my impression is that we are very close to a formal agreement with them and certainly have agreed with them in principle now on the fundamental aspects of the approach.

I would like to double-check this answer with staff here in the room to see whether they want to supplement it in any way, with your permission.

Mr. LICCARDI. Mr. Chairman, we have submitted an agreement to GRI. They have responded with changes to that agreement. I received their copy just yesterday evening.

We have a schedule now to have an internal review, and we have proposed to meet with them the week of May 20 for final resolution.

Mr. DICKS. Would you describe these agreements as extremely fundamental disagreements, or are we talking more around a central agreement?

Mr. LICCARDI. There are some legal issues that have to be resolved by our general counsel's office and their attorneys.

And there are some programmatic issues. But I really don't feel that they are insolvable.

Mr. LEGASSIE. Again, I will certainly do my best to work for early resolution of whatever issues may remain, because I think it is appropriate that we and GRI should come to an agreement rapidly.

Mr. DICKS. Isn't there a high level of private sector cost-sharing in the field test program?

Mr. LEGASSIE. Yes.

Mr. DICKS. Aren't those participating utilities who will share the field test cost anxious for the equipment to be procured and put to test?

Mr. LEGASSIE. I would believe they would be, sir.

Mr. DICKS. I think it's a very interesting and potentially very important technology. I would just like to see us get going on it.

Mr. LEGASSIE. All right I will certainly take your personal interests in this as reflected in these questions, and do some personal review of this matter and commit to you that I will move it along promptly.

Mr. DICKS. Thank you very much.

Mr. LEGASSIE. I appreciated the opportunity to be responsive.

Mr. DICKS. Thank you.

The committee will be adjourned until 10:00 o'clock tomorrow.

MONDAY, APRIL 6, 1981.

STRATEGIC PETROLEUM RESERVE, NAVAL PETROLEUM RESERVE AND EMERGENCY PREPAREDNESS

WITNESSES

ALEX G. FREMLING, ACTING ASSISTANT SECRETARY FOR ENVIRONMENTAL PROTECTION, SAFETY AND EMERGENCY PREPAREDNESS
HARRY A. JONES, DEPUTY ASSISTANT SECRETARY FOR STRATEGIC PETROLEUM RESERVE
CAPT. GORDON R. GILMORE, DIRECTOR, NAVAL PETROLEUM AND OIL SHALE RESERVES PROGRAM
SAMUEL M. BRADLEY, ACTING ASSISTANT ADMINISTRATOR FOR ENERGY CONTINGENCY PLANNING
MAX KOSTINER, ACTING SPECIAL ADMINISTRATOR, GASOLINE RATIONING PREIMPLEMENTATION PROJECT OFFICE
HENRY G. BARTHOLOMEW, DIRECTOR OF EMERGENCY CONSERVATION PROGRAM
DELMAR D. MAYHEW, DIRECTOR, FINANCIAL SERVICES DIVISION

Mr. YATES. I think we will take SPR up first today. Mr. Murtha has another meeting.

This is the hearing on the appropriations for the Strategic Petroleum Reserve appropriation for fiscal year 1982 and on the Naval Petroleum Reserve for 1982 and such other matters that relate to rescissions for fiscal year 1981.

Appearing in support of those appropriations, the principal witnesses are Mr. Fremling, Assistant Secretary for Environmental Protection, Safety and Emergency Preparedness; Mr. Jones, Captain Gilmore, and Mr. Bradley. You are supported by Mr. Kostiner, Mr. Bartholomew, and Mr. Mayhew.

Do you want to tell us about the Strategic Petroleum Reserve?

Mr. FREMLING. Thank you, Mr. Chairman.

We are pleased to have the opportunity to meet with you today. I will mention just a couple of things and then I will have Mr. Harry Jones talk in more detail about the Strategic Petroleum Reserve.

Mr. YATES. Before you start, I want to put your biography into the record so history may know you were here and also the biography of Mr. Jones, Captain Gilmore, Mr. Kostiner, and all the others.

Your statements also will be made a part of the record.

[The biographies and statements follow:]

ALEX G. FREMLING, MANAGER, RICHLAND OPERATIONS OFFICE

Secretary of Energy, James B. Edwards, appointed Mr. Fremling Acting Assistant Secretary for Environmental Protection, Safety, and Emergency Preparedness on February 25, 1981.

Alex G. Fremling has been Manager of the Department of Energy's (DOE) Richland Operations Office since September 1973. As Manager, he is responsible for DOE Hanford activities involving site management, production of nuclear materials,

management of defense wastes, commercial nuclear fuel cycle research and development and other aspects of energy research, development and demonstration.

Fremling was born in Brainerd, Minnesota, where he graduated from Washington High School in 1949. He subsequently attended Carleton College, Northfield, Minnesota, as a Baker Scholar, graduating cum laude in 1953. He attended Washington University (St. Louis) School of Law in 1953–54 and served as a Machine Accounting Specialist in the U.S. Army in 1954 and 1955. He received his M.A. degree in Political Science from the Graduate School of the University of Minnesota in 1957.

In 1957, Fremling entered the Atomic Energy Commission's (AEC) Management Intern Program and was assigned to the Division of Inspection in Washington, D.C. From 1958 to 1963, he was engaged in contract negotiation and administration work at the AEC's Chicago Operations Office until named in 1963 as Assistant to the Assistant Manager for Administration.

Fremling returned to Washington, D.C., in 1965. He served at AEC Headquarters as Contracts Management Specialist and as Special Assistant to the Assistant General Manager for Operations prior to his appointment as Special Assistant to AEC Commissioner James T. Ramey in 1969. In February 1972, Fremling was named Deputy Manager of the Richland Operations Office, a post he held until being named Manager.

In 1977, Fremling was recognized with a special award for his leadership in the Equal Employment Opportunity Program at the Richland Office and he received a 1979 Special Service Award for accomplishments, including upgrading of Hanford production and waste management programs. Fremling was given the rank of Meritorious Executive in the Senior Executive Service in 1980 by the President for his consistent superior program management accomplishments. He was one of 18 DOE executives chosen for this honor which carries a $10,000 cash award. Fremling authored a comprehensive study of the effects of the Department's Hanford Site on the environment which was first presented to the Richland Kiwanis Club in 1979, and later published in pamphlet form.

Fremling is married to the former Janet D. Berkland of Cylinder, Iowa. The Fremlings have two children, Mitchell (16) and Heather (14), and reside in Kennewick.

HARRY A. JONES

Harry A. Jones currently is serving as Deputy Assistant Secretary for the Strategic Petroleum Reserves (SPR) in the Office of Resource Applications at the Department of Energy (DOE). He is responsible for DOE's program to provide a petroleum reserve to diminish the vulnerability of the U.S. to the effects of crude oil supply interruption. Mr. Jones has been with DOE since November 1976 when he joined the SPR program as Director of the Site Operations Division.

Prior to joining DOE, Mr. Jones held the dual positions of Manager, Planning Division, and Manager, Operations Division, for Esso Asia Services, Inc. in Signapore. From 1970 to 1972, he served as a Logistics Staff Analyst with Esso Eastern, Inc. in Houston, Texas.

Mr. Jones was an officer in the U.S. Army from 1959 to 1970. His military assignments included various management positions in petroleum related areas, including Commanding Officer, U.S. Army Petroleum Depot, Ryukyu Islands; and Chief, Petroleum Branch, U.S. Army Vietnam.

A native of Ryan, Oklahoma, Mr. Jones was born on August 14, 1935. He graduated from the University of Texas in 1959 with a bachelor of science degree in petroleum engineering. He received a master of science degree in petroleum engineering from the University of Pittsburgh in 1966.

Mr. Jones was recently awarded the Presidential rank of Meritorious Executive. During his military service he was the recipient of the Bronze Star Medal, Army Meritorious Service Medal, and Commendation Medal with oak leaf cluster.

Mr. Jones is married to the former Linda Askew. They have two sons, Kevin and Harry, Jr., and a daughter, Karen.

CAPT. GORDON R. GILMORE, U.S. NAVY

Capt. Gordon R. Gilmore is the Director, Naval Petroleum and Oil Shale Reserves, within the Office of Environmental Protection, Safety, and Emergency Preparedness, U.S. Department of Energy (DOE). He is responsible for management of the Naval Petroleum Reserves in California and Wyoming and the Naval Oil Shale Reserves in Colorado and Utah.

Prior to reporting to the DOE for duty in June 1980, Captain Gilmore had served as Officer in Charge of Construction to develop the Elk Hills Naval Petroleum Reserve. A career naval officer, Captain Gilmore's other previous assignments have included duty in Japan, Vietnam, Thailand, Cambodia, and various locations in the United States including two previous tours with the Naval Petroleum Reserves.

Captain Gilmore holds a B.S. degree in petroleum engineering and an M.A. degree in management. He is a registered professional engineer. Captain Gilmore is the recipient of numerous awards including the Navy Marine Corps Medal, Bronze Star Medal with Combat V, three Meritorious Service Medals, and the Cambodian National Defense Medal. He was named as one of the Outstanding Young Men of America in 1968.

A native of Texas, Captain Gilmore currently resides in Great Falls, Virginia with his wife Donna and their three boys.

Max N. Kostiner

Max N. Kostiner joined the U.S. Department of Energy in June 1980 to become the Deputy Special Administrator for the Gasoline Rationing Preimplementation Project Office. The Office of Environmental Protection, Safety, and Emergency Preparedness has management oversight of this function.

Mr. Kostiner was employed for 23 years by the Systems Development Corporation, Santa Monica, California. As a Manager of Space Program Contracts and New Business Activities he was involved in major data processing hardware and software contracts for the Air Force Space Program and Newspaper Automated Text Editing Systems. In addition, he has been associated with the American Institute of Aeronautics and Astronautics, Armed Forces Communication and Electronics Association, Air Force Association, and the Association of Computing Machinery.

Mr. Kostiner served in the U.S. Army and Army Reserve data processing units from 1957 to 1963.

A native of New York, Mr. Kostiner is married to the former Betty Miller of Norfolk, Virginia. The Kostiners have two sons, Craig Scott and Kevin Bradley.

Samuel M. Bradley

Samuel M. Bradley is the Acting Assistant Administrator for Energy Contingency Planning, Economic Regulatory Administration, U.S. Department of Energy (DOE). The Office of Energy Contingency Planning serves as the core staff in DOE for the preparation of energy contingency response plans.

Prior to his appointment to his current position in August 1980, Mr. Bradley was Deputy Assistant General Counsel for Petroleum Regulations in DOE's Office of General Counsel. Mr. Bradley joined the General Counsel's Office of the Federal Energy Administration, a predecessor agency of DOE, in January 1977.

Mr. Bradley was the Coordinator for the White House Conference on Children and Youth Legal Rights and Justice Task Force in 1970. He served as an officer in the U.S. Army during 1971–1973.

A native of North Carolina, Mr. Bradley received a Bachelor of Arts degree in political science from Duke University and the Juris Doctor degree from the University of Virginia. In 1966, Mr. Bradley was selected as a Rockefeller Fellow by the Rockefeller Brothers Fund for Theological Education and was awarded a full scholarship to Yale University Divinity School for the 1966–1967 academic year. In August 1979 he received the Department of Energy's Exceptional Service Medal.

Henry G. Bartholomew

Mr. Bartholomew is acting director of DOE's Office of Emergency Conservation Programs. This office is responsible for the development and implementation of emergency energy conservation programs; especially those required by the Energy Policy and Conservation Act of 1975 (EPCA) and the Emergency Energy Conservation Act of 1979 (EECA).

From July 1979, until February 1981, the Office of Emergency Conservation Programs administered the Federal emergency building temperature restrictions—the only Congressionally-approved energy conservation contingency measure authorized by EPCA. In February 1980, the office published the first standby Federal emergency energy conservation plan. It also established and currently administers a national effort to coordinate Federal, State and local emergency conservation planning, in response to EECA requirements.

Prior to his current assignment, Mr. Bartholomew directed a major energy conservation education and training program aimed at owners and managers of commercial businesses, offices buildings, food stores, restaurants and manufacturing plants, as well as corporate chief executives. Within a period of 10 months, more than 600 separate conferences and workshops were conducted throughout the nation.

Before joining the Federal Energy Administration in 1975, he held engineering and marketing management positions with such firms as Xerox, Rockwell International, and Beckman Instruments. Mr. Bartholomew holds a B.Sc. in engineering from the University of California, Los Angeles.

DELMAR D. MAYHEW

D. D. Mayhew is currently serving as Director of the Financial Services Division in the Office of the Assistant Secretary for Environmental Protection, Safety and Emergency Preparedness at the Department of Energy. In September 1978, he became the Director of the Financial Services Division in the Office of the Assistant Secretary for Environment of the Department of Energy. In these positions, he is responsible for financial management functions including budgeting and procurement and associated management information systems. Mr. Mayhew has been employed by the department of Energy, the Energy Research and Development Administration and the Atomic Energy Commission since July 1963 when he joined the Oak Ridge Operations Office of the former Atomic Energy Commission as a management intern and served as an industrial relations officer. In August 1966, Mr. Mayhew transferred to Atomic Energy Commission Headquarters in Washington, D.C., as a budget examiner in the Office of the Controller. He progressed to increasingly responsible positions, including branch chief and Deputy Assistant Controller for Budget in the Energy Research and Development Administration where he shared responsibility with the Assistant Controller for Budget for formulating and executing the Department's budget. He served as the Department of Energy's Deputy Director, Office of Budget from October 1977 until September 1978.

A native of Plainsville, Kansas, Mr. Mayhew was born on December 29, 1939. He graduated from the University of Kansas in 1962 with a Bachelor of Science degree in business administration and earned a Master of Business Administration degree from Washington University, St. Louis, Missouri, in 1963. Mr. Mayhew has been awarded Special Achievement awards on four occasions and has been commended by the Congressional budget office for his efforts.

Mr. Mayhew and his wife, Bonnie, have two daughters, Beth and Heather, and a son, Eric, and reside in Damascus, Maryland.

Statement of Alex G. Fremling
Acting Assistant Secretary for Environmental Protection,
Safety, and Emergency Preparedness
Department of Energy
Before the
Committee on Appropriations
Subcommittee on Interior and Related Agencies
House of Representatives
April 6, 1981

Mr. Chairman, and members of the Subcommittee, I am pleased to be here today to discuss with you the Department's Emergency Preparedness Programs. With me today are:

Mr. Harry A. Jones, Deputy Assistant Secretary for Strategic Petroleum Reserve Office

Captain Gordon R. Gilmore, Director, Naval Petroleum and Oil Shale Reserves Program

Mr. Samuel M. Bradley, Acting Assistant Administrator for Energy Contingency Planning

Following my brief opening statement, each of these gentlemen will deliver statements on their program responsibilities. We will then be prepared to respond to your questions.

I would like to begin by highlighting several very important aspects of our emergency preparedness programs:

1. The Department is committed to the development of a planned, more effective, and more timely overall energy emergency response capability. To that end, on February 25, 1981, as a part of a broader restructuring of the Department of Energy organization, energy emergency preparedness functions located in various elements of the agency were brought together under the new Office of the Assistant Secretary for Environmental Protection, Safety, and Emergency Preparedness. I hold this position on an interim basis.

   The emergency preparedness elements incorporated into this new office includes responsibility for maintaining the capability to deal with energy emergencies. The Office also includes overall agency responsibility for fulfillment of our environment and safety requirements and policies.

2. The Administration and this Department are firmly committed to the development of an effective Strategic Petroleum Reserve Program, and the budget for Fiscal Year 1982 and the proposed supplemental for Fiscal Year 1981 reflect this commitment.

   The President's Fiscal Year 1982 budget request provides for a 750 million barrel reserve, to be completed and filled by 1989, which will be a secure and reliable system capable of withdrawing crude oil at a rate of up to 4.5 million barrels per day if necessary.

3. In addition, the Department is conducting reviews of various policy options and their implications for the National economy in dealing with possible disruptions in petroleum supplies. These reviews are being done with the cooperation and input of other Federal agencies.

The Fiscal Year 1982 budget request for the programs being discussed today is as follows:

	(Dollars in Thousands) FY 1981 Revised Request	FY 1982 Request
Strategic Petroleum Reserve		
Planning	$ 8,000	$ 9,000
Petroleum Acquisition & Transportation	2,688,282	3,684,000
Storage Facilities Development and Operations	82,834	178,496
Program Direction	11,391	11,912
Subtotal	2,790,507[a/]	3,883,408
Entitlements	540,168	
Total SPR	$3,330,675	$3,883,408
Naval Petroleum Reserves		
(Reserves 1 and 2 California)	$ 183,940	$ 202,037
Reserve 3 (Wyoming)	13,413	22,869
Program Direction	893	997
Total NPR	$ 198,246[b/]	$ 225,903
Naval Oil Shale Reserves	$ 3,900	$ 2,560
Emergency Preparedness	$ 6,300	$ 7,900
Emergency Energy Conservation	$ 2,000	$ 2,000
Gasoline Rationing	$ 3,500[c/]	$ 0

Mr. Jones will now discuss the Strategic Petroleum Reserve in more detail.

a/ Includes proposed supplemental request of $1,305,000 for petroleum acquisition and $507,000 for October 1980 pay raise.
b/ Includes pay raise supplemental of $272,000.
c/ Reflects proposed rescission of $33.155 million and reprogramming of $6.012 million for pay raise.

Statement of Harry A. Jones
Deputy Assistant Secretary for Strategic Petroleum Reserve
Department of Energy
Before the
Committee on Appropriations
Subcommittee on Interior and Related Agencies
House of Representatives
April 6, 1981

I. Introduction

Mr. Chairman and Members of the Subcommittee, it is a pleasure to have this opportunity to discuss the status of the Strategic Petroleum Reserve (SPR) Program and the FY 1981 Supplemental and FY 1982 Budget requests.

II. Status of the Strategic Petroleum Reserve

A. Resumption of Oil Acquisition

The most significant event during 1980 involving the Strategic Petroleum Reserve was the resumption of oil fill. The Department of Energy had ceased having oil procurement solicitations issued in May 1979, due to the tight crude oil market conditions resulting from the reduction of Iranian production. Oil fill was resumed following enactment of the Energy Security Act on June 30, 1980. This Act directed that the President immediately undertake and thereafter continue crude oil acquisition...at a level sufficient to assure that crude oil in storage in the Strategic Petroleum Reserve will be increased at an average rate of at least 100,000 barrels per day for FY 1981 and for each fiscal year thereafter."

On August 4, 1980, the President delegated authority to the Secretary of Energy to utilize Naval Petroleum Reserves oil in exchange for oil for the Strategic Petroleum Reserve. A policy decision was made to utilize 75 percent of the Government's share of Naval Petroleum Reserves production while 25 percent would continue to be set-aside for sale to small refiners. The Defense Fuel Supply Center, acting as purchasing agent for the Department of Energy, conducted a competitive exchange of Naval Petroleum Reserves oil for oil to be delivered to the Strategic Petroleum Reserve.

By October 31, 1980, the Defense Fuel Supply Center had awarded contracts under the competitive SPR/NPR exchange solicitation in the amount of 36.6 million barrels. Additionally, an agreement was concluded with the Pacific Refining Company on August 29, 1980, to provide for the direct delivery of 641,490 barrels of crude oil by pipeline from Elk Hills.

On December 12, 1980, Congress enacted Public Law 96-514, the Department of the Interior and Related Agencies Appropriations Act for FY 1981, which provides that "the President shall immediately seek to undertake and thereafter continue crude oil acquisition, transportation and injection activities at a level sufficient to assure that crude oil storage in the SPR will be increased to an average annual rate of at least 300,000 barrels per day or a sustained average annual daily rate of fill which would fully utilize appropriated funds."

On January 30, 1981, the Defense Fuel Supply Center issued the first in what we plan to be continuous open solicitations for crude oil. Awards are made on a weekly or biweekly basis depending on the acceptability of offers from the standpoint of price, timing and quality. Through March 23, 1981, contracts for over 16 million barrels of crude oil were awarded under this method, bringing to almost 145 million barrels the amount of crude oil in storage or scheduled for delivery to the Reserve. Approximately 118 million barrels were in storage on March 23, 1981, with a further 26 million barrels scheduled for future delivery.

The Energy Security Act also required that an amendment to DOE's entitlements program regulations be in place no later than August 29, 1980, to provide the advantages of low-priced lower-tier crude oil to the Reserve. The Department of Energy issued final rules on August 29, 1980, which enabled the Federal Government to benefit from the entitlements program when filling the Strategic Petroleum Reserve. Total entitlements benefits prior to decontrol are estimated to be $540,168,000.

B. Construction Status

For the benefit of the new members of this committee, I will briefly review the Strategic Petroleum Reserve development program. The Strategic Petroleum Reserve is being developed in separate phases. It should be understood that although the separate phases involve development work for different storage facilities, the phases do overlap in time. Decisions have been made and funding requested for the first three increments or phases to provide a total of 750 million barrels of capacity by 1989.

Phase I

Phase I consists of 248 million barrels of storage capacity in five storage sites, one in Texas and four in Louisiana, plus a Government-owned marine terminal facility at St. James, Louisiana. The Phase I sites are Bayou Choctaw, West Hackberry, Weeks Island and Sulphur Mines in Louisiana, and Bryan Mound in Texas.

All five of the Phase I storage sites had existing capacity developed either through solution or conventional mining techniques. These sites were selected for conversion to crude storage sites because of existing capacity suitable for crude storage, and their proximity to commercial facilities which permitted distribution to inland and local refineries via pipeline and to other coastal locations, including noncontiguous areas, via ocean going vessels.

To develop these facilities over 2,100 acres of land were acquired. In addition, 175 miles of 30, 36 or 42 inch diameter pipeline were constructed to interconnect with commercial pipelines and marine terminals. Over 3,200 acres of rights-of-way were obtained. In Phase I of the program, 55 wells were drilled for oil fill, drawdown and brine disposal, and 20 wells were worked over.

Phase I construction began in July 1977 with the installation of temporary facilities for early oil fill. During 1980, Phase I facilities development was completed as designed.

Phase II

Phase II consists of expansion of three of the five Phase I sites: West Hackberry by 160 million barrels, Bryan Mound by 120 million barrels and Bayou Choctaw by 10 million barrels through the acquisition of an existing cavern. Facilities installed at West Hackberry and Bryan Mound sites during Phase I are being modified and used for the solution mining of the additional underground storage capacity. Each of the expansion caverns being created will have a net oil storage capacity of 10 million barrels. For Phase II, 46 wells out of a planned 48 wells have been drilled for leaching, oil fill, and withdrawal of oil.

To accommodate the high volume of brine generated during the creation of the new caverns at the West Hackberry and Bryan Mound sites, brine disposal pipelines had to be constructed to discharge the brine offshore in the Gulf of Mexico. The two brine disposal pipelines are 36 inches in diameter and total 41.6 miles in length.

Phase II facilities construction at Bryan Mound will be completed during 1981. Leaching operations were initiated in March 1980 and will continue into 1986. Since July 1980, brine disposal rates have averaged over 600,000 barrels per day. I am pleased to report that our environmental monitoring has not detected any detrimental effect to the Gulf or to sea life as a result of the brine disposal operations.

Phase II facility construction at West Hackberry will be completed during 1981. The 27 mile brine pipeline was completed in December 1980 and all wells required for leaching have been drilled. The commencement of leaching is planned at West Hackberry in May 1981.

Under current plans, fill of the Phase II expansion of 120 million barrels and Phase III expansion of 40 million barrels at Bryan Mound will be completed in March 1987, and fill of the Phase II expansion of 160 million barrels and Phase III expansion of 30 million barrels at West Hackberry will be completed in December of 1987. The second group of six caverns at Bryan Mound and eight caverns at West Hackberry will be leached simultaneously with the Phase III caverns at these sites.

We are looking at ways to accelerate the Phase II program without significantly increasing the Estimate at Completion. We have initiated action to increase the Bryan Mound leaching rate to 980,000 barrels per day by the end of 1981.

Phase III

Phase III of the program consists of 212 million barrels of storage capacity. Phase III, like Phase II, is currently planned to include the solution mining of salt domes in the Gulf Coast region to create underground storage caverns. Phase III will involve the further expansion of the two existing sites. Bryan Mound will be expanded by an additional 40 million barrels and West Hackberry will be expanded by an additional 30 million barrels. In addition, at least one new site will be developed for the remaining capacity.

III. FY 1982 Budget Request

A. Summary

I will turn now to the FY 1982 budget request for the Strategic Petroleum Reserve. We are requesting $3,883,408,000 for Budget Authority in FY 1982. In addition, we are requesting $1,305,000,000 in a FY 1981 supplemental request to replace benefits from the entitlements program which were lost when crude oil prices were decontrolled on January 28, 1981, and $507,000 for October 1980 pay raise costs.

B. Major Policy Decisions and Assumptions Affecting the Budget

The FY 1982 budget proposal for the Strategic Petroleum Reserve embodies the following major program policy decisions and assumptions:

1. Funding in the FY 1982 request assumes continuation of Phase II construction. The Estimate of Completion remains unchanged.

2. Funding is requested to initiate Phase III site acquisition, design and construction for one new site plus a further expansion of two Phase II sites, West Hackberry and Bryan Mound.

3. Phase III will be 212 million barrels to provide for 750 million barrels of filled storage by 1989.

4. The March 10, 1981, budget request is based on the assumption that oil acquisition will continue to be financed by direct appropriations. The budget request is based on an annual average rate of 207,000 barrels per day during FY 1981 increasing to an annual rate of 230,000 barrels per day in FY 1982. This provides for a fill level of 252 million barrels by the end of FY 1982. This represents the highest sustainable average rate during that period, in light of storage limitations.

5. Oil prices and delivery costs are assumed to trend gradually upward this year and to increase slightly faster than the rate of inflation through program completion.

6. Based on the foregoing assumptions, the completed 750 million barrel SPR will cost $41.7 billion.

C. Explanation of the FY 1982 Budget Request

The Department is requesting $3,883,408,000 in new budget authority for the Strategic Petroleum Reserve Program in FY 1982 for the following purposes:

1. Planning: $9,000,000 to support the funding of studies pertinent to major issues concerning the development and use of the Strategic Petroleum Reserve, including Environmental Impact Statement preparation, environmental monitoring of sites and brine disposal, management information, computer services and Phase IV planning.

2. Petroleum Acquisition and Transportation: $3,684,000,000. This budget assumes continuation of direct appropriation financing of the Strategic Petroleum Reserve at an average rate of 230,000 barrels per day in FY 1982, to a cumulative fill level of 252 million barrels, with a further 54 million barrels on order for delivery in FY 1983.

3. Storage facilities development and operation: $178,496,000 for the following purposes:

   a. Phase II: $34,065,000

      The Phase II funding category provides for continued incremental funding of development of 290 million barrels of additional storage capacity at West Hackberry, Bryan Mound and Bayou Choctaw. The total cost of Phase II is estimated to be about $702,255,000 or $2.42 per barrel of capacity. Through FY 1981, the Congress has provided $527,637,000 for Phase II.

   b. Phase III: $102,949,000

      The total cost of Phase II is estimated to be $1,033,742,000 or about $4.87 a barrel of capacity. The FY 1981 budget provided $2,802,000 to conduct engineering analyses of the Phase III sites. The Phase III storage represents the least cost approach now available to complete 212 million barrels of storage.

      The FY 1982 request of $102,949,000 is to proceed with detailed design and development of Phase III sites, which are scheduled to be completed in FY 1989.

   c. Non-Phase Specific: $41,482,000

      A new budget category called "non-phase specific" was added in FY 1981 to include those facility development activities not clearly associated with any one of the phases. Included in this category are Continuing Engineering, Operations and Maintenance, and Safety, Security and Reliability Upgrades.

4. Program Direction: $11,912,000

Program Direction funding provides for the salaries and expenses necessary to plan and manage the Strategic Petroleum Reserve. During 1981 the staffing level of 190 full time positions will be required and during FY 1982 it will increase to 200 positions. These additional 10 people are required for the initiation of Phase III of the Strategic Petroleum Reserve.

A total of 32 other than full time positions for the Strategic Petroleum Reserve are funded as are 25 full time positions transferred to the Corps of Engineers during FY 1979.

D. Proposed FY 1981 Supplemental Request

The Department is also requesting an additional $1,305,000,000 to remain available until expended for petroleum acquisition and transportation for the Strategic Petroleum Reserve. The President's January 1981 buget estimated that $1,845,390,000 in entitlements would be received by the Strategic Petroleum Reserve in FY 1981. This estimate was based on the assumption of a continuation of phased oil price decontrol and an SPR fill rate of 207,000 barrels per day in FY 1981. Prior to the Administration's decision to decontrol oil prices in January 1981, the SPR had earned an estimated $540,168,000 in such receipts, a reduction of about $1,305,000,000 from the prior estimate. It is proposed that this estimated loss be restored by a supplemental appropriation for FY 1981 in the amount of $1,305,000,000. If such a supplemental appropriation is not made available in a timely manner, oil procurement will be delayed, which will increase the acquisition cost for oil.

IV. Conclusion

In conclusion, I would note that the Congress has expressed its support for this program in the past through the appropriation of nearly $7 billion in funds and in other ways as well. This support is resulting in the development of an emergency oil storage system which, as both a strategic and financial asset of the United States, will provide the nation with benefits in excess of the budgetary resources required.

We believe that the budget levels the President has proposed for the SPR program in FY 1981 and in FY 1982 reflect the high priority which the Administration has placed on a responsible but expeditious execution of program plans. I commend these proposals to you and ask for your continued support of our effort.

Mr. Chairman, this concludes my statement. I will be pleased to answer any questions you may have at this time.

Statement of Samuel M. Bradley
Acting Assistant Administrator for Energy Contingency Planning
Department of Energy
Before the
Committee on Appropriations
Subcommittee on Interior and Related Agencies
House of Representatives
April 6, 1981

As Mr. Fremling indicated, the Emergency Preparedness functions in the Department have been consolidated under the Assistant Secretary for Environmental Protection, Safety, and Emergency Preparedness. In addition to managing the Strategic Petroleum Reserve program and the Naval Petroleum and Oil Shale Reserves programs, the Assistant Secretary is responsible for developing plans for energy emergencies as well as managing operations during an actual emergency.

The Department is requesting $5 million to continue our power supply and reliability activities. Funds are requested for reviewing international electricity transactions, expanding the Electric Power Monitoring Center, responding to fuel supply emergencies, and investigating major power systen outages.

The Department is requesting $2 millon for the emergency preparedness programs of the Economic Regulatory Administration. The recent decontrol of domestic oil markets has changed our emergency preparedness posture. In the past, the country had in place what might be called a "negative emergency preparedness policy" because of controls on petroleum. These controls amplified tightness in oil markets and, by allocating products on a historical basis, contributed to shortages and gasoline lines.

We are currently taking stock of existing emergency authority to determine what, if any, additional legislation is needed to mitigate future disruptions in world oil markets. The funding requested for FY 1982 will be used to develop and maintain DOE readiness in the event of defense or peacetime "declared emergencies" and to ensure an adequate DOE capability to communicate effectively with State and local Governments.

Finally, $900,000 is requested to support a small price and supply analytical capability. Since world oil supplies are influenced by a relatively small number of producers concentrated in an insecure region of the world, we must be prepared to respond to potential supply disruptions. We believe that free market forces will, under most if not all conditions, provide the necessary incentives to ensure the most efficient allocation of available supplies of crude oil. We believe, however, that continued monitoring is advisable since decisions to implement energency plans or draw down SPR require information on international and domestic supply situations.

With respect to gasoline rationing, the Administration has concluded that the magnitude and complexity of the problems associated with a coupon rationing program have raised serious questions about its viability. Even if the problems of logistics, security, fraud and equity could be resolved and even if the preimplementation work is completed, it is doubtful that the program could be implemented within the projected three-month startup time after an emergency occurs. Consequently, we must concentrate on other, more readily workable emergency measures.

With respect to the Emergency Energy Conservation Act program activities, the FY 1982 request of $2 million will be used principally to (1) facilitate the dissemination of information regarding the development and implementation of voluntary conservation measures and plans; (2) provide limited technical assistance to State and local Government planners; and (3) develop and refine effective emergency measures aimed at mitigating the adverse economic and social effects of future supply interruptions.

The proposed FY 1981 budget rescission for this program would reduce the budget by $10 million, largely by eliminating further categorical grants to the States for emergency planning. During Fiscal Years 1980 and 1981, approximately $3.2 million was awarded to States for emergency conservation planning, including $1,653,000 from the FY 1981 appropriation during the first quarter.

The proposed FY 1981 rescission and FY 1982 reduction in this program are consistent with other actions we have taken recently as a consequence of the President's removal of price and allocation controls on crude oil and petroleum products. The Department expects that voluntary restraint induced by market incentives will be more effective in dealing with future disruptions than would additional Government regulations. Thus, on February 23, 1981, we proposed to withdraw several measures from the standby Federal emergency energy conservation plan. If after reviewing the public comments we will receive by April 24, 1981, and other relevant information, the Department makes the proposed changes final, the standby Federal plan will include but two measures: a public information program and minimum automobile fuel purchase restrictions.

In conclusion, a need exists for continuing review of the implications to the economy of disruptions in petroleum supplies and the various policy options that will assist the market in coping efficiently and equitably with disruptions. This review will be done with the cooperation and input of other Federal agencies.

Statement of Captain Gordon R. Gilmore
Director, Naval Petroleum and Oil Shale Reserve
Department of Energy
Before the
Committee on Appropriations
Subcommittee on Interior and Related Agencies
House of Representatives
April 6, 1981

Mr. Chairman, I am Gordon R. Gilmore, a Captain in the U.S. Navy and presently assigned as Director of the Naval Petroleum and Oil Shale Reserves. I know that many of you on this committee are well acquainted with the background and history of the Naval Petroleum and Oil Shale Reserves program, but I would like to summarize for the new members a few major points about the program.

There are three petroleum reserves and three oil shale reserves. Naval Petroleum Reserve No. 1, located at Elk Hills, California, is one of the largest producing oil fields in the United States, and has remaining recoverable reserves of nearly a billion barrels. Production is accomplished under a unitization agreement with Chevron, with the Government receiving about 80 percent of production and Chevron the remainder. In Fiscal Year 1980, production from Naval Petroleum Reserve No. 1 averaged 159,200 barrels of oil per day. Production continues to increase from that field and is estimated to average nearly 180,000 barrels per day in Fiscal Year 1981. That level of production makes it second in the United States only to Prudhoe Bay as a producing field.

Naval Petroleum Reserve No. 2, joins the southwest portion of Naval Petroleum No. 1 and has been leased for production since the early 1920's. About 630 million barrels have been produced from Naval Petroleum Reserve No. 2 over the years and recoverable reserves remaining are now about 20 million barrels. During Fiscal Year 1980 the Government received about 300 barrels of oil per day as royalty, and that should remain fairly level during the next several years.

Naval Petroleum Reserve No. 3, located northeast of Casper, Wyoming, is also being developed and is totally Government owned and managed. Recoverable reserves remaining there are approximately 26 million barrels. Annual production during Fiscal Year 1980 averaged 4,500 barrels of oil per day. It is expected that production will average about 4,000 barrels of oil per day in Fiscal Year 1981 and Fiscal Year 1982.

There has been no exploration or development of the oil shale reserves located in Colorado and Utah, although we are making progress on a pre-development plan for Naval Oil Shale Reserve No. 1 in Colorado. There have been some recent discoveries of conventional oil and gas in the vicinity of Naval Oil Shale Reserve No. 2 in Utah and Naval Oil Shale Reserve No. 3 in Colorado.

Development of the Petroleum Reserves is generally proceeding according to plan. We had anticipated the availability of two additional drill rigs at Naval Petroleum Reserve No. 1, however, with drilling activity in the United States at an all-time high, we have not been able to expand our rig count since early in the fiscal year. We are actively pursuing the two additional rigs and anticipate bringing them on board within 30 days, if acceptable rates can be negotiated. Consideration is being given to moving the Government rig from NPR-3 to Elk Hills this summer if needed to complete the 50 well program for 1981.

Since last year we have been authorized to use Naval Petroleum Reserve oil to support the Defense Department and the Strategic Petroleum Reserve. During September and October 1980, approximately 640,000 barrels of oil were transported directly from Naval Petroleum Reserve No. 1 at Elk Hills to the Strategic Petroleum Reserve sites on the Gulf Coast.

FY 1982 Budget Request

Turning now to the Fiscal Year 1982 budget request for the Naval Petroleum and Oil Shale Reserves. Out of the total Naval Petroleum Reserve request for $225,903,000, $202,037,000 is needed for continued development and production of Naval Petroleum Reserve No. 1. At that level of funding, output from the Reserve should peak at between 180,00 and 190,000 barrels of oil per day, bringing in revenues for Fiscal Year 1982 of about $2.4 billion. This level of funding is an increase of approximately $18,000,000 over the Fiscal Year 1981 revised request.

Roughly half of the request, $107,161,000 is needed for operations and maintenance of the Reserve. This is almost a 60 percent increase over operations and maintenance funding for Fiscal Year 1981, caused chiefly by increased natural gas operations (+$6.3 million), remedial work on existing wells (+$5.3 million), 145 miles of road repairs (+$4.9 million), and increased electrical usage (+$7.1 million).

We also plan to expand our drilling activity significantly at Naval Petroleum Reserve No. 1. The field should have an on-going program of 60-90 new wells per year to reach and then maintain the maximum sustainable rate of production. The drilling program for Fiscal Year 1982 would include 91 development wells ($76.5 million) and 4 exploratory wells ($8.1 million).

During Fiscal Year 1982, we expect to complete essentially all of the California Development projects. The request of $7.2 million for this program will bring to $361.2 million the cumulative amount which has been requested for these projects since 1977.

The Fiscal Year 1982 budget request for Naval Petroleum Reserve No. 3 is $22,869,000. This represents an increase of some 70 percent over the Fiscal Year 1981 appropriation. This level of funding would support a production program of 4,000 barrels of oil per day, with revenues at Naval Petroleum Reserve No. 3 of almost $69 million. Underlying the large percentage increase for Naval Petroleum Reserve No. 3 is a significantly larger development program (+$3.4 million), expansion of the enhanced recovery project (+$3.5 million), and across-the-board increases in operation and maintenance (+$2.4 million).

The Fiscal Year 1982 budget request for the Naval Oil Shale Reserve is $2,560,000. This is a reduction of $1,340,000 from the Fiscal Year 1981 appropriation, but will complete the pre-development plan for these reserves, and provides $160,000 for their surface management by the Interior Department's Bureau of Land Management.

The total amount of funds requested for program direction in the field and at headquarters ($4,666,000) is for the support of 21 full-time positions in headquarters, 82 full-time positions at the Naval Petroleum Reserves Project Office in Elk Hills, California, and 18 full-time positions at the Project Office in Casper, Wyoming, that helps to manage the Naval Petroleum and Oil Shale Reserves in Colorado, Utah, and Wyoming.

That concludes my remarks and I would be pleased to answer any questions you may have.

Department of Energy

FY 1981 Supplemental Appropriations Request
Interior and Related Agencies

Proposed Appropriation Language

Strategic Petroleum Reserve

For an additional amount for the Strategic Petroleum Reserve, $1,305,000,000, to remain available until expended.

DEPARTMENT OF ENERGY
FY 1981 Supplemental Request
Summary Table
(Budget Authority in Thousands)
Strategic Petroleum Reserve
Energy Preparedness

	Presently Available	Revised Estimate	Proposed Supplemental
Strategic petroleum reserve operating expenses:			
Planning	8,000	8,000	0
Petroleum acquisition and transportation	1,383,282	2,688,282	1,305,000
Storage facilities development and operations:			
Phase I - existing sites	0	0	0
Phase II - expansion sites	40,000	40,000	0
Phase III - new sites	2,802	2,802	0
Non-Phase Specific	40,032	40,032	0
Subtotal	82,834	82,834	0
Program direction	10,884	10,884 1/	0
Total	$1,485,000	$2,790,000	$1,305,000

1/ Excludes $507,000 requested for FY 1981 pay costs.

DEPARTMENT OF ENERGY
FY 1981 Supplemental Request
Narrative Explanation and Justification
Strategic Petroleum Reserve
Energy Preparedness

The January 1981 President's budget estimated that $1,845,390,000 in entitlements would be received by the Strategic Petroleum Reserve (SPR) in FY 1981. This estimate was based on the assumption of a continuation of phased oil price decontrol and an SPR fill rate of about 200,000 barrels per day in FY 1981. The administration's decision to decontrol oil prices in January 1981 resulted in the loss of all but an estimated $540,168,000 in such receipts, a reduction of about $1,305,000,000. It is proposed that this estimated loss be restored by a supplemental appropriation for FY 1981 in the amount of $1,305,000,000. If such a supplemental appropriation is not made available in a timely manner, this will result in delays in awarding contracts for approximately 30 million barrels of crude oil, reducing and/or delaying such oil fill in FY 1981 and FY 1982.

SUMMARY STATEMENT

Mr. FREMLING. As mentioned in my statement, the Department is committed to the development of an effective and timely overall emergency response capability.

Mr. YATES. How long have you been so dedicated?

Mr. FREMLING. I can't speak from very far in the past, sir. I have been in my capacity only for a few months. We are definitely committed.

It was with that commitment in mind that one of the key features of the recent major restructuring of the Department was the establishment in one organizational structure all of the elements related to energy emergency preparedness which had formerly been located in various parts of the organization.

One of the key pieces that was brought together with the others was the office which has responsibility for the construction and fill of the Strategic Petroleum Reserve. Our budget submittal for fiscal year 1982 and the request for a fiscal year 1981 supplemental reflects our commitment to the completion of that project and to filling it with oil.

I have other points of emphasis in my remarks but inasmuch as you would like to take up SPR first, at this time I think I will turn it over to Mr. Jones. I can pick up later, if you would like.

Mr. YATES. I would like to know how long you are going to stay in business, because I have an idea that the Department of Energy is going out of business. The impression I had from interrogating Secretary Edwards last week and looking at the table of organization and seeing how many Assistant Secretaries—none except one for Congressional Affairs and a General Counsel—have been nominated. That does not indicate that you are in business or that you have a permanent hold on business.

I couple that with Secretary Edwards' statements during the campaign that he is coming into office for the purpose of disestablishing the Department of Energy. Are there organizational changes proposed here? Are you going to stay on the Strategic Petroleum Reserve job? Are you going to move ahead?

ORGANIZATION OF DEPARTMENT

Mr. FREMLING. I can speak to the organization which was approved on February 25 which brings the Strategic Petroleum Reserve into the new structure intact without any changes. It is more closely coupled to the other emergency preparedness functions. There is a Phase II reorganization which is now being developed. That will in turn be followed by the fulfilment of the requirement under the Sunset provision of our Act for the Secretary to come to Congress in January of 1982 with his recommendations regarding the future structure of the organization beyond that time.

As of this time, I am not privy to any proposed changes in the future.

Mr. YATES. Let's hope you stay in business.

SPR STATUS

Mr. JONES. Mr. Chairman, it is a pleasure to appear before this committee again to review the changes in the Strategic Petroleum

Reserve status. The most significant event, of course, that has occurred since we last met is the resumption of oil fill. As you are aware, the DOE discontinued issuing solicitations in May of 1979 for the purchase of oil due to the tight oil market that developed following the reduction in the Iranian production.

Mr. YATES. When did you start on oil fill again?

Mr. JONES. We resumed following enactment of the Energy Security Act. On August 4th, the President delegated the authority to the Secretary of Energy to use NPR oil in exchange for oil for the SPR. By October first, the DFSC had concluded contracts to exchange 100,000 barrels a day which is the minimum under the Energy Security Act. However, oil actually started rolling into the SPR in September based on earlier contracts that were awarded. Initially, they all were as a result of exchanging NPR oil.

Then, of course, Public Law 96-514, the appropriations act, required that Strategic Petroleum Reserve fill be taken to an annual average of 300,000 barrels a day or until all appropriated funds were utilized.

The compliance with that law is what we are about right now.

On January 30, the Defense Fuel Supply Center issued the first of a series of continuously open solicitations for purchases from the spot market. At the beginning, these solicitations closed weekly. As the buys got larger, they closed on a biweekly basis. As of today, we have 121.5 million barrels in storage with a further 45.4 million barrels on contract for delivery this fiscal year.

Mr. YATES. That is 121.5 in storage.

Mr. JONES. That is 45.4 under contract for delivery this fiscal year.

Mr. YATES. What is your goal for the balance of the fiscal year?

Mr. JONES. The goal for the balance of the fiscal year is to spend all the money we have. I will get into that a little later. It could take us as high as 196 million barrels.

Mr. YATES. Okay.

Mr. MURTHA. Would that be the total stored?

Mr. JONES. In storage.

Mr. MURTHA. That wouldn't be the total bought?

Mr. JONES. That would be the total in storage and purchased.

Mr. MURTHA. For this year?

Mr. JONES. This year, this fiscal year.

Mr. YATES. Another 30 million barrels over what you have now?

Mr. JONES. We could buy approximately 27 to 29 million barrels, roughly 30 million barrels with the balance of funds we have available to us.

Mr. YATES. Is that with or without the supplemental?

Mr. JONES. Without.

Mr. YATES. If you received the supplemental, would the number change?

Mr. JONES. Yes, sir.

Mr. YATES. What would you be able to do then?

Mr. JONES. We would be able to have oil under contract to continue to fill SPR after October first.

Mr. MURTHA. Mr. Chairman, if I could ask, I thought I read in the newspaper that some of the oil countries said that if we were going to store this oil, they were going to reduce their production.

That is not happening. In other words, we are able to buy it. I assume the spot market is a reasonable price. They are not reducing their production, is that accurate?

Mr. JONES. That is correct. The total oil we have placed under contract since the resumption of fill is 75.5 million barrels. If we have no more oil—

Mr. YATES. I thought it was 45.

Mr. JONES. We started out at 91.2, Mr. Chairman.

Mr. YATES. I see.

Mr. JONES. If we were to purchase no more oil from where we are right now, we would have delivered 166.9 million barrels by the end of fiscal year 1981 as compared with the budget target of 168.4 million barrels. If we purchased no more oil in other words.

The Energy Security Act also required an amendment to the DOE entitlements program to provide the advantage of lower priced, lower tier crude for the SPR. They were issued August 29 of last year and the benefits accruing prior to decontrol of oil prices were approximately $540 million, which has been apportioned by OMB as of last week to the DOE and is now available for obligation.

CONSTRUCTION PROGRAM FOR SPR

Before I go into the details of the budget, I would like to just review quickly the construction program for SPR as it now exists and as it is consistent with the budget.

The curve represents the development schedule and the top of the curve is the oil fill schedule. It does not represent the total capacity, but capacity available for fill.

As you are aware, the program is now being developed in three phases. Phase I consisted of 248 million barrels which was the conversion of existing capacity in five storage sites, four in Texas and one in Louisiana, and the construction of one marine terminal. Those facilities have been completed and are available for fill.

The capability to drawdown is available now—we ran drawdown tests twice last year. Our drawdown system will allow us to remove, on a fairly sustained basis, one million barrels a day. We have hardware in place to remove 1.7 million barrels a day. As we get on to the end of the fiscal year, we will actually be able to move that amount of oil as the other facilities are filled up with oil.

Phase II of the program, as you note, overlaps Phase I and Phase III then overlaps with the construction of Phase II. Phase II is the addition of 290 million barrels of storage. That is further expansion of three of the Phase I sites. The Bryan Mound site in Texas will be expanded from its original 61 million barrel capacity by another 120 million barrels. The leaching of those new caverns commenced last March and as of today, we have created about 16 million barrels of additional space; however, it is not ready for fill. We are only putting blanket oil in at this time.

The West Hackberry site will be expanded by 160 million barrels. It now is a 51 million barrel site. That leaching is scheduled to begin in May. We received last year, last August, the permit to construct the brine line and the permit to discharge brine contingent upon meeting certain requirements from the EPA and the

Corps of Engineers. That line was constructed by December and upon the acceptance of our final monitoring plans, by the EPA, we are hoping to get approval sometime in this month to discharge the brine and then in May to start up this site.

The third site that is being expanded, the small expansion, is the acquisition of a 10 million barrel cavern at the Bayou Choctaw site.

Mr. MURTHA. How do you read the completion of the projects? For instance, is Phase I to be completed in 1982?

Mr. JONES. Phase I is complete now. That is why it is a straight line. This is the Phase II which began in 1981 and this represents the fill. Once it reaches this level right here, the facility is completed.

Mr. MURTHA. That is scheduled for completion in 1987.

Mr. JONES. That is right. Phase III would actually start having capacity available for fill. We would start working on Phase III in 1982, assuming we get our appropriations request. Space would first be available in Phase III in 1985 for fill and that would continue on until 1989.

Phase III is a 212 million barrel expansion taking us to 750 million barrels. That is one new grassroots site and a further expansion of the Bryan Mound site of 40 million barrels and the West Hackberry site by 30 million barrels. All of this is through the process of solution mining.

We are looking now at the possibilities for accelerating the program. We have made application for a permit to increase the leaching rate at Bryan Mound and that is within the original estimate at completion for Phase II. We had planned to do this. We are simply doing it about a year earlier. If we are lucky enough to get that permit by mid-June, then we should be able to increase the available storage for fill by about 50 million barrels between now and 1985.

Mr. YATES. What will that bring the total storage capacity to by 1985?

Mr. JONES. By 1985, that would give us a storage capacity of right around 460 million barrels available for fill. We would have more capacity than that, but that is how much could be filled without having any detrimental effect on the leaching program that would be ongoing at that time.

SPR BUDGET REQUEST

If I may, I will turn to the fiscal year 1982 budget request. We are requesting $3.8 billion in budget authority for fiscal year 1982. In addition, we are requesting in the supplemental request $1.3 billion to replace the entitlements which we had forecast would accrue to the SPR as a result of the modification of DOE regulations. However, with decontrol, we only received $540 million out of $1.8 billion.

Mr. DICKS. Would you explain that again?

Mr. JONES. We were anticipating that we would receive entitlements benefits of $1.8 billion. However, with decontrol, which occurred in February, we only accrued $540 million worth of entitlements; so the supplemental request is to replace that budget authority which we expected to be available to us in fiscal year 1981.

Mr. DICKS. Okay.

Mr. JONES. According to the Energy Security Act, funds obtained from entitlements would be appropriated for use in fiscal year 1981.

The major budget and policy decisions and assumptions that we have included in our budget package are that Phase II construction will continue with the estimate at completion to remain unchanged. Funding has been requested to initiate Phase III construction which will add 212 million barrels to provide for a 750 million barrel storage system that would be filled by fiscal year 1989.

The 1981 fill rate is assumed to be 207,000 barrels a day, increasing to 230,000 barrels a day in fiscal year 1982. As I mentioned earlier, we are at around the 200,000 barrels a day average level today under contract for this fiscal year.

It also provides for filling 252 million barrels by the end of 1982. The oil prices and delivery costs are assumed to trend slightly ahead of inflation rates over the period of time during the development of all three phases of the program.

As part of the $3.8 billion, this consists of planning, $9 million; oil acquisition, $3.684 billion. As I said that takes us to 252 million barrels by the end of 1982 and we would have 53 million barrels under contract for delivery in fiscal year 1983.

In facilities development, we have $34 million to continue Phase II construction; the estimate at completion remains unchanged at $702 million or $2.42 a barrel. Through 1981, the Congress had appropriated $527 million in budget authority for that phase of the program.

We have asked for $102.9 million to initiate Phase III construction. The estimate at completion for Phase III the 212 million barrels, is $1,033 million which is $4.87 a barrel.

We have also asked for $41.4 million for the non-phase specific activity which is the new budget category we added in fiscal year 1981 to cover those items which are not specifically related to development of a particular phase. That includes operations and maintenance costs, continuing engineering, safety, security, and reliability upgrades of the system.

Then, in addition, we have asked for program direction of $11.9 million. That would fund 200 full time permanent positions. We are asking as part of Phase III of the program to increase our overall staffing level by ten. That also includes funding for 32 other-than-full-time positions and 25 positions in the Corps of Engineers.

STATUS OF OIL ACQUISITION

The fiscal year 1981 supplemental, as I mentioned earlier, is $1.3 billion to replace the entitlements that were lost. With regard to the current status of oil funds, we have $580 million which is unobligated in DFSC at this time. We have received $540 million in entitlements that have been apportioned by OMB. With the next two weeks, we will obligate that to DFSC. That will leave them with $1.1 billion. At today's prices, that will buy somewhere between 27 and 29 million barrels, depending upon the mix of crude that would be purchased; that is, sweet and sour.

That would take us, as I said, to as much as 194 to 196 million barrels of oil in storage by the end of this fiscal year.

Over the next 90 days, our physical fill rate in SPR will be about 450,000 barrels a day. The effective average fill rate of oil so far under contract for this year is 200,000 barrels a day. To insure that we have continued oil deliveries in fiscal year 1982, we feel that it would be prudent to buy at least 100,000 barrels a day for fiscal year 1982 on the term market. The $1.3 billion supplement will buy approximately 85,000 barrels a day, if you use the 1982 estimated prices that we have in the budget.

Right now today, the last buy we made was something like $1.25 per barrel under our budget estimate for this quarter. However, if there is any movement upward in the oil prices or tightening of the market, we could expect to be right at about our budget estimate.

We will be ready by early May to issue our first solicitation for term purchases. Term purchases can be made from the open market. We believe that that is in the best interests of the Government versus trading the NPR oil because you have more competition and more firms are available to offer oil to us.

Mr. YATES. Why didn't SPR do that earlier?

Mr. JONES. A policy decision was made last year to do the NPR exchange.

Mr. YATES. Why not two years ago, or three years ago?

Mr. JONES. Two years ago the policy was that the market was in such a position that it would not be prudent to fill the SPR.

Mr. YATES. Why go into the spot market?

Mr. JONES. The reason we did it now is because the spot market was soft.

Mr. DICKS. The spot market is down because there is a glut of oil on the world market. The prices are substantially below the long term contractual prices.

Mr. JONES. We have term contracts for delivery throughout this fiscal year of 100,000 barrels a day. We have purchased about 100,000 barrels a day off the spot market. We have a combination of that. I am suggesting that that is a good plan to try to follow. However, we must keep the NPR oil exchange as an option available to us in the event the market should become tight and we cannot find enough offerors to sell us crude oil.

ACCELERATED FILL RATE

Mr. LOEFFLER. Can you accelerate your fill rate from 100,000 barrels a day to 150,000 or 200,000 barrels a day if you are given the supplemental request?

Mr. JONES. Mr. Loeffler, we are at an average of 200,000 barrels a day right now, for this year. Yes, if we got the supplemental, we could; but as I just mentioned, the supplemental would be to primarily make a term purchase for next year. So that deliveries will continue after the beginning of fiscal year 1982. As it stands right now, all oil we have purchased will be delivered prior to the end of this fiscal year.

Mr. YATES. If you got more money than you asked for, would that help you?

Mr. JONES. If the market continues as it is, yes. I think that the premise that we have always had that the earlier we purchase the

oil and put it in the ground the overall benefit to the Government would be a lower price.

Mr. YATES. How much did you ask OMB for?

Mr. JONES. We asked OMB for the $1.3 billion.

Mr. YATES. That was all?

Mr. JONES. For this particular year. We did not anticipate being as successful as we have been.

Mr. YATES. Based on your current experience, shouldn't the Congress give you more money than $1.3 billion? In order to permit you to buy now when you have favorable markets?

Mr. JONES. If we were to obtain more money, it would be used for attempting to cut term contracts for next year or later on during this fiscal year being able to buy on the spot market for the first quarter of next year.

Mr. YATES. How much more money could you reasonably use?

Mr. JONES. I can't answer the question as to how much we could reasonably use. I would rather submit that. I would like to go through the calculations.

Mr. YATES. We are going to mark up—

Mr. JONES. I anticipate that our fill could use a total for the first six months of the year of something in the neighborhood of $3 billion.

Mr. YATES. For first six months of 1982?

Mr. JONES. Fiscal year 1982.

Mr. YATES. What about the balance of 1981?

Mr. JONES. The balance of 1981, with the 29 million we could buy another 10 million barrels above that. That would be about all I think.

Mr. DICKS. Would the chairman yield?

Mr. YATES. Yes.

ALTERNATIVE FINANCING FOR SPR

Mr. DICKS. Mr. Stockman says he wants to go to some new off budget scheme for financing the SPR. Could you tell us generally what that would mean to your operation? Does it make any sense? Is it realistic?

Mr. JONES. Well, if alternative funds are available at the time they are required to buy oil, and the legislation or the scheme was structured in such a way as to not interfere with the use of the strategic——

Mr. DICKS. This would require new legislative authority, is that correct?

Mr. JONES. The schemes that I can think of so far would require legislative authority.

Mr. DICKS. You would have to get a bill through Congress.

Mr. JONES. That is correct.

Mr. DICKS. Then you would have to go out and try to issue the bonds. Isn't that correct as well? That would cause a substantial delay in this whole operation, would it not?

Mr. JONES. It depends upon how quickly you could do that.

Mr. DICKS. You must have looked at this.

Mr. JONES. If we received, let's say, the supplemental and $1.7 billion in new budget authority for fiscal year 1982, then I would have to have new cash of approximately $2 billion by June of fiscal

year 1982 generated through some alternative means to continue on with the planned program that we have right now.

Mr. DICKS. What would be the underlying assumptions? Would you have to get the $1.3 in the supplemental?

Mr. JONES. That is correct.

Mr. DICKS. And the $1.7——

Mr. JONES. Of the $3.8, assuming there is some alternative. This isn't policy, this is just what I have calculated based on what we anticipate being able to buy in the oil market.

Mr. DICKS. Didn't the Senate Budget Committee zero you out for fiscal year 1982?

Mr. JONES. They took $3 billion of the $3.8. That leaves $200 million for facilities and other budget categories and $600 million for oil purchases.

Mr. DICKS. That wouldn't get you past the first quarter of next year, would it?

Mr. JONES. The $600 million would buy us a little less than 20 million barrels.

OIL INVENTORY

Mr. LOEFFLER. How much do you currently have now in place as of the last accounting period?

Mr. JONES. As of today we have 121.5 million barrels in storage.

Mr. LOEFFLER. Are you looking then at approximately 150 million barrels in storage by the end of this fiscal year?

Mr. JONES. We have purchased for delivery by the end of this fiscal year 166.9 million barrels. We have enough money to buy another 27 to 29 million barrels. If we are successful in our next buy in April, or by the end of May, it is conceivable we could have spent all of that money and we would end up with between 194 and 196 million barrels in storage by the end of this fiscal year.

Mr. LOEFFLER. By October 1?

Mr. JONES. By October 1.

TERM CONTRACTS

Mr. LOEFFLER. Then the $1.3 billion supplemental will be for additional purchases is that correct?

Mr. JONES. Additional purchases, but primarily to fund a term buy for continuing oil fill into next year. And to assure that we have some continuity of supply during next year.

Mr. YATES. The $1.3 billion would permit you to sign some term contracts?

Mr. JONES. Yes, sir, of about 85,000 barrels a day based on our budget estimates.

Mr. YATES. Do you have any idea what your costs would be for the term contracts?

Mr. JONES. It is right around an average of $42.29 a barrel assumed as the average price for next year. The last oil buy we made of 22 million barrels—that was a mix of sweet and sour—the average price was $37.09 a barrel.

Mr. YATES. Why didn't you ask OMB for more than $1.3 billion?

Mr. JONES. As I mentioned earlier, Mr. Chairman, at the time we were preparing this budget, we did not expect to be as successful as

we had been in purchasing the oil. There was no indication that the spot market would provide as much oil. The buy we made last week was 22 million barrels in one spot market purchase.

Mr. YATES. You are going to use the $1.3 billion not for spot market purchasing but for anchoring term contracts?

Mr. JONES. Yes, sir.

Mr. YATES. Wouldn't it make sense to buy on the spot market?

Mr. JONES. It would make sense actually to buy on the spot market as well as attempt to structure term contracts with a clause which stated that it would be subject to availability of funds in the next fiscal year so that we could go ahead and continue to buy on the spot market for this year as well as sign up, say, one year contracts with some portion of it funded, say, through December with the remaining nine months to be contingent upon the Congress appropriating fiscal year 1982 funds for oil purchases.

ADDITIONAL FUNDING

Mr. YATES. Wouldn't it make sense for the committee to give you extra money, for instance $2 billion, with a proviso that you could spend the money to buy oil at a certain price? What are you paying for oil on the spot market now?

Mr. JONES. The purchase we made last week averaged $37.09. There were different crude qualities. Therefore the price ranged from $35.45 a barrel to $41 a barrel delivered. Of course, we are attempting to have 50 percent American flag utilization. We have additional costs for those voyages in which we have American flags. The prices would vary over quite a range depending upon the source country, quality of that crude, and whether or not American flag ships were used.

Mr. YATES. If we were to set a level at which you could pay for the oil at a certain price, would that destroy your flexibility?

Mr. JONES. Quite possibly it could.

Mr. YATES. Would it be an incentive for your seller to come down and meet your price? If the Congress gave you all this money to buy oil at a certain price, could you buy it for that price?

Mr. JONES. I can't answer your question. Tomorrow a country could announce that the amount of its oil production would be reduced and whatever the perception of the industry is of what is going to happen to the marketplace, that will drive the spot market prices. It is conceivable you could give us $2 billion and we may not ever use a dollar of it because we would be fenced in and wouldn't have the ability to do that.

Mr. YATES. Should you be given an extra amount of money? I think you answered my question yes when I asked you before.

I have the impression from your testimony and from what I read in the newspapers that there is a favorable spot market now.

Mr. JONES. From a physical sense of filling the Strategic Petroleum Reserve, if the market continues as it is, we could expect to be able to make more purchases, but as I mentioned a few minutes ago, if we are creative in structuring a term contract, and can get acceptance of industry—that is if industry believes we will receive an appropriation next year—we can probably structure term contracts so that they could be incrementally funded which would

make some of the money available from the $1.3 billion to continue purchasing this year.

I would estimate that we could buy only another 10 million barrels for delivery this year over and above the money that we now have. Of course, if the market were suddenly to become very tight, it would be difficult to spend the remaining $1 billion we have.

SPR CAPACITY

Mr. LOEFFLER. You have now begun to move out, properly so in my judgment, to purchase your fill for SPR. What type of capacity do you have to continue to purchase at this rate or an accelerated rate to be placed into storage for the next year?

Mr. JONES. We can expect physically to be able to average between 350,000 and 400,000 barrels a day and that depends upon the present capacity. The quicker some sites are filled up, the less daily throughput capacity we have. But I would say in the neighborhood of 350,000 to 500,000 barrels a day depending upon the availablity of crude types.

Mr. LOEFFLER. I understand that on a daily basis. Given the capacity of the Strategic Petroleum Reserve cavities that you currently have, how long can you fill at the rate of 200 barrels per day in a general sense, not dividing it between sweet and sour?

Mr. JONES. From an average standpoint, we can average 200,000 barrels a day between now and 1989 with the exception of fiscal years 1984 and 1985. We are looking at various acceleration proposals which would allow us to be able to continue a rate of 200,000 barrels a day until the SPR is filled. That would, of course, accelerate the end date of the completion of fill of Phase III.

In the meantime, under our current plan we expect to have 261 million barrels of storage by the end of fiscal year 1982 available for fill. If we are successful in getting the permit for increasing the brine disposal rate at Bryan Mound, we could expect to add as much as 8 million barrels additional capacity available for fill in fiscal year 1982 taking that total to 269 million, to 270 million barrels.

That would all be available for fill during fiscal year 1982.

Mr. LOEFFLER. In 1982, can we buy at today's purchase rate on a daily basis and fill it, and then have the capacity to place it in storage?

Mr. JONES. That is correct.

Mr. YATES. What is the capacity now?

Mr. JONES. Right now we are saying it is 248 million. As I mentioned we already have generated another 16 million barrel capacity at Bryan Mound, but we are just putting small amounts of blanket oil in that right now. We would anticipate having 8 million barrels of that available for fill next year. If we accelerate the leaching rate, 16 million at that new site.

Mr. DICKS. How many barrels do we have in the ground today?

Mr. JONES. We have 121.5 million as of six o'clock this morning.

Mr. DICKS. If we went with the original budget request, how much would we have in the ground at the end of fiscal year 1982?

Mr. JONES. We would have 252 million barrels plus an additional 53 million barrels on order for delivery. That is the budget assumption.

Mr. YATES. He said at the end of fiscal year 1982.

Mr. JONES. At the end of fiscal year 1982, based on the President's fiscal year 1982 budget request and the fiscal year 1981 supplemental, we would have 252 million barrels in the ground with 53 million barrels on order. That doesn't mean that we couldn't have every bit of space filled. That is just the assumption we use.

Mr. DICKS. Fifty-three million barrels on order, plus that amount?

Mr. JONES. Yes, sir.

Mr. DICKS. We would be up over 300 million barrels.

Mr. JONES. That would have been under contract or delivered.

ALTERNATIVE FUNDING FOR SPR

Mr. DICKS. Let us go Mr. Stockman's new off budget route, and compare the addition. We would still have the 121.5, that wouldn't be affected that in any way, shape, or form.

You are assuming the $1.3 billion even under a new bond program in the supplemental, isn't that correct?

Mr. JONES. Yes, sir.

Mr. DICKS. What would that total?

Mr. JONES. Just a second.

About 226 million barrels.

Mr. DICKS. Two hundred and twenty-six. That is with the $1.3 billion?

Mr. JONES. The $1.3 billion in addition to the moneys that we already have appropriated—available—would take us to 226 million barrels.

Mr. DICKS. By the end of fiscal year 1982?

Mr. YATES. What is that amount? Is it $1.3 billion plus what amount you have appropriated?

Mr. JONES. We have had roughly $7 billion appropriated to date.

Mr. YATES. You don't know how much of that is unspent?

Mr. JONES. Yes, $580 million in DFSC, $548 million that we got from entitlements. $1.1 billion is available today.

That plus the $1.3 billion would take us to the level of 226 million barrels.

Mr. DICKS. We would be short 26 million barrels, wouldn't we?

Mr. JONES. If we received no fiscal year 1982 appropriation. That is correct.

Mr. DICKS. And 53 million barrels on order?

Mr. JONES. There would be none on order and we would be at a level of 226 million barrels at the end of the year, if there were no fiscal year 1982 appropriations.

Mr. DICKS. Is any of the money you would be using in fiscal year 1982 and 1981, to be spent in 1983?

Mr. JONES. It would be outlaid in 1983, but we would intend to obligate against contracts using all of the appropriations.

Mr. DICKS. Does that make any difference in the 53 million barrel figure? You are counting that? In other words, I am trying to get a fair comparison of what would happen using the Reagan

supplemental budget approach and fiscal year 1982 budget approach versus the Stockman off budget concept?

Mr. JONES. If the off budget concept generated funds in time, there would be no difference, if any off budget approach is successful it generates funds on time.

But I believe it would be impossible to have generated an off budget idea which would actually generate cash by the beginning of the fiscal year. So there would be some appropriation required in fiscal year 1982.

Mr. DICKS. Even the Senate Budget Committee provides $800 million.

Mr. JONES. Six hundred million dollars for oil purchases and $200 million for the other budget categories.

Mr. DICKS. Does that affect those figures, the 262 million? What would that do?

Mr. JONES. The $600 million would provide another 14 million barrels.

Mr. DICKS. I can't understand how you can get the 226. You are talking about 4 billion.

Mr. JONES. That is correct. We would be purchasing 53 for delivery in fiscal year 1983 and the price jumps again $4 a barrel. Obviously, if we could get the price in that fiscal year delivered, we would do so. The earliest we can take the oil delivery, we are attempting to do so because it is a lower price. However, in order to assure continuity of fill of the SPR, you have to buy in advance.

Therefore, you have to have the budget authority in sufficient time to obligate to the Defense Department which then has to send out solicitations.

IMPACT OF OFF BUDGET FINANCING

Mr. DICKS. Can you tell us what the adverse impacts of going on an off budget route would be as manager of the SPR? Can you tell us what uncertainties of that process would do to your entire operation?

Mr. JONES. I would say that the perception of industry, if there were no appropriations available, and an off budget approach was untested, that it might affect the ability to enter into term contracts, but if the funds were made available from an alternative approach in time, then it shouldn't have any effect on oil purchases.

Mr. DICKS. What is "in time"?

Mr. JONES. As I mentioned earlier, if we had, say, $1.7 billion in 1982 appropriations and by June the money could be available, then we could expect to meet the forecasted fill schedule as well as have oil purchased for fiscal year 1983.

Mr. DICKS. In your personal and professional opinion, if you received the money now, would it mean a better price than if you have to wait a year until you got this off budget scheme in place?

Mr. JONES. Mr. Dicks, the earlier we deliver, it will mean a better price. Even if we enter into term contracts today, the price is going to be based on the delivery date. No one will sign a term contract without an escalator clause. We are basically paying market price at whatever time it is delivered.

Therefore, that is why I said earlier that the premise still holds true that the earlier you can put the oil in storage, the less cost.

Mr. DICKS. Thank you, Mr. Chairman.

Mr. YATES. Suppose instead of getting $1.3 billion in accordance with your request, the committee would authorize $2 billion for your purchases. Would you use that for term contracts? Would you also use it for spot purchases?

Mr. JONES. There would be more available for spot purchases. Assuming we are successful in buying from the spot market another 29 million barrels for delivery this year, I estimate we could buy an additional 10 million. That is about all we can handle for this year.

Mr. YATES. Do mean because of capacity?

Mr. JONES. Because of the fill rate, somewhere in the neighborhood of 10 million barrels. By the time we would purchase it, even if we were to receive the additional money, we would be talking about the fourth quarter of this fiscal year.

Mr. YATES. How much money would that cost?

Mr. JONES. The 10 million barrels?

Mr. YATES. Yes.

Mr. JONES. Somewhere in the neighborhood of $390 million.

Mr. YATES. Would you use approximately $300 million for spot market purchasing and the balance for term contracts?

Mr. JONES. What I would use is the $1.1 billion we have, another roughly $400 million for spot purchases, but the $1.3 billion would not cover a full 100,000 barrels a day for next year. As I mentioned earlier, it would be about 85,000 barrels a day. Even if we were to exchange NPR crude, we would be a little bit short there on the $1.3 billion.

Mr. YATES. If you are going to continue to buy at the present rate, what would you need, in addition to the $1.3 billion that you asked for in the supplemental in the 1982 budget?

Mr. JONES. We believe that we need $3.6 billion in the 1982 budget available through either a combination of Congressional and direct appropriations and/or alternative financing.

Mr. YATES. You are going to have a little trouble with the alternative financing. I think you have to look at Congressional appropriations.

Would it make any difference if you knew that that sum of money would be available in the 1982 budget?

ABILITY TO ENTER INTO TERM CONTRACTS

Mr. JONES. I think it would make a difference in negotiating any term purchases, especially being able to incrementally fund, knowing there was going to be an appropriation available to at least cover the 100,000 barrel a day Energy Security Act Requirement.

I am merely saying that the perception of industry, from reading the newspapers, is that there might not be an appropriation available to fund oil purchases.

Mr. YATES. We could put the additional money into the supplemental bill to be made available on October lst? That would bring it into the 1982 budget. Still it would give the purchasing agency the money in hand with which to negotiate, wouldn't it? That might be helpful.

Mr. JONES. In which case we might be able to enter into a term contract on an incrementally funded basis.

Mr. YATES. It makes sense, doesn't it? That is, until we talk to Stockman.

What do you think your chances are of getting into a long term contract?

Mr. JONES. I think they are good today. If we were able to have a solicitation out sometime in May, then based on what I have read about what is likely to happen to the market for the next few months, I think the chances are good we could enter into a term contract.

Mr. YATES. Do you have any indications from the Saudis what their attitude might be in the event that we begin signing long term contracts?

Mr. JONES. I don't think it would make any difference one way or the other. The information I have read from interviews of Mr. Yamani and others have not indicated anything other than an awareness of what is happening and they seem to be saying that it is a political decision that has been made.

Mr. YATES. Is there any indication that the OPEC countries will reduce their production because of the so-called glut?

Mr. JONES. I have read in the trade journals that there has been some talk of that, but I don't know if it will take place or not. The next meeting, I believe, of OPEC ministers is scheduled for May 25. There has been some talk of possibly delaying that meeting.

COUNTRY-TO-COUNTRY AGREEMENTS

Mr. YATES. Do we buy any oil by means of country-to-country agreements rather than going out on the open market?

Mr. JONES. We have never purchased any oil on the basis of country-to-country agreements. We did buy oil from Mexico.

Mr. YATES. Wouldn't it make sense to try to do it that way, too?

Mr. JONES. It would make sense to try where it is possible.

Mr. YATES. To try anything we can?

Mr. JONES. That is correct.

Mr. YATES. How would we go about country-to-country purchasing? Would you be doing it or would the State Department be doing it?

Mr. JONES. We would go to the State Department and ask them to initiate, to feel out the other party.

Mr. YATES. That is three years away then, isn't it?

Mr. JONES. No. That is taking place now, sir.

Mr. YATES. Is it?

Mr. JONES. Yes, sir.

Mr. YATES. You mean there is country-to-country negotiating going on?

Mr. JONES. There is no negotiating going on. We do have an interest.

Mr. YATES. What is going on?

Mr. JONES. The State Department is talking to some of the U.S. embassies about approaching a couple of countries.

Mr. YATES. How long has that been going on?

Mr. JONES. For the past month or so.

Mr. YATES. Why didn't they do it last year?

Mr. JONES. They may have. I am not sure.

ENERGY FUTURES FOR OIL ACQUISITION

Mr. YATES. What about setting up energy futures in order to purchase oil for the reserve?

Mr. JONES. It may be possible to do that. The only thing I would say is that the benefits, of course, of any oil appreciation accrue to the purchaser who would be the owner of the security. As of this point in time, the oil we have in storage has appreciated somewhere in the neighborhood of a little over $2.5 billion over and above what we have paid for it which covers all other budget categories other than oil purchasing from the inception of the program through fiscal year 1983.

Mr. YATES. You don't have funds for reprogramming, do you?

Mr. JONES. No, sir.

Mr. YATES. Can you borrow from the Department of Defense?

Is it possible, in your judgment, to purchase oil on the basis of 300,000 barrels a day?

Mr. JONES. Are you asking whether it is possible to purchase that large a quantity

Mr. YATES. Yes.

Mr. JONES. In today's market, I think it is no problem.

Mr. YATES. You are talking of today's market and not tomorrow's?

Mr. JONES. Possibly not tomorrow. It wouldn't be that we could not purchase the oil. If you pay a high enough price, you can purchase the oil on any market. I just don't think it would be prudent in a tight market to buy it that way.

TURNKEY CONTRACTS

Mr. YATES. Right. There was a time when you wanted to negotiate turnkey contracts for using existing capacity. Are there any sites available for purchase now?

Mr. JONES. There is one site that we have been looking at as a possible acceleration alternative. However, whether or not it is available or not without exercising the right of eminent domain, I am not quite sure. We have not approached the owners of the site.

Mr. YATES. You have a right of eminent domain?

Mr. JONES. We could exercise the right of eminent domain.

Mr. YATES. Where is that located?

Mr. JONES. The site? In Louisiana.

Mr. YATES. What about surface storage sites? Have you given that up?

Mr. JONES. We have looked at this possibility and have developed cost estimates with the Corps of Engineers.

Mr. YATES. How does that compare with your below surface storage?

Mr. JONES. The actual dollar outlay would be roughly $13 a barrel as compared with right around $5 a barrel for new grassroots storage sites, underground. Above ground construction would be building above ground tank farms of 30 to 40 million barrels. Each tank would be in the neighborhood of 1.2 to 1.5 million

barrels in size, not the conventional tank that you would find in refineries. Costs would be much higher if we built smaller tanks.

Mr. YATES. What about leasing surface storage?

Mr. JONES. Leasing would be a possibility. With various refineries closing down now, it might be there would be some tankage in the right place that could be leased.

Mr. YATES. Why are they closing down?

Mr. JONES. Because of reduced demand. As of the week of March 20th refineries were running at about 68.8 percent of capacity, and the National Petroleum Refiners Association projects that average utilization will be somewhere between 55 to 60 percent capacity.

REGIONAL RESERVE

Mr. YATES. What about a regional reserve?

Mr. JONES. We have no plans to construct a regional reserve at this time.

Mr. YATES. Would it require legislative action?

Mr. JONES. No, sir.

DISTRIBUTION OF SPR OIL

Mr. YATES. I don't think it would either.

Do you have any plan for distributing the oil from the storage in the event there were an emergency?

Mr. JONES. Well, we have published——

Mr. YATES. How would you provide oil for the country in the event oil was unavailable from outside sources?

Mr. JONES. Assuming a decision were made to draw down the Strategic Petroleum Reserve, we have a framework contract called a basic sales agreement which we have sent to all refiners. Some 84 refiners have signed it to date. The agreement would allow us to send a telex to each of the refiners that are a party to the agreement and they could make an offer for the purchase of oil.

Assuming their offer was accepted, then the telexes, the exchange of telexes, plus the basic sales agreement, would be a contract.

Then the DOE procurement activity would do that job for us. At that point in time, we would receive, in SPR, copies of the contracts and would arrange the delivery schedules with the parties to the contract.

Mr. YATES. What do you mean by the DOE procurement activity? Is that you?

Mr. JONES. No, sir. The DOE procurement office in Washington would negotiate those sales contracts. The Strategic Petroleum Reserve would implement the sales contracts.

Mr. YATES. Is that system in place now?

Mr. JONES. Yes, sir.

Mr. YATES. Do you have enough personnel to operate it?

Mr. JONES. Yes.

OPERATIONS AND MAINTENANCE

Mr. YATES. Are all operations and maintenance included in your request for $19.3 million for the non-phase specific category?

Mr. JONES. No, sir. During the leaching of Phase II, for example, the operations and maintenance costs associated with the leaching and the filling operations in part of Phase II are not included in that.

Mr. YATES. How much more money do you need?

Mr. JONES. We don't need any more money. It is included in the facilities development appropriation.

Mr. YATES. Okay.

Mr. JONES. This is the additional O&M moneys that are not specifically identified with the specific phases of the program.

SECURITY AND SAFETY

Mr. YATES. What about the question of security? There was an explanation given to us last time we met across this table about the fact that you were taking steps to prevent the recurrence of fire. Are you fireproof now?

Mr. JONES. I don't think any place is ever totally fireproof. We feel we have significantly improved the safety. We redesigned the valves on the wellheads so we would not have the same kind of failure. It was a failure of a mechanical plug that took place before. We have a significantly improved safety program. We don't think there is a high probability that we would have a recurrence.

Mr. YATES. Is there any possibility of theft from your sites?

Mr. JONES. I would say that there is always a possibility, if somebody tries hard enough. We believe it is improbable as far as theft of the oil.

Mr. YATES. Is there access to any of your oil other than at particular spigots? I don't have a picture in my mind of how you draw down your supplies.

Mr. JONES. Someone could go in and draw down a pipeline and break into it or something like that. That is very unlikely to happen.

DRAWDOWN OF SPR

Mr. YATES. You had a chart that showed a picture of a huge pipeline device. That picture on the front of your charts had Strategic Petroleum Reserve written across it.

I assume the oil would come from that kind of device if you were to draw it down, is that right?

I am trying to picture in my own mind how you draw down the oil.

Mr. JONES. The way we draw down the oil is we pump fresh water into the cavern, down in the well.

Mr. YATES. You don't pump it out of a bilge?

Mr. JONES. In the solution mined caverns, which are located at four of the five storage sites, fresh water is pumped into the cavern. The oil is removed. The piping is underground. It then goes to a terminal. At the Bayou Choctaw site and the Weeks Island sites the oil is moved into the St. James Marine terminal operated by DOE. It then goes into surface tankage there, conventional surface tankage.

This is a schematic which shows you the various systems which are available on site to move fluids.

For the West Hackberry site and the Sulfur Mine site we are utilizing the Nederland Sunoco terminal in Nederland, Texas. Then the Bryan Mound site uses the Seaway facilities located at Freeport, Texas.

The Weeks Island site is a conventional room and pillar mine and it has 11 deep well pumps that are down in the sump at the base of the mine. That is the one case in which we directly pump the oil from the caverns to the surface.

Mr. YATES. That is similar to secondary recovery, isn't it?

Mr. JONES. I would hope it is much better than secondary recovery, Mr. Chairman.

Mr. YATES. You don't have the rock formation to worry about, do you?

Mr. JONES. That is right, sir.

Mr. YATES. How can you test it? How often do you test it to see whether it works? How often do you flush out a portion by pumping water into it?

Mr. JONES. During the course of events of a year, we have many occasions in which we might move some oil. As far as actually testing at full rates, we have done this twice.

Mr. YATES. It worked both times?

Mr. JONES. Yes, once in February of last year and once in April. The February exercise was an unannounced exercise in which I was just told to cancel a trip and start pumping oil.

The second occasion we had planned the exercise. In both cases, we sustained more than the designed fill rate.

Mr. YATES. Good.

SECURITY FROM THEFT

Mr. LOEFFLER. What type of security do you have to avoid what the Chairman alluded to, for instance, a slant well coming in to penetrate the dome by someone who would love to have found 121 million barrels?

How do you police that so this does not happen?

Mr. JONES. I would like to ask Mr. Curt Johnson, the manager of our field office in New Orleans, if you grant permission, to answer that question since he is the one who has the responsibility to do that job.

Mr. JOHNSON. All of our wellheads are within a security perimeter which are patrolled by security forces. As far as any trouble with the pipelines, the pipelines are flown over at least once a week, and any disturbance of the terrain is very easily seen, so that is not a particular problem.

What was your specific question?

Mr. LOEFFLER. What are you going to do about the slant wells that could be drilled from another location, other than on top of the dome, to extract SPR oil?

Mr. JOHNSON. First of all, it requires a permit from the States for any drilling.

Secondly, we approach any drilling rig within many miles of our sites and check their logs and make sure that the drilling is in the proper modes.

Mr. YATES. What if they go down and turn at right angles?

Mr. JOHNSON. That is not possible in the business. They can't slant drill. You have to start your slant very high to make a cut.

Mr. YATES. Why not longwall mining?

Mr. JOHNSON. The caverns are 10 million barrel caverns, also. It is not one huge 200 million barrel cavern. We do monitor constantly the pressure in those caverns. If someone would tap in, we could get a variation very quickly.

Mr. JONES. That is really the key that despite any other monitoring that might take place, we are monitoring the caverns themselves and the conditions in them. Any changes in those conditions are immediately investigated.

Mr. YATES. Is lightening a possible hazard?

Mr. JONES. I would say that it would be a possible hazard.

Mr. YATES. I am just speculating.

Mr. JONES. I think it is very unlikely that lightening would cause a fire, but it has happened before when tanks have caught on fire because of lightning.

However, in our case we have built a foam system so we can foam the top of the floating roof tanks. We also have a system which permits us, should one tank catch on fire, to cool the other tanks to prevent them from overheating and exploding.

FUNDS NEEDED

Mr. YATES. I am kind of intrigued by the question of how much money to make available to you. I think, of course, the $1.3 billion is essential for your operation at the present time. I can understand the possibility of making available the amount you want for 1982 as of October lst, the $3 billion. I wonder whether that is all that you could use at the present time to achieve the rate that the Congressional authorization set?

Mr. JONES. Until we see our success in spending this $1.1 billion, I really can't answer the question with any certainty, but if we are successful as we have been this year, I would anticipate that by May we will be out of funds.

Mr. YATES. How does the Government lose by making these funds available to you?

Mr. JONES. If they are not spent, we certainly would not lose.

Mr. YATES. Right. Does it make sense for us to put a top level of how much you can spend for the oil?

Mr. JONES. I don't think so. We are following the Federal procurement regulations. We are not buying oil unless it is at a fair and reasonable market price, which is based on a market analysis.

I think we have been rather conservative in the purchase of oil so far.

The recent purchases that we have made this year have all been net back at below the official selling price.

Mr. YATES. Your predecessors were even more conservative than you. They didn't buy any oil.

Let's see then, that would be $1.3 billion for the supplemental, $3.6 billion for 1982 funds; that would make it $4.9 billion. You couldn't use much more money than that, could you, even assuming the market continues?

Mr. JONES. No, sir.

Mr. YATES. Wouldn't you run out of capacity?

Mr. JONES. Yes, sir.

ACCELERATION OF CAPACITY

Mr. YATES. At what point would you run out of capacity and unable to buy more?

Mr. JONES. We don't really run out of capacity. If we were to go at 200,000 barrels a day, we could go all the way to fiscal year 1985 in which case we would be totally out of capacity for a year.

Mr. YATES. You wouldn't run out of capacity until 1985?

Mr. JONES. That is correct. If we were to fill at a rate above 200,000 barrels a day, at certain times we will run out of capacity and would have to sit back and wait a while. It is better to keep a rate which can be sustained than it is to try to maintain too high a rate.

Mr. YATES. What is your capacity now?

Mr. JONES. The capacity right now is 248 million barrels. The capacity by the end of fiscal year 1982 will be 261 million unless we do succeed in accelerating Bryan Mound, in which case it will be around 269 million.

Mr. YATES. How do you accelerate Bryan Mound?

Mr. JONES. We do that by having permission to increase the brine disposal rate from 680,000 barrels a day to 980,000 barrels a day.

Mr. YATES. Whose permission do you need?

Mr. JONES. The Environmental Protection Agency. The permit is pending.

Mr. YATES. For how long?

Mr. JONES. We submitted this permit request this February and we hope to get the permit granted by June of this year.

Mr. YATES. How much will that increase your capacity?

Mr. JONES. It will increase our leaching rate by three hundred thousand barrels a day. It would increase the capacity 8 million barrels in fiscal year 1982 and a total of about 50 million barrels between now and 1985.

BRINE DISPOSAL

Mr. YATES. What are you going to do with the brine you pump out?

Mr. JONES. That is discharged offshore in Federal waters, about 12½ miles offshore.

Mr. YATES. Was that acceptable to EPA under your previous applications?

Mr. JONES. Yes, sir.

Mr. YATES. What are you smiling about?

Mr. JONES. It is not acceptable to some of the fishermen.

Mr. YATES. What does it do?

Mr. JONES. The monitoring we have done so far indicates no detrimental effect whatsoever to the environment or sealife as a result of the discharge of brine. I have been informed that there has been a lawsuit filed against Loop which is discharging brine now in the development of their deep water port project.

Mr. YATES. Do you have other capacity beyond the Bryan Mound project?

Mr. JONES. The West Hackberry project is scheduled to come on in May. That requires the discharge of brine about seven and a half miles off the shore of Louisiana at the rate of one million barrels a day.

Mr. YATES. What capacity will that give you?

Mr. JONES. That will give us no capacity available for fill during fiscal year 1982. Our first capacity will come on in 1983 from that site.

Mr. YATES. How much storage capacity will it provide?

Mr. JONES. I will have to submit that for the record. I can't remember the exact number.

[The information follows:]

WEST HACKBERRY PHASE II CAPACITY

The West Hackberry expansion is scheduled to commence cavern development in May 1981. These caverns will provide storage capacity for fill beginning in fiscal year 1983 with a total fill capability of 35 million barrels by the end of fiscal year 1983.

Mr. YATES. Mr. Loeffler, do you have any questions?

Mr. LOEFFLER. No. Thank you, Mr. Chairman.

Mr. YATES. Thank you very much. I appreciate it.

Is there anything else you want to tell us?

Mr. JONES. No, sir.

Mr. YATES. Have you told us everything you should?

Mr. JONES. I think so.

Mr. YATES. By what standards?

Thank you.

SUMMARY STATEMENT—EMERGENCY PREPAREDNESS

Now we have statements on emergency preparedness. Perhaps there may be something you want to tell us. Is there anything that isn't in your statement?

Mr. FREMLING. We have the Naval Petroleum Reserve scheduled. Would you rather go to emergency preparedness generally?

Mr. YATES. Let's discuss the emergency preparedness, then we will go to the NPR, if that is all right.

Mr. BRADLEY. Mr. Chairman, I am Samuel Bradley. My testimony will focus on the budget request for emergency preparedness under the new Assistant Secretary for Environmental Protection, Safety and Emergency Preparedness.

Mr. YATES. Is there a new Assistant Secretary?

Mr. BRADLEY. Mr. Fremling is acting.

Mr. YATES. I know he is. Is there a new one?

Mr. FREMLING. There is not an appointment yet. It is a new position.

Mr. YATES. I see. Go ahead.

Mr. BRADLEY. We are requesting $5 million to continue our power supply and reliability activities. The funds for this area are requested for reviewing international electricity transactions, expanding our electric power monitoring center, responding to fuel supply emergencies, and investigating major power system outages.

We are also requesting $2 million for the emergency preparedness programs that are presently in the Economic Regulatory Administration of the Department. $900,000 is requested to support a small price and supply analytical capability, also proposed to be under the Assistant Secretary for Emergency Preparedness. Even with the President's decontrol action, we believe that continued monitoring and analysis of price and supply trends is essential to maintaining an effective emergency preparedness capability.

Mr. YATES. Does the President agree with you?

GASOLINE RATIONING RESCISSION

Mr. BRADLEY. I believe that he would.

With respect to the gasoline rationing program——

Mr. YATES. Is it defunct?

Mr. BRADLEY. It is proposed to be—that is right. We are requesting a rescission for fiscal year 1981, and no money for fiscal year 1982.

Based on the preimplementation work that we have done, we have concluded that there are substantial questions about the viability of this program and consequently believe it more prudent to concentrate our activities, our time, our resources on other measures which would appear to be more readily workable.

Mr. YATES. Such as what measures?

Mr. BRADLEY. The Administration is determined to rely to the maximum extent on market forces, price, as the principal allocation mechanism.

Mr. YATES. That has nothing to do with a lack of supply, does it? If you had another emergency situation such as you had in 1973, what would you do?

Mr. BRADLEY. If crude oil and petroleum products remain uncontrolled, then price, our studies show, will be an effective allocator; that if the price of gasoline is allowed to rise to the market clearing level, there will essentially be an equilibrating between available supply——

Mr. YATES. Mr. Bradley, that assumes a supply. Suppose you don't have a supply?

Mr. BRADLEY. That is assuming a dramatically reduced supply.

Mr. YATES. What you are saying is if it comes in dribbles, only the rich will get the gasoline?

Mr. BRADLEY. That is not what I am saying.

Mr. YATES. I thought you said price would be the equilibrating——

Mr. BRADLEY. That is one aspect of the strategy. Price can be an effective allocator.

Mr. YATES. Then what is wrong with my thesis? If you have a limited supply available, the price mechanism will operate to make that supply available to those who can bid the highest, is that right?

Mr. BRADLEY. That is right.

Mr. YATES. I said then that the rich would get it, because they are able to outbid anybody else; therefore, they would be able to get hold of it.

Mr. BRADLEY. There are several other points that need to be made.

Mr. YATES. Let's hear those points.

Mr. BRADLEY. There is room for reduced consumption, for conservation, if you will.

Mr. YATES. How is that?

Mr. BRADLEY. Allowing the price to go up will bring about more prudent use.

Mr. YATES. That is right. People won't be able to run their cars. Would you have priorities? What would you do about public transportation under those circumstances? Would they have a priority other than price?

Mr. BRADLEY. As I say, there are certain corollary policies that have to be factored in here.

Mr. YATES. Have they been factored in yet?

Mr. BRADLEY. We are doing the development work now. I am talking about fiscal and economic measures such as rebates of the taxes that would be generated by the windfall profit tax.

Mr. YATES. Mr. Bradley, how would that help provide diesel oil to the railroads and diesel fuel to your local transportation agencies? How would you supply jet gasoline for aircraft under your scheme? As I understand it, they would have to outbid everybody for their supplies.

Mr. BRADLEY. Starting with public transportation, presumably the money would be available.

Mr. YATES. So you mean the public transportation system? Take the Chicago Transit Authority in the city of Chicago. They would have to bid higher than the New York Transit Authority or the Los Angeles Transit Authority.

Either that or you would have to ration a certain amount of it to the public transportation agencies, wouldn't you? Otherwise, you would have them bidding against each other.

Mr. BRADLEY. Mr. Chairman, at this point I am not in a position to describe the specifics because admittedly some of the market mechanisms which the Administration is interested in pursuing have not been worked out in detail.

Mr. YATES. Why cancel the existing mechanism?

Mr. BRADLEY. We are not cancelling it.

Mr. YATES. You are unfunding it, which is cancelling it.

Mr. BRADLEY. That is right. We are not proposing to proceed with the preimplementation.

Mr. FREMLING. On the gasoline preimplementation plan, it was believed the direction in which it was going was so extraordinarily complex that it probably would be unworkable. It was not fully funded during fiscal year——

Mr. YATES. How much more unworkable could it be than your proposal?

MARKET STRATEGIES

Mr. FREMLING. What Mr. Bradley was indicating was that primary reliance would be on the market forces to cause a reduction in demand. I don't think there is an attempt to say there would be sole reliance on the market forces. The studies we are doing are looking at other mechanisms which possibly would be available to determine how effective they would be with varying sizes of disruptions.

Mr. YATES. Do you mean rationing?

Mr. FREMLING. Not rationing but enhancement of supply, perhaps.

Mr. YATES. A rose by any other name. What is the difference between what you call a supply enhancement system and a rationing system?

Mr. FREMLING. By supply enhancement, I am referring to a drawdown of the stocks in the private sector if it is expected the disruption will be of a limited length. Ultimately, of course, we believe the filling of the SPR and having that available for a large—

Mr. YATES. That is a long time away. You have your supply in the pipeline now.

All you have is what you have in the country. How are you going to distribute that supply? As I understood Mr. Bradley, he said you intend to use price mechanisms. You are now saying you are going to have a supply enhancement system. I don't know quite what that means, but the point I make is why terminate one system by cutting off the funds, as you have. You say it is unworkable without coming up with some workable system. The system you are describing isn't workable, is it?

ALTERNATIVES TO RATIONING

Mr. FREMLING. It is believed that when the studies are completed, options will be available which will be much more effective than the gasoline rationing would have been.

Mr. YATES. Such as what?

Mr. FREMLING. If an interruption is of a finite length, perhaps six months, the drawdown of industry stocks would help to alleviate the shortfall.

Mr. YATES. If it is a finite length of six months, you won't have anything left at the end of six months, will you? How much do we have available for industry out of your Strategic Petroleum Reserve now, two days supply, or three days supply?

Mr. JONES. There are 121 million barrels, a million barrels a day.

Mr. YATES. You will have to ration that in case the supply is terminated, won't you? That isn't your province. All you know is you get an order to pull it out of your stocks and you pull it out of your stocks.

Mr. JONES. That is correct.

Mr. YATES. He has to decide who is going to get it. Isn't that what you have to decide?

Mr. FREMLING. That would be part of the planning.

Mr. YATES. Except for a few studies that are now taking place. Mr. Bradley says it is going to be price that determines that, is that right? This is what I understand the acting Assistant Secretary said. Are you are going to look at studies to see what to do?

Mr. FREMLING. We are now studying the various options.

Mr. YATES. You have a national request to all the churches of the nation to pray that there is no termination of the supply in the interim until you finish the study. What happens now?

Mr. FREMLING. There currently are authorities existing which could be applied if necessary.

Mr. YATES. Give us an example.

Mr. FREMLING. Under the allocation program.
Mr. YATES. Which allocation program?
Mr. FREMLING. The emergency petroleum allocation.
Mr. YATES. That expires in September.
Mr. FREMLING. In October.
Mr. YATES. It expires October lst. Do we have to pray for the time after that.
Mr. FREMLING. The gasoline rationing program which was in the process of being developed would not be able to be implemented for 12 to 18 months from now.
Mr. YATES. Let's assume that that is true. What happens then to this country of ours in the event that war breaks out in the Middle East and supplies terminate as they did in 1973 when you had the blockade. What do we do then?
Mr. FREMLING. Depending upon the size of the disruption, in terms of how much oil comes through from other sources, initially the market response would be reduced demand as the prices went up. If that was not sufficient to reduce the demand sufficiently, a drawdown of the private stocks could be effected. They currently are on the order of several hundred million barrels held by the private companies.
Mr. YATES. Would the private companies control that?

CONTINGENCY STUDIES

Mr. FREMLING. Our studies are looking at either required drawdown or incentives, with the incentives being preferred.
Mr. YATES. What do you do for your public operations? What do you do for your transportation operations? What do you do for heating oil for the country? What do you do for the people, assuming this takes place in December of next year? Will your studies have been completed by December of next year?
Mr. FREMLING. Yes.
Mr. YATES. When will they be completed?
Mr. FREMLING. Somewhere between 60 and 120 days.
Mr. YATES. From now?
Mr. FREMLING. Yes.
Mr. YATES. Have they started?
Mr. FREMLING. Yes.
Mr. BRADLEY. Mr. Chairman, the Department has already completed one series of initial studies. I certainly don't mean to suggest that this market strategy is a much more simplistic or easier solution than gasoline rationing, but on balance, the costs associated with gasoline rationing so outweigh the costs of the market strategy in terms of the ease of implementation, workability that—and I referred to several independent studies that have recently——
Mr. YATES. Supply those independent studies to the committee, please.
Mr. BRADLEY. I will be happy to.
[COMMITTEE NOTE.—Overview and status report submitted to committee files.]
Mr. YATES. All right.
The market function is something that I don't grasp. Perhaps there is something here that hasn't been explained to me. I don't

know how the market function would perform the function in terms of supplying basic needs, first of all, of public agencies, secondly of the communities that have to be heated during the wintertime; thirdly, of farmers who will need the fuel in order to plant the food that the country needs. Will the market function that way, if you have a limited supply?

REBATE MECHANISM

Mr. BRADLEY. It requires for its effectiveness a very well planned rebate system, because the windfall profit tax, as it is currently structured, will capture tremendous revenues during a supply disruption when the price of oil, both foreign and domestic, increases dramatically. There will be tremendous revenues, that if rebated through targeted assistance programs could address the kinds of problems that you are speaking of in terms of human hardship, specialized needs of the transportation sector, small businesses, farmers. It is going to require a lot of preimplementation work.

Mr. YATES. We have been trying for seven years, since 1973, to come up with some system. The Congress approved the rationing system on the representation by the Administration at that time, since there was no other system that might have worked in the event that there was an emergency that required some kind of governmental overseeing of the distribution of scarce supplies.

Certainly the market system will work to distribute a limited supply to those who can afford to pay for it. How do you take care of the needs of those who can't afford to pay for it and who need it?

Mr. BRADLEY. As I said, the system presumes that you would have effective fiscal, economic programs that would assist these groups.

Mr. YATES. Do you mean government programs?

Mr. BRADLEY. Money rebated back to the economy very quickly.

Mr. YATES. But if you have no supply coming in and therefore no windfall profits, what do you tax then? Where do you get your money from?

Mr. BRADLEY. We will still have domestic production of crude. I presume even under the most severe interruption, there would also be some imports.

Mr. YATES. Then how do you propose to do it? Would you take that money and give it to consumers to compete in the marketplace for scarce supplies, one against the other?

How does your windfall profits reserve work under those circumstances?

Mr. BRADLEY. The rebate of the windfall profits revenues would be intended to do several things. First, it could provide targeted assistance for those with low incomes who are unable to pay the cost of heating.

Mr. YATES. Mr. Bradley, let's stop there. How do the poor get it? They get their money. Then do they compete in the marketplace for the limited supply against the corporations who need it for their production?

Mr. BRADLEY. That is right.

Mr. YATES. Isn't there a certain amount set aside for the poor and a certain amount set aside for transportation? Do they go into

the marketplace and compete for that limited supply when money is given to them?

Mr. BRADLEY. That is right.

Mr. YATES. What is the cost of it going to be, Mr. Bradley? How much are you going to pay for a gallon of gas, $27, $30, $40?

Mr. BRADLEY. Mr. Chairman, when I say that the Administration—and Mr. Fremling might want to correct me—intends to rely on market mechanisms to the maximum extent possible, obviously prudence would dictate having available other measures in case the market is not able to handle those matters.

Mr. YATES. Fine. Now we are making sense. What other measures are there? They are in the study stage now, is that right?

Mr. FREMLING. That is correct.

Mr. YATES. Will you not have to have something funded? What will this committee do then? We will wait until we get the studies, then will you come in and tell us what you need?

Mr. FREMLING. We are targeting to complete the studies as expeditiously as we can. We have enough money to do the studies now. It is expected that some of these might well require that we come in seeking legislative authorization and funding.

I think there is an acknowledgement that there is no single plan that is going to work for any and all kinds of disruptions. What we are doing in the studies is looking at the various kinds of disruptions that might occur and at the effectiveness of various measures in terms of assuring that there isn't a disproportionate effect on the poor, that we don't totally lose competition in the oil sector and so on.

Mr. YATES. Is there a possibility that you will be coming in and asking for money for a gasoline rationing plan?

Mr. FREMLING. I don't believe so.

Mr. YATES. You don't?

Mr. FREMLING. No.

Mr. YATES. That is what happened with the last Administration. They strenuously fought the rationing program until they finally threw up their hands and said there is no other system. I don't know how your market forces would work and provide for the limited supplies. But there is no need in beating this dead horse. We will just have to wait and see what happens. I suspect that the Administration will come in and ask for an extension of the emergency preparedness legislation out of which you have government funding. Don't you think so?

Mr. FREMLING. That is one of the factors which is under study. I don't know what the recommendation will be.

Mr. YATES. As of now, until your studies are completed, we don't know what we are going to do, do we?

Mr. FREMLING. We do not have a plan. There are some actions which could be initiated under the existing legislative authority.

Mr. YATES. What could be done under the existing legislative authority?

Mr. FREMLING. One could do what was done the last time which didn't work very well, that is price controls and allocation of petroleum. That resulted in long gas lines and shortages in some areas.

Mr. YATES. Is that worse than having nothing? Don't you believe it would be worse not to have any kind of a plan? Even that was

some kind of a plan or program. As of now, we don't have anything.

I sense a deepening unhappiness on your part.

EMERGENCY CONSERVATION GRANTS

You also want to rescind $10 million in State funds which were provided under the energy conservation program to help States develop emergency energy conservation plans. Do you think that makes sense in view of the present circumstances? Why should we not certainly try to have the States, at least, develop programs for distribution? Why rescind those amounts?

Mr. BRADLEY. Mr. Chairman, the rescission reflects two principles basically. First, the rescission covers $10 million in categorical grants and the preference of the Administration is to use block grants. If any assistance is to be given to the States——

Mr. YATES. Well, that means——

Mr. BRADLEY. More importantly, we believe the rescission is consistent with the President's action decontrolling crude oil and petroleum products and preference for reliance on market forces rather than complicated, elaborate schemes which would have been covered in many respects by this $10 million in State grants.

Mr. YATES. If the President's program looks to block grants, it will be block grants for about 50 different programs instead of categories.

Mr. BRADLEY. That is right.

Mr. YATES. You are going to give the money to the States. Instead of giving you the full amount of money that the States would have received under categorical grants, we are going to cut it by a third, which is what Mr. Stockman proposes, roughly. Each of the States will get a third less. The States will look at the money that is given to them and say, that they need this for education, for transit, for health, and for other programs.

Where do you think the energy conservation program is going to wind up? There is not going to be any money. That is up to the States, though, to decide whether they want to use that under their block grants.

Mr. BRADLEY. Yes, sir.

Mr. YATES. There won't be any money for it. The States are not going to vote themselves any money for this.

Mr. BRADLEY. We intend to provide further technical assistance to the States.

Mr. YATES. What kind of technical assistance? You don't have any plan.

Mr. BRADLEY. Public education, to name one, Mr. Chairman.

Mr. YATES. To do what? What are you going to educate them about?

Mr. BRADLEY. To educate the public on the measures they can take—

Mr. YATES. Are you going to educate them on how to get along without gasoline?

Mr. BRADLEY. That is one thing, that is right.

On conservation activities that the public can participate in.

Mr. YATES. You are cutting $700 million out of conservation, too. You are telling them to conserve, and yet you are taking out of

another fund $700 million that was devoted to conservation programs. You are going to print pamphlets telling them to conserve.

Mr. BRADLEY. I believe that the recent decontrol of crude oil and petroleum product prices provides the necessary incentive for conservation. I think what is happening right now in the marketplace and the behavior by consumers indicates——

Mr. YATES. Mr. Bradley, you are right. It does provide that. The prices are going up. People are using less gasoline. If the supplies are cut off, they will use less gasoline. Then they will have to compete for the small amount that is available.

I don't know what happens to basic services then. We still will have to wait for your plans, as far as I can make out.

Mr. BRADLEY. I am prepared to submit for the record these further studies.

Mr. YATES. Are they ready?

Mr. BRADLEY. Yes, they are preliminary studies which have been completed by the department and by outside sources.

EMERGENCY ENERGY CONSERVATION PROGRAMS

Mr. YATES. We will be glad to receive them.

You have certain activities that are going to continue in fiscal year 1981 and fiscal year 1982. You want $2 million in the emergency energy conservation program. What will you do with the $2 million?

Mr. BRADLEY. Basically there are three areas of activities, Mr. Chairman. As I indicated earlier, they will provide technical assistance to State and local government planners.

Mr. YATES. How much of the two million is for that?

Mr. BRADLEY. I will have to provide that information for the record unless—if the Chairman will permit—Mr. Bartholomew may answer.

Mr. YATES. How do you break down the $2 million?

Mr. BARTHOLOMEW. About $1.1 million for Federal development analysis of emergency measures which the States or local governments could implement.

Mr. YATES. The Federal development of what, Mr. Bartholomew?

Mr. BARTHOLOMEW. Federal development of various schemes, emergency measures that could be implemented ultimately by State government, local government, or even by the private sector.

Mr. YATES. None by the Federal Government?

Mr. BARTHOLOMEW. Generally, no.

Mr. YATES. Okay.

Mr. BARTHOLOMEW. About $800,000 for the development and delivery of the broad category of technical assistance, again to States and local government primarily.

Mr. YATES. How does that differ from your previous one?

Mr. BARTHOLOMEW. It would be using the products, if you will, of that first effort, the development of measures; and then seeing that they are coherently transmitted to the people who would be using them eventually.

In an effort, largely, to mitigate some of the impact of the grant cutbacks where we were formerly looking to the States to do a lot of this work independently, we would be undertaking a good bit of it ourselves.

Mr. YATES. They wouldn't be doing any, as I understand it. Since they wouldn't have any money at least from the Federal Government, they would have to appropriate it themselves, wouldn't they?

Mr. BARTHOLOMEW. Yes. I am not sure we know yet what the State reactions or actions will be in that regard.

Mr. YATES. Okay.

Mr. BARTHOLOMEW. There is likely to still be an emergency function, certainly, in every State.

Mr. YATES. What is the third category?

Mr. BARTHOLOMEW. The third category is only about $100,000, one-fifth of the budget, for longer range planning and program analysis.

Mr. YATES. What does longer range planning mean?

Mr. BARTHOLOMEW. I think it is obvious from some of the discussion here today that there remain a lot of unknowns in how we approach a future energy supply interruption, particularly in the context of a market strategy.

Mr. YATES. Aren't you getting that from the studies?

Mr. BARTHOLOMEW. We are collaborating, to a large degree, with Mr. Bradley and his people in the development of some phases of these studies.

Mr. YATES. Who do you represent?

Mr. BARTHOLOMEW. I represent the emergency conservation program office which, under the former structure of the department, was within Conservation and Solar.

Under the new organization we will come under the new Assistant Secretary for Emergency Preparedness and the other functions. I am not sure how we will fit precisely in the ultimate organization, but hopefully we will be complementary.

CONTINGENCY PLANNING STUDY

Mr. YATES. That there are lots of unknowns is the understatement of the day.

On page 84 of your revised request to Congress for supplemental rescissions and deferrals, you have a proposed rescission and among the reasons underlying the proposed rescission are these.

You say one of the principles underlying this study is to support U.S. goals concerning the world oil market and U.S. foreign policy toward allied oil importing nations and less developed countries.

What does that mean?

Mr. BRADLEY. These basic principles, as I understand them underlie the studies and the analyses that Mr. Fremling and I have already briefly described in terms of the direction we are going in emergency preparedness planning.

This last principle is an attempt at underscoring the fact that any action we take to deal with supply interruptions is going to be that much more effective if we do it jointly with our allies and other oil importing nations.

These are the principles underlying the alternatives to gasoline rationing and the proposed rescission of that program.

Mr. YATES. Page 83 says, [reading:]

To insure that immediate problems will not cause the nation undue hardship, the department has initiated a high priority study to review all policy options and their

implications for the national economy to deal with possible disruptions in petroleum supplies.

That is a new study, isn't it? Is that the study you are furnishing for the record?

Mr. BRADLEY. I believe that refers to Secretary Edwards' most recent direction for a comprehensive review within approximately two months of everything the agency has done in the area of emergency planning.

Mr. YATES. You mean under Edwards or under his predecessors too?

Mr. BRADLEY. Everything that had been done to the time Secretary Edwards assumed the position.

Mr. YATES. That is going to take an awful long time.

Mr. FREMLING. That is the study to which we have been referring.

Mr. YATES. This is your high priority study?

Mr. FREMLING. Yes.

Mr. YATES. That isn't what you propose to do in the future? That was done in the past, as I understand what Mr. Bradley is saying.

Mr. BRADLEY. The study is reviewing previous studies with the idea of coming up with options that can be exercised.

Mr. YATES. When will that study be completed?

Mr. FREMLING. Within 60 to 120 days.

ENERGY EMERGENCY MANAGEMENT

Mr. YATES. What would happen in an emergency right now? Who would direct energy management at that time?

Mr. FREMLING. There are several interagency organizations set up, but the Secretary of Energy is the emergency energy coordinator.

Mr. YATES. Does Mr. Edwards coordinate all the activities of the government? Who coordinates the Department of State and Defense?

Mr. BRADLEY. There is an executive order, Mr. Chairman, that establishes an energy coordinating committee which the Secretary of Energy would chair. This committee would, of course, be activated during any energy emergency as it was last fall at the onset of the Iran-Iraq War. That body would effectively coordinate the actions of the Department of Energy, the Department of State, Treasury, Defense.

It is the cornerstone of the executive branch's energy management structure.

Mr. YATES. Is that the keystone of our action in the event there is a national emergency in petroleum supplies?

Mr. BRADLEY. That is right.

Mr. YATES. Who, under Secretary Edwards, will function? will the assistant Secretary's office function?

Mr. FREMLING. Yes.

Mr. YATES. How many people do you have working there now?

Mr. FREMLING. In terms of the emergency preparedness function?

Mr. YATES. Yes.

Mr. FREMLING. We have about 200 to 225 depending upon how we stand at the moment. Plus we have people located in the field.

Mr. YATES. What do they do? How are they split up? What are their functions?

Mr. FREMLING. I can get that for you in a moment.

I don't have it in front of me.

They are broken out by their former organizational elements—from Policy and Evaluation, a total of six: from the Economic Regulatory Administration, about 100; in the conservation function, about seven; Strategic Petroleum Reserve, 59; Naval Petroleum Reserves, 18; then 15 overhead.

Mr. YATES. Strategic petroleum reserve doesn't really relate. Is that that portion of the strategic petroleum reserve that will become activated in the event of a national emergency?

Mr. FREMLING. No. These are the functions which are currently under the Assistant Secretary which are emergency-related.

Mr. YATES. He is under that?

Mr. FREMLING. Yes.

Mr. YATES. How will these activities be affected by the cutbacks in personnel in 1982?

Mr. FREMLING. We have in the 1982 revised, a total of 176, or about 25 less.

Mr. YATES. 25 less?

Mr. FREMLING. Than fiscal year 1981.

Mr. YATES. You will have 25 less in fiscal year 1982 than you have now?

Mr. FREMLING. That is correct.

Mr. YATES. Do you know what those people are going to do?

Mr. FREMLING. The people who are involved in the strategic petroleum reserve and the naval petroleum reserve will be doing their functions.

Mr. YATES. You have three categories that you described. Are those people just going to wait until they know what your plan is as a result of this study?

Mr. FREMLING. A lot of these people are developing the plan we are referring to.

Mr. YATES. It is not an outside contract?

Mr. FREMLING. No. This is primarily in-house.

Mr. YATES. You are developing a proposal for emergency preparedness. Are they the ones who are doing it?

Mr. FREMLING. That is correct. We will have both an emergency contingency planning organization and an emergency operations component that would be used to carry out actions in the event the plans need to be activated. All of this is aimed at developing the plans and getting the administrative machinery in place so that decisions can be made promptly through the organization which you referred to, the Energy Coordinating Committee, and ultimately some presidential decisions can be made on the actions that we should take.

Mr. YATES. How does this relate to the functioning of the marketplace?

Mr. FREMLING. As indicated before, the belief is that the marketplace will do a great deal toward controlling demand, but there are other measures which have to be evaluated to assure that we don't unduly impact essential services such as those you referred to or

unduly impact the poor or cause other major dislocations in the economy.

The plan which is being developed takes each of those possible measures and evaluates it in terms of its effectiveness in dealing with those kinds of things.

Mr. YATES. Is there any formal procedure set up to use the strategic petroleum reserve in the case of an emergency?

Mr. FREMLING. We have a plan which was approved which is somewhat general by its very nature. The belief is there that you don't necessarily want to have a detailed plan in the public domain which would have triggers in it which could be used by those who do not want this to be a strategic petroleum reserve, so it was in the context of the study that we were looking at what kinds of detailed drawdown plans would be called for and they will be under discussion within the Executive Branch and with the Congress.

INTERNATIONAL ENERGY AGENCY

Mr. YATES. Let's talk about the International Energy Administration. Are there any kinds of emergencies that trigger action by the International Energy Administration?

Mr. BRADLEY. Mr. Chairman, are you asking for specific types?

Mr. YATES. Yes. How is the International Energy Administration activated?

Mr. FREMLING. Currently the program can be activated when any member nation or the group generally experiences a seven percent shortfall in supply.

Mr. YATES. What kind of actions would we be required to take in order to meet whatever responsibilities we would have in that organization?

Mr. FREMLING. Each of the member countries is committed to imposing demand restraint measures and to draw down a proportionate share of its stocks in an attempt to equalize or even out the overall shortage of the members.

Mr. YATES. Would implementation of those agreements require the allocations of crude oil, gasoline, or other products in this country?

Mr. FREMLING. No, I don't think so.

Mr. YATES. Wouldn't the United States be required to help our so-called allied countries or NATO countries in the event that their supplies were cut off?

Mr. FREMLING. One mechanism to accomplish this is by drawing down available stocks at a time such as now when there are fairly large stocks being held in the private sector. Drawing them down would tend to reduce the demand that we would have on the world market and would equalize it.

Mr. BRADLEY. Voluntary sharing or sharing among the various members of the IEA certainly is provided for. We would be expected to assume some obligation.

Mr. YATES. That might further limit the supplies available in our own country, might it not?

Mr. BRADLEY. That is right.

STANDBY MEASURES

Mr. YATES. Are we going to be waiting for a plan on how to deal with that for the next 120 days?

Mr. FREMLING. Yes, that is right.

Mr. BRADLEY. We have measures ready and developed today that could be used in the event of an emergency.

Mr. YATES. What kind of measures?

Mr. BRADLEY. Such as a whole range of voluntary fuel switching measures that could be implemented.

Mr. YATES. Give me an example.

Mr. BRADLEY. Oil to gas, oil to coal switching. We have authority to put those into place on a mandatory basis if voluntary fuel switching is not forthcoming, although we would expect that it would be during an interruption.

Mr. YATES. If we haven't been able to get anybody to switch over the years, how are we going to be able to do that?

Mr. BRADLEY. These are emergency authorities that are provided by legislation to the President. I think with the decontrol of oil, you would get voluntary switching. You would not need to exercise these authorities.

Mr. YATES. Do you mean because the price of oil is so great they are already switching over?

Mr. BRADLEY. We would expect that to begin happening, yes.

Mr. YATES. How many of them have switched over? Do you have any statistics?

Mr. BRADLEY. I would have to supply that for the record, Mr. Chairman. I don't have that.

[The information follows:]

CONVERSION TO COAL

Only one utility powerplant has actually switched to coal since January 28, and we can't really credit oil decontrol for that conversion. Coal burning was initiated at VEPCO's Possum Point Unit 3 in mid-February after EPA approved a Clean Air Act delayed compliance order, for which an application had been pending since May 29, 1980.

Oil decontrol is certainly going to increase utility incentive to convert to coal, but utilities will require lead time to secure the necessary air quality and other permits and licenses from appropriate federal, state, and local authorities, and to refurbish or install the necessary coal burning equipment and pollution controls. The length of time for conversion is very much a variable, depending upon whether a facility ever burned coal before, how environmental standards might have changed since then, what condition any coal burning equipment might be in, whether the site has been substantially altered since last operation on coal, etc. The decontrol of oil and the anticipated decontrol of natural gas will increase the disparity between oil/gas and coal prices and should accelerate the use of coal and alternate fuels.

Mr. YATES. I would like to have that information.

As I recall the information I had in previous years, there was not very much.

Mr. BRADLEY. That is right. I think primarily because of the effects of price controls.

EIA RESCISSION

Mr. YATES. There is $10 million proposed for a rescission to the EIA, affecting the emergency energy system and the amount of information that will be available to the government in an emergency.

What kind of residual information will not be available for you for use under these circumstances?

Mr. BRADLEY. Mr. Chairman, I am not sure if I know which part you are referring to. Are you talking about the energy information——

Mr. YATES. Yes.

That rescission is going to cut back the amount of information that will be available to you.

Mr. BRADLEY. I do not believe it will mean a change in the quality or quantity of information.

Mr. YATES. Aren't you going to lose anything by reason of having $10 million cut off that budget?

Mr. BRADLEY. I believe this is primarily again a reduction in categorical grants to the states for their own emergency management planning.

It does not reflect any reduction whatsoever in information available to the department. Unless I am mistaken, that $10 million is for the liaison center under the Regulatory Administration.

Mr. YATES. It says:

Support to ERA conservation and solar, and environment will be cut back. The OGIS will scale down collection of information at the field level of detail. The EEMIS function will be sharply curtailed. Development of industrial and commercial data systems will cease. The activities of the field offices, which currently provide state liaison for collection and use of data, will be scaled down.

Mr. BRADLEY. I am not able to address myself specifically to that.

Mr. YATES. It will be reduced from $13 million to $3.8 million.

Mr. BRADLEY. That money was largely going to be used as grants to the States.

Mr. YATES. Not really. According to your rescission information, it was to be used for numbers of purposes. Put something in the record to show what information you will retain and what information will be given up.

Mr. BRADLEY. I will be happy to.

[The information follows:]

EFFECT OF RESCISSION ON EEMIS

While advanced systems development will be curtailed as a result of the rescission, the current EEMIS system is operational and fully able to respond to any emergencies that may arise.

Mr. YATES. Thank you, Mr. Bradley.

NPR SUMMARY STATEMENT

Now we turn to the NPR. Captain, is there anything you want to tell us before we start? How are things going?

Captain GILMORE. Going just fine, Mr. Chairman. I have a few remarks I would like to make before your questions just to apprise you of how far we have come along on our development program, where we stand on production, and basically what we are doing and where we are going on fiscal year 1982.

You are well familiar with the number of petroleum reserves and oil shale reserves. I won't cover that. In fiscal year 1982, number one, the Elk Hills oil field averaged 159,200 barrels of oil per day; and that same field is expected to produce an average of about 175,000, or 180,000 barrels per day this year. It is a little lower than we projected. We are still projecting the peak produc-

tion there as 190,000 barrels per day to be reached around the November time frame.

Mr. YATES. How much of that will go to the Defense Department?

Captain GILMORE. Thirty-four thousand barrels per day.

Mr. YATES. For how long?

Captain GILMORE. That period is indefinite, Mr. Chairman. It is going to go as long as we continue our production. There is a termination provision in there, I think 180 days. That would be by mutual agreement of the Secretary.

Mr. YATES. Has anything been done to protect the setaside provisions for small refiners?

Captain GILMORE. Secretary Weinberger in his request for the NPR oil indicated that he would run the oil to small refiners to convert it to military fuels. We don't envision a separate setaside for small refiners in addition to that.

Mr. YATES. Go ahead, Captain.

Captain GILMORE. Naval Petroleum Reserve No. 2 has been producing for many years. The Government's share of production there is running about 300 barrels per day. We don't see any significant change in that.

At Naval Petroleum Reserve No. 3, production there averaged about 4,500 barrels per day in fiscal year 1980. That dropped off to about 4,000 barrels per day or a little under that, 3,500 barrels per day currently. It may come up slightly with the water flood, but it will probably stay around the 4,000 barrel per range for a while.

SHORTAGE OF DRILLING RIGS

Our substantial development program at Elk Hills is pretty well on track. We do have a problem getting drilling rigs. We projected about six drilling rigs this year, and we have only four on board at the present time. We have been looking all over the United States and Canada for rigs and still don't have the additional two under contract yet. We are optimistic we can get them. We just hate to look at the prices they are quoting—like $8,000 a day to $10,000 a day for 10,000 foot rigs.

Mr. YATES. Why don't you buy a couple?

Captain GILMORE. Then we have the problem of manning them. I think rigs would be built faster today if the crews were available to man them. As you probably know, we do have a drilling rig at Teapot, but it is a little shallower than what we need for our work at Elk Hills, at least for the deeper wells there.

Mr. YATES. Who makes the rigs?

Captain GILMORE. Many companies. There are companies in California, Wyoming and Texas.

Mr. YATES. Why are there so few available?

Captain GILMORE. I think there is quite a backlog. I think maybe decontrol caught some of the companies by surprise. There is quite a backlog of orders to make rigs currently.

Some of our questions were why couldn't they make them faster. The answers were lack of personnel to operate them once they were built. It is just a matter of training, I think, in the oil field, both in the workover area and the drilling area. The labor market is fairly tight.

PROVISION OF OIL TO DOD

You asked about the provision of oil or sale of oil to the Defense Department. I informed you that we have 34,000 barrels a day going from Elk Hills, and the 4,000 barrels from Teapot Dome is also going to the Department of Defense. Also, we are supplying oil to the Strategic Petroleum Reserve as Mr. Jones indicated at the rate of about 103,000 barrels of oil per day. That goes to the strategic reserves through a series of exchanges.

NPR BUDGET

Our fiscal year 1982 budget request for Elk Hills basically is a continuation of operation and maintenance, and the sale of crude. There is very little development in our budget request this year, because you have been kind to us in the past year and pretty well funded our development program. We only have $7.2 million in the facilities development part of the program. That would get us up to within $5 million of the total cost of $366.2 million. We won't exceed that total cost and we are trying to speed up the program. I believe last year we told the committee that the program would be completed by the end of fiscal year 1983. I hope to have that program completed by the end of fiscal year 1982. There may be a nominal reduction in the program.

We do have a significant increase in the operation and maintenance area at Elk Hills. The increase deals primarily with increased natural gas operations, remedial work on existing hills, road repairs, and increased electrical usage.

Road repair sometimes falls at the bottom of the list. Sometimes it is hard to realize why that is important in our work at Elk Hills, but when one travels around the oil field there, there are many, many roads. Most of these are unimproved roads except the main arteries, and we have studied our production charts over the past four, five years and found that during the December, January and February time frame, when they have the heavy rains, we have a considerable amount of lost production. You can't get to the wells, can't work them over, and, we have gas driven pumping units on some of our shallow wells, and those tend to flood out and cause problems. Road work is important to us. I would not want to neglect that and have that reduced.

The California development program has come along well and we plan to complete that by the end of fiscal year 1982.

We will have a continuing requirement, though, for facilities work. The California development program was established for a given number of major projects at Elk Hills. Those will be completed. There will be a need in the years ahead for $5, $10, $20 million for facilities type work, for revolving requirements such as to change the high pressure to a low pressure boost or some other purpose.

The fiscal year 1982 budget request for the Naval Petroleum Reserve No. 3 is $22,869,000, and it represents a fair increase over the 1981 appropriation. Production would be about 4,000 barrels per day and would give us revenues of about $69 million. The major cost increases are in the development programs where we are going from drilling four development wells to a total of 12 wells.

I am sure you were briefed last year on two pilot projects—an in-situ or fire flood and an improved water flood. The in-situ project is along to the stage where we have started injecting air. We will do that about 90 days before we ignite the flood. We are still evaluating, and still doing engineering work on the improved water flood, but we plan to have it in operation by the end of this fiscal year.

The operational costs there are significant. If the program goes well in one or both, then we would likely expand one or the other or both slightly.

The fiscal year 1982 budget request for the naval oil shale reserves is $2,560,000 and this is a reduction from the 1981 budget, a reduction of about $1,340,000. This will enable us to complete the predevelopment plan for the reserves and provides $160,000 for their surface management by the Bureau of Land Management.

The total amount of funds requested for program direction in the field and headquarters, is $4,666,000 for support of 121 personnel. Twenty-one are at headquarters, 82 at Elk Hills, and 18 at Naval Petroleum Reserve No. 3.

That is a quick overview, Mr. Chairman. I would be happy to respond to your questions.

EIS ON OIL SHALE RESERVES

Mr. YATES. Thank you very much.

Has your environmental impact statement been completed?

Captain GILMORE. Our programmatic draft environmental impact statement for the Naval oil shale reserves has been filed and we are presently working on the final. We expect to file it this summer.

Mr. YATES. Apparently you are not ready to make a decision on the development of the oil shale reserves.

Captain GILMORE. As soon as that statement is filed, Mr. Chairman, we should have the data together to present to the Secretary so a decision can be made.

Mr. YATES. What about your plans for the shale reserve in Utah? Can you tell us what you intend to do there?

Captain GILMORE. Yes, sir. As you probably recognize, there have been discoveries of oil and gas adjacent to that reserve, and we are trying to accomplish some seismic work out there at no cost to us so we will have better information to determine the value of the potential oil and gas resources and to structure lease parcels if we decide to do that.

We are soliciting interest currently in a "group shoot" arrangement where oil companies and seismic companies would do the seismic work at their own expense and then provide the information to us at no cost to the Government.

That is in progress. We have also asked them for interest in leasing the conventional oil and gas resources at that reserve. This is in line with the Administration's policy of private sector development rather than government. There are a couple of unique aspects that would have to be incorporated in a lease of those assets, and the Secretary of Energy is supposed to control the time and rate of development and production. So that is unique. It cannot be a standard mineral leasing arrangement. It is more of a partnership arrangement.

ENHANCED OIL RECOVERY PROGRAM

Mr. YATES. What is happening to your enhanced oil recovery program? That is reserve No. 3 in Wyoming.

Captain GILMORE. Yes, sir. It is coming along fine. The in-situ part is well on schedule. We have started injecting air in that pilot and expect to ignite within about 90 days.

We are still proceeding with some engineering data on the enhanced water flood or Palmer-type flood. Core Labs in Dallas is working with us on that project. They have analyzed the cores and need to collect some information on moveable oil saturation before we set up where we are positioned and move ahead with the pilot. We intend to complete that engineering and have the facility in before the end of the fiscal year as far as the initial pilot arrangement.

Mr. YATES. How much more in funding will you need for 1983 and the years beyond that?

Captain GILMORE. In 1983, basically, it is going to be a contining operation of the pilot and design of whichever system appears to be feasible and most economical. I think probably late in 1983 we would need the funds to possibly start the construction at that time. Certainly in 1984.

The potential exists for an increase of about 50 to 90 million barrels of additional oil as a result of the EOR work. We are only getting about five percent of the estimated oil in place in the Shannon reservoir. If we can increase that to 35, 40, or 50 percent, it is a tremendous amount of oil that would be made available. If the pilots do work out, we will be asking you for additional funds in the 1983–1984 time frame.

Mr. YATES. You indicate that enhanced oil recovery can increase your output from 9 to 90 million barrels. How does this translate into barrels per day?

Captain GILMORE. It would increase production to a total of 9,000 barrels a day, Mr. Chairman.

DEVELOPMENT FEES

Mr. YATES. What is provided by the development fee at Reserve No. 3? You have $171,000 budgeted for development fee. What is that for?

Captain GILMORE. The development fee?

Mr. YATES. Yes, in fiscal year 1982.

Captain GILMORE. At NPR–1?

Mr. YATES. No, excuse me, Reserve No. 3, $171,000 budgeted for development fee in 1982, and $14,000 this year. Why is there such a significant increase?

Captain GILMORE. The development fee at NPR–3 is split into two parts. The fiscal year 1982 request is $514,000. The development fee provides for the development portion of the operator fee.

The development program increases from $364,000 in fiscal year 1981 to $3,798,000 in fiscal year 1982 with a commensurate increase in fee. In addition, we will change over from a cost-plus fixed fee contract to a cost-plus award fee. It is an incentive type contract. We expect that it will improve the operative performance out there.

In such a system, normally you have maybe a third of the potential fee in the base that is fixed, and then you have about two-thirds of it available for the contractor to earn depending upon his level of performance. I don't know why particularly we have split out the fee into two categories, Mr. Chairman, but it has been done that way.

EXTENSION OF NPR PRODUCTION ACT

Mr. YATES. The Naval Petroleum Reserves Production Act expires April 5th next year. Is anything being done to extend the authority to produce?

Captain GILMORE. Mr. Chairman, we have a study under way to provide information to us so that we can make a recommendation to the Secretary and he can provide a recommendation to the President.

That study is being performed by Mitre and Hudson and they have been giving progress reports, but their actual report should be in later this month or early in May. I am sure we will have to look at it in some detail. As soon as we get the draft report, we will start preparing our recommendation to go to the Secretary.

If the President chooses to continue the reserves on production, he must submit a report to Congress by about the fifth of October. He must determine that continuing production is in the national interests and submit a report to the Congress.

Mr. YATES. Will you need an appropriation if the authority to produce isn't extended?

Captain GILMORE. We will need the major part of our appropriation.

Mr. YATES. For 1982?

Captain GILMORE. For 1982. I would want to continue our development work there and the operation and maintenance effort, and it would not expire until the fifth of April in 1982, anyway.

Mr. YATES. How much will it cost to maintain the facility?

Captain GILMORE. We have about $107,161,000 in our fiscal year 1982 request. That could be reduced to some degree. If you need a good guesstimate, Mr. Chairman, I can give you one. It depends, too, on whether we would be mothballing facilities.

I think my best projection is if we were asked to shut in production at that time, that we still would be producing about 25,000 barrels per day and that would enable us to keep either one gas plant operating or cycle and keep all three of them operating. It would depend on which way we would go.

I think with SPR down to a fairly nominal storage level at the present time, maybe we would want to keep our readiness level up in the event of a shut in.

NAVAL FACILITIES ENGINEERING COMMAND ACTIVITIES

Mr. YATES. Why is the Navy being phased out of Elk Hills as its operator?

Captain GILMORE. Of course, the Navy provides officers to the program and, of course, I am the Director. I have two petroleum engineers, one at Teapot and one at Elk Hills.

Mr. YATES. The Navy facility engineering commander is being phased out.

Captain GILMORE. I see. We had tasked the Naval facilities engineering commander with basically a fixed scope of work coming into their construction effort. They planned around that. We had intended to have them do this peak workload so we didn't have to expand the operator-contractor forces. After that, the work would be continued by the operator-contractor who does have certain capabilities. I have asked the Navy about the possibility of extending their work effort. I talked to Admiral Jones about it. He is the commanding officer of San Bruno. He frankly is loaded with military construction work right now. He said if I had a serious problem, he surely would help, but we plan to let them complete their work about the end of fiscal year 1982 and then disengage that operation, because the major construction effort will have been completed and they have done a terrific job. They really have done well.

Mr. YATES. How did you select the new unit operator?

Captain GILMORE. The new unit operator at Elk Hills was selected on a competitive basis. We had a source evaluation board, a competitive selection. That same process, Mr. Chairman, is being utilized in the selection of a new operator at Teapot to continue the existing operator.

LITIGATION

Mr. YATES. Is there litigation between the Government and Chevron under the unionization agreement?

Captain GILMORE. There is some litigation which has not been resolved, Mr. Chairman, but one of the major pieces of litigation related to the 7-R issue, and, as you know, 7-R has been brought into the unit. That area is on production at the present time and we look forward to final settlement of that particular litigation.

There is some litigation regarding whether or not Chevron pays for drilling a well prior to the time a well is put on production. We have been approached on settling that particular issue. I am optimistic that it will be settled.

Finally, there is a suit pending in the court of claims regarding the valuation of oil provided to Chevron, prior to open up in 1976, for their taxes and operating costs associated with NPR–1.

The climate, I think, is fairly good at the present time. We are not getting much new litigation. We are chipping away, resolving the older matters.

MANAGEMENT SYSTEMS

Mr. YATES. Let's turn to your function and management system. You want an increase of $1,975,000 for fiscal year 1982. From what base do you make this increase?

Captain GILMORE. As I recall, Mr. Chairman, we have spent about one million dollars going into the 1982 budget on the ADP system.

Mr. YATES. I had the impression this was to be a one shot expenditure.

Captain GILMORE. We are still continuing to develop the program. As of the first of October, we put in the basic system. I think we only started the design of that system earlier last year.

Mr. YATES. What is the total cost going to be?

Captain GILMORE. We have two million this year, that is going to be the basic cost of the system. After that there will be continued lease costs because we have not bought the computer. We are leasing that equipment. I would assume there would be some adjusting as we go along. I am surprised we are as far as we are in getting this major system implemented. ADP systems seem like they are quite complicated.

Mr. YATES. What is it going to cost to operate the system manually?

Captain GILMORE. I am guessing, Mr. Chairman, that it will cost $500,000 to $700,000.

Mr. YATES. Do you know how many people you will have to operate the facility?

Captain GILMORE. We had about 14 people in our financial section and we are adjusting them to monitor the contractor. We changed to an integrated contractor at Elk Hills who keeps the accounts and manages the financial program under our oversight. I can't give you an accurate figure of just how many people there are. I would guess in the area of around 20.

Mr. YATES. Will they be contracted or will they be employees in place?

Captain GILMORE. The people doing most of the work are from the contractor. We provide oversight. Our staff at Elk Hills provides oversight over them and has certain controls over our system. We were careful to design in a system of controls in the ADP system. We have conducted one audit of the accounts out there and plan another audit of the accounts and the system, the checks and balances and so forth in the system near the end of this fiscal year and overlapping into the next fiscal year.

FISH AND WILDLIFE SERVICE ISSUES

Mr. YATES. Have you settled with the Fish and Wildlife Service on the San Joaquin Kit Fox and the Blunt Nosed Leopard Lizard?

Captain GILMORE. I am not sure we have settled that issue, Mr. Chairman. We are working on the problems and have done a lot of studying out there. I think we have one of the best reports in the State of California on the San Joaquin Kit Fox and the Blunt Nosed Leopard Lizard. I guess this year we will be putting together a plan to satisfy Fish and Wildlife; we will not destroy those species. We have been careful to protect them out of the reserve and are conscious of our environment requirements.

REMEDIAL WORK

Mr. YATES. What do you mean by remedial work? You ask for $20,466,000 for remedials.

Captain GILMORE. Remedial work involves going in and working over a well at such time that production drops off or production stops. If you have a pumping well, you normally have quite a bit of remedial work. The pump will be sanded up or wear out. You have

to pull the rods, pull the pump, and replace it. You get casing collapses.

Mr. YATES. How often do you have to do that?

Captain GILMORE. We plan in fiscal year 1982 about 343 remedials.

Mr. YATES. For how many wells?

Captain GILMORE. We have a total at Elk Hills of about 1,100 wells. Of course, you get more remedials probably on the shallow zone wells. That is about 625 or so.

I don't know. Our production is getting up near the peak now. It is a little harder to get it up again. You get up so far and then you start having some problems. I know at some reservoirs we started producing quite a bit of gas. Then you have to work over the well to control your gas or else you will be exceeding the capacity of your gas plant to handle and process all of it.

So we are into some remedial work there on the Stevens-owned wells which normally didn't give us too much trouble.

ENHANCED PRODUCTION

Mr. YATES. How much of the increase of your cost of gas operations is related to enhanced production? You move up from $16 million to $22 million.

Captain GILMORE. We have water flood work at Elk Hills. I don't know whether you would call that enhanced oil recovery operations. Some of our gas work will run in connection with the water floods. I know in the R area, we are planning to inject gas in the gas cap prior to actual startup of our water flood there.

Mr. YATES. Are there any other factors contributing to that increase?

Captain GILMORE. In the gas area? Yes, sir. We have several fairly significant repair jobs or maintenance type programs on plants. Our 3-G gas plant has been operating for many, many years. It requires some maintenance work. The LTS-1 plant will have been operated for about three years. We need to take that down and do some turnaround work on it.

The 30-R compressor installation which is a field compressor station was built about the same time as LTS-1 and requires some maintenance work.

Mr. YATES. How many oil recovery projects do you have at NPR-1?

Captain GILMORE. At NPR-1 we have water flood work under way. We have a contract which we just awarded for the first phase of one of our major water flood projects. The second phase will be awarded probably within 60 days.

That is our main B sand area, the major water flood operation.

Then we are proceeding with preliminary design work on water flood in the R area, trying to keep our pressure up.

Mr. YATES. You are going to do some exploration drilling. You want $8,119,000 for four wells. What is the potential of the wells?

Captain GILMORE. Regarding the possible production from those wells, in the Stevens zone, if our exploratory well becomes a producer, the production could range from probably 400 barrels a day to possibly 900 or 1,000 barrels per day. Generally they average about 400 barrels per day in the Stevens zone. In the shallow zone,

of course, it is much less. The potential for recoverable oil in the areas being studied could approach 75 million barrels.

NPR STORAGE FACILITIES

Mr. YATES. Do you have any storage facilities at NRP-1?

Captain GILMORE. Yes, sir.

Mr. YATES. Do you use them?

Captain GILMORE. We have five tanks, 250,000 barrels per tank capacity. We used one tank last fall when Arco was having trouble with their pipeline system. I think those problems arose concurrently with the flood of oil on the market at that time. The oil started backing up in the system. Refiners weren't taking it. We couldn't ship all our oil. We did ship about 9,000 or 10,000 barrels a day into storage at that time and then when the pressure was relieved on the system, sold the oil.

NPR WELL DRILLING

Mr. YATES. You are planning to drill only 44 wells in fiscal year 1981. The budget for 1982 shows only 44 development wells. The original budget for 1981, though, showed a drilling proposal for 65 development wells.

Captain GILMORE. Yes, sir.

Mr. YATES. You are cutting those back now?

Captain GILMORE. The 65 wells were a spread of shallow zone wells, Stevens wells, and Carneros. We started looking at our drilling program last fall about the beginning of the fiscal year. We also reviewed our projected production at Elk Hills primarily for this fiscal year and going into 1982. Those projections were lower than we had anticipated.

I asked that my staff review potential increases in production that would keep us in line with our projections and still stay in line with good engineering practices.

One of the items that the staff came up with was to drill a deep Stevens well with potentials of about 400 barrels production rather than drilling shallow wells where the production may be 40 barrels per well. We opted to drill in areas where we maximized our production.

Mr. YATES. I have some questions that I would like to ask you to answer for the record.

That is all we have at the present time.

Thank you very much, gentlemen.

[The questions and answers follow:]

ADDITIONAL COMMITTEE QUESTIONS

Receipts

Question: Total revenues from the Naval Petroleum Reserves are now estimated to be almost $2.2 billion in FY 1982, including the receipts to the treasury from the Windfall Profits Tax. Please explain how the Windfall Profits Tax is applied to the Naval Petroleum Reserves.

Answer: The Windfall Profits Tax estimate is based on 70% of the difference between the May 1979 Upper Tier Price ($13.00 per barrel) and the estimated sales price of Naval Petroleum Reserves crude oil multiplied times the projected annual production.

Pursuant to OMB direction, Naval Petroleum Reserves crude oil is priced commensurate with world oil prices.

Question: Are the effects of decontrol factored into the revenue estimates for FY 1981 and FY 1982 included in the budget estimates?

Answer: Decontrol is expected to have little or no effect on the sales price of NPR crude oil because NPR crude has been classified as non-controlled oil since production open-up in 1976.

Decontrol has had, and will continue to have an impact on drilling, development and operations costs. Drilling activity is setting all time records causing rapidly escalating costs in the drilling of NPR's development and exploration wells. Costs of oil field equipment are also increasing, driving up the cost of operations and facilities development. These costs are reflected in the FY 1982 drilling and operations and maintenance budget areas.

Question: Chevron's payments for its share of the facilities at Elk Hills goes to the Treasury. How much of the FY 1981 and FY 1982 estimated receipts reflect Chevron's payments for facility development?

Answer: Chevron's share for payment is not included for FY 1981 and FY 1982. Only receipts for petroleum and petroleum products are included. Chevron's payment is approximately 20% of all outlays at NPR--1. At the present time, total outlays are estimated to be $190 million in FY 1981 and $250 million in FY 1982 which would make Chevron's share approximately $38 million in FY 1981 and $50 million in FY 1982. Due to misunderstandings in various reviewing agencies concerning Chevron's share, this amount was not identified. These funds will be specifically identified in all future submissions.

Question: At what point in the development of a shared facility is Chevron billed for its portion of the costs?

Answer: Monthly progress payments are made to subcontractors of the NPR-1 Unit Operator and to prime contractors under the cognizance of the Naval Facilities Engineering Command. For work under the Unit Operator, Chevron is invoiced approximately ten days after the end of the month in which the work was accomplished and a progress payment made. For the Naval Facilities Engineering Command work, Chevron is invoiced about two months

after the Navy makes its progress payments. This delay is caused by Chevron requirements for detailed justification of the costs. The Director, Naval Petroleum and Oil Shale Reserves has interceded with Chevron's top management to speed up this process by automated billing with detailed justification to follow later.

Oil for Strategic Petroleum Reserves

Question: The Naval Petroleum Reserve has been a source of oil for the Strategic Petroleum Reserve for several months now.

--How much are you actually providing on a daily basis?
--What happens to the balance of the government share?

Answer: Approximately 103,000 BOPD from Naval Petroleum Reserve No. 1 is currently being exchanged for delivery to the Strategic Petroleum Reserve. The remaining balance of the Government's share of production, 34,000 BOPD, is sold to small refiners without adequate sources of crude.

Management

Question: The Operator's fee is budgeted at $4,000,000 for FY 1982, an increase of 70% over the FY 1981 amount. The justification indicates that in part of the increase is due to the award provisions of the contract. What are these award provisions?

Answer: Prior to FY 1981, the Operator contract at NPR No. 1 was a Cost-Plus-Fixed Fee contract where fee was negotiated annually and equal payments were made monthly. Under the current Cost-Plus-Award Fee contract, a fee pool comprised of approximately one-third base fee and two-thirds award fee is negotiated annually. Department of Energy guidelines provide that in an award fee contract, the base fee may equal 50% of the guidelines for a fixed fee contract and the award fee pool may equal 100% of those guidelines. Thus, the entire fee pool may equal 150% of that which would be paid under a fixed fee contract. The base fee is that amount of fee which will be paid to the contractor regardless of performance. The award fee portion is allotted quarterly based on a performance rating which ranges from unsatisfactory (0% of available award fee) to superior (100% of the award fee pool). The criteria used in arriving at the rating for the NPR-1 operator are as follows: Project management and performance of key personnel; business management and property management; environmental, health and safety procedures; technical management and performance; and production operations.

The objective of the award fee system is to improve contractor performance. Current indications are that improvements will result and the system will be cost beneficial.

Question: What are the services that the Unit Operator provides?

Answer: The Unit Operator is responsible for all operations and maintenance activities, development drilling, exploratory drilling, and design and construction of certain facilities. The Government staff is responsible for defining the broad guidelines and objectives for each category and for setting standards and goals to be achieved by the Unit Operator. The Government staff then oversees and evaluates the Unit Operator's performance. Actual implementation of programs is accomplished by the Unit Operator through Operator employees or through subcontracts procured and supervised by the Unit Operator.

Checks and balances and other controls are built into the systems at the Naval Petroleum Reserves to ensure integrity of operations.

Question: How does this arrangement benefit the Government?

Answer: The benefits to the Government are twofold. First, this form of contract provides a direct link between contractor performance and fee earned. This serves as an incentive to the contractor and because the award fee criteria are developed by the Government, it ensures that the contractor's priorities are in concert with those of the Government. In addition, the format for rating the contractor requires the Government employees to closely interface with their contractor counterparts to document accomplishments as well as deficiencies, and to propose remedial actions. Thus, the contract format also serves as an incentive to the Government employees to more closely monitor their areas and to be more specific in their direction to the contractor. For these reasons, it is expected that this form of contract will result in improved performance.

Question: Given the large amounts of money you are collecting, what procedures do you have in place to ensure that collections are made promptly?

Answer: Currently, the Naval Petroleum Reserves sell about 141,000 barrels of crude oil per day (BOPD) to the Defense Fuel Supply Center (DFSC) and small refiners. In addition, butane, propane, natural gasoline, natural gas, and condensate are sold on a daily basis.

The current NPR sales contracts provide that payments must be made within seven days of invoice receipt. Our procedures to insure that payments are made on time include weekly verification by the Treasury Department that payments have actually been received. For the sale to DFSC, we telephone every ten days to ensure that payment has been received. In addition, we conduct periodic unannounced audits to insure that payment procedures are being followed.

Question: How quickly are the billings made?

Answer: The sale of about 103,000 BOPD to the DFSC is being utilized to fill the Strategic Petroleum Reserve (SPR) under exchange agreements between the DFSC and private oil companies. Every seven days meter tickets are pulled and provided to the DFSC within 48 hours. The DFSC, upon receipt of the meter tickets, prepares invoices and utilizing wire communication, sends the invoices to the six exchange contractors. Generally, the exchange contractors receive the bill on the same day that the DFSC receives the NPR meter tickets. The total time lapsed from the last day of delivery to receipt of invoices by the purchasers is two days. The exchange contracts provide that payment for these invoices is due ten days after receipt.

About 38,000 BOPD is sold to small refiners. The billing cycle parallels that for the sale to DFSC in that meter tickets are pulled every seven days, invoices are wired to customers within 48 hours after the meter tickets are pulled and payment is due within ten days of invoice receipt.

While the billing cycle is essentially performed manually and, in some cases, delays have been experienced, we plan to automate this function as part of the new automated accounting system being installed in FY 1981.

Question: What is the extent of your outstanding claims?

Answer: We have not experienced any late payments for the sale of petroleum products. However, we continue to age accounts receivable on a monthly basis.

Financial and Management Information System

Question: For FY 1981 you requested $1,192,000 for installation of an automated financial management system and, in fact, this amount was increased by $500,000. Now in FY 1982 you have requested an increase of $1,975,000 for FY 1982. From what base is this increase?

Answer: The base utilized in the FY 1982 Submission was $ 1,192,000 the FY 1981 budgeted amount.

Question: Last year you told us that much of the amount requested is a one-time expense. Why are you now coming back for such a large amount?

Answer: Much of the amount is a one-time expense. A totally new comprehensive and integrated financial management system, however, can not be conceptually designed, or organized in detail, and installed in a single fiscal year while the daily oil field operations continue. The complex organization of a joint owner and a change October 1 to an integrated Unit Operator, moreover, complicated the installation.

As a result, a general ledger, chart of accounts and accounting policies were installed effective for FY 1981, in addition to six primary accounting subsystems. Such work will not be repeated, so its cost is a one-time expense. Maintenance of the ledger, chart, policies and the subsystems will recur.

An additional three subsystems of responsibility accounting to improve budgeting, inventory control and procurement, (subcontracting and purchasing) are being designed and installed in FY 1981.

The increase for FY 1982 is for the five remaining subsystems of payroll, personnel, production, property and vehicle maintenance, all at higher costs. There is further the need to apply some engineering functions to the present computer in order to reach better decisions and to improve efficiency. Over half of the increase is, in fact, for engineering applications.

Question: What will be the total cost to get the financial management system in place?

Answer: Costs directly identifiable with the installation, and excluding operation of the financial management system, are planned not to exceed $3,000,000 which is comprised chiefly of purchased software programs and the systems services of a leading firm of Certified Public Accountants.

The joint owner of the NPR-1 Unit is expected to reimburse about 20% of such gross cost. In addition, certain savings will occur, primarily resulting from more rapid billing to Chevron. As they are realized, beginning in FY 1981, the total financial management system could pay back its direct cost in about two years, and provide more timely financial data which will permit management increased flexibility to utilize and maneuver funds more expeditiously.

The savings are not, however, the chief aim of the financial system. The aim is to accumulate and organize hard information so that foremen, superintendents and managers can reach better quality decisions more promptly, and so that management can better determine directions and strategies. It is here that the real benefits are expected. Such improved decisionmaking will of course provide a more cost effective operation.

Question: How much will it cost to operate the system on an annual basis?

Answer: Annual operating costs also comprise directly identifiable costs, as well as indirect costs whose identity would cost more to get than would be useful; for example, the allocation of a foreman's salary for the time he spends reviewing and approving a report of materials

received. The direct operating costs at current prices include the $700,000 payroll for Unit Operator employees who automatically process data, $160,000 for the rental of hardware, and about $20,000 for rental of software, a total of $880,000 per year.

Of the total, about 20% is expected to be reimbursed by the joint owner and, in addition, certain savings are expected.

Question: How many people are involved in the operation of the facility? Are they contractors or DOE employees?

Answer: Twenty-three Unit Operator employees work full-time with the automatic data processing system and represent the largest concentration of employees devoted to the system. This effort is monitored by the DOE staff.

Question: Please provide the Committee with a crosswalk that compares Operations and Maintenance activities as presented in the FY 1981 justification with the way their activities are shown in FY 1982.

Answer: See the attached.

NPR-1
OPERATIONS AND MAINTENANCE ACTIVITIES
($000)

		FY 1982 Budget Submission		FY 1981 Submission	FY 1981 Column of FY 1982 Budget Submission
a)	Operator Fee	4,000	1,800	Operator Fee	2,350
			550	Miscellaneous Costs	
b)	Administrative Support	16,581	4,295	Miscellaneous Costs	11,733
			4,502	Operator/Contractor Labor	
			1,192	ADP Installation	
			1,744	Equipment/Vehicle Purchase & Maintenance	
c)	Drilling Supervisor	375	222	Operator/Contractor Labor	222
d)	Technical Services	3,568	1,220	Operator/Contractor Labor	3,190
			1,970	Miscellaneous Costs	
e)	Production Operations	39,341	374	Asphalto	19,025
			5,413	Well Production Facilities	
			702	Roads	
			7,908	Utilities	
			998	Rail Loading System	
			59	Equipment/Vehicle Purchase & Maintenance	
			3,571	Operator/Contractor Labor	
f)	Remedials	20,466	15,156	Remedials	15,156
g)	Gas Operation	22,830	143	Miscellaneous Costs	
			11,183	Gas Processing Facilities	
			3,040	Operator/Contractor Labor	
		22,830	2,150	Utilities	16,516
	TOTAL	107,161	68,192		68,192

NPR-3
CROSSWALK

	FY 82 Column of FY 82 Budget		FY 1981 Submission	FY 81 Column of FY 82 Budget
Operations & Maintenance				
Contractor/Operator Labor	2,925	2,153	Contractor/Operator Labor	2,288
		135	Operator Fee	
General Support	2,200	1,574	Officer in Charge Support	1,765
		191	Operator Fee	
Maintenance & Production Systems	3,027	865	Maintenance of Production System	2,457
		23	Operator Fee	
		1,569	Development Program	
Buildings/Utilities/Roads	790	496	Maintenance of Buildings/ Utilitie Costs/Roads/Vehicles	700
		204	Development Program	
Chemical Program	340	285	Development Program	285
Security	130	108	Security	108
Well Servicing	2,853	946	Well Servicing	2,386
		34	Security	
		84	Workover Rig	
		1,322	Development Program	
Workover Rig	123	106	Workover Rig	106
Fire Protection/Safety/ First Aid	100	75	Fire Protection	85
		10	Development Program	
Operator Fee	514	381	Operator Fee	381
TOTAL	13,002	10,561		10,561

Funds were shifted between categories to:
A) Formulate a new category specifically identifying the Enhanced Oil Recovery Program.
B) To properly distinguish between the Development Program and Operation and Maintenance.

Question: Please explain what the increased environmental requirements are:

Answer: The increased environmental requirements principally relate to two additional endangered species study projects proposed for FY 1982. First, an endangered species study of NPR-2 is proposed. Such a study program was implicity prescribed by the U.S. Fish and Wildlife Service in its formal Biological Opinion as a possible way for DOE to fulfill its mitigation requirements while minimizing the need for conpensatory land purchases. In addition, some new exploratory drilling may take place on NPR-2 in the future. Second, we propose to undertake a study of the giant kangaroo rat on Elk Hills, which is believed to be within the habitat range of this animal. Fish and Wildlife has informed us that this species may be listed as a federal candidate endangered species, so we have elected to include this study in our FY 1982 budget to develop appropriate information to ensure that our interests are considered by Fish and Wildlife in their determination. This type of advance study approach was used by us in FY 1980 on a plant, the cottony buckwheat. Information we provided to Fish and Wildlife was instrumental in its decision not to include this plant on a list of proposed endangered and threatened plants for California.

Question: Have you settled with the Fish and Wildlife Service on the San Joaquin Kit Fox and the Blunt Nosed Leopard Lizard?

Answer: Our study of the San Joaquin Kit Fox is in the final year of the three-year program requested by Fish and Wildlife. The work this year will be concentrated on obtaining the data necessary to prepare the final Biological Assessment for this species. Our study program of the Blunt Nosed Leopard Lizard is essentially complete, and a final Biological Assessment has been submitted to Fish and Wildlife. This assessment supported DOE's judgement that most of Elk Hills is poor habitat for the leopard lizard and thus should not be designated as critical habitat for this species. We do not expect that construction activities will jeopardize the existence of this species.

Question: Please explain why you need seven additional employees.

Answer: The seven additional employees are not related to additional environmental requirements. No additional Unit Operator personnel will be required for strictly Environmental work. These positions will be utilized throughout the Production Operations sub-category. Lack of sufficient Unit Operator personnel has been a major problem at NPR-1.

Electrical Utility Costs

Question: Electrical usage accounts for a $7,148,000 increase over FY 1981. What is the FY 1981 amount?

Answer: The FY 1981 Budget Submission contained $10,533,000 for electrical utility costs. At the present time, the rate of electrical consumption at NPR-1 is less than originally planned. This has been due to delays in executing projects due to minor engineering and design problems and increased conservation awareness at Elk Hills. Also, the new automated Accounting System has given NPR-1 accurate and timely utility costs which were not previously available.

The FY 1981 Budget Submission requests $17,681,920 for electrical utility costs. It appears highly unlikely at this time that all these funds will be required for electrical utilities. Many of the projects identified as requiring electrification; e.g., new field lighting for tank settings, electrification of SOZ pumping units, electrification of tank setting transfer pumps, and additional waste water pumps, will not become operational until the middle of FY 1982 versus late FY 1981, thereby reducing the amount of electrical demand. Any excess FY 1982 electrical funds will be offset in FY 1983 against utility costs.

Question: How much is because of rate increases and how much is because of increased consumption?

Answer: Approximately $740,000 is as a result of rate increases with the remainder of $6,408,000 related to increased consumption.

Question: What measures are you taking to control electricity costs?

Answer: All the participants on the NPR-1 operation (Chevron, DOE, and WBEC) are keenly aware of the increased electrical costs. Virtually all the increase in costs are directly related to new production facilities going on-line and requirements to reduce NOX emissions causing an elimination of gas-driven pumps and substituting electrically driven pumps.

The new accounting system has been an invaluable aid in discovering areas where electrical costs have been excessive. Beginning on a trial basis in FY 1981 and presently planned for full implementation in FY 1982, each field supervisor and manager will be responsible for submitting a planned electrical budget and then keeping costs within that budget. In addition, NPR-1 will perform a local management study to determine other procedures for reducing electrical costs.

Road Repair

Question: You plan to spend $5,590,000 in FY 1982 for major road repair. How many miles of secondary and tertiary roads will this repair?

Answer: Forty-five miles of secondary roads are to be reconditioned and all-weather surfaced at approximately $64,587 per mile.

One hundred and fifty miles of tertiary roads are to be resurfaced at approximately $17,880 per mile.

This is an addition to maintenance and up-keep of the total road system. An analysis of production has shown that NPR-1 experiences significant production declines during the rainy season of December, January and February. These declines are attributable to the inability of work crews to move about on the Reserve during inclement weather including heavy fog. These funds will be utilized to make remote sites more accessible in order to keep production at a level pace throughout the year.

Question: Are any of these roads open for public use?

Answer: In accordance with DOE Security Policies and obvious safety reasons, the roads at NPR-1 are not open to the general public. All of the roads requiring upgrading are on the NPR-1 reservation.

Question: What is the volume of truck traffic hauling away crude oil or liquids?

Answer: At the present time, truck traffic to transport crude oil and liquid products averages 75 trucks per day. This represents only a small portion of the traffic at NPR-1. The vast majority of traffic at NPR-1 are work crews responsible for drilling, oil field operations, maintenance, and construction requirements. Approximately 1,000 people per day are utilizing these roads.

Question: Over what period of time will the $5,590,000 be spent?

Answer: The entire amount will be obligated and committed in FY 1982 with work actually being started in early FY 1982. As the inability to use these roads during the rainy months of December, January and February has resulted in production declines, work will commence as soon as the funds are available to mitigate the production declines during the winter. The size of this road effort will require a year-long effort, therefore these funds will be outlayed in both FY 1982 and FY 1983.

Question: What is your long-range maintenance plan for the roads?

Answer: The Unit Contractor (Williams Brothers Engineering Company) is in the process of submitting a long range maintenance plan based on engineering data developed by the Naval Facilities Engineering Command.

It is expected that road maintenance in the out-years will average about $1,000,000 per year.

Distribution Facilities

Question: Describe for the Committee the facilities you now have operating, under construction or planned for distribution of crude oil, natural gas and liquids.

Answer: Distribution Facilities at NPR-1 are essentially complete, with the exception of the final portion of the liquid products distribution system. Construction of these facilities will commence in September 1981.

Crude oil is delivered to common carrier pipelines after first passing through lease automatic custody transfer (LACT) stations which are equipped with storage tanks, pumps and automatic devices for testing, metering and recording the crude oil before it enters the main carrier lines. Small amounts of certain crudes are shipped by highway tank trucks. Plant liquid products are delivered into tank trucks from loading facilities located near the on-site gas processing plants. These loading facilities are equipped with the necessary storage tanks, pumps and automatic devices for metering and recording the volumes of products shipped. The portion of the liquid products distribution system still pending will transfer products from the plant area to a nearby ARCO products rail and truck loading facility for distribution. Natural gas is delivered through automatic metering and recording facilities via common carrier pipelines.

All NPR-3 distribution facilities are completed. With the exception of the liquid products delivery system, the NPR-3 facilities are essentially the same as those at Elk Hills on a smaller scale.

Reserve No. 3

Question: You have requested $460,000 for special and reservoir studies at NPR-3. How many studies does this provide?

Answer: This provides for three studies, one each for the Muddy and Tensleeps reservoirs, and one for the northern sector of the Second Wall Creek reservoir.

Question: What information are the studies designed to provide?

Answer: The purpose of the studies is to determine the secondary recovery or enhanced oil recovery potential for increasing the ultimate recovery in each of these reservoirs, and select an optimum process for each reservoir. The studies will be designed to provide forecasts of producing rates and recoverable reserves, also capital and operating costs and economic analyses, for each of several candidate processes, for each reservoir.

Contractors Used for SPR Consulting Services

Question: Please provide for the record a breakout of the contractors or types of contractors who will be used in your consulting services.

Answer: Contractors will be used for logistic support analysis, to update the distribution plan, to analyze SPR size and configuration alternatives, for program control/evaluation systems enhancement, to draft and publish a drawdown procedural manual and implement a drawdown operational testing program, for safety and health analysis of construction operations, for analysis of SPR oil supply, for safety risk analysis for management objectives, and for programmatic and site specific environmental investigations.

Question: Your fiscal year 1982 request is $2,150,000. What expenses do you anticipate in fiscal year 1981?

Answer: We anticipate $2,133,000 in consulting expenses for FY 1981.

Question: Please also provide for the record a listing of who provided such services, what these services were, and what rates they were compensated in fiscal year 1980.

Answer: Services were provided by Dames and Moore for programmatic and site specific environmental investigations for $300,000.

THURSDAY, APRIL 9, 1981.

CONSERVATION AND RENEWABLE ENERGY

WITNESSES

FRANK DeGEORGE, ACTING ASSISTANT SECRETARY, CONSERVATION AND RENEWABLE ENERGY
MAXINE SAVITZ, DEPUTY ASSISTANT SECRETARY FOR CONSERVATION
DR. MELVIN CHIOGIOJI, DEPUTY ASSISTANT SECRETARY FOR STATE AND LOCAL ASSISTANCE PROGRAMS
DR. ROBERT L. SAN MARTIN, DEPUTY ASSISTANT SECRETARY FOR SOLAR ENERGY

Mr. YATES. This is a hearing on the appropriations for the Department of Energy. This morning we are going into the question of the conservation budget.

Appearing in connection with that budget is Mr. Frank DeGeorge, Acting Assistant Secretary for Conservation and Renewable Energy; Dr. Maxine Savitz, Deputy Assistant Secretary for Conservation; Dr. Melvin Chiogioji, Deputy Assistant Secretary for State and Local Assistance Programs; and Dr. Robert L. San Martin, Deputy Assistant Secretary for Solar Energy. Their biographies will be put in the record.

Mr. DeGeorge, your statement will be made part of the record.

[The biographies and statement follow:]

FRANK DEGEORGE

Frank DeGeorge was named Acting Assistant Secretary for Conservation and Renewable Energy, U.S. Department of Energy (DOE) on February 24, 1981. He had served as Acting Assistant Secretary for Conservation and Solar Energy since January 21, 1981.

Mr. DeGeorge was the Principal Deputy Assistant Secretary for Conservation and Solar Energy from August 1980 to January 1981. He served as the principal adviser to the Assistant Secretary and had major responsibility for the day-to-day management of Conservation and Solar staff and programs. He advised the Assistant Secretary on the effectiveness, responsiveness and quality of program operations, and dealt with various administrative and management matters.

Before joining DOE in October 1979 as the Deputy Chief Financial Officer for Internal Management, Mr. DeGeorge served in various senior level administrative positions with the Department of Health, Education and Welfare (HEW). From January 1979 until October 1979, he was Deputy Commissioner of Social Security. Prior to that appointment, he served as Associate Commissioner for Management and Administration at the Social Security Administration, a position to which he was appointed in December 1973.

From 1972 to December 1973, Mr. DeGeorge was HEW's Associate Administrator for Financial Management of the Social and Rehabilitation Service. From March 1971 until December 1972, he was Assistant Administrator for Financial Management of the Social and Rehabilitation Service.

Before joining the Federal Government, Mr. DeGeorge held executive and management positions with several private companies. He was Treasurer at Systematics General Corporation of Falls Church, Va., from 1969 until joining HEW in 1971. From 1968 to 1969, he was Vice President of Alloys Unlimited in New York City. During the period 1958 to 1968, Mr. DeGeorge was associated with Litton Industries. While at Litton, he was Vice President for two of the company's major divisions.

Mr. DeGeorge received a B.S. degree in accounting in 1951 from LaSalle College, Philadelphia, Pennsylvania. In 1956, he was awarded an M.B.A. degree from the University of Delaware.

The recipient of numerous recognition citations, Mr. DeGeorge received the HEW Social and Rehabilitation Service Award of Appreciation of 1973; the HEW Secretary's Special Citation in recognition of service performed as Chairman of the Department Grant Appeals Board in 1974; the Beta Alpha Accounting Association Award of LaSalle College in 1974; HEW's Distinguished Service Award in 1978; DOE's cash award for Special Act or Service in August 1980; and DOE's Outstanding Service Medal in January 1981.

Mr. DeGeorge is also a member of the Department of Health and Human Services' Grant Appeals Board.

Dr. Maxine Savitz

Dr. Maxine Savitz was named Deputy Assistant Secretary for Conservation, Office of Conservation and Solar Energy, Department of Energy (DOE) in February 1980. In this position she directs programs designed to improve energy efficiency in transportation, buildings and industry. Her office also includes a program of basic research into areas such as heat transfer and thermodynamics.

Previously, Dr. Savitz has served as DOE's Deputy Assistant Secretary for Conservation and Solar Applications, providing administrative and management support to the Assistant Secretary. Also, she served as Director of the Division of Buildings and Community Systems, Office of Conservation and Solar Applications.

Dr. Savitz held similar positions at the Energy Research and Development Administration (ERDA), which was merged into DOE in October 1977. Before joining ERDA in 1975, she was Director of the Building Policy Research Program, Office of Energy Conservation and Environment at the Federal Energy Administration (FEA). Prior to that she was a Program Manager at the National Science Foundation. She earlier served as Professor of Chemistry at Federal City College where she was the creator and co-principal investigator of the Federal City College Science Mobile. She has also served as Chemistry/Laboratory Instructor at Hunter College in New York.,

In 1967 Dr. Savitz received the MERDC Commander Award for Scientific Excellence at Fort Belvoir, Virginia, where she was a senior research chemist working in the area of hydrocarbon fuel cells and secondary batteries.

In 1976 Dr. Savitz received the ERDA Meritorious Service Award and in 1975 she received the FEA Certificate of Superior Service. She was recognized for her outstanding contribution to the construction industry in 1975 by the Engineering New Record.

Dr. Melvin H. Chiogioji

Dr. Melvin H. Chiogioji is Deputy Assistant Secretary for State and Local Assistance Programs, Office of Conservation and Solar Energy, U.S. Department of Energy (DOE). He directs grant programs for states and localities, including the institutional buildings conservation grants program and the residential conservation service, and is responsible for the small scale technology and energy-related inventions programs.

Previously, Dr. Chiogioji was director of the Federal programs division and assistant director for systems analysis in DOE's Division of Buildings and Community Systems, also part of the department's conservation and solar energy program.

Dr. Chiogioji held similar positions with the Federal Energy Administration (FEA) since 1975. From 1973 to 1975, he served as director of FEA's Office of Industrial Analysis, Industrial Programs Office. FEA became part of DOE in 1977.

During the period 1965 through 1973, Dr. Chiogioji held key civilian posts with the Navy ranging from engineering positions with the Phoenix missile program to director of the Weapons Evaluation Division, Naval Ordnance Systems Command.

Dr. Chiogioji served as a naval officer from 1961 to 1967, including a one-year tour of duty as the Navy officer in charge at the Byrd Station in Antartica.

Born in Hiroshima, Japan, in 1939, he attended Purdue University and received his bachelor of science degree in electrical engineering in 1961. He received a master of business administration degree in management from the University of Hawaii in 1968, and his doctorate in operations research and R&D management from George Washington University in 1972. He is a professorial lecturer of management science at George Washington University and a registered professional electrical engineer.

Dr. Chiogioji has been listed in various publications including Outstanding Young Men of America; Community Leaders of America; Personalities of the West and Midwest; Men of Achievement; Who's Who in Finance and Industry; Who's Who in the East; and American Men and Women in Science. He is the author of two books, Industrial Energy Conservation, 1979, and Residential and Commercial Buildings Energy Conservation, 1980, and many monographs and articles.

He resides with his wife and two children in Silver Spring, Maryland.

Dr. Robert L. San Martin

Dr. Robert L. San Martin was appointed Deputy Assistant Secretary for Solar Energy, Office of Conservation and Solar Energy, U.S. Department of Energy (DOE), on October 9, 1980. In this position, he is responsible for the management of the Department's solar research, development, and demonstration program. His primary duties include the formulation and implementation of DOE policies which are related to the development and commercialization of solar energy technologies.

Previously, Dr. San Martin had served as Deputy Assistant Secretary for the Field Operations and International Programs in DOE's Office of Conservation and Solar Energy, where he managed the relationship between the Office of Assistant Secretary and DOE laboratories and field installations. He joined the Department of Energy in 1978 as Director of DOE's Division of Distributed Solar Technology.

From 1977–78, he served as Director of the New Mexico Solar Energy Institute and, from 1976–78, was Director of the New Mexico Energy Institute where he assumed responsibility for solar and geothermal energy research in the State.

Dr. San Martin's extensive career in the area of solar energy began in 1962 at the University of Florida, and continued when he moved to New Mexico State University to teach and perform research in solar energy, heat transfer, and thermodynamics.

In 1974, he became Director of the Energy Research and Development Institute at New Mexico State University.

Dr. San Martin received his bachelor's degree in mechanical engineering from the University of Florida in 1963, his master's in 1964 and his doctoral degree in 1969.

A member of numerous solar professional and technical societies, he is past chairman of the American Society of Mechanical Engineers Solar Division and currently a member of the Board of Directors of the American Section of the International Solar Energy Society. He is author or co-author of over 50 technical publications and reports on solar energy.

STATEMENT OF FRANK DEGEORGE

ACTING ASSISTANT SECRETARY

for

CONSERVATION AND RENEWABLE ENERGY

DEPARTMENT OF ENERGY

Mr. Chairman and Members of the Subcommittee:

I appreciate this opportunity to appear before you today to discuss the Department of Energy's revised FY 1982 budget request for energy conservation programs under the jurisdiction of this Subcommittee. As you may already know, all of the energy programs listed on the attached budget tables are currently under my authority as Acting Assistant Secretary for Conservation and Renewable Energy.

By way of overview, the revised FY 1982 budget for these programs totals $193.0 million. This amount is fully adequate to implement DOE's energy conservation programs, because many of the activities previously supported by this office are unnecessary in light of the new healthier climate for conservation. National economic conditions clearly make conservation cost-effective and there is widespread public awareness of the benefits of conservation. Nevertheless, total Federal support for energy conservation will remain high due to continuation of tax credits for conservation. Such tax credits are expected to total nearly $800 million in FY 1982 alone. More detailed budgetary data are summarized in the accompanying tables to which I referred earlier.

THE FRAMEWORK FOR THE BUDGET

Before I describe the highlights of the Department's FY 1982 revised budget for conservation programs, I would like to describe briefly the assumptions underlying the formulation of the revised budget.

Essentially, the Administration's energy policy and revised budget request are based upon the following underlying assumptions: (a) the Nation's energy problems will be solved primarily by the American people themselves -- by consumers, workers, managers, inventors, and investors in the private sector -- not by the government; (b) the government's role is to establish sound public policies, based on economic principles, so that individuals and firms in the private sector have the incentives to produce and conserve energy efficiently; (c) the government's role is not to select and promote favored sources of energy. Doing so risks wasting the Nation's resources.

Based upon these underlying assumptions, the revised budget reflects a new policy regarding the proper role of the Federal Government in energy conservation. Briefly stated, this policy recognizes that the Federal Government should continue to support longer-term, generic and high-risk, but potentially high-payoff research that private industry will not undertake. However, it is the Administration's conviction that the marketplace can, and will, perfect and commercialize new energy technologies more efficiently and effectively than government, especially if energy prices are allowed to reflect their true replacement costs. Accordingly, industry is expected to support development and demonstration of promising near-term technologies and to be responsible for their ultimate market or commercial deployment.

Finally, stimulated by Federal tax credits and rising energy prices, the Administration notes that the market for energy

conservation products is expanding rapidly. Deregulation of oil in accordance with the President's policy and increasing natural gas prices, permitted under the Natural Gas Policy Act of 1978, will raise the price of oil and gas toward true market value. Regulations which have held energy prices artificially low have prevented investments in conservation activities from achieving their true potential. As a consequence, the President believes it is necessary to shift the focus of the Department's energy conservation activities away from costly near-term development, demonstration and commercialization efforts, burdensome regulatory programs, inefficient subsidy programs, and into longer-range research and development projects that are too risky for private firms to undertake.

DOE is reviewing the provisions of all existing statutes authorizing or directing DOE to undertake conservation and renewable energy activities. DOE will provide to the Congress any suggested revisions to existing legislation as soon as the review is completed.

I would now like to highlight the programs included in the FY 1982 revised budget request.

OFFICE OF BUILDINGS AND COMMUNITY SYSTEMS

The primary objective of the Buildings and Community Systems programs is to perform long-term, high risk (but potentially high payoff) generic research on technologies affecting the use of energy in buildings. This research is intended to support development of the technology base necessary for the private sector to increase the energy efficiency of the Nation's buildings. The research findings will be available for use by manufacturers, architects, engineers, and builders to achieve further increases in the energy efficiency of

buildings. Additionally, continued support will be provided for updating the appliance test procedures used under the FTC labeling program and for continued coordination of conservation efforts in Federal buildings and operations.

The FY 1982 request for Buildings and Community Systems is $31.1 million. The request reflects a concentration on the generic, long-term research which provides a technological base for building energy efficiency and which would not be undertaken by the private sector.

Building Systems. The request for Buildings Systems is $17.9 million which will support long-term generic Building Energy Science research programs in ventilation and controls, envelope systems and materials, performance calculations and diagnostics, and pilot projects and case studies. These activities are directed toward advancing the technical understanding of energy phenomena in both new and existing residential and commercial buildings. They focus on the energy efficiency of the entire building by examining the interaction of its component parts and energy systems. Substantial gains in improving the energy efficiency of buildings can be achieved if these interactions are better understood. The building system subprogram conducts research that is not done in the private sector. Technical program areas and the specific research agendas selected reflect close cooperation with the major segments of the diverse building industry. Building Energy Science programs are looked upon by the private sector as the source for unbiased research and technical data on energy efficient buildings.

The Building Systems request will also support research on energy conversion equipment and continued updating of existing appliance test procedures. The energy conversion equipment activity will support technology base research on generic technical issues (for example, combustion and heat transfer) that can lead to improved energy efficiency in a variety of end-use products, such as advanced heating and refrigeration systems.

Federal Energy Management Program. The purpose of the Federal Energy Management Program (FEMP) is to increase energy efficiency and thereby reduce energy consumption in Federal facilities and operations. The program office provides direction and coordination of the efforts of Federal agencies with non-energy missions to incorporate energy considerations into their planning and management functions and to improve the energy efficiency of their operations and facilities. To continue these activities, $1 million has been requested for the program for FY 1982.

Energy From Municipal Waste. This program focuses on research and development of economically and environmentally sound options for energy forms derived from wastes and on replacement of the use of virgin materials with recyclable materials derived from municipal wastes.

In FY 1982, research and development will focus on completing unit improvements which have the potential to enhance efficiencies and economics. Special attention will be given to plan evaluation and the generation of engineering data. In future years, any further urban waste research and development of this type will be undertaken by the

private sector. Longer range, generic research on conservation that will provide a technology base for private sector efforts is continuing in the Energy Conversion and Utilization Technologies Program in the Multi-Sector area.

TRANSPORTATION PROGRAMS

The primary objective of the transportation program is to support long-term, high-risk, but potentially high-payoff, research and development on promising conservation technologies that are unlikely to be undertaken by the private sector alone.

For FY 1982, $38.3 million is requested for the transportation program. Vehicle Propulsion Technology Development accounts for $11 million. Key long term, high risk research areas have been identified in both the gas turbine and Stirling engine technologies and in areas related to improving efficiency in truck and bus systems. This research is fundamental to the success and eventual use of these types of engines in transportation.

The FY 1982 gas turbine program will focus on ceramics development, combustion, compressor and turbine aerodynamics and regenerator hot seals. Generic research and development will be carried out on Stirling engine technology items such as low-cost heat exchangers, advanced control systems, and ceramic heat exchanger components. Generic research projects will be initiated, including the investigation of ceramic materials for the heavy-duty truck propulsion system market.

The FY 1982 request includes $19.6 million for Electric and Hybrid Vehicle Research, Development, Testing and Evaluation. The program will concentrate on the most promising experimental battery

candidates determined from laboratory and vehicle testing. Longer-term, high risk research and development of components and subsystems for electric vehicles will emphasize complete direct current and alternating current propulsion subsystems and the related controllers. In the hybrid vehicle project, the fabrication of a hybrid research vehicle will be completed.

In the FY 1982 budget for the Transportation Systems Utilization Program, $1 million is requested to publish and distribute 12 million copies of the Gas Mileage Guide for model year 1982.

The Alternative Fuels Utilization program is budgeted at $5.4 million for FY 1982. Activities will be focused on the use of synthetic fuels. The effort will consist of exploratory investigation of potential problems and establishment of engine and resource industry tests. Because synthetic fuels are deficient in hydrogen as compared to petroleum, and the manufacture and addition of hydrogen adds substantial costs to the finished fuels, experimentation will be expanded in FY 1982 to determine the fuel tolerance of various engine combustion chamber configurations.

INDUSTRIAL ENERGY CONSERVATION PROGRAM

There is clear evidence that the Nation's industrial sector is conserving energy. To present one example, the U.S. steel industry consumed 47 million Btu's per ton of finished steel in 1950. In 1973, the comparable figure was 35 million Btu's per ton--a 25 percent improvement in spite of the era's inexpensive energy. With the sharply rising energy prices of the 1970's, energy conservation by industry has accelerated. Between 1972 and 1976, improvements in

composite industrial energy efficiency averaged 9.7 percent. Present industrial energy consumption is at almost the same level as in 1972, despite a 20 percent increase in real industry output. Decontrol of oil prices as a result of the President's January 28th announcement and increasing natural gas prices permitted under the Natural Gas Policy Act of 1978 will increase further the rate at which the industrial sector improves its energy efficiency. Conservation investment tax credits for such devices as recuperators and preheaters will also stimulate industrial conservation improvements. Accelerated depreciation allowances and the removal of unnecessary regulatory burdens, proposed as part of the President's economic recovery package, will improve industry's capital formation and provide the necessary means for high priority conservation investments, including development and demonstration projects.

Under these conditions, it is no longer necessary to have a Federal program of research, development, and demonstration on industrial energy conservation. Consequently, the FY 1982 request is limited to about $1 million for Program Direction funds to provide the personnel required to oversee the closeout of existing multi-year projects. Longer term, generic research on conservation that the private sector is unwilling to undertake will continue in the Energy Conversion and Utilization Technology Program in the Multi-Sector area.

ENERGY CONVERSION AND UTILIZATION TECHNOLOGY PROGRAM

The objectives of the Energy Conversion and Utilization Technology Program are to establish the technical feasibility of advanced concepts and to expand the technological base from which

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improved energy systems are developed. Therefore the program supports long-term, high risk research and development that is generally not supported by the private sector.

We are requesting $12.0 million for FY 1982. These funds will be used for materials research, chemical processes technology, new concepts development of advanced instrumentation and analysis methods for combustion processes, and the development of improved components and computer-aided design techniques for heat exchangers used for recovery and use of waste heat. This research can be utilized by the private sector to develop technologies in a variety of end use applications.

ENERGY RELATED INVENTIONS PROGRAM

The Energy-Related Inventions Program provides direct support to inventors by evaluating their inventions and providing technical and financial assistance for innovative concepts which will contribute to energy conservation or production.

This program pays particular attention to those inventions submitted by individual inventors and small companies. Inventions are evaluated by the National Bureau of Standards (NBS). The Department of Energy considers for support those inventions recommended to them by NBS. The decision of the type and amount of support, if any, is based on the inventor's proposal, a review of it by an appropriate DOE technical program, and the NBS recommendation.

The FY 1982 budget request for funding to continue this program is $5.4 million.

SCHOOLS AND HOSPITALS GRANT PROGRAM

The Institutional Conservation Program is designed to address the needs of local governments and local public and non-profit institutions. Under the National Energy Conservation Policy Act, Title III, Parts 1 and 2, DOE provides both technical and financial assistance to public and non-profit schools, and hospitals.

The budget requests $100 million for FY 1982, of which DOE will award $92 million in grants to schools and hospitals. These grants will provide funds for technical assistance analyses and energy conservation measures in an estimated 8,400 buildings. The energy saved as a result of these grants is estimated to be 4.1 million barrels of oil equivalent annually. The additional $8 million requested will be used for contractor support for auditing and monitoring grants, program evaluation, management information system support, technical review of grant applications, and for the survey, evaluation and dissemination of effective energy conservation methodologies and energy management practices in institutional buildings. These activities will be disproportionately greater in FY 1982 because they will not only cover grants awarded in FY 1982, but also grants awarded at the end of FY 81.

WEATHERIZATION ASSISTANCE FOR LOW-INCOME PERSONS

In FY 1982, the Energy Department's weatherization assistance program will be incorporated into the Department of Housing and Urban Development's proposed community development support assistance program. Low-income home weatherization activities will thus continue, but more in accord with local needs and priorities.

Currently, about one third of community development block grants funds, or about $1 billion annually, is targeted by recipient communities to some form of rehabilitation. Combining the Department of Energy weatherization program with the community development block grant is one example of Administration efforts to shift resources and decision-making authority to State and local government through block grants and program simplification wherever possible. The existing Department of Energy program has been plagued by increasing costs and quality control problems. As currently structured, the Department of Energy program would take 50-100 years to reach all the potentially eligible low-income households in the Nation. By shifting administrative responsibility entirely to the local level, communities will be able to devise weatherization efforts most appropriate to their needs and circumstances and achieve greater levels of efficiency and productivity.

SUMMARY

As the program levels in the Department's revised FY 1982 Budget for conservation, solar and other renewable energy technologies reflect, we are embarked on a new course regarding the appropriate Federal role in energy development. This budget also implies a closer partnership with industry.

Mr. Chairman, this concludes my formal statement. I would be pleased to respond to any questions.

Department of Energy
FY 1982 Revised Budget
Conservation and Renewable Energy
(BA in Millions)

Appropriation and Program	Jan. 15 Submission FY'81	Jan. 15 Submission FY'82	Revised Budget FY'81	Revised Budget FY'82	Changes FY'81	Changes FY'82
Energy Conservation						
Buildings & Community Systems						
Building Systems	17.8	27.1	11.1	17.9	-6.7	-9.2
Residential Cons. Service	5.2	6.8	3.0	0	-2.2	-6.8
Community Systems	13.8	10.4	8.6	0	-5.2	-10.4
Small Business	0.8	1.0	0.1	0	-0.7	-1.0
Appliance Standards	6.0	5.8	3.8	0	-2.2	-5.8
Technology/Cons. Product	20.3	23.3	12.7	0	-7.6	-23.3
Analysis/Technology Transfer	5.9	5.7	3.8	0	-2.1	-5.7
Federal Energy Management Prog.	1.0	3.1	0.5	1.0	-0.5	-2.1
Urban Waste	10.9	9.1	5.8	9.1	-5.1	0
Emergency Bldg.& Temp. Restric.	-0.5	0	0	0	+0.5	0
Residential/Commercial Retrofit	26.2[a]	31.1	6.2	0	-20.0	-31.1
Program Direction	6.4	7.2	6.4	3.1	0	-4.1
TOTAL	113.8	130.6	62.0	31.1	-51.8	-99.5
Industry						
Waste Energy Reduction	24.8	16.7	14.8	0	-10.0	-16.7
Industrial Proc. Eff.	37.8	16.5	14.9	0	-22.9	-16.5
Cogeneration	16.5	9.5	8.0	0	-8.5	-9.5
Implementation & Development	7.5	5.6	2.7	0	-4.8	-5.6
Program Direction	3.1	3.3	2.6	0.9	-0.5	-2.4
TOTAL	89.7[b]	51.6	43.0	0.9	-46.7	-50.7

Continued--

Department of Energy
FY 1982 Revised Budget
Conservation and Renewable Energy
(BA in Millions) Continued--

Appropriation and Program	Jan. 15 Submission FY'81	Jan. 15 Submission FY'82	Revised Budget FY'81	Revised Budget FY'82	Changes FY'81	Changes FY'82
Transportation						
Transportation Systems Util.	6.7	9.2	4.9	1.0	-1.8	-8.2
Alternative Fuel Util.	5.3	5.4	4.5	5.4	-0.8	0
Vehicle Propulsion R&D	68.0	58.4	41.4	11.0	-26.6	-47.4
Electric and Hybrid Vehicle R&D	36.8	45.4	27.3	19.6	-9.5	-25.8
Program Direction	2.9	3.3	2.9	1.3	0	-2.0
TOTAL	119.7[b]	121.7	81.0	38.3	-38.7	-83.4
State & Local[c]						
Schools & Hospitals	181.3	200.0	81.3	100.0	-100.0	-100.0
Local Govt. Bldgs.	0	0	0	0	0	0
Weatherization	182.0	200.0	175.0	0	-7.0	-200.0
Energy Mgmt. Partnership Act	0	101.6	0	0	0	-101.6
EPCA	37.8	0	37.8	0	0	0
ECPA	10.0	0	10.0	0	0	0
Energy Ext. Service	20.0	0	20.0	0	0	0
Program Direction	9.9	12.5	9.9	5.0	0	-7.5
TOTAL	441.0	514.1	334.0	105.0	-107.0	-409.1
Energy Impact Assistance	62.0	47.6	10.0	0	-52.0	-47.6
Multi-Sector						
Appro. Technology	12.0	13.8	12.0	0	0	-13.8
Inventors Programs	5.8	5.4	5.8	5.4	0	0
Energy Conversion & Util. Technology	8.0	12.1	8.0	12.1	0	0
Program Direction	0.7	0.4	0.7	0.2	0	-0.2
TOTAL	26.5	31.7	26.5	17.7	0	-14.0
Total, Energy Conservation	852.7	897.3	556.5	193.0	-296.2	-704.3

Continued--

Department of Energy
FY 1982 Revised Budget
Conservation and Renewable Energy
(BA in Millions) Continued--

Appropriation and Program	Jan. 15 Submission FY'81	Jan. 15 Submission FY'82	Revised Budget FY'81	Revised Budget FY'82	Changes FY'81	Changes FY'82
Energy Production, Demonstration & Distribution						
Solar						
Federal Buildings	1.8	0	1.8	0	0	0
Market Analysis	6.0	6.8	0.5	0	-5.5	-6.8
Program Direction	0.7	0.7	0.7	0	0	-0.7
Total Energy	8.5	7.5	3.0	0	-5.5	-7.5
GRAND TOTAL	861.5	904.8	559.5	193.0	-301.7	-711.8

[a]Reflects consolidation of funds appropriated to Building Systems ($16.5 million) and RCS ($9.7 million) subprograms requested under R/CR line-item.

[b]Does not reflect effects of FY 1981 Carter rescissions ($35.8 million in Industry and $120 million in Transportation.)

[c]Excludes funds for Emergency Energy Conservation (EECA) activities.

Mr. YATES. Tell us what is the bleak future in the Department of Energy.

Before we do that, I should insert justifications for the rescission for fiscal year 1981.

[The information follows:]

Department of Energy
FY 1981 Request for Rescissions
(Dollars in Thousands)
Funding Summary of Proposed Rescissions

	Presently Available (BA)	Revised Request (BA)	Proposed Rescission (BA)
Buildings and Community Systems			
Subprogram			
Building Systems (BS)	$ 34,325	$ 11,120	$ -23,205
BS	(17,825)	(11,120)	(- 6,705)
Residential/Commercial Retrofit (R/CR)	(16,500)	(-0-)	(-16,500)
Residential Conservation Services (RCS)	14,865	9,210	-5,655
RCS	(5,200)	(3,010)	(-2,190)
R/CR	(9,665)	(6,200) 1/	(-3,465)
Community Systems	13,800	8,608	-5,192
Small Business	750	100	-650
Technology and Consumer Products	20,300	12,670	-7,630
Appliance Standards	6,000	3,742	-2,258
Analysis and Technology Transfer	5,900	3,800	-2,100
Federal Energy Management Program	1,000	530	-470
Urban Waste	10,900	5,790	-5,110
Emergency Temperature Restrictions Program	- 500 2/	-0-	500
Program Direction	6,430	6,430	-0-
Total	$113,770	$62,000	$-51,770

1/ This line item includes the consolidation of R/CR demonstration and training activities previously identified under Building Systems and Residential Conservation Service.

2/ This negative amount will be applied against existing energy conservation programs in FY 1981.

Program Summary of FY 1981 Request for Rescission

Justification

Building Systems
Work in support of the Building Energy Performance Standards program is no longer justified in view of the market response to the decontrol of oil prices. In view of the plan to terminate the program in FY 1982, efforts to provide Codes and Standards, program implementation, technical assistance, and a demonstration program will be canceled. The R/CR rescissions under this line item are covered under the Residential/Commercial Retrofit rescission narrative.

This program is being reduced in FY 1981 and, as a result, contract termination and close-out costs of $1,540,000 are anticipated in FY 1981.

Residential Conservation Service
Work in support of the Federal RCS plan and funds for monitoring utility supply, installation and financing activities will not be necessary in view of the market response to oil price decontrol. In view of the plan to terminate the program in FY 1982, new efforts to provide technical assistance to States and utilities on program implementation will be canceled along with plans to evaluate items for addition to the eligible RCS measures.

Specifically the $2,190,000 proposed for rescission will permit the:

- cancellation of all plans for further technical assistance to States and utilities (continue and complete projects underway such as inspector/installer training).
- discontinuation of work to support Federal RCS plan implementation.
- cancellation of monitoring activities of utility supply, installation and financing activities.
- cancellation of plans to evaluate new measures proposed for addition to RCS program measures list.

The R/CR rescissions under this line item are covered under the R/CR rescission narrative.

This program is being substantially reduced in FY 1981 and terminated in FY 1982. As a result, contract termination and close-out costs of $350,000 are anticipated in FY 1981.

Residential/Commercial Retrofit 1/
Work in the three program areas--Innovative Demonstrations, Auditor Training and Certification Grants, and the Commercial and Apartment Conservation Service is no longer justified in view of the anticipated impact of the market response to the decontrol of oil prices. Reduced funds for Innovative

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1/ The activities under this program are included within the Building Systems and Residential Conservation Service programs in FY 1981. The FY 1982 budget reflects a separate line item for R/CR.

Demonstrations will only support a limited-scale demonstration effort in one building sector. In recognition of the more advanced knowledge and planning for the residential sector demonstration, the commercial and multi-family efforts will be eliminated as well as the Residential Energy Efficiency Program. With program termination, there will not be a need for a large number of qualified persons to conduct on-site audits under the program, thus eliminating the need for the Auditor Training and Certification Grants Program. The proposed termination of the Commercial and Apartment Conservation Service program prior to implementation significantly reduces the need for technical assistance support to States and utilities.

Specifically, the $19,965,000 proposed for rescission will permit the:

- cancellation of 24 projects to demonstrate innovative approaches for stimulating conservation investments in commercial (10 projects) and multifamily (10 projects) buildings and in the Residential Energy Efficiency Program (4 projects).

- reduction in the number of innovative residential sector demonstration from 20 to 10.

- cancellation of the Auditor Training and Certification Grants program.

- scale-down of technical assistance for States and utilities in support of the Commercial and Apartment Conservation Service Program.

This program is being substantially reduced in FY 1981 and eliminated in FY 1982. As a result, contract termination and close-out costs of $150,000 are anticipated in FY 1981.

Community Systems

The Community Systems Program consists of two major elements--a technology component and a management component. Within the technology area such systems as district heating and cooling have been pursued. The deregulation of oil provides the proper market signals which will allow for the selection of a district heating alternatives when economically appropriate. Similarly, on the management side, the market signals should be picked up by local governments so that they will initiate management and outreach efforts for energy conservation in public enterprises and in the community as a whole.

Specifically, the $5,192,000 proposed for rescission will:

- discontinue a number of district heating/Integrated Community Energy System demonstration projects.

- reduce a number of Site and Neighborhood Design case projects by working with other Federal agencies to address energy efficiency in community processes.

This program is being substantially reduced in FY 1981 and terminated in FY 1982. As a result, contract termination and close-out costs of $250,000 are anticipated in FY 1981.

Small Business

The Small Business Program has concentrated on providing assistance through the dissemination of practical, efficient and cost-effective advice and information. The Small Business Program has been preparing such information and developing channels of providing the needed assistance. With oil

deregulation, small businesses will look for and select opportunites to improve their energy efficiency when economically appropriate.

Specifically, the $650,000 proposed for rescission will:

- o cancel the small business sector guidebooks.
- o discontinue the Energy Partnership for American Cities Program, done in conjunction with the Chambers of Commerce across the country.

Technology and Consumer Products

Near-term product development and market development of energy-conserving consumer products have been needed primarily because of the past lack of importance of energy conservation as a criteria in consumer product purchases and the low rate of technologically based innovation in the consumer product industry. With decontrol of oil, market demand for energy-efficient products will increase and manufacturers will respond to this demand. Therefore, a rescission of $7,630,000 is proposed to withdraw Federal support for near-term product development efforts and market development efforts which the industry could undertake on its own.

Specifically, the $7,630,000 proposed for rescission will permit:

- o cancellation of all product development work in the areas of space heating and cooling, appliances and lighting.
- o cancellation of prototype development efforts for two advanced heat activated heat pumps and two advanced electric heat pumps.
- o termination of field testing of advanced gas and oil heating systems and characterization of commercially available systems.
- o termination of five development efforts and six planned development efforts for advanced energy-conserving appliances.
- o termination of a demonstration phase of the solid state ballast projects and termination of the advanced prototype phase of the Energy Efficient Light Bulb projects.
- o cancellation of all market development efforts including Low Cost/No Cost, Fuel Oil Conservation Marketing, and Consumer Products Market Planning.

This program is being substantially reduced in FY 1981 and terminated in FY 1982. As a result, contract termination and close-out costs of $3,000,000 are anticipated in FY 1981.

Appliance Standards

This program is not justified in view of the market response to higher energy prices. Consumers are demanding and manufacturers are producing more energy-efficient products and services without Federal standards, and with oil price decontrol, these trends are expected to continue.

Specifically, the proposed rescission of $2,258,000 will result in:

- o cancellation of a Federal Standards and certification/enforcement program.
- o termination of all test procedure modifications and revisions.

- cessation of processing requests for waiver from Federal test procedures
- termination of Category 14 work.

This program is being substantially reduced in FY 1981 and terminated in FY 1982. As a result, contract termination and close-out costs of $1,000,000 are anticipated in FY 1981.

Analysis and Technology Transfer

Funds approved for this subprogram were intended for planning, analysis and evaluation, for communications and education activites, for economic and impact analysis, and for supporting the interchange of conservation research findings under the International Energy Agency. With rising energy prices, consumers are demanding and producers are providing more energy efficient products and buildings with mandatory standards. The rescission of funds from other programs within the Office of Buildings and Community Systems lessens the need for the analytic services provided by this subprogram. These trends also obviate the need for Federally supported technical assistance and public service information activity.

Specifically, the proposed rescission of $2,100,000 will permit:

- termination of economic analysis in support of regulatory programs.
- cancellation of proposed revisions of fact sheets and several "How to" Manuals.
- cancellation of planned education seminars and technical assistance activities.

This program is being substantially reduced in FY 1981 and terminated in FY 1982. As a result, contract termination and close-out costs of $300,000 are anticipated in FY 1981.

Federal Energy Management Programs

As a result of energy price decontrol and anticipated commensurate price increases in all fuels, Federal agencies now have adequate reason to save energy and dollars without strong DOE guidance or assistance. Therefore the Federal Energy Management Program will reduce its efforts in planning technical guidance, performance evaluation, reporting development of the Federal energy emergency contingency plan, and Federal agency planning and program assistance. The proposed rescission is $470,000.

Urban Waste

Work in support of the Federal Urban Waste program is being reduced. This action is occurring due to the deregulation of domestic petroleum prices and the increasing high price of fossil-based fuels which are making the costs of production of energy from municipal waste competitive with those traditional fuel sources. The proposed rescission is $5,110,000. Therefore, funds for Federal Urban Waste efforts will permit the program to:

- delete Co-disposal Projects.
- delay the Wastewater Treatment Program.
- delete Recycling Projects.
- delay Thermal Projects.
- delay Mechanical Programs.
- reduce Program Support.
- eliminate Incentives Support.
- delay Demonstration.
- eliminate Institutional R&D.

This program is being reduced in FY 1981 and, as a result, contract termination and close-out costs of $420,000 are anticipated in FY 1981.

DEPARTMENT OF ENERGY
FY 1981 REQUEST FOR RESCISSION
ENERGY CONSERVATION
(Dollars in thousands)

	Presently Available	Revised Appropriation	Proposed Rescission
Industrial Energy Conservation			
Operation Expenses and Capital Equipment			
Waste Energy Reduction	$ 24,800	$ 14,800	$-10,000
Industrial Process Efficiency	37,800	14,900	-22,900
Industrial Cogeneration	16,500	8,000	- 8,500
Implementation and Deployment	7,500	2,700	- 4,800
Program Direction	3,100	2,600	- 500
Total Industrial Energy Conservation	$ 89,700	$ 43,000	$-46,700

JUSTIFICATION

The rising cost of energy and increasing demand for energy efficient products has stimulated the private sector to engage in research and development of new energy recovery techniques, industrial process improvement, and industrial cogeneration technologies. Decontrol of oil coupled with continued Federal tax incentives for energy conservation will accelerate this trend. Therefore, it is no longer necessary for the Federal Government to support a variety of individuals, RD&D projects, and information activities aimed at specific end-use products, since this will be undertaken by private industry (audits, institutional research organizations) in response to market forces.

Longer term research on advanced conservation components and subsystems that would not be supported by the private sector will be undertaken by the Energy Conversion and Utilization Technologies program. These research projects are generic in nature and could lead to further private sector developed work in various end-use sectors (including industrial applications).

For these reasons, and in view of the proposal to terminate these program in FY 1982, the following projects are proposed for rescission in FY 1981:

Waste Energy Reduction: Fluidic high temperature sensor, bi-phase concentrator, slagging burner, chemical heat pump, comminution and blasting, conversion of industrial waste to fuel oil, reradiant recuperators, large passage recuperators, district heating/industrial heat source heat exchanger, water-to-water heat pumps, Stirling cycle heat pumps, waste wood lumber dryer and mobile tire pyrolysis systems.

Industrial Process Improvement: Advanced Catalytic Reactor, Continuous Refining of Vegetable Oil, Computer Controls and Sensors for Industrial Processes, an Advanced Pulping Process, Advanced Copper Reduction, Formcoke, Pellet Coke, Petroleum Crude Unit, Efficient Motor Testing, Alternatives to Natural Gas in Paint Curing, Methane Transport Systems, Cutting Tool Coatings, Glass Pellet Preheat, Crop Drying Systems and Integrated Farm Energy Systems. Prior year appropriated funds for form coke which remain unobligated will be redirected to generic research in support of industrial process efficiency and waste energy reduction projects.

Industrial Cogeneration: Advanced Bottoming Cycles, Closed Cycle Gas Turbine Systems, Thermionic Topping Cycles and Externally-Fired Coal Burning Brayton Cycle Systems.

Implementation and Deployment: Boiler training workshops in 40 regions, expansion of the six energy analysis and diagnostic centers to sixteen universities and technology transfer.

The Industrial Energy Conservation program is being substantially reduced in FY 1981 and FY 1982. As a result, contract termination and close-out costs of $ 2,642,000 are anticipated in FY 1981 for Waste Energy Reduction, Industrial Process Improvement, Industrial Cogeneration, and Implementation and Deployment.

Program Direction: Commensurate with the reduction in workload during FY 1981, funds for a total of fifteen staff positions can be rescinded.

Department of Energy
FY 1981 Request for Rescissions
Conservation and Solar Energy
(Dollars in Thousands)

Transportation Programs	Presently Available (BA)	Revised Request (BA)	Proposed Rescission (BA)
Subprograms			
Vehicle Propulsion Technology Development	$ 67,900	$ 41,400	$ - 26,500
Electric and Hybrid Vehicle RDT&E	36,820	27,270	- 9,550
Transportation Systems Utilization	6,700	4,900	- 1,800
Alternative Fuels Utilization	5,300	4,500	- 800
Program Direction	2,930	2,930	0
Total Operating Expenses and Capital Equipment	$119,650	$ 81,000	$ - 38,650

Justification

Vehicle Propulsion Technology Development

Funds in this program were intended to provide research, development and demonstration efforts to advance the development of and accelerate industry acceptance of energy-efficient and socially-acceptable advanced propulsion systems for highway use. Automobiles are becoming more efficient as a result of industry's commitment to provide a competitive, fuel-efficient product in the marketplace. As fuel prices rise, an increased stimulus is present for the major U.S. automakers to continue this trend and incorporate propulsion systems of increasingly advanced design and sophistication. Funds in the amount of $26,500,000 are therefore proposed for rescission to begin a transition from the development of technologies that can be commercially feasible without Federal assistance to research on high-risk, long-term supporting technology. Reductions in the following projects are proposed:

Gas turbine: Third gas turbine team development work with Chrysler/Williams ($7,000,000); component development and material characterization and vehicle integration work with Garrett/Ford ($300,000); vehicle integration and MOD I engine build with DDA/Pontiac ($3,100,000); activity on 2265°F engine ceramic design ($2,600,000); commercialization and market activities ($400,000); and supporting research and technology and project management activities in the field ($1,000,000)

Stirling engine: Stirling engine component development program that duplicates the more generic ECUT program on this technology ($5,000,000); MOD II engine design, reference engine activity, and commercialization activities ($2,203,000); MOD I engine activities ($741,000); and supporting research and technology and project management activities in the field ($1,856,000)

Vehicle systems: Road tests of diesel-organic Rankine compound engines for long-haul trucks, adiabatic diesel activities, and environmental evaluations ($1,037,000); gas turbine bus demonstration ($800,000); turbocompound diesel engine activity, transmission technology, diesel emissions technology and project management activities in the field ($463,000)

Electric and Hybrid Vehicle RDT&E

The private sector is responding to the demand for energy-efficient vehicles with lower operating and maintenance costs to consumers. Included in the effort by the automotive industry to meet this demand is the development and eventual production and marketing of electric vehicles. A rescission of $9,550,000 is proposed to phase out the nearer term research and development activities and demonstration of current state-of-the-art vehicles while continuing advanced research and development of electric and hybrid vehicles technology to improve performance and reduce costs. Reductions in the following projects are proposed: market demonstration project and public awareness activities ($610,000);

addition to loan default fund ($1,100,000); hybrid vehicle battery research and systems development ($1,910,000); advanced vehicle propulsion system development ($545,000); electric vehicle near-term battery research, propulsion and nonpropulsion subsystems development, test vehicle development and field tests ($4,125,000); vehicle evaluation and improvement program with universities ($217,000); technical support effort ($1,043,000).

Transportation Systems Utilization

DOE supported research has identified the benefits and other factors associated with non-Federally supported activities in the areas of medium-speed diesel bottoming cycle technology, aircraft towing, driver feedback devices and certain research and information dissemination activities. Further progress would depend, even with continuing Federal support, on the active commitment by vehicle operators to such efforts. Since past DOE research and feasibility studies, plus rising fuel costs, make these technologies more attractive to the private sector and provide a sufficient basis upon which the affected parties can judge the extent to which they wish to pursue action, a rescission in the amount of $1,800,000 is proposed to withdraw Federal support from the following projects: marine organic bottoming cycle demonstration, area navigation impact on energy conservation study, vehicle performance technical support, and municipal government heavy-duty vehicle manual preparation ($1,155,000); aircraft towing project, driver efficiency teach-ins and analytical support ($400,000); driver feedback device evaluation and driver awareness consumer materials development ($245,000).

Alternative Fuels Utilization

Funds in this program had been requested to initiate tests on the use of vegetable oil as a supplemental fuel for diesel equipment in farming applications and to establish a synthetic fuels supply depot. A rescission in the amount of $425,000 is proposed since work on the physical testing of the vegetable oil has been deferred awaiting the outcome of an assessment on resource availability and an evaluation of compositions from various levels of processing, and the establishment of the synfuels depot has been deferred until specific needs on size and numbers of fuels are determined. In addition, delays in establishing alcohol/blend fuel compositions for use in field reliability fleet tests have resulted in a stretch-out of this project and a further proposed rescission of $375,000.

Department of Energy
FY 1981 Request for Rescission
Energy Conservation - Operating Expenses and Plant & Capital Equipment
(Dollars in Thousands)

	Presently Available (BA)	Revised Request (BA)	Proposed Rescission (BA)
State and Local Assistance Programs:			
Subprogram			
Schools and Hospitals Grants Program.....	$181,250	$ 81,300	$-99,950
Weatherization Assistance Grant Program.....	181,975	175,000	- 6,975
Energy Management Partnership Activities:			
Energy Policy and Conservation Program.....	37,800	37,800	0
Energy Conservation and Production Grant Program..	10,000	10,000	0
Energy Extension Service Program.....	20,000	20,000	0
Emergency Energy Conservation Program.....	12,000	2,000	-10,000
Program Direction.....	9,862	9,862	0
Total Operating Expenses....	$452,887	$335,962	$-116,925

Restraining the growth of Federal spending lies at the center of the President's economic recovery program. In some instances, achieving this goal requires a stretch-out of public sector capital investment programs. Such an approach is being applied to the funding for the Schools and Hospitals Grant Program. Further justification for this approach is as follows.

Justification

Schools and Hospitals Grant Program

The Schools and Hospitals Program was fully implemented six months after enactment of the authorizing legislation. This rapid implementation was necessary in order to meet Congressional mandated time frames. During the first full year of implementation, in excess of $250 million was awarded in grants to eligible institutions. It is now appropriate that the Federal spending rate be slowed to allow time to better evaluate the impacts of the funds obligated to date, to further refine DOE management information systems and to judge the differential impacts of other market forces, such as, decontrol of oil prices. Additionally, many institutions have expressed concern that the rapid implementation had not allowed them time to fully meet program requirements, such as, complete implementation of recommended low-cost operating and maintenance changes and time to form the capital necessary to meet the program's 50 percent non-Federal matching requirements. Therefore, a rescission in the amount indicated is proposed in FY 1981 to slow the pace of the program and allow time for these necessary activities to be accomplished.

Weatherization Assistance Program

The Department's Weatherization Assistance Program will be incorporated into the Department of Housing and Urban Development's community development block grant program. Low-income home weatherization activities will thus continue, but more in accord with local needs and priorities. Currently, about one-third of community development block grant funds, or about $1 billion annually, is targeted by recipient communities to some form of rehabilitation. Combining the Department of Energy weatherization program with the community development block grant is one example of Administration efforts to shift resources and decisionmaking authority to State and local governments through block grants and program simplification wherever possible. The existing Department of Energy program has been plagued by increasing costs and quality control problems. As currently structured, the Department of Energy program would take 50-100 years to reach all the potentially eligible low-income households in the Nation. By shifting administrative responsibility entirely to the local level, communities will be able to devise weatherization efforts most appropriate to their needs and circumstances and achieve greater levels of efficiency and productivity.

Grant funds in the amount of $175,000,000 had already been committed to the States. The remaining $6,975,000 will be rescinded from the FY 1981 appropriation.

Emergency Energy Conservation Program

In keeping with Administration policy, categorical grants are being de-emphasized in favor of block grants. This rescission reflects that policy by eliminating the State grant component from the Emergency Energy Conservation Program budget. The emergency planning function itself is being reorganized to provide more centralized guidance and it is felt that expenditures in this area should be kept to a minimum until that reorganization takes place and a full assessment of needs and resources can be accomplished. At that time, the status of existing emergency contingency plans will be reviewed to determine whether additional authority is required, and to assure that all interests of consumers are appropriately protected. A number of studies suggest that a market-oriented approach to managing supply disruptions is preferable to government allocation programs and these studies will also be reviewed carefully.

Department of Energy
FY 1981 Request for Rescissions
Conservation and Solar Energy
(Dollars in Thousands)

	Presently Available	Revised Request(BA)	Proposed Rescission(BA)
Energy Impact Assistance	$62,000	$ 10,000	$- 52,000

Justification

The success of the President's Economic Recovery Program requires significant fiscal retrenchment. In order to achieve that objective, funding for lower priority programs must be reduced or eliminated altogether. Under these circumstances, continued funding for this program cannot be justified. Energy resource development yields substantial profits for private developers. It is the responsibility of state and local governments to ensure that they reap sufficient revenues to pay for public services required as a result of energy development activity.

Specifically, the $52,000 proposed for rescission will allow for the discontinuance of approximately 200 grants to local jurisdictions for site acquisition and development.

Mr. DEGEORGE. Mr. Chairman, it would not be very useful to go again into the philosophical underpinings of the budget. I know you have heard them several times from many other witnesses.

Mr. YATES. That is right. You will be compelled to streamline your activity. This is the word we have heard from several witnesses. They have a budget they know will not permit them to carry out their responsibilities.

You will streamline it. One went further. One said, "We will have to get smarter." As the budget hearing went on it appeared that he would have to be awfully smart. He would have to be a Ph. D. in a hurry to handle his new budget responsibilities.

With that background, what would you like to say?

Mr. DEGEORGE. Perhaps I won't make it since I am not a Ph. D.

Mr. YATES. But you become one. You worry a little.

Mr. DEGEORGE. I understand it is about an eight-year process. I don't know that I have the time.

Mr. YATES. You have only eight weeks.

Mr. DEGEORGE. The most useful thing I can do is to give you some insight, at least programmatically, if not philosophically.

IMPORTANCE OF CONSERVATION

Mr. YATES. Let me help you out. I have the impression that for the short term the best thing that the Government can do is to stimulate conservation. We are still under an enormous strain in having to pay for imported oil.

The alternate fuels program will not come into being, assuming it ever does, for another 15 or 20 years. Solar energy will not be in, assuming it ever does, for 15 or 20 years.

Nuclear, assuming we go to nuclear, takes 8 to 10 years to bring in a reactor and turn on the power.

In the meantime the pressures of the budget still exist. We send out $100 billion a year and more to other countries of the world in order to get oil for our industrial and personal machines and fuel demands in the country.

Obviously what is left is conservation. You are going to tell me in the course of the testimony what wonderful strides we have made. Our imports are down 6 to 8 percent in oil as a result of the progress made in the automobile industry and the new engines manufacturers are putting into their cars. As it happens, they are increasing the imports of cars coming in from other countries which have more fuel-efficient engines than we have.

Believing that conservation was an activity which deserved special consideration and special generosity, our committee last year put in, with some trepidation, what we thought was a minimum figure of $900 million for conservation.

Lo and behold, the new administration comes along and reduces that budget by $700 million for fiscal year 1982. Is that what it proposes to do?

Mr. DEGEORGE. Yes, sir.

Mr. YATES. Not only that, but how much did you want to cut back in the rescission?

Mr. DEGEORGE. $306 million.

Mr. YATES. That is for this fiscal year. Does it make sense, Mr. DeGeorge?

Mr. DEGEORGE. Obviously there are differing opinions, Mr. Chairman.

Mr. YATES. I am asking for your opinion. I know you are under compulsion to approve the Reagan budget and to defend it. How good are your defenses?

There is a song as I remember from my middle youth, titled "My Defenses are Down," or something like that. How are your defenses on the budget?

Mr. DEGEORGE. I am not here to say that the budget is not the administration's position. I can put it this way, Mr. Chairman: One could spend legitimately more money than is in the conservation budget. I think we could perhaps differ over the level. I fought personally for more money in the budget.

Mr. YATES. Conservation?

Mr. DEGEORGE. Solar as well. However, there was an honest effort to deal with the budget fairly in the Department. I believe there will always be an honest effort but there were overriding considerations which governed how they arrived at the numbers. I am not sure I was privy to all of them. I have a sense of how the process worked. There was an honest debate.

Mr. YATES. What is an honest debate?

Mr. DEGEORGE. An honest debate is where both sides express their opinions.

Mr. YATES. Did you have a chance?

Mr. DEGEORGE. Yes, sir. I was at OMB.

Mr. YATES. Did you have a chance to win on the basis of your honest arguments? I will put it this way. Did you win?

Mr. DEGEORGE. No, I didn't win.

Mr. YATES. So you never had a chance. That is why I'm not certain that it was an honest debate.

Mr. DEGEORGE. That is subjective, Mr. Chairman.

Mr. YATES. Subjective on my part, too.

Go ahead, Mr. DeGeorge. I know I am making your day a happy one.

Mr. DEGEORGE. No; I would say you pretty well summarize my opening remarks.

SUBCOMMITTEE ACTION ON RESCISSION REQUEST

Mr. YATES. Let's talk a moment. You are asking for certain things to happen. We took certain actions yesterday on rescissions. I am not happy with some of the decisions we made on rescissions.

We made deferrals. Perhaps we might have lopped a few dollars off, and I will ask you about that in the course of the hearings this morning, lopping a few dollars off and let you spend them now rather than agreeing with some of the rescissions.

We had hearings yesterday afternoon with some of the outstanding conservationists in the country. None of them agreed with the budget.

They said they know there have to be cuts somewhere. A lot of them said that.

How do we protect our energy cause except through conservation? Do we have any other choice?

Mr. DEGEORGE. The question with this budget is whether we still do meaningful things.

Mr. YATES. That is right.

Mr. DEGEORGE. Can we do more? Certainly we can do more.

Mr. YATES. That is what I want you to tell us. What are you doing that is meaningful and what should you be doing that is more meaningful? Can you do that?

Mr. DEGEORGE. With all this talent at the table we can discuss individual line items. I assume that is the intention of the hearing.

BUILDINGS SYSTEMS

Mr. YATES. Perhaps we should look at some of the items.

First you have building systems. Let's look at conservation. This is one I am not happy about in our decision. We agreed to defer $6,705,000 out of a budget of $70,825,000. This was in accordance with your recommendation.

One of those who testified yesterday was Professor Rosenfeld from the University of California. I was impressed by his testimony as to the good coming out of the DOE grant. Will he be hurt by this rescission? Will his research be hurt by this rescission on building systems?

Mr. DEGEORGE. I am not familiar with the work the professor is doing. Perhaps Maxine is.

Dr. SAVITZ. Some of the work at Lawrence Berkeley Laboratory will be hurt.

Mr. YATES. How much money do they have and how much will it be cut back?

Dr. SAVITZ. A couple million dollars will be cut back from LBL in the lighting area and somewhat in the indoor air and ventilation quality work in 1981.

Mr. YATES. How much money did you give him?

Dr. SAVITZ. We gave LBL a total of about $4 million for this year.

Mr. YATES. How much money are you leaving him as a result of the rescission?

Dr. SAVITZ. About $2 million.

Mr. YATES. Are you giving him a 50 percent cut?

Dr. SAVITZ. That is right.

Mr. YATES. Do you think that is smart?

Dr. SAVITZ. We have to eliminate some projects.

Mr. YATES. What projects will you have to eliminate?

Dr. SAVITZ. In the lighting area we are eliminating some of the lighting programs, such as more efficient ballasts. The research has been done by LBL and private industry. We will reduce the number of homes we can test for indoor air quality this year. We are reducing some of the windows activity. LBL wants to construct a mobile piece of equipment which can give you a total wall, including windows and wall areas, and make some measurements of total system heat flows.

We are learning that windows alone only account for 25 percent loss by infiltration. That is less than we thought. That equipment will not be constructed.

Mr. YATES. What happens to his operation? We have deferred that money until the next fiscal year rather than rescinding it. He will not be able to spend that money for the next few months, until October 1.

Dr. SAVITZ. That is right.

Mr. YATES. Presumably, he can spend it after October 1. How badly will it hurt him as a result? Will it disrupt his program so badly he will not be able to carry on?

Dr. SAVITZ. He will have to do some of his things at a reduced level. Some of the people they have hired will have to be removed. If they know they have money in 1982, they will try to keep a nucleus together to continue the work and some might find outside consulting during the five month hiatus.

Mr. YATES. It is too bad you have to break up a team, is it not?

Dr. SAVITZ. Yes.

Mr. YATES. How many others of your grants and research programs will be in the same situation.

Dr. SAVITZ. The rescission in the buildings area is across the board.

Mr. YATES. Apparently he gets a third of the rescission if you are cutting him back by $2 million. He is the biggest single cut, is he not?

Dr. SAVITZ. I am combining several categories there. The whole buildings budget was cut $52 million. The lighting program comes from the technology and consumer products line item.

Mr. YATES. I see the point. So LBL would come out of buildings systems and out of technology, consumer products, and so forth.

Dr. SAVITZ. Right.

Mr. YATES. Is this being penny wise and pound foolish? According to his testimony what they had discovered as a result of the research was going to save literally—I don't know how much in energy but literally—millions of dollars.

Dr. SAVITZ. There has been successful research and results regarding infiltration, lighting products, in identification of where and how buildings lose energy, and in measurement techniques for indoor air quality. We estimated that the buildings lose 20 to 50 percent of the energy due to inefficient construction. Techniques have been developed to measure where that energy is lost so they can then correct the losses. It is a development of diagnostic equipment.

Mr. YATES. That is one program which is hurt out of the $52 million. Which others will be hurt? That is one you would have wanted to continue, is it not?

Dr. SAVITZ. Yes.

Mr. YATES. Are there others you would have wanted to continue?

Dr. SAVITZ. There are others in the technology and consumer products area itself, which is where a lot of the product development has occurred. That is where work on the gas-fired heat pump has been going on, advanced electric heat pumps. Many of those will be funded at a lesser amount.

Mr. YATES. You have unobligated balances for this program. Assuming funds go over to 1982, and with the expectation and hope that that money will be made available at this time, how much are you hurt in the interim? Obviously you are hurt by breaking up a team.

Dr. SAVITZ. Yes.

Mr. YATES. How else?

Dr. SAVITZ. Things happen because of the people who do the work.

Mr. YATES. I know.

Dr. SAVITZ. That is the basic thing. You get slippage in ordering parts and components where you are doing laboratory testing or putting breadboards together. You get a slippage in time.

Mr. YATES. We know some of the research out of the Lawrence-Berkley Laboratory did some good. Now they have to go on hold for at least three or four months, or a significant portion of the research will be held back. Will there be money left to carry on some part of it?

Dr. SAVITZ. Yes.

Mr. YATES. Where else might we not have deferred?

PERFORMANCE STANDARDS

Dr. SAVITZ. In that category of building systems is also where the performance standard work is carried on. Of the $6 million of that rescission, $3 million of that was related to the building energy performance standard, so there will be less research done in the energy budget, particularly for commercial buildings. We are putting our emphasis on the residential buildings, single-family homes.

Mr. YATES. Will corporations or individuals carry on the research they have been carrying on?

Dr. SAVITZ. In that type of area, development of life-cycle cost methods to come up with new energy budgets for new buildings, the industry has traditionally not done research in that area. The industry has done some research in the product area, but again energy has not been a component.

ACTIVITIES AT OAK RIDGE LABORATORY

Mr. YATES. Who else is doing what? Give us examples.

Dr. SAVITZ. The Oak Ridge National Laboratory is managing a lot of the appliance and technology of consumer products work.

Mr. YATES. Technology and consumer products is another aspect.

Dr. SAVITZ. Much of that work is done at Oak Ridge. The actual work is done by industry, General Electric Company, MTI, and others. The work there will just slow down, particularly in things such as the gas heat pump where we are moving to put together a breadboard model of a heat pump. In a couple cases the absorption system was involved. That was getting ready for field testing. That will be delayed in part.

Mr. YATES. This is a rescission which does not take place for 45 days. Are they slowing down yet? Will they be slowing down now or at the end of 45 days?

Dr. SAVITZ. All through, depending on who the contractor is and what the situations are.

Mr. YATES. Does the contractor wait until he sees what Congress does or will he act on the basis of what you have said? Have you told him to do it?

Dr. SAVITZ. In some areas where we feel there will be shortfalls and they are making commitments we told them to run at a 60 to 70 percent level rather than 100 percent level so they can keep some parts of the team without having to disrupt their work altogether.

Clearly, the earlier we know what will happen, the easier it is for us to manage the program.

RESCISSION REQUEST

Mr. YATES. Let's go back to some of these rescissions again. There are $52 million in rescissions in this area. We proposed to defer most of them.

In what area would we be better advised to cut the rescissions in half, for example? Are there any? It is proposed to rescind $675,000 under buildings systems. Suppose we provided for a $3 million cut rather than $6.7 million.

Dr. SAVITZ. Make $3 million available this year?

Mr. YATES. As opposed to a cut of $6.7 million. How would that be helpful?

Dr. SAVITZ. We would then be able to continue at a larger scale the indoor air quality work which we have been planning to do. We would also be able to do more of the commercial development work.

Mr. YATES. So it makes a difference for four months?

Dr. SAVITZ. The four months? You do not disrupt as much of the team. Even if you have a four-month deferral and some people have to leave and then have to be rehired, it can involve a longer than four months slippage.

Mr. YATES. If you have already acted, does it make sense on our part to undo what you have done for the four-months period not knowing what Congress ultimately will do? Obviously you are acting in accordance with the administration's instructions. I am asking you to try to give me an answer that is a very difficult answer.

Dr. SAVITZ. Yes.

Mr. YATES. But still it is an answer we would like to have.

My own feeling is that I am opposed to the rescission. I have a feeling that conservation is what we need more than anything else at the present time in dealing with our energy problem.

Should we keep the whole $6.7 million? Should we cut it in half? You have already sent out your notices to the contractors saying that the administration has asked you to cut back $6,750,000 in buildings sytems. Is that right?

Dr. SAVITZ. Yes.

Mr. YATES. They are acting on that now.

Dr. SAVITZ. Yes.

Mr. YATES. If the Congress sets that aside, they will have acted, anyway, will they not?

Dr. SAVITZ. In some cases it takes them 30 to 90 days to act with their own rules and requirements.

The question is what happens in 1982 if one restores all the money or half of it.

Mr. YATES. All right.

Dr. SAVITZ. What kind of a balanced program follows it into 1982?

Mr. YATES. The impression I have now is that the Department of Energy is a shambles. We hope when the next fiscal year comes around we will know what is going to happen to the Department of Energy. As of now, you do not have one Assistant Secretary except

for governmental affairs. You have no Assistant Secretary appointed in any other department.

Is my memory right?

Mr. DEGEORGE. A couple of names have been listed but they are not on board.

Mr. YATES. Conflict of interest requirements are preventing his appointing somebody. I don't know why he cannot find somebody somewhere else. That is his decision and not mine.

You started to tell us what would happen if the money were available in the next fiscal year.

Dr. SAVITZ. If the money were available for the next year, to maintain a balanced program, one could say defer it until next year.

Mr. YATES. Can you say that?

Dr. SAVITZ. As opposed to saying we will give the money this year and then in 1982 we will not have follow-on money. It would be better to keep things running at a 60 to 70 percent effort for several years than 100 percent for four months and then discontinue it without a follow-on. That is where the tradeoff comes. You get more out of doing it on a longer-term basis in this kind of research.

Mr. YATES. You are looking prayerfully to 1982. If we defer—I didn't mean you personally but I am referring to the program.

Dr. SAVITZ. Yes.

Mr. YATES. What we hope to do is to let you keep working and let the Department work in the field of conservation. We are unhappy with these rescissions. We are deferring most of them rather than rescinding them. This is in the hope that that will ease the budget strain somewhat.

Will there be a mitigation of the damage if the deferral money is made available in 1982?

Dr. SAVITZ. If that money is available in 1982, these programs which will end would be able to continue and get to the next milestone.

Mr. YATES. How can I give you my assurance they will be available? Who knows what Congress will do?

Would you rather have the whole $52 million?

Dr. SAVITZ. Yes. We thought there was a balanced budget for 1981.

Mr. YATES. There is always that phrase, "balanced budget." I am not sure where this discussion leaves us.

Dr. SAVITZ. Depressed.

Mr. YATES. Yes, it is depressing. What happens now as a result of these rescissions? Does it play hell with your program?

Dr. SAVITZ. It makes management very difficult because people are on one course and then things are altered.

PROGRAM RANKINGS

Mr. YATES. Let me go through these programs with you and see how you would rank them.

Did you happen to see the movie "10"?

Dr. SAVITZ. I didn't see it but I know about it.

Mr. YATES. On a standard of 1 to 11 how would you rank building systems in order of importance?

How would you rank residential conservation, retrofit, small business, and so on? Take your list. How would you rank these items?

I know, you rank them equally important.

Dr. SAVITZ. But they address different markets.

Mr. YATES. I know that. However, you know the progress being made in each and the need for finishing out certain kinds of programs.

Dr. SAVITZ. What has been exciting is to see good progress in all of these areas.

Mr. YATES. Having said that, what is your answer?

I will tell you what the outside people said yesterday. They would rank buildings systems number 1 in priority. Of all of them, they think that is the most important of the 11.

They also said community systems with the heat pumps research going on was almost as important.

Dr. SAVITZ. Technology and consumer products.

Mr. YATES. They rank those 1 and 2. Would you agree with that?

Dr. SAVITZ. I would agree with those two.

Mr. YATES. We have 1 and 2 established.

Dr. SAVITZ. I think the Residential Conservation Service, retrofit, is important.

Mr. YATES. One is buildings systems or technology and consumer projects?

Dr. SAVITZ. We have two Bo Dereks.

Mr. YATES. It's like asking your little girl, "Who do you like better, your mother or your father?"

What is number 2?

Dr. SAVITZ. Residential Conservation Service. We are getting information to the homeowners as to what they can do now with rising oil prices.

Mr. YATES. All right.

Dr. SAVITZ. Then community systems is important. This deals with the interaction.

Mr. YATES. That is number 3.

Urban waste is good, bad, or indifferent?

Dr. SAVITZ. Urban waste is good. We have two quads of energy from this. We have only 20 plants built, of which eight are working. Europeans have several hundred. It is a technology which needs to be implemented.

Mr. YATES. We will put that number 4, then.

Let me go back to number 2, Residential Conservation Service. I understand that a major part of this fund was going for the training of auditors for utility systems and industries of various kinds. Why cannot the industries and utility systems do that work themselves?

Dr. SAVITZ. I would separate that. If I were to prioritize them within subprograms, the auditor training, certification, are less important because States are finding the money to fund them. More important is monitoring existing programs as to what successes we are having, developing new measures.

Mr. YATES. What portion of that is for the auditing program?

Dr. SAVITZ. Of the $14 million, $9 million is.

Mr. YATES. The rescission is $11 million.

Dr. SAVITZ. We have two categories there. It gets very complicated because we have the Residential Conservation Service.

Mr. YATES. Nine million dollars for auditors, leaving $2.8 million. We agree maybe the auditors' work can be done primarily by industry and utilities. What is the $2.8 million for?

Dr. SAVITZ. Set up to monitor the programs already ongoing, to add new measures. We now have measures established two years ago. New products come on board and we would like utilities to audit them and provide assistance to the heating oil people.

Mr. YATES. So far we have come to urban waste as being number 4.

Mr. YATES. The Federal Energy Management Program is only $400,000?

Dr. SAVITZ. That is right. That is necessary as well. The Federal Government has to report what it is doing.

Mr. YATES. That is almost 50 percent, is it not?

Dr. SAVITZ. That is right. Being able to report what the agencies are doing, getting them to do the accounting, this is important.

The Analysis and Technical Transfer Authority is a program which does two things. It does some of the marketing activities but also does the modeling support to see how energy is being used, our evaluation of proposals, so we can run the threshold criterion, one proposal versus another, to see what the savings are. It is the analytical basis used for planning, analysis and evaluation, the required internal management types of things.

In that area we have enough.

Mr. YATES. You have $3 million left for that.

Dr. SAVITZ. Which is enough for this year.

Mr. YATES. So we can defer that one.

Next is appliance standards.

Dr. SAVITZ. That would defer $2.2 million. Half a million dollars of that would be used for consumer education to tell them what is happening with the labels which started appearing last May. That is half of the consumer education program. One million dollars is in that now.

Mr. YATES. How does that differ from consumer education on Residential Conservation Services?

Dr. SAVITZ. This applies just to the appliance itself.

Mr. YATES. And the other to the homes?

Dr. SAVITZ. Yes.

Mr. YATES. All right.

Dr. SAVITZ. Another part of that, about $750,000, is related to the development of the standards themselves which were required to be promulgated, particularly for the four appliances for which standards were supposed to be promulgated next November. That work has been cancelled as a result of not having money this year.

Mr. YATES. You still will have $4 million in this budget. Is that enough to carry on until the next fiscal year?

Dr. SAVITZ. Enough to carry practically everything on except for the other four products. We cancelled that contract of about a half million dollars.

Mr. YATES. How will you comply with the statute?

Dr. SAVITZ. We will have to be late.

Mr. YATES. Will it be the first time?

Dr. SAVITZ. No. I might say those four appliances are perhaps less likely to have standards associated with them. They are TV's, humidifiers, dishwashers, and clothes washers. They use less energy. There is not that much difference.

Mr. YATES. I would guess this is one place where the market will be a determining factor as well if there are no restrictions on imports. People will look at prices and look at what the various products are.

At least to that extent they will be appraising their purchases. It is true they will not have the information which you would ordinarily give them, but perhaps they can get it from Consumers Reports.

Dr. SAVITZ. It varies from product to product, too.

Mr. YATES. We come to small business. That is only $650,000 out of $750,000, 80 percent.

Dr. SAVITZ. That was the information program to provide guidebooks for the small business sector.

Mr. YATES. We will turn that over to the Committee on Small Business. That leaves the retrofit of Residential Services for number 5. We never got to number 10. You have a budget of $16.5 and we are supposed to rescind two-thirds of it. Is that right?

Dr. SAVITZ. Yes. What that program does is to give innovative demonstrations to show new delivery mechanisms to homeowners, commercial and multi-family. They were going to be discrete types of solicitations to look at. What is left in the budget allows us to do the single-family homes. What is rescinded is multi-family and commercial. There is no time difference there because they have not yet been started.

Mr. YATES. What I get from our conversation is that number 1 is buildings systems and technology and consumer products; number 2, Residential Conservation; Community Systems number 3; urban waste number 4.

Are we meeting here?

Dr. SAVITZ. Yes.

INDUSTRIAL CONSERVATION

Mr. YATES. Let's turn to industrial conservation. Where you had $78 million, you have a small cut to $46 million.

We were rather enchanted with this program last year and gave you what we thought was a goodly amount, almost $90 million.

Now the administration says we erred, that more than half should be cut out. We are supposed to defer that amount. Will that raise a problem with you?

1982 is zero.

Mr. HARVEY. Yes.

Mr. YATES. They must think a lot of your program.

Mr. HARVEY. There is obviously a very basic philosophical difference of opinion.

Mr. YATES. Why were you not able to sell them on this? Why could you sell us and not them?

Mr. HARVEY. I never spoke to anybody. I never had the opportunity.

Mr. DEGEORGE. Even the people at OMB thought it was a successful program. Actually I think from OMB's perspective, the

program has in it the seeds of its own success, the ability for industry to pick it up.

Mr. YATES. Why did we give him the money if industry can pick it up? If that is true, we do not want to put the money in ourselves.

Mr. DEGEORGE. There is obviously a point in time. We might disagree as to when.

Mr. YATES. I see.

Mr. DEGEORGE. When it does become a successful program, industry will deal with it.

Mr. YATES. I had the impression from what Mr. Harvey said that it was productive, that for every dollar Mr. Harvey spent on the program the Government was going to get back in the form of taxes at some later date a greater amount than the Government had invested.

Is my memory right, Mr. Harvey?

Mr. HARVEY. That is right.

Mr. DEGEORGE. I also read those facts. I do not want to get into an internal dispute.

Mr. YATES. He is going.

Mr. DEGEORGE. Doug and I have had this discussion. The question is whether these programs will be handled by private industry.

PRIVATE SECTOR INVOLVEMENT

Mr. YATES. Will they be handled by private industry? Are they being handled by private industry now?

First, what are you doing that private industry should be doing and is not doing? That is the question.

Mr. HARVEY. The real question is what is the risk associated with new process technology and is there a probability that private industry would fund that type of program on its own, given increasing energy prices, given increasing investment tax credits and more rapid depreciation, all the things the administration is proposing? That is the real question that has to be answered. What is the realistic risk of the new process technology?

A paper came out last July by the MIT press in a document called "Innovation" which said those technologies which had not been demonstrated at pilot plant stage, had a probability of failure of 65 percent; going into full scale demonstration, the probability of failure was 45 percent.

The question which arises is what is the probability that industry would fund internally a demonstration program at the pilot stage or full-scale demonstration on its own which has a 45 percent chance of failure, or 50 percent chance of failure.

My opinion is that the probability is relatively small. Obviously, in the opinion of those who put together this budget it is relatively large. I did some calculations last night, as a matter of fact, in which you might be interested. I am not sure I can explain it all very succinctly but I will try.

Union Carbide came out with a number which says that they are willing to invest $18,000 in capital investment for a technology which will save them one barrel per day of oil. At $35 a barrel that is $12,775.00 return on that investment. That is about a 70 percent ROI.

Let's assume they get an additional 10 percent tax credit and a five-year depreciation. That would then raise their willingness to invest in that technology to about $25,700, giving a return on investment of 50 percent approximately.

That is existing technology, technology which is modern but proven in an industrial environment.

Suppose you superimpose on that investment decision probability of failure of 50 percent and there is a formula by which one can do this. It would say that the investment would have to have a 260 percent return on investment if it had a probability of failure of 50 percent.

Now, one then can go a step further and say, "all right, what would the price of energy have to be before they made that kind of an investment; that is, in a new technology which had a 50 percent chance of failure?

It turns out price of energy would have to be $167 a barrel. One could then project at current prices of $35 a barrel and a 15 percent compound increase in energy cost a year. It would take 11 years before the price of energy had sufficient motivation to cause that corporation to invest in that advanced technology.

Obviously that is one analysis, and I suspect there are 4,000 others which could refute it, but that seemed to me to be a logical approach.

My opinion is no, I don't think industry will invest in advanced technology.

You know, the price of energy in the last three years has just about tripled. I can give you examples of who is doing advance technology, and let's take the steel industry. I have some notes on that.

Mr. YATES. All right.

STEEL INDUSTRY CONSERVATION

Mr. HARVEY. Clearly the only new technologies investigated by our domestic steel industry of which I am aware, and obviously I am not aware of them all, are two programs: coal injection in the blast furnace and a continuous galvanizing line for sheet stock.

Mr. YATES. What about form coking?

Mr. HARVEY. The steel industry has not invested in form coking. FMC invested in the development of form coke for the reduction of phosphate rock to phosphate metal. The steel industry examined that process and they have a 250-ton-a-day plant in Wyoming which they examined. They said that would be applicable, they think, to the steel industry.

Mr. YATES. I had the impression from some of the literature that they had some elements of the steel industry which invested $50 to $60 million in this.

Mr. HARVEY. Bethlehem, National, Republic process.

Mr. YATES. Is that different?

Mr. HARVEY. Same concept, low grade coals to make blast furnace coke. The process is somewhat different from the FMC process. They built a pilot project for 500 tons a day. They had spent about $60 million on that, private investment funds. It turned out to be essentially unsuccessful because the additional monies they foresaw which would have to be invested—and these monies were

invested back in about 1970—the additional monies which would have had to be invested would not pay off. They never would be able to recoup their investment on their own.

They then proposed last year to continue the program. They since have withdrawn that proposal because the equipment they built is too old to resurrect.

I got a call from the vice president of Bethlehem about a month and a half ago which said they will have to retract that proposal because they cannot use the existing plant.

Mr. YATES. Off the record.

[Off the record.]

Mr. YATES. The Government should not pay for that, though, should it?

Mr. HARVEY. The form coke program which Inland proposed I did not see as an energy-saving technique. It was an interesting production technique. It reduces the amount of imported coke which comes into this country. It is important to the steel industry but it is not an energy-saving program, or not a significant one. We recommended to Congress it not be pursued.

Mr. YATES. Go ahead with your presentation.

Mr. HARVEY. If you look at the advancements, for example, innovative technologies developed in the steel industry, and everybody introduced basic oxygen developed in Austria, continuous casting systems developed in Germany. The dual-phased sheet annealing process which the Japanese are introducing. A number of articles came out last month on this. It is likely to make significant encroachment into of our domestic steel market because it is a very interesting process. I will describe it in a moment.

It takes sheet and runs it through a continuous annealing furnace and creates an alloy which can be formed very easily, a very soft alloy.

Once it is formed, the work-hardening of the forming makes it an extremely strong alloy. Therefore, it is directly applicable to light-weight, high-strength automobile forming parts.

The Japanese can do this annealing process on a continuous basis in 10 minutes. Batch annealing in this country takes 10 days. It does not produce the same product. There is no way you can batch anneal and get a dual-phased sheet. If the automobile industry, as I suspect they will, goes to this lighter-weight steel because it means more miles per gallon to get the same strength for less weight, I think there will be further incursion than 20 percent of our domestic market being supplied by foreign competition.

Mr. YATES. One of the witnesses testified yesterday that Volkswagen will come up with a car powered by a diesel engine that will get about 60 to 65 miles per gallon not through the use of steel but fiberglass.

Mr. HARVEY. It is very possible. The secret to making good fiberglass bodies is to make light-weight ones. Right now the strength-to-weight ratio of fiberglass is not a lot better than steel.

Mr. YATES. But it is much more expensive than steel, is it not?

Mr. HARVEY. That is right.

Mr. YATES. Is there no way of bringing down the cost?

Mr. HARVEY. The cost of that is dependent on the binder used in fiberglass. They are all petroleum derivatives, whether epoxies or

polyesters. It will escalate the cost directly with the escalation of this feedstock.

Mr. YATES. What do you want to do about that annealing process? Why do not the steel companies recognize the competition they face?

FOREIGN GOVERNMENT PARTICIPATION IN TECHNOLOGY DEVELOPMENT

Mr. HARVEY. I think they do. I think they will purchase the Japanese technology. That is what will happen.

They will definitely try to get these advanced technologies. They will have to purchase them.

The point I make is that the innovative process technologies are not being developed in this country. They are being developed abroad.

Mr. YATES. Why?

Mr. HARVEY. Much greater government participation in the industry itself.

Mr. YATES. How do you know that?

Mr. HARVEY. We have a lot of data on the amount of money being spent by foreign governments on industrial process improvements.

Mr. YATES. Do you have tables?

Mr. HARVEY. Yes.

Mr. YATES. Can you put all that in the record at this point?

Mr. HARVEY. Yes.

Mr. YATES. That is very important.

[The information follows:]

ENERGY CONSERVATION AND THE EUROPEAN COMMUNITY

The attached document is the most recent information available from the Commission of the European Communities on the energy conservation programs and government expenditures for the 9 member countries.

The following are included for each of the EC countries.

- o Energy Pricing Practices
- o Energy Saving in Industry
  - budget for 1978, 1979, 1980
  - energy conservation activities
- o Energy RD&D budget for 1978, 1979, 1980

The final pages of the report list the three year energy budgets for each country.

We have extracted in the following table certain budget items for four countries (Germany, France, the Netherlands, and the United Kingdom) and converted the ECUs (using the 1980 average dollar equivalent of $1.39) to dollars. There is also a page which shows some relationships between the US and the four European countries.

"ENERGY SAVING PROGRAMMES" OF THE EUROPEAN COMMUNITIES

Source: "Member States Energy Saving Programmes: Situation May 1980," January 26, 1981

1 ECU = $1.39 (1980 Average)
Figures Below in $U.S. Million
Percentages are Percentages of total (#9).

NOTE: Source also provides figures for residential, commercial and transportation conservation and energy production. "Total" is for all energy saving measures and not just the ones below.

	F.R. GERMANY			FRANCE			THE NETHERLANDS			UNITED KINGDOM			U.S. DOE OIP BUDGET			
	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	1981
2. Energy Saving in Industry	59.8 9.8%	75.1 10.1%	120.9 12.1%			89.0 15.7%	19.5 16.8%	25.0 13.6%	75.1 20.2%	10.4 6.9%	15.2 6.0%	40.0 14%	29.5	39.9	60.2	58.9
3. Energy Saving in Agriculture	1.4	5.6	7.6	40.3 15.9%	98.7 24.6%	16.7				N/A	N/A	N/A				
7. Information and Education	7.0	12.5	13.9	3.3	10.4	16.0	3.3	3.9	4.6	3.5	4.7	7.6				
8. R&D	45.9	77.8	116.8	58.4	70.9	80.6	20.9	16.4	19.7	20.7	21.5	22.9				
9. Total Govt. Budget for Energy (Saving*)	613.0	746.4	995.9	235.5	401.7	568.5	115.9	184.3	371.8	149.8	251.7	285.5				
% Increase 1978 to 1980		62.5%			141%			221%			91%					

Source: Statistical Abstract of the U.S. 1979

GNP-1977-$U.S. Billion	483.8	376.8	96.8	234.9	1,874.4
Industrial Activity as a % of GDP and Value of Industrial production.	41% 198.4	30% 113.0	32% 31	30% 70.5	29% 543.6

*IT IS NOT CLEAR FROM THE SOURCE DOCUMENT WHETHER THIS IS FOR ALL ENERGY ACTIVITIES OR ONLY ENERGY SAVING ACTIVITIES.

Ratio of the value of industrial production

US to Germany	2.7	to	1
US to France	4.8	to	1
US to Netherlands	17.5	to	1
US to UK	7.7	to	1

If per dollar of industrial production the US were spending as much as

Germany (120.9)	the US would be spending	326.4
France (89.0)	"	427.2
Netherlands (75.1)	"	1,314.3
United Kindgom (40)	"	308.0

FOR INDUSTRIAL ENERGY CONSERVATION

COMMISSION OF THE EUROPEAN COMMUNITIES

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Brussels, 26th January 1981

MEMBER STATES' ENERGY SAVING PROGRAMMES : SITUATION MAY 1980

Member States' Energy Saving Programmes : Situation May 1980

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C. Comparison of Member States' Energy Saving programmes and the basic energy saving programmes recommended to Member States

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E. Comparison of the principal elements of some of the larger incentive schemes for energy saving in the home

Member States' Energy Saving Programmes : Situation May 1980

A. Commentary

1. On 9 June 1980, the Council of Ministers adopted a resolution concerning "new lines of action by the Community in the field of energy saving".

2. Paragraph 2 of that resolution reads as follows:

(The Council) "agrees that Member States should, where this proves necessary, adapt their energy saving programmes so that by the end of 1980 each Member State has an energy saving programme covering all the main sectors of energy use and an appropriate energy pricing policy. In order to produce comparable effects, these programmes should be based on energy pricing guidelines and measures recommended in the basic programme set out in Annex to this Resolution. They must, however, be adapted to the specific priorities and conditions in the Member States."

3. In this document, a detailed comparison is made between the energy pricing guidelines and recommended measures annexed to the resolution, and the energy-saving programmes adopted by Member States as of 13 May 1980. Not every measure adopted by Member States is listed because the comparison is limited to the basic energy-saving programme described in that annex.

4. A table is also given showing best estimates of the public sector budgets for energy saving in 1978, 1979 and 1980. Every effort has been made to give accurate figures, but some inaccuracies may remain because such expenditures are spread across many departments of government, and between central, regional and local government, and in no Member State does any official unified estimate exist. Clearly, there is a need to prepare and publish programme budgets similar to those attempted in this document, in every Member State of the Community.

5. Finally, a comparison is made of the principal elements of some of the larger incentive schemes for energy saving in the home. With the exception of France, it is known that all these schemes are under active review, and important changes will probably be proposed.

6. This document, which is descriptive in character, will be followed by an analytical review of Member States' programmes to be prepared early in 1981, together with proposals for such further action as may seem appropriate at a national and at a Community level.

ANNEX

GUIDELINES FOR A BASIC ENERGY-SAVING PROGRAMME RECOMMENDED TO EVERY MEMBER STATE

A. ENERGY PRICING

Energy pricing should be based on the following principles:

— consumer prices should reflect representative conditions on the world market, taking account of longer-term trends;

— one of the factors determining consumer prices should be the cost of replacing and developing energy resources;

— energy prices on the market should be characterized by the greatest possible degree of transparency.

Publicity about energy prices and the cost to the consumer of energy used by appliances and installations should be as widespread as possible.

B. MEASURES TO ENCOURAGE THE RATIONAL USE OF ENERGY

The following measures are recommended:

1. Energy saving in the home

— a substantial upward revision of compulsory minimum performance requirements for new housing and heating systems;

— regulations to ensure individual metering, billing and control of heating systems in multi-occupied residential buildings;

— performance standards and control of servicing of heating systems;

— publicity campaigns and advice centres for energy saving in the home;

— financial aids for necessary improvements to existing houses, an exemplary programme for dwellings in public ownership;

— labelling to indicate the energy consumption of domestic appliances.

2. Energy saving in industry

— energy auditing, especially in industries consuming large volumes of energy;

— financial aids for small and medium-sized businesses, publicity campaigns;

— financial and tax aids to encourage investment to save energy;

— financial aids for the commercial promotion of new energy-saving technologies, equipment or methods (demonstration projects).

3. Energy saving in agriculture

— promotion of the use of energy-saving agricultural equipment for the transport and processing of crops, informing users of the scope for making better use of existing equipment and of the use of energy-saving techniques of cultivation, and training them accordingly;

— rational use of chemical fertilizers;

— better use of locally available alternative energy sources to heat farm buildings and glass houses.

1.

BELGIUM 1. Energy Pricing Practices

Taxes on energy are generally fairly high. Higher taxes on gas consumption are being considered.

Gas prices are under review. Increase in excise tax of 0.012 ECU per m^3, September 1979.

2. Energy Saving in Industry

Action	Public Sector Budget			
	1978	1979	1980	MECU
- energy auditing, especially in industries consuming large volumes of energy		-		
- financial aids for small and medium-sized businesses, publicity campaigns	Advisory service and free computing for, amongst others, small and medium-sized businesses			
- financial and tax aids to encourage investment to save energy		-		
- financial aids for the commercial promotion of new energy-saving technologies, equipment or methods (demonstration projects)	Some aid to demonstration projects through non-specific programmes. Service to support industrial phototypes. Scientific Research Programme (IRSIA)			

3. Sustained Efforts in Research, Development and Demonstration

Action	Public Sector Budget			
	1978	1979	1980	MECU
	2	2	2	

Extension of the programme adopted in 1977 (for 3 years with a budget of 6m ECU)

FEDERAL REPUBLIC OF GERMANY : Energy Pricing Practices

Taxes on heating oil doubled (from 0.04 to 0.07 ECU per 150 kg)

Law to amend Federal Electricity Pricing Regulations especially to decrease degressivity, and including incentives for electric heat pumps. A new law concerning the general conditions for electricity and gas distribution gives a special place to auto-production.

Power companies required to classify clients in most advantageous tariff based on previous 12 months' consumption.

Denmark

2. Energy Saving in Industry

Action

Public Sector Budget

1978	1979	1980	MECU
5.9	8.6		

- energy auditing, especially in industries consuming large volumes of energy

Energy audits are encouraged but are not mandatory. A register of the 600 most energy-intensive industries has been established, which are kept regularly informed.

- financial aids for small and medium-sized businesses, publicity campaigns

0.85m ECU spent on free advisory services, and 1.4m ECU granted in specific aids. A staff of consultants is available from the technological service institutes.

- financial and tax aids to encourage investment to save energy

20m ECU spent 1977 to 1979 in grants to support energy saving investment in industrial processes. Subsidies can be up to 40% of the project cost but average 20%. Average payback 5 years. Projects with a payback of less than 2 years are excluded. Grants are also available to improve space heating.

- financial aids for the commercial promotion of new energy-saving technologies, equipment or methods (demonstration projects)

This scheme exists within the framework of general aids to investment in energy saving.

Germany

4.

2. Energy Saving in Industry

Action

Public Sector Budget

1978	1979	1980	MECU
43	54	87	

- energy auditing, especially in industries consuming large volumes of energy

Energy audits are not mandatory. There is no government programme in support of energy audits for industry in general, other than a pamphlet service. However, industry itself and industry associations are active.

- financial aids for small and medium-sized businesses, publicity campaigns

A programme was adopted August 1978 (Budget 1m ECU 1978, 1.3m ECU 1979).

- financial and tax aids to encourage investment to save energy

Investment allowance of 7.5% of purchasing price and manufacturing costs of certain investments in energy production and distribution and energy-saving technology. Tax relief for diesel CHP, and gas-fired heat pumps.

- financial aids for the commercial promotion of new energy-saving technologies, equipment or methods (demonstration projects)

Programme begun May 1979. Budget for 1978 : 3.3m ECU; for 1979 : 5.4m ECU.

Germany

9.

8. Sustained Efforts in Research, Development and Demonstration

Action

Public Sector Budget

1978	1979	1980	MECU
33	56	64	

A very large programme.

1.

FRANCE : Energy Pricing Practices

Taxes on energy consumption in France are generally relatively high, but have not been further increased recently.

Electricity tariffs have been changed to reduce degressivity and to discourage the use of electricity for space heating without storage.

Gas tariffs were increased in January 1980 to bring them into line with other energy prices.

Denmark

8. Sustained Efforts in Research, Development and Demonstration

Public ...

1978	1979	1980
3	3	

France

8.

8. Sustained Efforts in Research, Development and Demonstration

Action

Public Sector Budget

1978	1979	1980	MECU
42	51	58	

Research and Development Programme.

Ireland

4.

	Action			
	Public Sector Budget			
2. Energy Saving in Industry	1978	1979	1980	MECU
- energy auditing, especially in industries consuming large volumes of energy	Energy audits are encouraged but are not mandatory. Aid for new industry is conditional on the use of energy-efficient methods.			
- financial aids for small and medium-sized businesses, publicity campaigns	A Fuel Efficiency Advisory Service is available. Grants are provided for up to 1/3 of cost of consultants. Training guides for energy managers have been prepared.			
- financial and tax aids to encourage investment to save energy	Grants of 25 to 1% of approved capital expenditure available towards expenditure to reduce energy usage in factories.			
- financial aids for the commercial promotion of new energy-saving technologies, equipment or methods (demonstration projects)	Grants of up to 79 000 ECU are available to develop new processes which reduce energy consumption, and for demonstration projects.			

9.

Ireland

	Action			
	Public Sector Budget			
8. Sustained Efforts in Research, Development and Demonstration	1978	1979	1980	MECU
	0.2	1.4		

ITALY : Energy Pricing Practices

Tax increases for petrol and heating oil in 1977. Further increases for petrol but not heating oil approved in November 1979. Taxes on LPG for transport and heating also increased. Tax instituted for gas in non-industrial uses in 1977.

Progressive tariffs for the domestic use of electricity and gas introduced. As from August 1980, the amount of electricity on which assistance is given to low income groups is reduced from 1800 to 900 kWH per annum and second homes cease to be eligible.

Refinery margins are now comparable to those in other Member States.

Italy

2. Energy Saving in Industry	Action Public Sector Budget 1978 –	1979 –	1980	MECU
- energy auditing, especially in industries consuming large volumes of energy			–	
- financial aids for small and medium-sized businesses, publicity campaigns			–	
- financial and tax aids to encourage investment to save energy			Funds of 103m ECU are proposed for 1980 to contribute to interest rate reductions for energy saving investments in industry and agriculture. Aids are also proposed to renovate industrial and agricultural buildings.	
- financial aids for the commercial promotion of new energy-saving technologies, equipment or methods (demonstration projects)			Demonstration projects for energy saving are funded as part of a wider Research and Development programme, up to 100% of cost. Funds of 26m ECU are foreseen for 1980 for demonstration projects in the field of energy saving for renewable energy sources, or the substitution of oil or electricity.	

LUXEMBOURG : Energy Pricing Practices

Taxation of energy in general, and oil products in particular is very low in Luxembourg compared to the general situation in the Community.

Luxembourg

1 3.

Action

Public Sector Budget

	1978	1979	1980	MECU
2. Energy Saving in Industry				
- energy auditing, especially in industries consuming large volumes of energy			-	
- financial aids for small and medium-sized businesses, publicity campaigns			-	
- financial and tax aids to encourage investment to save energy			-	
- financial aidsfor the commercial promotion of new energy-saving technologies, equipment or methods (demonstration projects)			-	

8.

Luxembourg

Action

Public Sector Budget

	1978	1979	1980	MECU
8. Sustained Efforts in Research, Development and Demonstration			-	

THE NETHERLANDS : Energy Pricing Practices

Vehicle taxation increased by an average of 2% in 1979. However, a surtax reduction on diesel motors has been discontinued for environmental reasons.

New contracts for large consumers of gas based on fuel oil price equivalence. However, some decreases were approved for largest consumers in January 1979. For small consumers' gas prices, it is intended to move towards fuel oil equivalence over a few years, which may imply price increases of the order of 20%. Gas export prices will also be reviewed. Flat rate tariffs to be introduced for domestic users of electricity.

The Netherlands

Action

Public Sector Budget

1978	1979	1980	MECU
14	18	54	

2. Energy Saving in Industry

- energy auditing, especially in industries consuming large volumes of energy

No mandatory requirements for audits. In 1978, a programme started to identify possible improvement in industrial energy-efficiency sector by sector. A report for the paper industry is already published. Reports will soon be available for five other sectors.

- financial aids for small and medium-sized businesses, publicity campaigns

Since 1977, a regulation has provided for a grant of up to 370 ECU. Over 500 firms surveyed to date (mid-1979).

- financial and tax aids to encourage investment to save energy

Temporary schemes were in force in 1977, 1978. Subsidies amounting to 67m. ECU were granted. A new regulation is to be proposed for 1980, with a foreseen budget of 37m. ECU.

- financial aids for the commercial promotion of new energy-saving technologies, equipment or methods (demonstration projects)

A demonstration project scheme is in operation, including new and renewable energy sources. 1979 budget is 1.9m. ECU.

Action

Public Sector Budget

	1978	1979	1980	MECU
8. Sustained Efforts in Research, Development and Demonstration	15	11.8	14.2	

A national programme organized by sector is being instituted.

Section E Comparison of the principal elements of some of the larger incentive schemes for energy saving in the home

	Nature of Scheme	Percentage grant	Maximum grant allowable ECUA	Remarks
Denmark	Tax credit for owner-occupiers	50%	428	Under review due to poor take-up rates
	Subsidies for apartments	30%	256	
F.R. of Germany	Subsidies or tax credits	25% subsidies	4785	Under review to improve cost-effectiveness
	Solar collectors and heat pumps also allowable	or 10% tax credit for ten years		
France	Subsidies or soft loans for owner-occupier	Subsidies up to 72 ECUA per t.o.e. saved		Considered successful
	Subsidies for public housing	30% of cost	-	
Netherlands	Subsidies	Average level is 30%	1444	Under review to improve cost-effectiveness
United Kingdom	Subsidies	Up to 66%	80	A 90% grant will be proposed for low-income pensioners

Notes

(1) To the extent possible, expenditure by local and regional authorities is included. However, it is known that complete figures are not available for Belgium, France and the United Kingdom in particular.

(2) Includes expenditure on demonstration projects.

(3) Estimate made by the services of the Commission.

(4) Expenditure is foreseen in a programme being prepared by the government, but not yet approved.

(5) There is expenditure by the Community through the EAGGF and ERDF, but expenditure on energy saving cannot be identified separately.

Commission of the European Communities

	Year 1978	1979	1980
1) Energy Saving in its home	-	-	-
2) Energy Saving in industry[2]	4	17.6	23
3) Energy Saving in agriculture	-	N/A[5]	N/A[5]
4) Energy Saving in offices and in commerce	-	-	-
5) Energy Saving in transport	-	-	-
6) Energy production	-	N/A[5]	N/A[5]
7) Information and education	-	N/A	N/A
8) Research and development	4.6	0.5	11.2
9) Total	8.6	(18.1)	(34.2)

	Italy Year			Ireland Year			Luxembourg Year			Netherlands Year			United Kingdom Year		
	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	FY 1978/9	FY 1979/80	FY 1980/1
1) Energy Saving in the home	–	–	(4)	–	–	(4)	–	0.1	N/A	35	88	124	44.4	83.0	48.5
2) Energy Saving in industry[2]	–	–	(4)	–	–	(4)	–	–	–	14	18	54	7.5	10.9	28.8
3) Energy Saving in agriculture	–	–	(4)	–	–	(4)	–	–	–				N/A	N/A	N/A
4) Energy Saving in offices and in commerce	–	–	(4)	–	–	–	–	–	–	3	3	50	37.4	68.0	105.0
5) Energy Saving in transport	–	–	–	–	–	–	–	–	–	–	–	–	1.1	0.3	0.8
6) Energy production	–	–	(4)	–	–	–	–	–	–	14	9	22	–	–	0.3
7) Information and education	–			0.4	0.7	1.4	–	0.2	0.6	2.4	2.8	3.3	2.5	3.4	5.5
8) Research and development	10	10[3]	10[3]	0.2	1.4	4)	–	–	–	15	11.8	14.2	14.9	15.5	16.5
9) Total	10	10	10	0.6	2.1	(1.4)	–	0.3	(0.6)	83.4	132.6	267.5	(107.8)	(181.1)	(205.4

Figures in brackets represent totals excluding non-available (N/A) items, where these are known to be small.

F/Y = financial year

Section B — Authorisations in public sector budgets for expenditure on energy saving[1] 1978-80

Member States — MECU

Programme	Belgium Year			Denmark Year			F.R. of Germany Year			France Year		
	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980
1) Energy Saving in the home	–	N/A	(4)	13	57	N/A	208	350	368	83	132	187
2) Energy Saving in[2] industry	–	–	(4)	5.9	8.6	N/A	43	54	87	29	71	64
3) Energy Saving in agriculture	–	–	–	–	–	N/A	1	4	5.5			12
4) Energy Saving in offices and in commerce	–	–	(4)	10.4	17.1	N/A	21	24	82	24	23.5	70
5) Energy Saving in transport	–	–	–	–	–	N/A	–	–	–	2	4	6.5
6) Energy production	–	–	(4)	9.3	9.3	N/A	50	60	80	–	–	–
7) Information and education	–	0.6	1.7	0.3	0.1	N/A	5	9	10	2.4	7.5	11.5
8) Research and development	2	2	2	3	3	N/A	33	56	84	42	51	58
9) Total	2	2.6	(3.7)	41.9	55.1	N/A	441	537	716.5	182.4	289	409

UK

9.

Action

Public Sector Budget

8. Sustained Efforts in Research, Development and Demonstration

1978	1979	1980	MECU
14.9	15.5	16.5	

UK

2. Energy Saving in Industry	Action Public Sector Budget 1978	1979	1980	MECU
	7.5	10.9	28.8	
- energy auditing, especially in industries consuming large volumes of energy	Energy audits are encouraged but are not mandatory. The Energy Technology Support Unit has published 9 reports on detailed investigations. Energy Survey Scheme : grant of up to 110 ECU for a one-day survey. A 50% discretionary grant can be obtained for a large survey. Surveys published for 16 industries.			
- financial aids for small and medium-sized businesses, publicity campaigns	Free advisory services: Energy Quick Advice Service. Energy Thrift Scheme is concerned with the collection of data for government use. In this process, firms may obtain, by invitation, some advice on heat energy use at no charge.			
- financial and tax aids to encourage investment to save energy	Energy Conservation Scheme (discontinued June 1980): selective grants (generally 15 to 25% of cost) to replace or improve inefficient boiler plant, for insulation and for CHP projects. 100% first year tax allowance for insulating existing industrial buildings.			
- financial aids for the commercial promotion of new energy-saving technologies, equipment or methods (demonstration projects)	Mm. ECU available over 4 years (beginning 1978). Budget reduced in 1980.			

UNITED KINGDOM : Energy Pricing Practices

Major increases in VAT on petrol and diesel fuel in July 1979. In March 1980 taxes on all oil products were further increased. The tax on gasoline was raised from 0.13 ECA per litre to 0.16 ECA per litre. Annual duty on cars was increased to 100 ECA. However, domestic users of electricity, gas and coal are still exempt from VAT.

Bill in preparation to alter relationships between government and the nationalised industries. Financial targets set at higher levels for nationalised fuel industries.

The Government announced its intention in January 1980 of increasing gas prices for domestic consumers by 12% in real terms over three years. Electricity prices will be increased by about 5% in real terms during the same period.

Mr. HARVEY. There are other factors as well. The debt-equity ratio allowed in Japan in steel is like 8 to 1 where in the steel industry here it is something like .5 to 1.

Mr. YATES. What do you mean by allowed?

Mr. HARVEY. Acceptable to the economy, the national economy. A large portion of that debt is supplied by the government itself.

I had a discussion with the Japan Development Bank. They are providing, for example, in advanced conservation technologies alone $488 million for loans at 5.5 percent.

Mr. YATES. For research?

Mr. HARVEY. For development. It was closer to being development and demonstration, not basic research.

Mr. YATES. Is that the same kind of program that you are handling here?

Mr. HARVEY. Probably a little further toward final commercialization than we are doing.

Mr. YATES. You are talking about a bank doing this?

Mr. HARVEY. This is a bank and loans to industry.

Mr. YATES. What does Japan do with respect to what you are doing? Does it have a government assistance program?

Mr. HARVEY. A very significant one, with industry.

Mr. YATES. Do we have that in our Government? I know we have it in defense. Do we have it in non-defense industries?

Mr. HARVEY. I think we cancelled it out next year.

Mr. YATES. Yours is the only one?

Mr. HARVEY. As far as I know.

Mr. YATES. Is there any?

Dr. SAVITZ. No.

Mr. YATES. Why have we not been doing that over the years? They do that in other countries?

Mr. HARVEY. We have data for the Netherlands.

Dr. SAVITZ. And Germany.

Mr. YATES. Put it all in the record. Let's start educating Congress as well. Tell us what we face in terms of international competition.

Mr. HARVEY. Absolutely.

Mr. YATES. If what you say is true, the fact we put barriers up to products coming into our country, as contemplated with the Japanese automobiles, it may have some impact on our market but how do we compete with them in the other markets of the world?

Mr. HARVEY. Exactly right.

Mr. YATES. It does not make sense.

Mr. HARVEY. Even in our own market. If you say you cannot import automobiles from the Japanese, they still provide 6 million of the 12 million engines used in the United States cars.

Mr. YATES. Which brand? Is this for Chrysler?

Mr. HARVEY. All of the users. I am not an expert in that area. There are people here who know that.

Mr. STADLER. I am Henry Stadler, Director of Transportation Programs.

I believe at present there are not as many as half of engines being built overseas but that is a projection toward the future rather than today.

Mr. YATES. Go ahead, Mr. Harvey. Is there anything else?

Mr. HARVEY. You might be interested in some of the things we have done this last year that you have not yet heard about.

Mr. YATES. I am interested. It is proposed that you be cut back more than 50 percent. We deferred until next year. How badly will you be hurt by deferrals rather than rescissions? Suppose funds are deferred.

Mr. HARVEY. I would prefer deferral if the 1982 budget stays at zero.

Mr. YATES. What should be the 1982 budget? Should it be comparable to the 1981 budget in your opinion?

This is like the testimony given by a dying man in connection with his will.

Mr. HARVEY. A coming farmer.

Mr. YATES. Therefore, it is entitled to a very proper reception.

Mr. HARVEY. It depends entirely on what you use for evaluation. We had a very meaningful program the first year we were in business at $5 million a year. We can have a meaningful program at $100 million a year.

Where do you want to make the cost-benefit tradeoff which says this is where it should stop? Our programs produce a barrel of oil for a Federal investment on an average of 23 cents a barrel, for a total private and Federal investment of $5 a barrel.

You want to say $5 a barrel is the cutoff point and we should not fund anything more expensive than that? Then you would have a $100 million program.

If you say you have to do better, work only on the most cost-beneficial projects and make oil equivalent at no more than 50 cents a barrel total, then we probably should have a $5 million program.

Mr. YATES. Your testimony about what the other governments are doing is quite persuasive. In previous years you came in with examples. What are you doing which has significance?

Mr. HARVEY. I knew you would ask that.

Mr. YATES. Of course you did. It is like the Smithsonian coming in with their books and the various goodies sold in their store.

Mr. HARVEY. I have books, too. I will tell you about a fertilizer program we have.

Mr. YATES. That should appeal to a politician.

Mr. HARVEY. The granulated fertilizer industry combines sulfuric acid, anhydrous ammonia, and phosphoric acid in a tank. It is a very exothermic reaction. They have to cool the tank. They mix it with potassium nitrate and make fertilizer.

We did a program with the National Fertilizer Research Institute which combines all of these reactants in a pipe. They call it a pipe cross reactor because there are a bunch of pipes coming in at the same time.

If you adjust the rate of the feed of these things exactly right, you end up getting just enough heat to form the granules from just the reaction itself.

We demonstrated this very successfully. We now have penetrated 25 percent of the market with this process.

One company in Ohio produced 14,000 tons of fertilizer two years ago. Their natural gas bill was $16,000. Last year they had exactly

the same output and their natural gas bill was $937.00. It is taking over the marketplace very, very rapidly.

Mr. YATES. Having done that, you stopped that program and went into something else?

Mr. HARVEY. Yes, sir. We are out of that program at this point. We are continuing the same process for two new products, diammonium phosphate and monoammonium phosphate. The only thing we are doing is looking at the rate at which it has to be introduced to get exactly the right product. That is one.

Another program we have gotten out this year was a program we did at Iowa State University in using corn stover, the waste material from corn crops, and corn cobs as a fuel to dry corn. The problem always has been a traditional problem in using this type of material for fuel, that is, it has a high potassium content. It is corrosive.

They have successfully licked this problem. Now there is a company in Iowa which has taken this up commercially. They are putting this into the marketplace and selling these systems. It looks like a good system. It takes an acre of corn cobs to dry five acres of corn. It looks as though it is cost-effective.

Mr. YATES. Mr. Stockman says industry will do that.

Mr. HARVEY. That is correct.

Mr. YATES. Why didn't they do it? Why did you have to do it?

Mr. HARVEY. I guess I expressed the opinion earlier that the relative risk associated with development often precludes private investment in higher risk technology.

Mr. YATES. But nobody had done it up to the time you did it. Is that right?

Mr. HARVEY. That is right.

Mr. YATES. Was anybody trying to do it that you know of?

Mr. HARVEY. There was a company in Ohio which was trying to develop a drier for seed corn. They came to us about three years ago and expressed some of the problems they had with potassium corrosion. This was a rotary kiln kind of drier.

I put them in touch with a number of people expert in metallurgy, and by the time they could prevent this corrosion from happening by using very corrosive-resistant alloys, the cost was out of sight. They, therefore, dropped the program.

I will be the last to deny that research development and demonstration is going on in this country. It is going on in this country. The question is how rapidly will these technologies penetrate the marketplace and will they make a significant impact on the Nation's energy consumption in the relatively near future? I am talking now about 1995. That is the key question which has to be asked.

Mr. YATES. It is not 1995 we are talking about but 1985.

Mr. HARVEY. That is right.

Mr. YATES. The only hope we have is your program right now, as I see it. Is that true? I am not referring to yours particularly, but I refer to the conservation program and all of this activity.

Mr. HARVEY. You are right.

Mr. YATES. You are the only ball game in town, are you not?

Mr. HARVEY. Yes, sir.

Mr. YATES. Put everything you want to put into the record at this point, Mr. Harvey. I think you have a good program. I hope we can continue it next year.

Mr. HARVEY. The person to replace me is a super guy. He is Mr. Al Streb.

[COMMITTEE NOTE.—Progress Report No. 12 (Final Report), "Conservation of Energy in Ammoniation—Granulation Plants" submitted for Committee files.]

TRANSPORTATION PROGRAM

Mr. YATES. Let's turn to automotive. You have vehicle propulsion, a budget of $67,900,000. We deferred $20,400,000. How badly are you hurt?

You had a program which had three turbine engine developers doing research and development. One was a Stirling engine. Are there any others?

Mr. STADLER. No other engine developments but various waste heat used in pushing trucks and various other energy-saving devices.

How badly are we hurt?

Mr. YATES. Yes.

Mr. STADLER. The third gas turbine will not go on.

Mr. YATES. How important is that? You have two gas turbines. If you have three or five, the reason you have numbers of them is that one is liable to hit. Is that right?

Mr. STADLER. Yes. These are three different techniques of applying the technology of gas turbines and there was a distinct difference in the ways they were being done, so they did not duplicate each other.

However, I think it is perfectly true that the first gas turbine is the most important. If you can do one, it is a great deal better than doing none.

Mr. YATES. That is correct.

Mr. STADLER. A second one, I think is a good deal more important than the third but they were both different concepts. They were important in two ways—one, they had different designs; two, there is the competition against each other. Gas turbine faces a lot of competition from improved diesels and the Otto cycle engines. There is a competitive situation involved there even if there were one.

Mr. YATES. Are manufacturers proceeding on their own here?

Mr. STADLER. Manufacturers are not proceeding very much on the gas turbine, and I think the auto manufacturers are not proceeding on Stirling engines at all. The gas turbine we are importing is through the automobile manufacturers. They have a small cost share in that. Other than that, they have no funds.

Mr. YATES. What would happen if your programs were cut out?

Mr. STADLER. There would be no development of automotive gas turbines and there almost certainly would be no development anywhere of Stirling engines for transportation.

Mr. YATES. Does the Department of Transportation have research in this field?

Mr. STADLER. Research, but not on those things.

Mr. YATES. What research does it have?

Mr. STADLER. Some trucks, safety areas, and it has a relatively small amount in fuel economy research.

Dr. SAVITZ. No basic research. Even in its total R&D budget it is $11 million, and that includes safety.

Mr. YATES. Is it doing anything on vehicle propulsion?

Dr. SAVITZ. Not related to energy efficiency. It does more work on vehicles related to safety.

PURCHASES OF FOREIGN AUTOMOBILE ENGINES

Mr. YATES. Should you be doing research in this? Where is that list of automobiles being purchased?

You are buying engines from Japan and Germany. I saw a list of engines a while ago which I want to check. These are engines brought from foreign sources.

Mechanical Technology Incorporated presented us with testimony on February 19. Among the exhibits they gave us is one showing the purchasing from foreign sources by U.S. automobile manufacturers for use in domestic vehicles production. It is quite startling. The sources are compiled from Automotive News, Ward's Automotive Report, American Metal Market, Detroit Free Press, and others.

General Motors for the period of 1982 is importing for its automobiles from General Motors of Mexico 400,000 2.8-liter V-6 engines; process for mini-trucks to import from Isuzu, Japan 100,000 2.0-liter L-4 engines for 1981.

Small numbers in the next category from Isuzu of Japan, 1.8-liter diesel L-4 engines for Chevette.

Then for the J-car for 1979, they imported 150,000 engines from General Motors of Brazil of 1.8-liter L-4 engines.

Then from GM Strassbourg in France, 250,180 automatic transmissions for Chevette.

There is an entire list which I will put in the record. It is already in the other record.

Ford of Mexico 2.2-liter engines, 400,000 a year.

Diesel-4s, 100,000 a year from Toyo Kogyo.

Ford of Brazil 50,000. Then 100,000 diesels from BMV Steger for 6 cylinder diesels.

For 1985 there are turbo diesels.

Who is doing the research? I drive a 1980 Buick Skylark. I thought this was a General Motors car. It is a General Motors car, but I thought it was a General Motors engine as well. Apparently that engine came from Japan.

I note from the advertising on television a new Japanese car I have never seen before, and perhaps it is my fault. It is an Isuzu which is being advertised, having tremendous gas savings. I believe it gets 50 to 60 miles per gallon. Where are we in this competition? Why are you not doing better?

Mr. DEGEORGE. If I may ask a question.

Mr. YATES. Of me or him?

Mr. DEGEORGE. Either of you.

Mr. YATES. Prepare yourself.

Mr. DEGEORGE. I am sitting here listening. I was curious. I think General Motors does $5 billion a year of sales. Ford does something

over $3 billion. I sense the expectation that our Federal research and development will address itself to that problem.

Why are not the automobile companies themselves making this kind of investment? Why are they buying millions of engines overseas? Is it a sense of timing? They certainly have large research budgets. They have spent hundreds of millions of dollars in research.

Mr. STADLER. I don't know the research budgets of the automobile companies. The R&D budget by definition of the Ford Motor Company is over $1 billion a year. I believe General Motors would be proportionately two or three times that.

The question as to why they buy so many overseas as well as Mexico is partly answered by the trade restrictions of the other countries.

As you probably know, in order to sell cars in Mexico, Brazil or other countries, you have to show that you have built a certain fraction of your own product in that country. The easiest way for American companies to get into the Mexican market, which is now expected to be an expanding market is to put up factories in Mexico.

Mr. YATES. Henry, that would ordinarily be true. I think it is part of an answer as to why they import their engines from General Motors of Mexico, for example.

However, then you see imports from Isuzu of Japan and imports from Toyo Kogyo of Japan and imports from BMW from Stuttgart.

Mr. DEGEORGE. Ford owns 25 percent of Toyo Kogyo, so that is not entirely an arm's length deal.

The other thing is that the American companies, particularly Ford and Chrysler, have a great deal of difficulty coming up with the capital to build new factories. That has forced them to outsource engines and other components to a greater extent than they ordinarily would if they had enough capital. There is evidence of that problem.

I am not an expert on this sort of thing.

Mr. YATES. I don't know that any of us are experts except, of course, as you pointed out that the automobile companies are not in a profit-making category at the moment. Presumably one of the reasons they are not in a profit-making situation is because of the amount invested in research and development.

As you say, there is $1 billion, and that is part of their balance sheet. What is their research and development going into? Is it going into smaller engines? I assume it is now except, from what you say, you are the only source for research and development.

Am I wrong?

Mr. STADLER. I want to be sure of what you are saying.

GAS TURBINE DEVELOPMENT

Mr. YATES. I want to be sure, too. If I understood you correctly, the small engine development program for turbine is the one they are doing at your request.

Mr. STADLER. Yes. As far as gas turbines for automobiles are concerned, the only work in the American auto companies is being funded nearly 100 percent by the Federal Government.

That does not say they are not doing any work on the research and development of small engines, however. They are doing a great deal of work on the development of various novel gasoline engines, novel diesel engines, but nothing on gas turbines and nothing on Stirling engines.

INDUSTRIAL RESEARCH ON NEW ENGINES

Mr. YATES. What kind of research are they doing on novel gas engines and novel diesel engines?

Mr. STADLER. I do not have a complete set but I will give you a couple examples.

Mr. YATES. All right.

Mr. STADLER. The so-called lean burn gasoline engine which is expected to be——

Mr. YATES. That is the Chrysler engine. I read the advertisement a couple years ago about lean burn.

DIESEL ENGINE DEVELOPMENTS

Mr. STADLER. There are various lean burn designs. Some of them have been developed at Chrysler, some in Japan, and I believe there is a considerable amount of effort at Ford now, and I assume there is also at General Motors.

In the diesel area the personal car diesels are chamber diesels which are not as efficient as direct-injection diesels. They have a small chamber into which the fuel comes, and that has given them some advantage of being quieter and emitting less pollutant, but there is now development on eliminating those problems with direct-injected diesels which will be about 10 to 15 percent more efficient than the present engines.

Those are both going on in the private auto sector. There is also some work in the Cummins Engine Company on an uncooled and ceramic diesel engine. Those are not federally funded by us. Some of it is funded by the Army. It draws heavily on our ceramic research, which is a very large part of what we call our gas turbine work. It is about half of the money we put into gas turbines and this actually is in development of engine ceramics which hold the key to more efficient heat engines generally, because if you can make a heat engine run hotter it is more efficient.

Mr. YATES. Cummins came in yesterday and testified.

Mr. STADLER. A great engineer.

Mr. YATES. He talked about 1988 for the new diesel that he said would be revolutionary. He is using zirconium.

Mr. STADLER. Zirconia. That means it has oxygen in it. It is an oxide.

Mr. YATES. Is it is a metal which will withstand heat?

Mr. STADLER. I see. He actually was talking about zirconium, the metal.

Mr. YATES. I thought so. My mind went back to some Rickover testimony about the use of zirconium and making a reactor for the first nuclear submarine. They were looking for exotic metals which could withstand heat.

On the basis of the testimony we had on the Moody, the question was whether a turbo diesel could withstand the enormous heat generated.

Mr. STADLER. I believe he is coating the metal with a ceramic which is zirconium oxide. That is a process which shows great promise of allowing them to run hot inside. Unfortunately, I didn't hear the testimony.

Mr. YATES. We have a copy of it. We should send it to you because you will be enamored of it. He made me very comfortable and uncomfortable. His testimony brought the most spectacular pictures of what that diesel engine will do at sometime in the future.

He has a target date of 1988. I wish it were 1984 rather than 1988.

If you were to give Cummins Engine some of this research money, could they move the target date up to 1984?

Mr. STADLER. I don't know about the precise date, but they have come in and made proposals of that nature to us. I find them as attractive as you do.

Mr. YATES. Do you have money to help them, Henry?

Mr. STADLER. I don't think we will be doing that to any great extent on our reduced budget. I don't think we will be able to make a four-year difference in introduction time.

Mr. YATES. Is that because of lack of knowledge or funds?

Mr. STADLER. The Cummins proposal contends they could speed up their production date substantially if we gave them support.

Mr. YATES. Why don't you give him support, then?

Mr. DEGEORGE. I guess the question is how much we are talking about.

Mr. YATES. Ask Henry.

Henry, Mr. DeGeorge wants to know how much we are talking about.

Mr. STADLER. I understand it is $5 million over a three-year period.

Dr. SAVITZ. Fifteen million dollars total.

Mr. YATES. Can we have an engine in three years?

Mr. STADLER. Prototype.

Mr. YATES. We can have a prototype in three years. That is very good, is it not?

Mr. STADLER. Yes.

Mr. YATES. For $5 million.

Dr. SAVITZ. Per year.

Mr. YATES. It is a total of $15 million, then. Is it worth it?

STIRLING ENGINE PROGRAM

Mr. DEGEORGE. Compared to what, Mr. Chairman? Compared to the Stirling engine program?

Mr. YATES. Let's talk about that.

Mr. DEGEORGE. Or others?

Mr. YATES. We have a nice vision here of the Cummins engine. Tell us about the Stirling engine. How close to a prototype are you there?

Mr. STADLER. The Stirling engine——

Mr. YATES. This is all important because 20 percent of our use of petroleum goes into automobiles. Is that right?

Mr. STADLER. Use of petroleum?

Mr. YATES. Use of gasoline.

Mr. STADLER. That is right.

Mr. YATES. That is a sizeable chunk.

Dr. SAVITZ. Fifty percent.

Mr. STADLER. Fifty-three percent into transportation generally. Not all goes into cars and trucks.

Dr. SAVITZ. Transportation is 25 percent of the Nation's energy but over 50 percent of the Nation's petroleum.

Mr. YATES. What is the vision of the Stirling engine? Assuming you had a prototype, what do you hope to accomplish with the Stirling engine?

Mr. STADLER. What we hope to accomplish is to have an engine which is about 50 to 40 percent more efficient than the gasoline engine now projected for the same time period, so that instead of a Chevy Citation or Pontiac Phoenix car, a fairly large car by today's standards, with 27.5 miles a gallon, we then would have 42 miles per gallon.

Mr. YATES. How would it compare with a diesel?

Mr. STADLER. That would be in the year 1985 that we would have that prototype.

Mr. YATES. How long does it take after a prototype is constructed? Does it then go into commercial production?

Do you have to test it?

Mr. STADLER. We would have tested it by then.

Mr. YATES. You do have a prototype at that point.

Mr. STADLER. We would have a prototype which was tested in 1985. The normal automobile company cycle is something like four years after that to do the production engineering and trying to reduce costs, and then to design the machines which have to manufacture it and build them. It takes two or three years to build the special machines which build that engine.

For a Stirling it may be somewhat longer because there are severe problems about the materials and the production techniques for this new kind of engine.

What I am giving you is the time it takes to go from one kind of a gasoline engine to a different kind of gasoline engine. That is all the automobile companies have ever done. Presumably it would be a little bit longer.

COMPARISON OF STIRLING AND DIESEL ENGINES

Mr. YATES. Do you have greater hopes for the Stirling than you do for the diesel?

Mr. STADLER. They are different.

Mr. YATES. I know that. In terms of miles per gallon, what is the story?

Mr. STADLER. In miles per gallon I do not have better hope for the Stirling than for the common types of diesel. The improved diesel will have emissions of particulates and nitrogen oxide which will be significantly greater than those of the Stirling. Stirling is a very clean engine.

The Stirling is also able to use alternate fuels as well as high-efficiency fuels.

Our behavior is to try to plan for a case where we need the very cleanest engine as opposed to a situation where we do not need a very clean engine.

The improved diesel in that latter case might be the better one.

Mr. YATES. Do we walk around with gas masks?

Mr. STADLER. It would not be anything like that bad.

Mr. YATES. Is it anything beyond what you understand the present environmental considerations?

Mr. STADLER. The improved diesels are expected to make the environmental and clean air regulations which were promulgated and discussed by the Vice President a couple years ago. That is not expected to be a problem. They would have had a problem with the very tightest regulations. I think those are still effective in California.

Mr. DEGEORGE. I will ask one more question. I am enjoying this, too, Mr. Chairman.

We talked about this six or eight months ago. I would ask the same question now.

Why does not the automobile industry do this themselves?

Mr. YATES. I was going to ask that.

Mr. DEGEORGE. If it is an alternative to the diesel, if it is as desirable, and it seems to be technologically feasible, I cannot believe that the automobile industry cannot squeeze into a $3 billion R&D budget a $30 or $40 million investment.

Mr. YATES. What is the answer to that, Henry? It is very well put, Mr. DeGeorge.

Mr. STADLER. The auto companies—and I can speak only for the disposition of the billion dollars a year at Ford—have to cover a very large number of issues with that money. They have an enormous number of issues, materials, safety, all sorts of problems they have with quality control, a whole lot of things with their billion dollars a year for one company.

There are several engines we discussed on which they really ought to keep their hand in. There are those we have not discussed where they should also keep their hand in. The possibility of putting $30 million a year into one more engine, which would be used only if we have the tightest of emission requirements, is a problem. The auto companies have not yet been fully convinced that the amount of fuel for transportation is going to be all that tight. They don't know what price automobile fuel will be in 10 years.

Mr. YATES. Haven't they seen the projections?

Mr. STADLER. There are various projections. If it were certain that the price of fuel for automobiles was going to be in 1980 dollars something like $5 to $6 a gallon, they would go right ahead and do this work. However, they are not certain of that.

Mr. YATES. Henry, I would like to follow up on Mr. DeGeorge's question. Apparently they do not have the same feeling about the Stirling engine that you have, do they? Otherwise, they would be doing it, would they not? Would they not find money for it?

Is the Stirling a long shot in your judgment?

Mr. STADLER. Yes.

Mr. YATES. That is why they have not done it?

Mr. STADLER. Yes.

Mr. YATES. Didn't Ford look at it when you were at Ford?

Mr. STADLER. Yes.

Mr. YATES. They didn't like it; they couldn't move it. Was it too expensive?

Mr. STADLER. The explanation which Ford gave, and I feel they believed this internally, was that they had a small enough number of engineers, qualified and experienced engineers, and that they could not put 30 to 40 of them onto this kind of long shot. They had so many near-term problems they saw even four or five years ago. Now I would say they have even more.

PRIVATE DEVELOPMENT OF STIRLING ENGINE

Mr. YATES. Who is developing the Stirling engine?

Mr. STADLER. Our prime contractor is Mechanical Technology, Incorporated. They have a very large subcontractor, United Stirling of Sweden, which got its expertise from Philips Eindhoven which had been developing them for about 40 to 45 years.

Mr. YATES. The Stirling engine?

Mr. STADLER. Yes.

Mr. YATES. For transportation?

Mr. STADLER. Not for transportation use. Philips Eindhoven came to be interested in promoting them for transportation about in the mid-sixties. They gave a license to General Motors first and then there was a license for Ford in the late sixties.

Mr. YATES. Philips Eindhoven was the basic developer?

Mr. STADLER. They developed it since the mid-thirties. That is not really the original developer. It was invented in 1816. It was supplied to stationary power plants around the turn of the century. It had been in use for quite some time.

The Stirling engine as it has been up until our program began was four times—the latest ones are four times—as heavy and four times as bulky as a gasoline engine or a diesel engine of the same horsepower, so you could not conceive of putting it into an automobile.

Mr. YATES. It is like the battery for the electric automobile.

Mr. STADLER. It has a lot of those same problems.

Our present program would bring it down by that whole factor of four.

Mr. YATES. How are you doing with it?

Mr. STADLER. It is looking very good. The technical milestones are being accomplished. In fact, in some cases this is being done before they were expected.

BUDGET FOR STIRLING PROGRAM

Mr. YATES. What is your target date for a protyotype?

Mr. STADLER. The final all-the-way-down time was in 1985.

Mr. YATES. Then money is coming out of it next year?

Mr. STADLER. That is right.

Mr. YATES. How much money will you have invested in the engine by that time?

Mr. STADLER. Sixty-seven million dollars for the full program.

Dr. SAVITZ. Forty-two million dollars will have been invested in the development of the Stirling engine.

Mr. YATES. At the end of this fiscal year?

Dr. SAVITZ. 36.6 million dollars, Mr. Chairman.

Mr. YATES. How much will you need next year to continue the program?

Dr. SAVITZ. To continue the Stirling, do development of it, it is about $12 million.

Mr. YATES. Is that your budget target, $12 million for next year?

Dr. SAVITZ. The budget for next year has been focused to look at the supporting research for Stirling engines as opposed to being focused toward engine development.

Mr. YATES. That phases it out over a number of years. You need development, too, do you not?

Dr. SAVITZ. It would do research as opposed to doing research and development of an engine.

Mr. YATES. Are not research and development both necessary?

Dr. SAVITZ. If you want to get a product within a certain period of time, you need to have the development as well.

Mr. YATES. Would you have to pay a license fee to Philips Eindhoven if you develop the engine?

Mr. STADLER. Philips Eindhoven sold its rights to United Stirling. They have licensed Mechanical Technology Incorporated for the North American market.

Mr. YATES. What happens to the engine? Are you getting patents, too? Once you develop the engine, are you then subject to be required to do certain things by the holder of the patent?

Mr. STADLER. I don't think we are required to do anything except by Mechanical Technology. I believe Mechanical Technology has such rights as will be needed to manufacture it in the United States. We would encourage them to collaborate with domestic automobile manufacturers in that manufacture.

They do have rights. Our arrangement with them is that if they successfully commercialize it, they will pay back the Government the amount that the Government had put in plus about one and a quarter times that.

Mr. YATES. Is that true with the turbine, too?

Mr. STADLER. There I believe we have the rights.

Dr. SAVITZ. That is right.

Mr. YATES. "We" being the United States Government?

Mr. STADLER. The United States Government.

Dr. SAVITZ. I want to clarify that. If we finish the development of Stirling here, the United States has the license rights as opposed to United Stirling of Sweden.

Mr. YATES. How many more years do you want to develop the engine?

Dr. SAVITZ. Our time table had it through 1985.

Mr. YATES. For a prototype?

Dr. SAVITZ. That is right, going through initial modification which would get the weight down to about half and then about another half.

Mr. YATES. Do you have enough this year?

Dr. SAVITZ. This has been one of the largest problem areas we have had on the rescission from the point of view of being able to

carry out the existing contracts to meet a second point with the 1981 budget number as proposed in the rescission.

Mr. YATES. There is $6 million for it.

Dr. SAVITZ. That money would get the turbine and the Stirling to a milestone within this year.

Mr. YATES. So this year is taken care of. How much money do you need next year, $12 million?

Dr. SAVITZ. To do the Stirling.

Mr. YATES. How much do you need for research and how much for development? How do you break it down?

Dr. SAVITZ. The $12 million includes both the development and R&D part of it. Eight and a half million dollars to model one, engine development, as well as supporting research.

TURBINE BUDGET

Mr. YATES. Let talk about the turbine budget.

Dr. SAVITZ. The turbine for one engine is $14 million, about $8.6 million going specifically for one of the engines and the ceramic technology is about $5.6 million.

Mr. YATES. What is the target date for the turbine?

Dr. SAVITZ. They have both been on a 1985 time frame.

Mr. YATES. Can you say one development is more encouraging than the other? Suppose you had to pick one or the other? Would you know how to pick?

Dr. SAVITZ. It would be difficult to do at this point.

Mr. YATES. You know you do not need the third one. Is that right? That began just this year.

Mr. STADLER. Which of the two gas turbines or which of the turbines versus the Stirling?

Mr. YATES. No. You have to continue the Stirling. Now you have two turbine developments. You said they are taking different paths.

Mr. STADLER. One is substantially ahead of the other one because the General Motors team found last summer and fall that they had to redo their design, so they are somewhat behind the Garrett-Ford team. At this point if we had to make a choice, we would choose the Garrett-Ford team.

Mr. YATES. You said General Motors was ahead of Garrett-Ford. Is it the opposite?

Mr. STADLER. Yes. Garrett-Ford will be testing an engine within fiscal year 1981. General Motors will not be able to do that. This is the first model engine.

NEW SMALL AUTOMOBILES FROM AMERICAN COMPANIES

Mr. YATES. I read somewhere that General Motors will come out with a small car late this spring.

Mr. STADLER. Yes.

Mr. YATES. Do you know anything about the car? Do you know what the mileage will be and how large it will be? How will it compare with the J-car?

Mr. STADLER. I cannot give you further information.

Mr. YATES. Is that confidential information?

Mr. STADLER. I don't think so. I am not very well prepared on that particular question.

Mr. YATES. Do you know anything about the car?

Mr. STADLER. I have heard of it. There is a string of different cars being developed.

Mr. YATES. Are they coming out this spring?

Mr. STADLER. Yes. Ford is coming out with one which they just started advertising.

Mr. YATES. The Lynx.

Mr. STADLER. EXP. The Lynx is already out. The Lynx has been out about six months.

Mr. YATES. Is this a bigger gas saver?

Mr. STADLER. No.

Mr. YATES. Is it just sportier?

Mr. STADLER. That is right.

Mr. YATES. Will General Motors be a bigger gas saver?

Mr. STADLER. That is the answer I cannot give you.

Mr. YATES. Call them up in the interim.

PRIVATE ENGINE DEVELOPMENTS

Should you be telling us anything further about other engines which you said were in development?

Mr. STADLER. There are other engines being developed which are not in our program. One is the stratified rotary engine.

Mr. YATES. The Mazda?

Mr. STADLER. It is one that Mazda is involved in with the Curtis Wright Corporation. Some of the problems Mazda had with their rotaries a few years ago have been alleviated a good deal by stratifying the charge. That has reduced many of the problems they had before. One can now get a pretty high fuel economy with this new development. I don't know what else we ought to be telling you.

ELECTRIC VEHICLES

Mr. YATES. What about electric vehicles? Are we any closer than we were a year ago?

Mr. STADLER. Interest in the private sector has perked up a great deal even in the past year. As you know, about a year ago General Motors made a fairly flamboyant claim. They seem to be proceeding, although perhaps not quite as quickly as they had expected, both toward a van and toward a small personal car.

The Ford Motor Company is showing a great deal more interest than they had previously. So has American Motors.

Mr. YATES. If you have not liked the battery, why would they be showing this interest?

Mr. STADLER. The question of what is needed to lick the battery problem is coming under review. About 10 years ago I was the manager of the electric car department at Ford. I participated in persuading society that you could not have an electric car, you could not sell an electric car, if it would not go 200 miles on one charge.

I guess I am reborn again. I now feel we have seen a great deal of interest in a very large part of the population in an electric car

which goes perhaps 72 miles on a charge. There are many trips one can take, a great deal of use one can get out of such a car.

We have a lead acid battery car which gets sufficient range in city driving, so there is some question as to whether the market would now accept a kind of car which is technologically feasible.

HYBRID VEHICLES

Mr. YATES. What about a hybrid motor?

Mr. STADLER. A hybrid would allow you to go further. I want to get to that. Hybrids are a very large class of cars. You can make a great many different designs within that class.

However, we have designs which do go a great deal farther than 75 miles, but they are fairly complicated and they will be relatively expensive because generally they have two power plants rather than one. That does make the vehicle more expensive.

It is very important if you are trying to sell broadly, to bring down the price. In fact, it is one of the major problems of the electric cars, whether we can bring the price down close enough to that of the conventional car.

Mr. YATES. Of a hybrid car, the prime source of power would be the electric power plant. The hybrid would be a spare tire in the event you ran out of a charge.

Mr. STADLER. That kind of use can actually be accomplished with a relatively small increase of the cost of the car.

Mr. YATES. Is there any design like that?

Mr. STADLER. There are designs tried experimentally. I know of some work at Ford which was looking into that kind of concept.

COMMERCIALLY MARKETED ELECTRIC VEHICLES

Mr. YATES. Are manufacturers selling electric cars now?

Mr. STADLER. There are manufacturers who are selling them.

Mr. YATES. Are they having many sales?

Mr. STADLER. Yes. We have small manufacturers selling a few thousand a year.

Mr. YATES. Are some the size of golf carts.

Mr. STADLER. Some of them are, but we should get you to ride in one of ours. The Secretary of Energy has been driving around in a car which, except for the fact it says "electric" on it and it has nothing coming out of the exhaust pipe, you would hardly know it was electric.

Mr. YATES. What size is this?

Mr. STADLER. Something like a compact, not a subcompact. How big is an 007?

Mr. YATES. Do you mean for Secretary Bond? How much does he pay for rental of the car? How much does he pay the Federal Government to rent the car?

Dr. SAVITZ. It is part of the demonstration program. We keep the data.

Mr. YATES. How does he like it?

Mr. STADLER. He seems to continue to use it.

Mr. YATES. What range does it have?

Mr. STADLER. This car has a range of 65 miles.

Mr. YATES. How fast will it go?

Mr. STADLER. We suggest you not take it to top speed.

Mr. YATES. Can it cruise at 55?

Mr. STADLER. It can go 70 miles an hour. It can go very fast.

Dr. SAVITZ. The range is different.

Mr. YATES. Who makes the car?

Mr. STADLER. This car is made by Jet Industries in Austin, Texas.

Mr. YATES. Is the Secretary's car the height of the development so far?

Mr. STADLER. No.

Mr. YATES. Are there cars more advanced than his?

Mr. STADLER. Yes. We have an experimental car made by General Electric and Chrysler Corporation which goes about 75 miles on a charge. It is a beautiful car.

Dr. SAVITZ. Here is a picture of it.

Mr. STADLER. It has been shown to people in the auto industry and has been very much appreciated.

Mr. YATES. It is a nice-looking car. How much does this cost?

Mr. STADLER. We got them prices for 100,000 or so. Six thousand eight hundred if you produce 100,000.

Mr. YATES. How safe is it?

Mr. STADLER. It passed various safety tests of the Department.

Mr. YATES. Do mean the crash tests?

Mr. STADLER. Yes.

Mr. YATES. How comfortable is it? Does it have all the accouterments and devices that the standard car has?

Mr. STADLER. It does not have air conditioning.

Mr. YATES. Is the reason because it is too much of a drain on the battery?

Mr. STADLER. Yes.

BATTERY DEVELOPMENTS

Mr. YATES. How many batteries does it have?

Mr. BROWN. I am Paul Brown.

Sixteen batteries. The battery is now being produced and offered for sale by Globe Union. This is a lead acid battery. It is developed for an electric car.

Mr. YATES. How long will it last?

Mr. BROWN. Eighteen months if you put 15,000 miles on a car within a year's time.

Mr. YATES. How much would it cost to replace it?

Mr. BROWN. Twelve hundred dollars for the complete battery pack of 16.

Mr. YATES. That is part of the problem, is it not? You have a car for only 18 months?

Mr. STADLER. That is complete replacement. Some of our work has been on development of longer-life lead acid batteries and ways of manufacturing them at lower cost.

Mr. YATES. How is that work proceeding?

Mr. STADLER. Mr. Brown, do you want to come up and talk about this?

Mr. BROWN. We are looking at the near term. The lead acid battery, the design of the electric car, and the problem you mentioned of reliability and longer life, are being investigated. We are finding in those demonstrations we have had on the road that

when one pays attention to how you charge it and how you water the battery we are getting more reliability.

The other occasions where the batteries have failed have been infant mortality. Once you have solved that kind of problem, there is good reliability even in a lead acid battery.

As we move to the other types of batteries, such as the nickel-iron long-life battery, it suffers a bit from cost problems. We are working on that.

Mr. YATES. What is the cost of that in comparison to the other one?

Mr. BROWN. They are not in mass production. They are hand made so you are talking about $20,000 for a hand-made job.

The projection of bringing that down for a battery set is still very high, probably on the order of $2 to $3 thousand for a battery.

Dr. SAVITZ. But they would have a longer life span.

Mr. YATES. How much?

Mr. BROWN. Two or three times that of the lead acid battery. I believe it is that since we do not have costs.

Mr. YATES. What about the dimensions?

Mr. BROWN. Same size. One that also looks promising and still to be tested is the zinc chlorine battery. Zinc chlorine is one where we have been working on a cost-sharing basis. That could have the potential of the life of the car. Because of the nature of the battery, it is different from other batteries, and there is no erosion of the elements. It is entirely possible the cycle life of that battery could be up into the thousand cycles.

Mr. YATES. What is your hope for a date on that becoming commercial?

Mr. BROWN. About three years away. There is extreme interest on the part of General Motors in working with EDA and with us in developing it, not for a passenger car but for a van.

Mr. YATES. Is that the so-called General Motors breakthrough?

Mr. BROWN. No. The General Motors breakthrough for the passenger car is a nickel-zinc oxide battery. We have been working on that, also. So far as we know, General Motors also is experiencing the battery life problem, particularly in nickel zinc. Between the plates they develop dendrites and they reach out and discharge the battery. It has a short 40 cycles.

Mr. YATES. Would extra funds help shorten the development time of any of these batteries?

Mr. BROWN. Actually we have not cut the battery effort. It has been our top priority.

Mr. YATES. Would it be helpful if you had more funds?

Mr. BROWN. I think it would to the degree we really get participation by the battery companies. Let me cite one which has happened because I think it may be typical. Gould has been developing the nickel battery. They were very enthusiastic in the nickel zinc battery done by General Motors, Delco Remy, and others. They were so encouraged they were cost-sharing with us. This year they made a business decision, in February, that they believe they could not make that 50 percent investment in cost-sharing with us any longer.

Mr. YATES. How much money are you talking about?

Mr. BROWN. One million dollars.

Mr. YATES. Gould could not put $1 million into it?

Mr. BROWN. In that particular development.

Mr. YATES. Is that because it is long term?

Mr. BROWN. They could not see their customers, General Motors, Ford, or the other majors, they could not see the cash flow back from that. From their point of view they saw some five years before there would be orders to make 100,000 of these batteries.

That is quite typical of the entire battery development industry. Until there can be actual orders from Ford, General Motors, and Chrysler, they will not tool up and put their facilities into the making of a battery, particlarly one which from their point of view has not been proven.

I still believe there is a Federal investment needed in the R&D of batteries. Potential is great and the interest is great.

General Motors now appears to be waffling from the 1984 projection, now to 1985, and perhaps 1986 and 1987.

MISSION CAPABILITIES OF ELECTRIC VEHICLES

We welcome General Motors development but we also believe it is necessary to have competition, and we do see that the battery-powered car can perform a very effective mission, and it is doing it now.

One citation might be helpful. When we talk about the commercial van, and the kind of mission where you have a central garage, and vehicles are dispatched from that out to install telephones, General Telephone and Electronics, who is working with us in our testing evaluation and demonstration, by their economics at today's prices of fuel at $1.40 per gallon, will pay one and a half times the cost for that battery-powered car compared with their other van. They will do that because the payoff and payback from maintenance and fuel costs at $1.40, including replacement of batteries, two complete replacements of batteries, is still cheaper than the operation and maintenance of a gasoline or diesel vehicle.

ELECTRIC VEHICLES SOLD COMMERCIALLY

Mr. YATES. Can they buy it?

Mr. BROWN. They can. They can get this from Jet Industries. Jet just went public with a stock offering in yesterday's Wall Street Journal. They can buy from Jet at that price.

Electric Vehicle Associates in Cleveland is close to those kinds of numbers.

Mr. YATES. Which was the one in Cleveland?

Mr. BROWN. Electric Vehicle Associates.

Dr. SAVITZ. Both of those companies have received loan guarantees from us to try to get them started to get into production.

Mr. YATES. What is their capacity to produce?

Mr. BROWN. Capacity to produce has gone from hundreds to thousands.

Mr. YATES. Are there vans or automobiles?

Mr. BROWN. Any conversion. It can be a passenger car like the Omni 024, a Ford Escort, a Lynx from Mercury, and then we go to the vans or light trucks—a Ford Courier, a Chevrolet Luv, as well

as vans, Isuzus, a type of Japanese van called a 500 van. Those are conversions.

Mr. YATES. Is their optimism justified?

Mr. BROWN. Yes.

Dr. SAVITZ. Regarding the one from Jet Industries, half of their sales are coming from people not associated with our demonstration program. They are people who do not have Federal money. Some are foreign purchases.

Mr. YATES. Is the U.S. Postal Service buying any?

Mr. BROWN. Not in the DOE program but separately funded. They have purchased 350 this year. Because of their mission, they are very strong for electric vehicles, so there are a number of companies now giving them more advanced vehicles in addition to the Jeep they had from American Motors. They have found the reliability of their devices as being extremely good once they got over the first start-up-type of operation.

They have gone ahead this year with a total of 700, 350 of them just purchased, to be delivered in about 18 months. They are also looking at Grumman Aircraft, where they have a separate model, a company in California, and also Marathon of Canada which is providing three test vehicles. They are encouraged by the operation and maintenance cost of an electric car.

Mr. YATES. What about the electric motor? Is that easier to maintain and not subject to as much repair?

Mr. BROWN. You don't have plugs, no exhaust system. Think of your appliance at home. How often do you replace the electric motor?

It is true that at this moment they are direct current machines. DOE is developing AC machinery which looks good.

Although we have the capability of coming up with the type of motor you are talking about, there has been no market so no one develops that particular type.

Mr. YATES. You would think manufacturers would develop markets.

Mr. BROWN. We thought so, too. The electric motor developed by General Electric for that particular vehicle is a light-weight motor in which General Electric now is attempting to interest General Motors.

The commercialization of the technology developed with Government money appears to be paying off.

SOLAR POWERED ELECTRIC VEHICLES

Mr. YATES. What about solar power?

Mr. STADLER. For transportation?

Mr. YATES. Yes. I visited Israel some years ago and they had some kind of a device on a car.

Mr. STADLER. There is a fellow in Tel Aviv who has a solar-assisted electric car. I think the solar portion is really a very small part of the amount of energy used.

Mr. YATES. That charges the battery, does it not?

Mr. STADLER. If you leave it out long enough, you can make a short trip on solar power alone. There is a fellow in Ann Arbor, Michigan, where I used to live, who built a wind-powered car which in a beam wind of 10 miles an hour can go totally on the wind for

50 miles an hour, so it is really capable of going totally on wind power. It is no different from an old sailboat.

ELECTRIC VEHICLE BUDGET

Mr. YATES. One of these days they will start putting up sails. Anything else about battery-powered cars?

We have a deferral of $9 million. How badly are you hurt? Are you hurt badly by a $9 million deferral?

Mr. BROWN. Actually the strategy in the deferral is this: we are not concerned with terminations. We did stretch out. In the stretching out, that deferral is not breaking up teams.

Mr. YATES. How about the 1982 appropriation?

Mr. BROWN. Nineteen point six million dollars for 1982.

Mr. YATES. Half of what it is this year.

Mr. BROWN. Strategy there is that there are no demonstrations proposed for 1982. You will recall this had a program of adding vehicles each year.

Mr. YATES. The Secretary will not be able to drive his car after October 1?

Mr. BROWN. There are three years in each demonstration.

Mr. DEGEORGE. Which exceeds the normal life of a Secretary.

Mr. BROWN. The principal difference is that we will not be adding the 600 vehicles which would run $15 million.

Mr. YATES. Does either program, those we have been discussing, have anything to do with airplane engines?

Mr. STADLER. Not per se. My office has to do a bit with conservation of energy in airplanes but we have a very small piece of a program jointly with the Federal Aviation Agency and NASA which pursues that.

There has been a lot of progress in that area, as you may perhaps know.

Mr. YATES. What about transportation systems? Is that your shop?

Mr. STADLER. Yes.

Mr. YATES. Is it driver education mostly?

Mr. STADLER. That covers driver education, gas mileage guides, and other modes of influencing the purchase of automobiles, and there is some work in vanpooling and carpooling.

Mr. YATES. All right.

Mr. STADLER. We have had a joint program with the Department of Transportation on voluntary truck and bus fuel economy, which is a rather important area as well.

ALTERNATIVE FUELS UTILIZATION

Mr. YATES. What about alternative fuels?

Mr. STADLER. Alternative fuels utilization is one of my small programs. This is an important program which has not been reduced by the Reagan budget from the Carter budget.

Mr. YATES. You have had a rescission of $800,000.

Mr. STADLER. There is a small rescission, but as far as the 1982 budget request it was not reduced.

Mr. YATES. What does that program do?

Mr. STADLER. In automobile engines, transportation engines generally, there are questions as to what you have to do to them to make them use alternate fuels, such as alcohols, methane, or synfuels. There is also a question of whether you can make a combination of a slightly changed engine and a broader-cut fuel which will be a less expensive and more efficient way of providing transportation than simply substituting for gasoline. Both of those kinds of problems are addressed in this program.

If we are going to have tens of millions of dollars of synfuels programs, as I imagine we are, it behooves us to be sure we are producing the most efficient material for the objective, and the ojective of most of this is transportation.

Mr. YATES. Is gasohol one of the alternative fuels?

Mr. STADLER. A small step in the direction of alternate fuels which does not require any changes in engines.

If we want to go to 100 percent ethanol or methanol, we will have to make changes although they bring with them such benefits that I think it would be well worth doing.

TRANSPORTATION PROGRAM MANPOWER

Mr. YATES. Do you have enough next year for program direction?

Dr. SAVITZ. Program directions are all being reduced for next year. We will have 78 less people at the end of this year.

Mr. YATES. What else should I know about your program, Henry, that we have not yet discussed?

Mr. STADLER. I think it is a rather thorough examination.

As far as numbers of people, we will be at half the number of people in 1982 we had when I came in a year ago.

Mr. YATES. I know why it would be, but will that hurt you?

Mr. STADLER. It will require our doing very much less management. We were not doing as much as I thought Ford Motor Company had been doing before.

Mr. YATES. Are you saying Ford Motor Company uses more people to do the same amount of work you do?

Mr. STADLER. Yes.

Mr. YATES. That is heresy, Henry. Did you believe that when you were with Ford?

Mr. STADLER. I don't know.

SCHOOLS AND HOSPITALS GRANT PROGRAM

Mr. YATES. State and local programs. What about schools and hospital grants?

Mr. DEGEORGE. Mr. Chiogioji can respond to that.

Mr. YATES. We have a recommended deferral of $42,500,000 out of the request of $99,950,000.

Mr. DEGEORGE. What does the deferral do?

Mr. YATES. It makes it available in 1982.

Dr. CHIOGIOJI. We can live with a deferral of $42 million mainly because the program as we presently have it developed will be providing funds on September 1. The deferral should not hurt the program.

Mr. YATES. What about the budget next year? How much is available?

Dr. CHIOGIOJI. The budget next year is $100 million, about half of the Carter budget.

Mr. YATES. That is a reduction. Will it hurt you at all?

Dr. CHIOGIOJI. We can do about half of the energy conservation work we would have been able to do with the other budget.

Mr. YATES. What are you doing with the money? How well is it working?

Dr. CHIOGIOJI. I believe it is working very well. As a matter of fact, the program as we presently have it is a 50-50 match with the State and local governments. For every dollar we put out, the local government or the school puts up another dollar.

This past year we put out about $225 million worth of grants. If you make a comparison between the number of requests we have versus the amount of money we have, it was about 3 to 1, in other words, three times more requests than we had funds.

Mr. YATES. Is that growing or diminishing?

Dr. CHIOGIOJI. It has been growing over the past year. The program has gone on since last year. Although the program was authorized in 1978, it took a number of years to get going. It was authorized but never appropriated.

We had an appropriation in 1978 and 1979 but it was not spent. It was carried over.

The program finally got into effect in 1980, at which time we provided for about 20,000 retrofits last year.

WEATHERIZATION PROGRAM

Mr. YATES. You have $181 million for weatherization this year. That is proposed to be transferred to HUD. Will they do a better job than you?

Dr. CHIOGIOJI. We at the present time do provide for weatherization. Over the past four years they have done about 50,000 a year.

Our program, after a rocky start, has done about 300,000. It will become a choice of the local government as to whether they would like to put money into weatherization or something else. I cannot conjecture as to whether they can do a better job than we can or vice versa. It becomes a choice of the local government at that time.

As I said, it has been an activity which has been authorized within their program, and they are doing about 50,000 a year at this point in time.

STATE GRANT PROGRAMS

Mr. YATES. You have, $47,800,000 for state grants.

Dr. CHIOGIOJI. That is right.

Mr. YATES. That goes to zero next year.

Dr. CHIOGIOJI. That is right.

Mr. YATES. What will the states do about it?

Dr. CHIOGIOJI. An analysis we have done in cooperation with the National Governors Association, a survey they ran, indicates that by and large the programs will probably disappear. They did a study for us over the last few weeks. They had 40 states responding. The majority of these states indicated their energy offices were 80 percent federally funded.

I would say on the basis of the study NGA did that the majority of the states will be unable to provide the support to replace the Federal dollars because of appropriation cycles.

Mr. YATES. What is the nature of the work done under the state grants?

Dr. CHIOGIOJI. The state programs fund the state energy offices within each state. For example, it provides the state capacity to manage the energy program within the state.

Mr. YATES. It is too bad if the states do not want the program, is that right?

Dr. CHIOGIOJI. That is about where it is.

ENERGY EXTENSION SERVICE

Mr. YATES. Is the Energy Extension Service using county agents?

Dr. CHIOGIOJI. No, sir. It is parallel to the county agents. We provide the funds to the states to provide information to the small businesses as well as individuals. In some states county agents are used because the Energy Extension Service uses the county agent for the state.

The state determines who it would like to use as its agent. In many cases they have gone to local governments or other activities.

Mr. YATES. The states will have to take that over, too. Is that right?

Dr. CHIOGIOJI. Yes.

EMERGENCY ENERGY CONSERVATION PROGRAM

Mr. YATES. And take over the Emergency Energy Conservation?

Dr. CHIOGIOJI. The Emergency Conservation Program becomes primarily a research program rather than a grant program.

Mr. YATES. What will you research?

Dr. CHIOGIOJI. We will develop different options other than gasoline. The program up to this point has been doing work primarily on gasoline-type measures. There are measures required by the law to do work in the area of natural gas, electricity, heating fuel, and things like that which we have not done up to this point.

Mr. YATES. What is your appropriation for next year?

Dr. CHIOGIOJI. Two million dollars. The $10 million which would be going to the states for them to develop their own plans has been rescinded.

Mr. YATES. States will be very unhappy with the cutbacks. Have you heard from any of them?

Dr. CHIOGIOJI. They are very unhappy.

Mr. YATES. How many have you heard from?

Dr. CHIOGIOJI. The majority of them. We have also heard from the trade associations, the Governors Association, Conference of Mayors, people like that.

Mr. YATES. Are they all in favor of these reductions?

Dr. CHIOGIOJI. They don't seem to be.

Mr. YATES. Program direction.

Dr. CHIOGIOJI. That is for people within my staff and at the regional level. It reduces my people by about half.

Mr. YATES. Have I omitted anything?

Dr. CHIOGIOJI. I believe you covered all the programs which are State and local government.

Mr. YATES. You will lose a lot of money, won't you?

Dr. CHIOGIOJI. About 80 percent.

ENERGY CONSERVATION AND UTILIZATION TECHNOLOGY PROGRAM

Mr. YATES. What else has not been covered?

Dr. SAVITZ. There is one other program we have which has not been cut, Energy Conservation and Utilization Technology, a small program for technology-type development. It was at $8 million this year. It is not rescinded.

Mr. YATES. What do you do with it.

Dr. SAVITZ. We look at a product which has not been identified. Combustion is one of the major areas. We look at components and computer-aided designs to see how molecules convert from molecules to carbon dioxide so you can make improvements. It looks at the fundamentals. It is fundamental chemistry.

Mr. YATES. How did you escape Mr. Stockman?

Dr. SAVITZ. This is very much the type of research that we think is appropriate for the Federal Government to do—generic, longer term and high risk.

PROGRAM ACCOMPLISHMENTS

Mr. YATES. That takes care of conservation.

What else do you want to tell us? Are you still reeling?

Dr. SAVITZ. Yes, and still getting results from programs. The Washington Post had an advertisement from a heat pump water heater which you have been funding which has now hit the market.

Mr. YATES. Is that yours or Mr. Harvey's?

Dr. SAVITZ. It is the buildings program. We funded a small company, a two-man operation to do prototype and demonstration. Now people such as Fedders are marketing it.

Mr. YATES. Who has a patent on something like that?

Dr. SAVITZ. I think some of the patent is held by the firm we picked, one from the start. Other companies such as Fedders and another small company have a retrofit model. This can take the existing system. They make some changes in the connection which give them some patents.

However, they take the data we developed and the results we have shown, and——

Mr. YATES. How many such advertisements can you show us of products developed by you?

Dr. SAVITZ. Within the technology and consumer products there are a half dozen different products which have now reached the market. In Mr. Harvey's program eight items have reached the market and gone beyond the one-of-a-kind stage.

The lead acid battery is one of those products.

Mr. YATES. When Secretary Edwards appeared before us he said he just bought a refrigerator which had a label on it. I assume that came from you. It showed the efficiency of the refrigerator.

I assume the Secretary consulted with you before he bought the refrigerator.

Dr. SAVITZ. No.

Mr. YATES. Anyway, he read the label.

Dr. SAVITZ. Here is one of the labels.

Mr. YATES. I asked him, "Suppose we had not had the program. Would the label have appeared?" He thought it would.

Dr. SAVITZ. The law required the label to appear. We develop the test procedures and do the consumer education related to the label. The Federal Trade Commission issues regulations as to how the label should appear and where. However, we do the technical backup for them.

Mr. YATES. We ought to be sure he gives you the credit you should have.

Dr. SAVITZ. It has been a joint program with us and the Federal Trade Commission.

ENERGY IMPACT ASSISTANCE

Mr. YATES. Was there objection by your office to the $52 million rescission impact assistance?

Mr. DEGEORGE. There was not.

Mr. YATES. Have you heard anything from the states on this?

Mr. DEGEORGE. Perhaps some of the staff people have. I have not.

Mr. YATES. We will submit some questions for the record for which we would like responses. Mr. Murtha and Mr. Dicks have some questions also.

[The questions and answers follows:]

Questions Submitted by Congressman John P. Murtha

AWARDS FOR INDUSTRIAL TECHNOLOGY DEVELOPMENT

Question. I understand that your office issued a grant to Penn State University to develop an energy efficient cupola furnace technology. I am interested in knowing whether it is common practice to make awards for industrial technology development to universities, what is the status of this particular research project and how do you communicate the results of such activity to industry where the technology ultimately must be implemented?

Answer. The cost type contract with Penn State University was initiated in fiscal year 1976. It is now scheduled for completion January 1982. Penn State was chosen as a contractor because of their historical involvement in research for the cast iron industry, their expertise in cupola operation, their identification of an important energy conservation potential and their enthusiasm for implementing a solution.

Modern Equipment Company, a cupola design company, was retained as a subcontractor by Penn State to assist in specification of the equipment to permit supplementary air injection in the stack at a position somewhat below the top of the descending charge materials. The air injection results in combusting the carbon monoxide in the off-gases just before leaving the cupola shaft. The successful use of air injection will eliminate the need for natural gas fired after burners used for the same purpose. Combustion of the carbon monoxide to carbon dioxide is an EPA requirement.

Penn State has completed the laboratory and pilot plant work on the air injection concept. Arrangements have been made for the first commercial scale test of the concept Tioga Foundry in Owego, New York. This demonstration work will be completed over the next six months.

The technology will be communicated to the foundry industry through presentation and publication of the results by the American Foundry Society. We also expect to retain Penn State as an advisor to help in communication at regional workshops. We expect that these sessions will have the support of the Energy Committee of the American Foundry Society. Finally, a new chapter will be written for the forthcoming revised "Cupola Handbook." This book has wide distribution and acceptance in the cast iron making industry.

It has been common practice for the Office of Industrial Programs to support technology development at universities. An agricultural waste fired grain drying system was developed under our sponsorship by Iowa State University. This technology was also picked up by an equipment manufacturer. Various other projects are also underway involving universities (e.g., MIT, Purdue, Cornell, University of Nebraska, and others).

Questions Submitted by Congressman Norman D. Dicks

Residential Conservation Service

Question. Your rescission justification for the RCS program proposes termination in fiscal year 1982. Have you submitted language to the appropriate committees to this effect? When do you intend to do so?

Answer. The Department has not yet determined whether to submit proposed legislation on the termination of the RCS program to the appropriate committees.

Question. Could you explain why you would like to terminate?

Answer. With rising energy costs, the public will continue to be motivated to make conservation investments. In addition, with the increasing interest in conservation investments on the part of the public, DOE believes private firms, selected utilities and other institutions have shown a capability to provide necessary conservation services. The marketplace must therefore be given an opportunity to effect conservation prior to determining a need for government intervention or subsidization. In this light, the RCS poses an unneccessary regulatory and administrative burden on affected States and utilities.

Question. What is the estimated cost to States and private utilities to implement this program over its useful life?

Answer. Estimated costs to States to implement the RCS from 1981 to 1984 are $60 million. Estimated costs to 296 covered utilities from 1981 to 1984 are roughly $1.6 billion.

Question. What is the estimated fuel savings to be derived from this program over the useful life of the measures implemented?

Answer. Estimated energy savings from households installing selected energy conservation measures are 300,000 barrels of oil equivalent per day by 1985 and 500,000 by 1990. These savings will, of course, continue at the same rate for 30 years which is what we estimate the useful life of most measures to be.

Question. What is the estimated cost of each barrel of oil saved and each Btu saved as a result of the program?

Answer. We estimate that at a 1981 price of $36/barrel, RCS will result in a savings of 1.1 billion barrels of oil equivalent by 1990 which (at this price) results in a savings of $40 billion.

Question. The Administration requested that Congress rescind the fiscal year 1981 funds for this program. As you are aware, this Subcommittee agreed to rescind some portion of the funding for the program and deferred $2.855 million to fiscal year 1982 to meet our statutory commitment. I have heard from several utilities in the State who are presently looking at expending large sums of money to implement this program even though the Administration has proposed its termination. I am interested in hearing how the Administration's proposed rescission of fiscal year 1981 funds for the RCS would affect the obligations of the States and the utilities to carry out this program and expand funds on its implementation?

Answer. The proposed rescission of fiscal year 1981 funds will not effect State and utility obligations to carry out the program. The only circumstance which would change these obligations would be to rescind the legislation which would in-turn relieve States and utilities of all RCS responsibilities. Utilities are required by law to fulfill the obligations of the RCS Program.

Question. Will this obligation you outlined under your rescission request be any different under this subcommittee's recommendation to defer some of these funds to fiscal year 1982?

Answer. The obligations remain the same.

Question. Can you estimate how much the States and utilities may expend on this program between now and September 30, 1981?

Answer. The Department has no information on how much States and utilities will spend on RCS in the next 5 months. A total of 48 State and 34 non-regulated Utility Plans have been received. To date, DOE has approved plans for 41 States and 32 non-regulated utilities. By September 30, 1981, RCS program announcements will be mailed to customers by covered utilities in 27 States and by 29 non-regulated utilities.

Questions Submitted by Congressman Norman D. Dicks

Residential Energy Efficiency Program (REEP)

Question. Last year Congress passed the Residential Energy Efficiency Program (REEP) which authorized up to four demonstration projects designed to encourage the initiative of the private sector to capture systematically the billions of Btu's of energy wasted each year in residential buildings in the U.S. Additionally, DOE has undertaken a pilot project in Lakewood, New Jersey, to demonstrate the concept on a pilot basis. My review of these programs leads me to conclude that, by demonstrating the commercial viability of the systemmatic retrofit of residential buildings, REEP promises to:

Save annually million of barrels of oil equivalent energy.

Reduce the need to build new powerplants and thus reduce environmental costs associated therewith.

Provide utilities a source of energy not otherwise available and at a lower cost than constructing a new powerplant.

Provide conservation measures at no cost to occupants of residential buildings and save them money on their heating and cooling bills.

Additionally, these programs appear consistent with the Administration's basic energy policy. These programs require minimal federal supervision; allow State and local governments discretion whether to participate in such programs, and are designed to demonstrate the commercial viability of a concept which is currently a risky and unproven enterprise.

In view of the obvious advantages these programs offer, and in view of the Administration's proposed reduction the fiscal year 1981 budget for the DOE's Residential and Commercial Retrofit Programs, I hope DOE plans to continue the Lakewood demonstration.

In what specific ways do you see either of these demonstrations as running counter to the Administration's basic energy policy of allowing and encouraging normal market forces to bring about the most efficient and effective use of the Nation's energy resources?

Answer. DOE does plan to continue the Lakewood pilot for REEP. The Lakewood pilot should demonstrate the commercial viability of the REEP concept. Federal support of the REEP demonstration is an unnecessary Federal expense because the concept is essentially local in application. Further, the regulations required to implement the demonstration limit the ability for the private sector to initiate such projects. Should the concept prove to be commercially viable, market pricing of energy will encourage businesses to enter this market in the absence of Federal support.

Industrial Conservation

Question. What research and development activities is your department supporting in high temperature heat pumps for industrial applications? Is there any activity in progress or planned which addresses more advanced systems such as the Stirling or Brayton cycle heat pumps?

Answer. The Office of Industrial Programs is conducting four industrial heat pump development programs that resulted from a competitive procurement and have been underway for several years. Three of these will recover waste heat and produce process steam, one will recover waste heat and solvents. The projects are:

Electric Rankine: Recovers heat from a pulp and paper mill and delivers 20 psi steam. The improvement is in the ability to have a higher temperature (ca 340° F) steam. This development has resulted in the generic improvement of working fluid high temperature capability.

High Coefficient of Performance: Recovers heat from a waste process stream, delivers clean steam in a chemical plant. Principle is to utilize a Rankine cycle system to provide shaft power to drive a steam compressor. This unit does not require the application of external power, it is driven by the waste heat itself.

Stirling: The Stirling heat pump, when delivered, will receive low temperature waste heat and produce 600° F steam, considerably higher than the Rankine cycle units, which are limited to lower temperatures by their working fluids. The temperature of 600° F for a Stirling Cycle Heat Pump is considered modest in relation to the 1600 to 1700° F temperature that Stirling cycle power generators utilize and should, being lower, improve reliability and lower cost.

Brayton Cycle: The Brayton cycle unit receives air (or inert gas) from an oven or cleaner that is laden with high energy content solvent vapor. This air goes through a Brayton cycle that shock cools the mixture so the solvent condenses out and is recovered for further use. The resulting warmed air is returned to the oven or

cleaner for recycling. The solvents recovered require 8000 to 18,000 BTU per pound to manufacture. At present these solvents are exhausted to the atmoshphere, resulting in signficant emissions, or incinerated for acceptable emission to the atmosphere.

Additional Committee Questions

Building Sector Energy Use

Question. Your revised budget justifications (p. 15) discuss energy use in the private sector and the overall increase inefficiency in that area. What has been the performance since 1973 in the buildings sector compared with transportation and industry?

Answer. In the post-embargo period from 1973 to 1980, total U.S. consumption of energy increased only 2.2 percent, compared with an increase of 28.9 percent in the seven year period prior to 1973. This dramatic decline in the growth of energy consumption was evident across the three end-use sectors.

In the buildings sector, energy consumption increased only 2.7 percent from 1973 to 1980, compared with an increase of 40.9 percent in the previous period. Although substantial, this decline in growth is less impresive than that of the transportation sector, where the growth in energy consumption fell from a 41.6 percent gain over the 1966–1973 period to a 0.5 percent increase in the most recent seven year period. The decline in the growth of energy consumption in the industrial sector, from 22.2 percent in 1966–1973 to 2.8 percent in the most recent period, is relatively less than the conservation gains realized in the other two sectors.

Focusing on conservation gains in the most recent year, the relative performances of the three end-use sectors are altered. From 1979 to 1980, energy consumption in the transportation sector actually declined 6.6 percent. Industrial energy consumption decreased 4.0 percent in the 12 month period. Although also registering a decline, energy consumption in the buildings sector decreased only 0.5 percent.

Within the buildings sector, there are limited historical data available on the private sector response to rising energy prices and federal tax credits. However, recent data for the 1973–1979 period collected by the National Association of Home Builders and translated into energy by Lawrence Berkeley Laboratory's DOE–2 Computer program clearly indicate that new residential homes are becoming thermally tighter. The estimated energy used for space conditioning in an average new U.S. house with gas heating, based upon an analysis of its design, declined 19 percent from approximately 95 million BTU/year in 1973 to 80 million BTU/year in 1979. The design energy use for a house with electric resistance heating declined 15 percent, from approximately 15 thousand KWh/year in 1973 to 13 thousand KWh/year in 1979.

With regard to commercial buildings, a recent survey of building design practices with regard to energy conservation indicates that there have been improvements in roof and wall insulation to conform to upgraded ASHRAE building codes. This evidence points to overall improvements since 1975–1976 in building envelope design practices and in the use of sophisticated energy controls. However, the same study points to little evidence od commercial building sector response to passive or active solar or to energy management systems. The study also indicates that building ownership has an important bearing on conservation decisions, and that non-owning building operators are less inclined to adopt more energy efficient consumption practices.

Private Sector Research and Development

Question. In discussing the objectives in Federal role in the Buildings and Community Systems area (P. 20), your justifications state that "the Federal strategy includes research and development activities of the type described above that the private sector would not undertake alone at this time."

What indication do you have from the private sector that they will continue the activities that you have previously funded, that you no longer are doing, such as in your technology and consumer products area?

Answer. With the full decontrol of oil, the pending decontrol of natural gas, the energy labeling requirements on residential appliances, the pending reductions in regulatory burdens placed on the private sector, and the growing concern of consumers over the rising cost of energy, it is believed that market forces will drive the private sector to step up its R&D activities in the area of energy efficient consumer products. Past history has also shown a willingness on the part of the private sector to pick a large share and in some cases the total cost of R&D projects once the

technical and financial risks are reduced to a reasonable level. Several projects sponsored under the Technology and Consumer Products program have reached the stage of development where, with government support fully withdrawn in 1982, the private sector could continue the work, possibly at a reduced level of effort. These projects include the heat pump water heater, the efficient motor compressor for refrigeration systems, the energy efficient refrigerator, the energy efficient light bulb and the solid state ballast for fluorescent lamps.

Question. If they do fund them, will it not be at a lower level than would have existed with Federal support or in a longer time frame?

Answer. Private industry obtains investment funds from several sources at various costs, and allocates these funds to projects ranked by priority. Normally, the prioritization of corporate investment funds is toward low risk, quick payback areas. Advanced technology, normally high risk projects, often are not successful in competing for corporate investment dollars. Therefore, it is probably correct that without DOE involvement, many of the R&D projects started under the Technology and Consumer Products program will be stretched out and delayed on the average of from one to five years.

Building Systems

Question. For the record, please provide a breakdown of the dollar amounts for each of the sub-elements under your buildings systems request for both 1981 after the proposed rescission, and for 1982.

Answer:

[In thousands of dollars]

Building Systems	Fiscal year—	
	1981	1982
A. Building Energy sciences:		
1. Ventilation and controls	1,907	2,075
2. Envelope Systems and Materials	2,115	3,200
3. Performance calculations and Diagnostics	1,831	4,775
4. Energy conversion equipment		3,400
5. Pilot Projects and case studies	1,272	3,497
6. Appliance test procedures		600
B. Building energy performance standards	3,495	0
Operating total	10,620	17,547
Capital equipment	500	353
Building systems total	11,120	17,900
Transfer from TCP & TT	1,630	
Total	12,750	17,900

Building Energy Sciences R. & D.

Question. Since you are only going to do R&D that industry will not do in the building energy sciences area, please explain what industry does so in this area and how your research will be distinctive from theirs.

Answer. The building sector, unlike other major sectors, is highly diffuse. One out of every seven members of the workforce is employed by this sector which involves over 1.2 million business establishments. Consequently, there are no huge industrial corporations, such as GM & Ford, which put funding into systems integration research areas. And yet, major gains in achieving energy efficient buildings are expected to be in the area of building systems which looks at how materials, products and systems interrelate. What little research does exist is product specific.

The other major category of work not done by the industry is where there is no clear product to market. Such as in indoor air quality. The research done by DOE is distinctive from that done in the private sector in that it focuses on long term generic research intended to facilitate systems integration.

Question. What kind of judgements are, or will be, used to determine what elements the industry would not undertake so that these elements can be.

Answer. Program plans for specific R&D areas are formulated on the basis of where there is a significant opportunity to increase energy efficiency that isn't

being addressed by industry. Many different startegies are used, depending on the specific reasons for the situation. Joint meetings are regularly held with various companies and representative building sector associations to review plans and progress to date. DOE uses program assessments in cooperation with the building community to determine what needs to be done and what DOE's role should be. For example, an examination of the diagnostics tools being used for audits was made and from the examination a determination was made of the needs for R&D. A twelve man panel worked a year. Their report was extensively commented on and will be available in May. The result is that sound program plans are formulated that have had the input of the technical, educational, professional and manufacturing community.

Question. How was that done in conjunction with the fiscal year budget for buildings?

Answer. Based upon recent program assessments by staff members of the Buildings Division, an informal ZBB/ranking process was utilized in order to translate long-term research opportunities in fiscal year 1982 budget priorities. Once the ranking of the Building Systems' subelement program areas by staff members was accomplished, dollar funding levels were allocated accordingly.

Scientific Basis

Question. Your work in building energy sciences appears to be trying to establish a scientific basis from which designers and contractors as well as manufacturers can draw a line. What is your estimate of the time necessary in this program in order to get significant results?

Answer. The time necessary to obtain significant results in the building energy sciences program is in the range of seven to ten years. Individual projects, of course, achieve major milestones in shorter time spans, but overall program accomplishment has a broader time-frame. For example work DOE supported resulted in a new, tighter ASHRAE ventilation standard.

Question. What is the mechanism that will be used to transfer this information to the commercial sector?

Answer. Information is transferred primarily through participation of the technical staff in national professional and technical associations and through national program reviews.

Technology and Consumer Products

Question. Your revised request includes an energy conversion equipment subelement which used to be a part of your Technology and Consumer products are, which has been deleted. What is the amount of funding for this subelement?

Answer. Fiscal year 1982 funding request for the Energy Conversion Equipment subelement is $3.4 million.

Question. What kinds of information and data will be developed in this activity compared to what you used to do in the Technology and Consumer Products area? How will this information be used by industry?

Answer. This activity is comprised of generic, non-profit specific research which will provide results mainly in the longer term. Much of this work is a continuation of the generic research elements of the Technology and Consumer Products program. The information and data produced will primarily be in the form of analytical procedures, laboratory test results, and bench-scale processes which can be applied to building energy conversion equipment. These data will be used by manufacturers as a basis for making R. & D. investment decisions or will reduce the uncertainty and time required in product development efforts by providing basic engineering data not now available.

The Technology and Consumer Products area was comprised primarily of jointly funded product development efforts conducted with manufacturers and aimed at analysis, construction and laboratory testing of prototype hardware and field demonstrations of preproduction hardware. Both near-term, moderate-risk efforts and long-term, high risk efforts were pursued. The information and data produced were evaluations of the effectiveness of various design and materials approaches and the identification of problem areas. These data were related to known performance, cost, reliability and environmental impact levels which specific products had to achieve in the market. This information enabled manufacturers to reduce the risk associated with new product introduction and to closely identify the hardware configuration needed for a final product.

BUILDING ENERGY PERFORMANCE STANDARDS

Question. Your 1981 rescission request asks that funds for building energy performance standards (BEPS) be deleted. No funds are requested in fiscal year 1982. What are requirements of the law for building energy performance stantards?

Answer. The law requires DOE to do the following:

Issue interim standards in August, 1981;

Conduct a demonstration of the impacts of the standards of at least 12 months;

Submit a report to Congress within 180 days of the end of the demonstration reporting on the result; and

Issue final standards by April, 1983.

Question. Under your current budget assumptions, will you meet the requirement of the law?

Answer. The current budget assumptions include a rescission of approximately $3.1 million in fiscal year 1981 and no funding in fiscal year 1982. Under these assumptions, the requirements of the law cannot be met.

Question. In addition to publishing standards, the law requres that you do a demonstration of such standards in residential and commercial buildings. Please explain what such a demonstration entails and what kind of costs would be involved.

Answer. The law called for the BEPS demonstration to determine and report on the following:

Impact on residential builders (especially small volume);

Impact on cost of construction of residential and commercial buildings built to the standard;

Impact on design process and costs for commercial buildings;

Impact on low and middle income families ability to purchase houses built to the standard; and

Estimated total energy savings on fuel type of residential and commercial buildings built to the standard.

The initial plans for executing the demonstrations were briefly as follows:

1. Issue a Request for Proposals to identify and contract with a prime contractor,

2. Work with industry groups to identify specific residential and commerical projects to be part of the demonstration,

3. Select projects in a minimum of four climatic zones covering 16 commercial building types and 4 residential types, and

4. Conduct demonstration utilizing selected projects and report to Congress on results.

The estimated cost for conducting the demonstration would have been $4–$5 million.

Question. The original response of the building industry to your proposed standards was harsh. As a result of criticism of the proposed standards what actions had been taken by the Department prior to termination of the programs to make the standards more acceptable to the building sector?

Answer. Although there was significant criticism of the NOPR and its associated research, much of it was due to lack of information or misunderstanding of what was presented. In instances where the criticism was valid, on-going research was modified or additional research started. In other instances, DOE staff held meetings directly with the commenting parties or communicated with them through the National Institute of Building Sciences. NIBS has established, at DOE's request, a BEPS project committee and seven subcommittees to review and advise DOE on all aspects of the BEPS program. In response to valid criticism, DOE has initiated several additional research initiatives. Some examples are:

1. Residential Manual of Recommended Practice.—The purpose of this manual is to transfer the BEPS residential research and energy budgets into simple understandable and usable form for use by residential builders. Manuals are being produced for various climatic locations and incorporate various conventional and passive conservation options that can be combined in numerous ways to meet an energy budget. Current funding will produce four initial manuals for different climate zones.

2. Upgraded ASHRAE 90 Energy Standard.—DOE's research indicated that the BEPS energy budgets would produce energy conservation approximately 25 percent greater than ASHRAE's Standard 90. The ASHRAE Standard is the primary energy standard currently followed by building designers and is a component prescriptive rather than performance standard. In order to allow an alternate path for meeting the BEPS energy budgets, DOE has funded ASHRAE to identify modifications to their current standard that will upgrade it to produce energy conservation equivalent to the BEPS. DOE is supporting the ASHRAE effort by testing identified modifications for energy and cost-benefits effects.

3. Energy Budgets for Mobile Homes.—Original research did not produce energy budgets for mobile homes. DOE has initiated and will complete research to establish mobile home budgets.

Question. Under the law, when would interim standards be published and when would final standards be published?

Answer. Interim standards would be published in August, 1981, and final standards in April, 1983.

RESIDENTIAL/COMMERCIAL RETROFIT PROGRAM

Question. You are requesting rescission of $10.3 million in fiscal year 1981 for your residential/commerical retrofit program. What activities will be undertaken with the $6.2 million that will remain in the program?

Answer. Of the $6.2 million, $4 million will be spent on residential demonstrations, including the pilot test to prepare for the demonstration of the Residential Energy Efficiency Program (REEP) and a solicitation for other "one stop" demonstration sites testing different methods of delivering energy conservation services to the residential sector. Another $0.5 million will be spent on background research on the delivery of energy services to the multifamily, and commercial sectors. In addition, $1.7 million is being spent on the development of the Commercial and Apartment Conservation Service in order to meet DOE's responsibilities under the Energy Security Act.

Question. You are currently funding the Commercial and Apartment Conservation Service under this activity. If funds were provided to continue the Residential Conservation Service, wouldn't the commercial and apartment activity likely be considered in the same category and joined with that program, rather than with the commercial retrofit program?

Answer. The Residential/Commercial Retrofit Program line item was initially added to the budget to fund the new programs established by the Energy Security Act including the Residential Energy Efficiency Program, the Commercial and Apartment Conservation Service (CACS), and auditor training and certification grants as well as the innovative retrofit delivery demonstration. DOE agrees that combining the CACS activity and the Residential Conservation Service (RCS) activity in the budget would be appropriate, if these programs were continued.

Question. Please explain the difference between the so-called "Residential Energy Efficiency Program" (REEP) and other kinds of innovative delivery systems you would have demonstrated under the Residential/Commercial Retrofit Program?

Answer. REEP is a regulatory program set up in accordance with mandatory provisions of the Energy Security Act. Basically, the REEP concept is a door-to-door residential retrofit program performed by an independent energy conservation company under State or local government auspices at no cost to occupants. The energy conservation company, in turn, would receive payment from local utilities based on units of energy saved. It is a complex program, requiring several agreements, contracts, etc. among a number of parties. REEP is predicated on utilities purchasing "saved energy." DOE has no estimate, at this point, as to how widespread the application of REEP might be. However, a number of potential applicants have indicated interest in the concept.

The other demonstrations are nonregulatory and are designed to respond to the specific barriers present in each sector. The single family residential demonstration will accent "one stop" delivery by a variety of organizations, where the customer needs to contact only one organization for all conservation-related services. Further, an experimental design, meant to isolate factors that enhance rates of retrofit, is included in each demonstration. The multifamily residential demonstrations would have accented financing and delivery methods that can overcome the incentives problems in the sector. The commercial demonstrations would deliver comprehensive retrofit services and take their payment as a function of energy savings achieved.

Question. If the program were continued at a smaller level through 1982, could the so-called "REEP" demonstration be combined with other systems to demonstrate systems for both residential and multifamily and commercial structures?

Answer. The Energy Security Act (ESA) establishes the Residential Energy Efficiency Program (REEP) as a program only for residential buildings, including multifamily buildings, and therefore would not be a program applicable to commercial structures. However, the concept contained in the REEP program could be applied to residential and commercial structures and, indeed, to other uses, such as industrial buildings and processes. However, this would require a legislative change and the REEP concept is complex and remains to be tested.

Question. In your opinion what is the order of priority of these three types of structures, residential, multifamily and commercial, in the Residential/Commerical Retrofit Program?

Answer. The single family residential sector is still the largest end user of energy in buildings and therefore should receive top priority. The multifamily sector is the next largest, and offers special institutional and incentive barriers to retrofit, making it second in priority. The commercial sector offers the most promise for private market response, making it third in priority.

Residential Conservation Service Program

Question. What is the status of the Residential Conservation Service? How many States have submitted plans to implement the service?

Answer. Of the 52 States, including Puerto Rico and the District of Columbia, eligible to participate in the Residential Conservation Service, 48 submitted plans. Nebraska has no regulated utilities and, therefore, didn't submit a plan. The three States that decided not to participate in the program are North Dakota, Utah and Virginia.

Question. If the service is done away with as the current budget and the 1981 rescission project, how many States do you believe will continue the program?

Answer. Only the five States with similar legislated reuirements will definitely continue the program. Those States are Florida, Massachusetts, Minnesota, New York, and Oregon. DOE expects that some other States are likely to continue the program, but has no way of estimating how many.

Question. Why is this the case?

Answer. All but five States—Florida, Massachusetts, Minnesota, New York and Oregon—lack statutory authority to administer and enforce utility compliance with the Residential Conservation Service in the absence of federal requirements.

In these States, the future of the program would depend upon further action by the States legislatures or public utility commissions.

Question. If the program were to continue, what do you think are the most essential Federal elements that should remain in place?

Answer. As you know, the Administration has proposed no funding for the Residential Conservation Service program in fiscal year 1982 and has proposed appropriation language to forbid expenditure of funds for the program in fiscal year 1982 and has proposed appropriation language to forbid expenditure of funds for the program in fiscal 1982. DOE also is considering proposing specific legislation to repeal the existing requirements that pose a regulatory burden to States and utilities.

If any elements of the program were to be retained, it should be those posing the least regulatory burden on States and covered utilities, such as the requirement that utilities offer customers an energy audit service.

Question. In light of the fact that energy audits have become rather commonplace, do you believe that the training of auditors on a State level with grants from the Federal government is a high priority item in comparison to other Residential Conservation Service activities?

Answer. Given reduced funding levels, the importance of other program activities exceeds that of grants for auditor training and certification.

Pilot Projects and Case Studies

Question. Your revised justification on page 23 states that "the pilot projects and case studies sub-element goals are to field test concepts developed in other areas of the building energy sciences program in real buildings under actual condition; to analyze the relationship between energy efficiency and investments; and to develop cost effective design options that increase energy efficiency.—Theoretical analysis cannot predict actual performance without field tests to validate the algorithms. Many times, on site refinement solve key problems that pave the way for transfers of advances to the building industry." These two statements would seem to argue that field testing of actual equipment on-site is an extremely valuable effort in the building area.

Is this not also true in the industrial area?

If such is the case, wouldn't that argue that selected demonstrations, not only in buildings but in the industrial and transportation area, and for products as well as design criteria, would be an extremely valuable tool and worthy of consideration for support by the government?

Answer. The value of pilot projects and case studies is not the same for different end use sectors. In the buildings sector, there is a complex interaction among builders, architects, engineers, financial institutions and local code officials. As a

result of this complex interaction, the benefits from a more efficient design do not acrue to single decision-makers. In fact, sometimes the financial incentives discourage energy efficiency. For example, the fixed-fee contracts frequently used by architects discourage the more careful, time-consuming designs that produce more energy-efficient building. It is therefore necessary for pilot projects and case studies to be performed in the buildings sector to verify the results of generic, long-term, but potentially high-risk, research programs. These pilot projects and case studies will provide information that would not otherwise be available on the cost-effectiveness of alternative building design and operation practices. This information will encourage the private sector to make a more robust response to the price signals received as a result of the Administration's proposed energy pricing policies.

RESIDENTIAL CONSERVATION SERVICE PROGRAM: REGULATORY REQUIREMENTS

Question. Your justification for the Residential Conservation Service in your revised justification states that the "program would have imposed massive regulatory burdens that would be a nightmare to administer and enforce." Please explain what were the regulatory requirements of the program.

Answer. Under Part 1 of Title II of the National Energy Conservation Policy Act, utilities have to comply with an approved State Plan; distribute program announcements to each eligible customer; offer a program audit; offer to arrange for the financing and/or installation of any requested program measure; provide for customer billing and repayment of loans associated with the purchase and installation of program measures; record and retain customer audit information for 5 years; and participate in complaint processing procedures. In addition, States are required to develop lists of qualified contractors, suppliers, and lenders. States are also required to qualify auditors.

In States that chose not to submit plans as well as in those States that have not adequately implemented a plan, covered utilities have to comply with the Federal RCS Plan. Requirements for these utilities would be the same as for those utilities under an approved State Plan with the additional requirement of qualifying auditors and inspectors.

Question. The justification further states that "where conservation is an economic alternative to new generating capacity, utilities already are developing their own conservation programs, for example, in Massachusetts, Oregon and California." Is the Residential Conservation Service set up to respond to the economic needs of the utility or to provide a mechanism for the consuming public to reduce their energy costs?

Answer. The Residential Conservation Service was established to provide assistance to consumers in reducing growth in their demand for energy and to conserve nonrenewable energy resources. However, the program requirements and costs to utilities may outweigh its benefit to those utilities. Only where such a program makes economic sense from the utility's perspective can its costs be justified.

Question. Without the Residential Conservation Service, how many States, or what percentage of the utilities, would develop their own similar conservation programs?

Answer. In the absence of Residential Conservation Service regulations, utility onsite audit programs would be carried out mainly in the five States with statutory requirements for such programs. Utilities in the five States—Florida, Massachusetts, Minnesota, New York and Oregon—comprise approximately 10 percent of the total number of utilities covered by the Residential Conservation Service regulations. In addition, another 10 percent of the utilities in other States can be expected to conduct similar programs if public utility commissions allow recovery of program costs. However, many public utility commissions have been unwilling to grant rate increases to allow utility cost recovery of conservation services without State and/or Federal legislation. Despite these problems, a limited number of utilities still will find conservation programs to be in their best interest as an alternative to investment in new generating capacity and will continue conservation activities in the absence of State or Federal legislation.

COMMUNITY PLANNING AND MANAGEMENT

Question. You are requesting rescission of approximately $5 million in the Community Systems Program in fiscal year 1981 and elimination of the Program in 1982. Was this Program intended to be a hardware program or one that assisted communities in analyzing and planning energy-saving opportunities?

Answer. The Program was a combination of hardware and planning. For example, covered by this Program were the Georgetown University fluidized bed cogeneration system, the Scranton water-source heat pump RD&D and the Energy Recycling

Company's thermal battery efforts, as well as programs associated with developing the methods that could be utilized by State and local governments to improve the overall productivity of energy use. Such increased productivity could lead to increased job creation and/or retention in cities; that is, energy productivity gains made through the efforts of local government to take on community-wide analysis is complementary to the discussed Enterprise-Zone concept of bringing jobs to people as a strategy for revitalization of the investment which exists in cities.

Question. Are there indications that communities are taking an increasing interest in this area and will be able to compensate for the loss of Federal funds for planning and management?

Answer. Communities are interested in applying both the software and hardware efforts of this Program. It has been found that it is efficient (economically) to undertake the work at the Federal level instead of by the 18,000+ units of general-purpose local government. This applies to the development stage at which time the units of local government can individually adopt and modify and then apply what is applicable to their situation. The Program was in the development/demonstration phase.

Question. Your justifications on Page 30 state that "Industry already has sufficient incentive without direct subsidies to commercialize promising near-term technologies." Is this statement relevant to the community planning activity that takes place in this area? Are these not municipal concerns and municipal funding sources rather than industrial?

Answer. The Page 30 statement applies only to certain hardware efforts and not to community planning activities which are traditionally performed by local government and are a concern of municipal funding. Energy, like all other municipal concerns, must be dealt with out of resources available to the municipality, such as HUD's block grant program.

Appliance Standards

Question. What is the current status of your appliance standards program for which you are requesting a rescission of $2.2 million in fiscal year 1981 and elimination of program in fiscal year 1982?

Answer. The statutory date for promulgating a standard for the first nine consumer products was January 2, 1981. On February 17, 1981, DOE issued a Notice of Intent stating that appliance efficiency standards would not be issued until such time as the data upon which standards would be set are reviewed for their sufficiency. This review is scheduled in part to include an internal DOE review conducted by DOE personnel not related to the program office. The internal review will be complete in April 1981, and further analysis will be conducted as deemed appropriate including a possible reopening of the public comment period to solicit a review by all interested parties, of the latest analysis.

Question. At what point in the process of issuing standards are you?

Answer. The data upon which the standard would be set for the first nine products is being reviewed for its sufficiency. The analysis for the proposed rule for the remaining four products has been halted.

Question. If the program were to continue, when would interim standards be proposed and when would final standards be proposed?

Answer. Interim 1981 and final 1986 standards for the first nine products were proposed on June 30, 1980. When DOE makes a final determination of either standards or no standards, the effective date of the interim standards would be "not less than 6 months" following the issuance of the final rule, and the effective date of the final standards would be January 1, 1986.

Question. Are these time periods specified in the law?

Answer. Yes, the legislation clearly defines these dates.

Question. The Administration argues that standards are wholly unnecessary while industry is somewhat divided. It appears that those who are in the so-called "white goods" or consumer appliance market are opposed to standards, arguing that those products have already had large increases in energy efficiency and are affected by the FTC labeling program. Some makers of heavy duty appliances such as central air conditioning, furnaces, and water heaters would argue that such appliances need standards because they are not bought by consumers but by builders who more often than not look at first costs and not energy efficiency.

What is your assessment of the industry's position?

Answer. The appliance industry doesn't have a uniform position regarding the need for Federal energy efficiency standards because of the diversity of the products included, the manufacturers affected, and the activities of State and other Federal regulatory agencies. Generally manufacturers would elect not to be subjected to regulation except to reduce the regulatory burden of State standards, or to increase

an individual manufacturer's competitive position in the market. The manufacturers of the "white goods" generally oppose Federal standards because of the relatively low level of State regulatory activities in these product areas. Also, those State standards which have been imposed have proven to impose little burden on manufacturers. Many manufacturers of HVAC (heating, ventilation and air conditioning products) favor standards because existing State standards have proven to be difficult to comply with.

Question. It is also argued that if there are no national standards then states will enact different standards of their own. What would be the impact of states issuing various standards compared to a national model?

Answer. A number of States currently have efficiency standards in place. With the exception of HVAC products, State standards have had little impact on manufacturers' businesses since they have adjusted their product to meet the most stringent standard, and at the same time been able to reduce the cost of the product. The manufacturers of HVAC equipment, especially central air conditioners, have found that multiple State standards have imposed a significant burden on the manufacturers by increasing product cost, and in some cases manufacturers have elected to drop out of certain markets. If there were to be no Federal standards we would expect this situation would persist.

Legislation Related to Fiscal Year 1982 Budget Amendment

Question. The budget amendment for fiscal year 1982 includes two and a half pages of language to be used in the appropriations act to set aside provisions of existing law with regard to DOE programs, most of which are in the conservation area. Has the Administration forwarded proposed legislation to Congress that would do away with the requirements in the normal legislative fashion rather than through use of the appropriations process?

Answer. The Department has submitted fiscal year 1982 authorization legislation which is consistent with the appropriation request but does not seek repeal or modification of the organic statutes. There are no current plans to submit "clean up" legislation in the near future.

Question. Do you have any indications from authorizing committees that they would be willing or able to pass legislation in this session of Congress that would modify or delete the provisions you wish to set aside?

Answer. The Department is not in a position to comment on the likelihood of Congressional passage of such legislation. Proposals to reduce regulatory burdens should be well received.

Question. What is your estimate of the budgetary effect of not setting such provisions aside?

Answer. It is important to note that the Department has requested no fiscal year 1982 funds to support these programs. Since implementation of these programs is predicated on the availability of funds, the programs would, therefore, not be continued.

Question. How many of these programs would be required to go forward based on mandatory provisions of law?

Answer. All of the programs and activities listed in that budget amendment are mandated by law. They are subject, in any event, to the availability of funds. The President has requested that no funds be appropriated in fiscal year 1982 to carry them out. We are sure that the Congress will agree with the President that in order to reduce Federal spending it is necessary to:

(1) control spending for regulatory programs and activities that impose unnecessary or excessive burdens on States, local governments, private industry and the public;

(2) terminate spending for Federal programs and activities that can be performed more effectively, efficiently, or appropriately by States, local governments, or the private sector; and

(3) remove impediments in law that inhibit market forces. Inclusion of the limiting budget amendment language in relevant appropriation acts would be sufficient, as a later expression of Congressional will to preclude implementation of those programs and activities in fiscal year 1982.

Types of Firms Impacted by Reduced R&D Support

Question. Industrial witnesses testified at hearings earlier this year, that without an active government role in promoting industrial R. & D. in the energy conservation area, high technology products subsidized by foreign governments would take large shares of the domestic market. Most of these witnesses were smaller high

technology firms. Would the impact of decreased R. & D. support be more on such firms than on industry in general?

Answer. The DOE Industrial Program consists of over 150 active projects selected from industry and academia at large. The contractors include large firms like Alcoa, Westinghouse, AiResearch, U.S. Steel, Honeywell and others as well as smaller firms such as Mechanical Technology, Incorporated, Thermo Electron and others. The impact of decreased R. & D. support would be felt more by the smaller firms which would have less financial resources.

Energy Conservation Incentives

Question. What are the current incentives for both individuals and companies to invest in energy conservation activities?

Answer. The primary incentives for both individuals and businesses to invest in energy conservation activities are the individual and business energy conservation tax credits. The Residential (Individual) Conservation Tax Credit is $300 or 15 percent of the first $2,000 invested in energy conserving devices for the individual's principal residence. The items covered include insulation, storm windows and doors, more efficient furnace burners, automatic flue gas dampers, and clock thermostats. The period of eligibility is April 20, 1977, through December 31, 1985. The Business Energy Tax Credit is 10 percent in addition to the existing 10 percent investment tax credit. The conservation items include specific waste-heat recovery, recycling, and other equipment and devices. The period of eligibility for "conservation" items is April 20, 1977, through December 31, 1982. The period of eligibility for renewable resource business investments is April 20, 1977 through December 31, 1985.

Question. What additional incentives are being proposed by the Administration?

Answer. For the future, the Administration has embarked on an economic recovery program which includes:

Immediate decontrol of oil prices and accelerated deregulation of natural gas prices.

Tax cuts for businesses and individuals.

Accelerating depreciation of business assets.

Controlled growth of the money supply.

Substantial streamlining or elimination of Federal regulatory activities.

The above program creates a new economic and institutional environment. The increased cash flow will support higher levels of business investments. Stronger market inducements and tax incentives will enhance the confidence in the benefits of conservation investments.

Eventually, we will stimulate energy conservation by inducing it through the market mechanism. To this end, oil prices have been fully decontrolled and accelerated deregulation of natural gas is being considered. In addition, conservation tax credits are being retained to provide additional incentives to individuals and businesses for energy conserving investments. Future levels of expenditures in energy conserving investments by individuals and businesses should increase since higher energy prices will provide consumers a stronger incentive to make these investments.

Private Sector Investments

Question. A Business Week article on April 6th estimates that spending for energy efficiency last year was $8.7 billion, or twice the amount spent in 1979, that such investment can be expected to top $10 billion this year, and soar to $30 billion by 1985. Do your projections also include such dollar amounts?

Answer. The Office of Industrial Programs estimates that U.S. industry will invest from $4.2 billion in industrial energy-saving technologies in 1981 to $10.2 billion in 1985. These investments represent 3–5 percent of total investments by U.S. industry. The figures quoted by Business Week obviously include investments made by all sectors of the U.S. economy, i.e., residential, commercial, transportation, as well as industry.

Question. What kinds of products are involved in such figures? For example, how much of that amount is common insulation versus more energy efficient products in industry?

Answer. U.S. industry's investments in industrial energy-saving technologies can be divided into four major market segments which do not include new energy conserving technology R&D:

Existing state-of-art energy-transforming technologies, e.g., new boilers; improved industrial heating equipment; increased use of congeneration; and improved electric motors. This market is expected to grow from $920 million to $3 billion, or 29 percent of the market, by 1985.

Existing state-of-art energy-recovery technologies, e.g., heat exchangers, heat wheels, recuperators. This market will grow from $300 million to $700 million or 7 percent of the market by 1985.

Existing state-of-art energy-control technologies, e.g., automatic process controls, motor controls, combustion controls. Sales of control technologies will increase from $800 million to $2.45 billion, or 24 percent of the market, by 1985.

Existing state-of-art process retrofits (modification of existing processes) expenditures for retrofits will increase from $2.2 billion to $4.0 billion, or 40 percent of the market, by 1985.

Investments for industrial buildings energy conservation are not included in the above numbers. Insulation of buildings and piping are not included in the numbers.

Question. The same article estimates that industry is spending an average of 55 percent of its R&D dollars on improving energy efficiency.

What is your estimate of industry's expenditures in this area?

Answer. Recent surveys conducted by DOE have indicated that industrial spending on improved energy efficiency is about 5 percent of the total R&D expenditure for all of industry. Contact with Business Week (Allan Hall, Research Editor, (212) 997–3097) revealed that the 55 percent was a typographical error and should have read 5.5 percent thus supporting the results of our surveys. NSF reports that the total R&D in the energy intensive industrial sectors is just over one billion dollars (about 5 percent of total industry R&D funding). Thus, the R&D expenditures by energy intensive industry is approximately $50 million annually.

Question. How do your total dollar estimates compare to the dollars that the Department of Energy has generally contributed to energy efficient R&D in industry?

Answer. The DOE program in Industrial Conservation has been funded at a level of $60 million in recent years. The program, therefore, has the potential effect of doubling the national industrial energy efficiency R&D effort in the most energy intensive industries, which invested approximately $50 million in fiscal year 1979.

Labeling Program

Question. With regard to standards, what is the Department of Energy's role in relation to the FTC labeling program?

Answer. EPCA as amended by NECPA requires the Department of Energy to develop test procedures for 13 types of consumer products, and a consumer education program in support of the FTC labeling program. The energy efficiency and cost of operation representations made under the FTC labeling program are based on the test procedures developed by DOE. Since prescribing final test procedures for all 13 product types in 1978, DOE has been revising the test procedures as required.

Question. How much money is included in the current budget to update all test procedures, develop new procedures as required, and process test procedure waivers submitted by manufacturers?

Answer. The proposed fiscal year 1982 budget for the consumer products program is $600,000 to update test procedures and respond to applications for test procedure waivers.

Question. How much is this compared to previous budget requests?

Answer. DOE spent approximately $1.3 million in fiscal year 1980 for developing test procedures. DOE intends to spend $1.7 million in fiscal year 1981 if the rescission request is approved; otherwise, $2.4 million is scheduled to be spent for this purpose.

Question. Is the testing done at certified laboratories?

Answer. Testing for the FTC labeling program is done by manufacturers and is performed at a test laboratory of the manufacturer's choice, typically the manufacturer's facility. Neither DOE nor the FTC has done any testing under the labeling program. However, the National Bureau of Standards has tested products in support of DOE's efforts to develop test procedures for consumer products.

Federal Energy Management Program

Question. Your rescission justification states that "as a result of energy price decontrol and anticipated commensurate price increase in all fuels, Federal agencies now have adequate reason to save energy and dollars without strong DOE guidance or assistance."

Answer. I would like to clarify that statement. The proposed rescission for the Federal Energy Management Program for fiscal year 1981 was intended to lessen the degree of Department of Energy guidance and assistance to Federal agencies to that which is required by law or Executive Order. The Reagan Administration's energy policy is based on the decontrol of oil and gas prices. After decontrol, prices will rise to true market levels and the higher prices will provide adequate incentive

for the Nation's citizens and businesses to reduce their energy consumption. However, it was recognized that the same financial incentives that exist in the private sector are not necessarily present in the Federal Government. Therefore, an alternative approach is necessary to ensure that the Federal Government keeps pace with the private sector in increasing its energy efficiency and reducing its energy consumption. In fact, as stated in NECPA, the Federal Government is charged with setting an example for the rest of the Nation to follow. The alternative approach chosen in fiscal year 1981 for the Federal Government was to continue the Federal Energy Management Program mechanism for planning, coordination, evaluation, and reporting.

Question. If that is the case, are conservation projects in the Department of Energy being increased or decreased in the revised budget?

Answer. Conservation projects in DOE are being increased from $22.8 million in fiscal year 1981 to $46.9 million in fiscal year 1982, a 51 percent increase.

Question. Do you have information on whether other Federal agencies have increased or decreased the value of conservation projects in the revised 1982 and 1981 requests?

Answer. Overall the conservation projects in Federal agencies accounting for over 99 percent of Federal energy consumption are being increased by 7 percent in fiscal year 1982 over fiscal year 1981 levels; $465.7 million to $435.3 million respectively.

Question. Could you provide the Committee for the record the dollar amount for Federal conservation projects for both fiscal year 1981 and 1982 for DOE and other agencies in both the original Carter request and the revised Reagan request?

Answer. I will provide this information for the record.

FEDERAL ENERGY MANAGEMENT PROGRAM, LARGE ENERGY USING AGENCIES, FEDERAL ENERGY INVESTMENT, FISCAL YEARS 1980–82

[In millions of dollars]

Agency	Percentage of total energy use (1980)	Fiscal year 1980	Fiscal year 1981		Fiscal year 1982	
			Carter	Reagan	Carter	Reagan
DOD	81.4	$115.5	$229.9	$229.9	$225.0	$225.0
DOE	4.9	33.4	32.8	22.8	84.9	46.9
USPS	2.9	31.2	35.1	35.1	48.0	48.0
GSA	2.5	31.7	35.0	35.0	33.1	33.1
VA	2.2	12.5	13.0	13.0	14.0	14.0
DOT	1.6	6.0	6.0	6.0	8.0	8.0
NASA	1.2	11.5	8.4	8.4	6.9	5.2
DOI	.7	0	12.7	12.7	24.2	15.2
USDA	.6	.5	11.3	11.3	7.6	6.1
HHS	.5	0	0	0	3.9	.4
DOJ	.4	0	3.0	3.0	2.1	2.1
DOC	.3	2.1	7.2	6.7	6.3	5.5
Treasury	.2	.1	.2	.2	.4	.4
DOL	.1	.2	12.2	12.2	4.8	4.8
TVA	.1	23.0	39.0	39.0	51.0	51.0
Total	99.5	267.7	445.8	435.3	520.2	465.7

Source: DOE Office of Federal Energy Management Programs from information provided by Federal agencies.

URBAN WASTE PROGRAM

Question. Your request in urban waste calls for a reduction of $5.1 million in 1981 and a reduced program of approximately $7 million in 1982. The program is expected to terminate in 1982. What indication is there that industry will pick up R&D in this area?

Answer. Industry uses 10 quads of steam in the United States each year. Commercial systems are available to convert municipal waste to steam. If all the municipal waste in the United States were converted to steam, it would produce about two quads. Therefore, there are both viable technologies and markets for energy from municipal waste. The decisions to implement waste to energy projects should be based on market forces, and similarly, the decision to improve a supplier's market share by research should be based upon competition without direct federal interference. The urban waste research and development program is designed to expand the available markets into the gas, liquids and chemical areas. The private sector could, of course, continue the development of these technologies, but in a time of budget

austerity the Department does not believe federal support for their further development is affordable.

Question. What kinds of improvements are necessary in urban waste processing in order to make this a viable industry?

Answer. With some 27 large plants of all commercial technologies built in the United States and eleven others in construction, it seems to me that this is already a viable industry. While many of these plants have had problems, they are typical of any emerging industry. As soon as municipal waste is recognized as a business and not as a service by local industry, the Administration expects this area to advance rapidly.

Capital Investment by Private Sector

Question. Your revised justifications for industrial conservation indicate that the industrial sector has saved considerable amounts of energy per unit of output since 1972. Do you have any idea how much of the improvements is because of capital investments in new types of energy technology versus how much is based on improvement in maintenance techniques and minor adjustments to processes and technology?

Answer. Only a very small fraction of the industrial efficiency improvements since 1972 is attributable to new types of technology developed since 1972. However, it is estimated that the construction of new plants replacing old plants and capacity expansion has accounted for slightly over half of the overall efficiency improvement. Housekeeping measure and the retrofitting of existing plants have accounted for the remaining improvement. While the amount of capital invested by industry in improved energy efficiency equipment has been enormous, there have been ample opportunities for short payback investments utilizing proven, already available technologies. The development and adoption of new technologies in response to fuel scarcity is necessarily a longer timeframe phenomenon, and, though it will eventually occur, will await the "emptying" of the inventory of existing, proven-technology energy efficiency investment opportunities. Thus, statements referring to mass industrial conversions to "new" technology, such as the dry cement making process, generally are referring to the adoption by industry of comparatively more efficient technology which has in fact been available for some years.

Question. The justification makes a statement that between 1972 and 1976 improvements in composite industrial energy efficiency averaged 9.7 percent. What was the comparable improvement between 1976 and 1981?

Answer. Through the end of 1979 the composite industrial efficiency improvement, as compared to 1972, was 15.4 percent, indicating an improvement between 1976 and 1979 of 5.7 percent. The average annual improvement between 1972 and 1976 was then 2.43 percent, as compared to the average annual improvement between 1976 and 1979 of 1.90 percent. Energy use data for 1980 from individual firms and industry associations will not be received until June 1981. Similarly, data for 1981 will not be received until mid-1982.

Generic Research

Question. An article in the February 27th Washington Star states that certain types of generic research will not be undertaken because of the so-called free-rider problem. No one firm stands to benefit enough to undertake the expenditure, hence something society could well find valuable may be left undone. How much of the R&D conducted in the industrial area fits into the so-called generic type of research rather than process or industry specific research? What indications do you have that people will undertake such technology developments in the absence of the government's support?

Answer. Approximately 54 percent of the researh and development projects currently sponsored by the Office are considered generic in nature rather than process or industry specific. DOE has not conducted a special analysis to determine if the private sector will undertake such technology developments. However, with rising prices and the President's economic plan, they will have incentives to do so.

Private Sector R. & D. Funding

Question. What indications do you have from industry that they will indeed increase their R&D spending to compensate for the loss of government research funds?

Answer. Among the reasons why industrial expenditures, as a percentage of sales, have fallen is the lack of capital available after non-discretionary expenditures (e.g., environmental controls), product improvements and short term market share development. The Administration's total economic program is projected to result in more capital being made available, at reasonable rates, for private sector investment. It is

appropriate to conclude, then, that another reversal will occur in private industry's R&D expenditures. It is also reasonable to anticipate that the ability to undertake R&D in new, high risk developments will continue to vary substantially among industries. The aggregate R&D expenditures will increase with a lowered Federal budget; however, some basic energy-intensive industries will be unable to increase R&D, in part because increased revenues will be more than offset by the increased operating expenses due to higher energy prices.

Question. If they do increase funding, will it be in long-term, high risk areas or in short term R&D?

Answer. The answer to this question varies substantially by industry and those analyzing a given industry. Corporations having strong long-term sales and profit projections—and which intend to make major investments in new or replacement plant capacity—can by expected to spend relatively more of their R&D funds on longer-term process changes or product developments. In any event, though, the R&D funds devoted specifically to projects having energy efficiency as their sole or primary objective are likely to remain quite minimal. In an era of high energy prices and reduced availability, basic process and technology changes will undoubtedly lead to energy efficiency improvements. However, energy will continue to account for less than 15 percent of the total cost for most products. Obviously, any corporation wishing to improve its overall productivity is likely to concentrate first on those resources accounting for the largest part of its costs.

Project Selection

Question. Please explain to the Committee what criteria you use to determine the types of projects that will be supported in the Industrial Conservation Program.

Answer. Candidate projects for the industrial energy conservation program are subjected to rigorous screening prior to selection. Proposals are first reviewed for technical soundness and appropriateness of Federal, DOE or Industrial Program involvement. Next, the candidates are analyzed to ensure that, given successful development, the technologies would have sufficient return on investment to be acceptable to industry; that the projects are truly cost-effective from energy savings; and that industry, alone, would be unlikely to pursue the projects. Lastly, prior to selection, the candidates are reviewed by a panel of senior management officials who review the various analytical results and assessments and select the highest priortiy proposals—non-redundant to private sector efforts—high risk, high potential—cost effective-energy saving.

Question. In choosing of projects, is it essential that industry have patent waivers so they will invest their own money in the technology?

Answer. Not in all cases. It really depends on the individual circumstances. It is highly desirable to have the DOE option of granting waivers since this results in receiving many more truly innovative concepts than would be disclosed otherwise and in many instances the key to acquiring significant cost sharing which gives the private sector a vested financial interest in the project.

Question. What kind of energy savings had you projected for this program in the past?

Answer. Prior to the decision to terminate the program in fiscal year 1982 the annual energy savings had been estimated by the Office of Industrial Programs as 1.0 Quad by 1985 and 5.5 Quads by the year 2000.

Question. Would you expect this energy savings to materialize without the program?

Answer. Changing economic situation would result in greater savings. How much savings will not be realized is not known.

Question. What kind of accomplishments have you had to date which would tend to support your projections of energy savings?

Answer. The estimated energy savings projections are supported by the tangible successes from eight of the earlier starts of well over one hundred total projects. The eight activities are now contributing ten trillion Btu's annually.

Vehicle Propulsion Technology Development

Question. Your fiscal year 1981 rescission package and your fiscal year 1982 budget assume the termination of both the turbine engine program and the Stirling engine program. What is the current status of each?

Answer. The Garrett/Ford gas turbine preliminary design shows the advanced powertrain system has the potential for meeting program objectives. The MOD I build will be completed in August. The Detroit Diesel Allison/Pontiac gas turbine design has undergone a major revision, and a complete design review is scheduled for June. The compressor rig tests recently conducted exceeded the performance

targets for the MOD 2 design. MOD I build I is now scheduled for completion in the summer of 1982. The Stirling engine MOD I build I is under test. The engine has been run to full temperature, and is meeting design predictions. The MOD I build II engine will be complete during the summer of 1981.

Question. What are the prospects of industry undertaking an aggressive program in either of these technologies given the drastic reduction in government support?

Answer. High risk technological problems will still exist in both the gas turbine and Stirling areas. The future participation of industry in either of these technologies without Federal support will be a direct function of economic health. The application of monetary and human resources in pursuit of near-term, market-competitive options in the present economic environment will decrease industry's high-risk research and development activites. Both General Motors and Ford have applied considerable internal funding to gas turbine development in the past, but under economic pressures have severely downgraded support of the technology. Under present economic conditions, it is doubtful an aggressive program will be continued in Stirling technology by United States industry. Sweden will probably continue working on solar-thermal Stirling applications, and a Japanese Nissan/Government/University program has reportedly developed a laboratory engineering 50KW Stirling systm.

Question. What other alternatives other than Stirling and turbine technology are being looked at by industry?

Answer. In the light duty area, industry is looking at fast burn techniques, compression ratio increase, turbocharging, improved electronic fuel and engine management, and stratified charge strategies for spark ignition engines. Both direct and indirect injection diesel engines are being considered, and future activities will be dependent on emission regulations. In the heavy duty area, diesel engines are the major concentration, and the application of ceramic components for possible uncooled, unlubricated operation is under consideration.

Question. What are foreign competitors working on?

Answer. To our knowledge, foreign competitors are working in the same technological areas as United State's industry, and have demonstrated leadership in some specific strategies. Light duty diesel technology has been under development by foreign competition for some time. The use of ceramic materials for weight reduction and improved efficiency is being investigated by many foreign industries.

Question. Are foreign industries receiving aggressive government support in this area? If so, please provide some examples of where this is true.

Answer. Foreign industries are receiving aggressive government support in this area. In addition, while United States manufacturers face major capital expenditures at a time when resources are already constrained, foreign competitors have accumulated greater resources of retained earnings and will be able to finance new product development and sustain great market competition. The French Government has initiated a research and development program to design fuel efficient automobiles, and will provide 75 percent of industry costs for creating prototypes showing fuel economy improvements of at least 25 percent over 1980 model cars. In Germany, the Government is cost-sharing with VW, Audi and Daimler-Benz a program to develop prototype Vehicles having a 30 percent improvement in energy consumption combined with environmental compatibility. Japan encourages research and development through tax provisions in addition to direct Government funding. If research and development costs exceed the largest previous expenditures, 20 percent of the excess may be taken as a tax credit. Firms which are members of research associations can take an immediate 100 percent depreciation deduction which extends to all fixed assests used in connection with research association activities.

Question. Of what value is high-risk, long-term component technology R. & D. if it is not tested on complete engines?

Answer. High-risk, long-term component technology R.& D. is necessary to overcome technological barriers. Engine type test stands will still be required. A complete engine program presents a focus for technology developments, and allows for acceleration of state-of-the-art advances. Complete engine programs provide for quicker results, but at a higher expenditure of funds.

Question. Will the reduction of the government program to a generic long-trem research activity delay the possible introduction of turbine and Stirling technology?

Answer. The reduction of the government program to a generic long-term research activity will result in delays to the possible introduction of turbine and Stirling technology.

Question. By how much time?

Answer. The delays will be governed by both economic conditions and the future availability of petroleum fuels. It is estimated the delays will be in the 5–10 year range.

Question. Your original turbine and Stirling programs were to have advanced prototypes available in the fiscal year 1984 to 1985 period. If such a program were to be continued, what would be the most likely technological competitors to those engines at that point?

Answer. The most likely technological competitors in the 1984 to 1985 period would be the advanced pre-chamber diesel engine and the fast burn spark ignition engine. It should be pointed out that both of these engines have limited fuel tolerance. The availability of fuels could greatly change the competitive situation.

Question. Since there is currently only one development team in the Stirling engine, would it be possible to have a viable turbine program with only one competitor?

Answer. The two turbine teams are involved with completely different technological approaches. Both approaches are showing considerable promise. It would be possible to have a viable turbine program with only one competitor, however, the risk of not meeting program goals would be increased and the technological options would be reduced.

Question. Could a logical decision be made to choose between the two current competitors in the turbine program if the Committee recommended that a turbine contract continue?

Answer. A logical decision to choose between the two current turbine program competitors could not be made until both teams have completed component and rig tests in the August-September time frame. The Garrett/Ford team has progressed trough MOD I design and some component rig tests with build I scheduled for test in the Fall. The Detroit Diesel Allison/Ford team, because of their MOD I configuration redesign, is approximately 6 months behind in their MOD I test program. The basis for selection would be the result of a technical evaluation of available rig test data, progress, and projected future potential made by a formally convened Source Evaluation Board.

Electric and Hybrid Vehicles Division

Question. In view of the drastically reduced budget in other areas, why does your revised budget (page 53) continue to add vehicles to the electric vehicle demonstration in fiscal year 1981?

Answer. The addition of only 150 vehicles to the demonstration was the compromise level of funding agreed to by the Conference Committee on the fiscal year 1981 Appropriations of one-half of the original budget request. The 58 percent cost sharing of site operators to the government's 42 percent continues to demonstrate the high interest by the private sector in the testing and evaluation of electric vehicle technology. A limited number of newly developed experimental controllers and batteries are included in the 150 demonstration vehicles. All of the vehicles are required to have a minimum of a 15 percent increase in range. The testing and evaluation in a road test environment is essential to the development of electric and hybrid vehicle technology.

Question. Will any of these proposed 150 vehicles have advanced batteries?

Answer. Experimental zinc-chlorine and nickel-iron batteries as well as advanced controllers will be included in a limited number of the 150 vehicles.

Question. What will the cost be to add these 150 vehicles and 8 new sites to the demonstration program?

Answer. The cost of adding these 150 vehicles will be $5,280,000.

Question. Please provide for the record the dollars requested for each of the activities under electric and hybrid vehicle functions listed on pages 51 and 52 of your justification for fiscal years 1980, 1981, and 1982.

Answer. The funding requests for fiscal years 1980, 1981, and 1982 will be submitted for the record.

FUNDING REQUESTS—ELECTRIC AND HYBRID VEHICLE RESEARCH, DEVELOPMENT, TESTING AND EVALUATION

The budget requests for fiscal years 1980, 1981, and 1982 for the electric and hybrid vehicle program activities are given in the table below (dollars are given in millions):

	Fiscal year—		
	1980	1981	1982
Electric vehicle R. & D.	14.6	15.9	9.5
Hybrid vehicle R. & D.	5.7	8.4	4.7
Advanced vehicle R. & D.	2.7	2.9	3.0
Testing and evaluation	11.1	7.4	1.9

Question. How much of your R&D work is connected with batteries?

Answer. The battery R&D effort is by far the largest share of the R&D funding in fiscal year 1981 and was not considered in the candidates for rescission. One battery contractor decided not to continue its cost sharing contract with the Department for business reasons in early February 1981.

Question. How much is the funding in 1982 compared to previous years?

Answer. The funding request for fiscal year 1982 includes $5.1 million for battery R&D compared with $7.3 million in fiscal year 1981 and $8.55 million in fiscal year 1980. This does not include the additional funding for experimental batteries used for the testing and evaluation vehicles.

Question. How much funding is provided in the energy storage program in your other appropriation for battery R&D? How does that compare to 1981 figures?

Answer. The other appropriation request in the energy storage program for fiscal year 1982 for battery R&D is $13.2 million compared to $13.76 million in fiscal year 1981.

Question. How much of your near term R&D is for improved lead-acid batteries?

Answer. At the end of fiscal year 1981 the number of battery R&D contractors will be reduced in accordance with the scheduled Phase I milestone with only the most promising candidates based on R&D progress continuing into fiscal year 1982. The funding level for specific battery types such as lead-acid has not been determined until the results of the R&D program have been evaluated.

Question. Please explain why you continue to attempt to develop improved lead-acid batteries when tables show that results in fiscal year 1981 for the nickel-iron, nickel-zinc, zinc-chloride, and lithium-iron sulfide batteries already meet or exceed the 1986 goals for lead-acid batteries. What advantage is there to developing further a battery that does not meet the expected goals of other batteries?

Answer. The goals for electric vehicle battery development also include lower cost and improved reliability and cycle life. The lowest cost of all of the experimental batteries under development is the improved lead-acid being developed for electric vehicle application. Fiscal year 1981 results for nickle-iron, nickle-zinc and zinc-chloride are test data from single cell or module laboratory tests. Cycle life and reliability data of complete vehicle sets have not been obtained on all of the batteries. Although significant progress has been made, the critical complete vehicle tests particularly for cycle life could reject promising battery technology at the cell level of testing. The costs of these promising new batteries must be reduced through R&D. Improved lead acid batteries continue to be one of the strong competitors for lowest cost and reliability. All of the goals of electric vehicle battery development are not yet met by a single battery technology. For example, the potential higher energy density of nickel-zinc batteries is off-set by their lower cycle life. Developing the lead-acid battery that will not meet the expected performance goals of other batteries may have advantages in satisfying more desirable attributes of an electric vehicle including lower acceptable cost and reliability.

Question. What is the auto industry's interest in hybrid vehicles?

Answer. The auto industry continues to have an interest in hybrid vehicles due to the limited range of an electric vehicle. The promising progress of the Department's hybrid research vehicle propulsion system under test is of significant interest to industry. The alternative advanced hybrid propulsion systems effort is also being closely monitored by industry.

Transportation Systems Utilization Division

Question. In transportation systems utilization, you are requesting a rescission of $1.8 million in 1981 and a reduction of $5.7 million in 1982. What activities that were previously done will not be carried out in this area?

Answer. The fiscal year 1981 rescission of $1.8 million resulted in cancellation or reduction of a number of activities involving both research and development of transportation systems and dissemination of conservation information. The cooperative industry/government cost-shared operational demonstration of organic rankine waste energy recovery systems for inland marine vessels has been cancelled as has

the operational test program for commercial aircraft towing and the area navigation study. The support of the municipal government heavy-duty vehicle project has been reduced, thereby prohibiting full field testing. The driver feedback device project has also been reduced by eliminating the design and test of equipment aimed at the original equipment marketplace. Also cancelled are information dissemination programs involving the distribution of driver awareness materials and driver efficiency teach-ins at the State and regional level.

The reduction of $5.7 million in 1982 will essentially restrict program activity in transportation systems utilization to the publication and distribution of the Gas Mileage Guide. All research and development associated with rail, marine, air and pipeline transportation systems will be eliminated, including alternative fuels tests of rail and marine diesel engines, organic rankine bottoming cycle demonstrations, aircraft towing tests, investigations of intermodal freight service, and the marine operational energy conservation program. Also eliminated will be driver awareness and new car fuel economy programs, involving awareness training for instructors, feedback device commercialization, materials distribution, a driver simulator, analysis of purchase behavior and auto use trends, a fleet purchase program, publication of quarterly MPG and Market Share Reports and other related activity. DOE participation in the Voluntary Truck/Bus Program will cease with State program technical assistance, truck fleet driver training and dealer seminars being cancelled.

Question. You will now only publish one edition of the new car fuel economy guide. How many new models are normally included in the second edition that are not included in the first?

Answer. The second edition of the Guide usually includes approximately 100 additional new models, the majority of which are of foreign manufacture. Foreign manufacturers usually do not introduce their new model types until January, and, therefore, are too late to be included in the first edition of the Guide.

Question. Do you have any data that would show the effectiveness of driver training for the saving of energy? What kinds of activities have you undertaken in this area in the past?

Answer. The Driver Energy Conservation Awareness Training (DECAT) program recently conducted a follow-up examination of its early graduates to determine what impact the program has had or is likely to have in the future on energy conservation. The average of the 500 instructors graduated to date expect to teach 30 student instructors who in turn will also teach a large group of drivers. In total, it is expected that nearly 2,000,000 drivers will be reached by DECAT training. If the 12 percent fuel saving experienced to date in the program can be maintained by the trained drivers in their fleet and home auto use, savings of approximately 188,000,000 gallons of fuel per year can be attributed to the present program.

The Driver Awareness Program activities consist of Instructor Training—an intensive course developed for individuals who are organizationally responsible for groups such as government or commercial fleets or will become instructors for such groups; Seminars/Workshops—half-day presentations aimed at public and private energy managers, corporate decision makers and others in policy making or educational positions; Moderator Courses—training enabling an instructor or moderator to conduct a workshop for drivers; and Materials—films, handbooks and pamphlets designed to educate the general public.

Question. What activities has the private sector undertaken?

Answer. No program similar in scope or application is known to exist in the private sector. All programs that exist are based upon DOE/Federal gathered, confirmed or generated information. The weakness of relying upon those programs is, first, that the data are static; second, that they become more narrow in scope and application as they are passed on; and third, that information sources unconfirmed by unbiased (Federal) data are considered unreliable by the public.

Alternative Fuels Utilization

Question. In Alternative Fuels Utilization you are expecting to test synthetic fuels combinations. What testing has the Navy previously conducted on shale oil?

Answer. The Navy has conducted two separate testing programs on shale oil derived distillate fuels. The first program known as the 10,000 barrel experiment tested fuels from shale oil refined by the Gary-Western Company. The experiments were conducted in the 1973-75 time frame and involved boilers, gas turbines and diesel engines typical of those used in Navy operations. The second program known as the 100,000 barrel experiment tested fuels derived from shale oil refined by the Sohio Petroleum Company. Tests were conducted starting in 1978 by the Navy on boilers, diesel engines and gas turbines that are typically used in Navy operations. The Army has acquired some of the Navy fuels for laboratory tests and tests involving engines used in Army mobility vehicles. In addition, DOE has acquired

some of the Navy test fuel for testing in stationary, railroad and marine diesel engines. The Alternative Fuels Utilization Program has acquired some of the Navy fuel for cooperative testing programs between DOE and diesel engine manufacturers. These tests are still ongoing and all efforts are being coordinated between DOE, DOD, NASA and any other government agency involved.

Question. Please explain where you will get the fuel for your tests and where it will be processed into fuels.

Answer. The only method we have to obtain test fuels is to acquire shale oil and/or coal syncrudes from companies which are producing syncrudes in research and development programs under contract to DOE. The test fuels are then obtained by hiring a contractor to process the syncrudes into finished fuels using pilot-scale facilities. Each batch of fuels must be obtained through separate contracts and in accordance with the required product slate of fuels. This method of obtaining fuels is extremely costly and time consuming, but is the only way we have to obtain the necessary fuels for testing. We try to coordinate our requirements for test fuels with other government agencies such as the Army, Navy and Air Force.

Energy Management and Extension

Question. Your justifications (page 58) state that "Grants for State Energy Offices and public outreach programs will be eliminated. These programs have created new bureaucracies while doing little to promote conservation." Can you identify any savings or proported savings as a result of the State grant program?

Answer. The 1980 energy savings attributable to State Energy Conservation Programs (SECP) above those savings which would have occurred without the program are 32.7 million barrels of oil equivalent. The total life-time dollar value of these savings amounts to approximately $13 billion. This can be compared to the cumulative Federal cost of SECP in terms of dollars appropriated from fiscal years 1976-80 of $217 million, yielding a benefit to Federal cost ratio of 60. While this study does not include private sector costs, several factors would still suggest that this is a conservative estimate of cost-effectiveness. For example, the analysis accounts for only those measures for which data was available, only those energy conservation actions taken in 1980, and only approximately seventy percent of those savings reported by the States as miscellaneous measures were excluded.

The study attempted to distinguish between three categories of savings. These three categories are: 1) energy savings caused by SECP efforts; 2) energy savings brought about by a combination of SECP efforts and other factors (e.g., where a person is motivated to reduce energy consumption by higher prices, and an SECP program measure provides the vehicle, or service, by which reduced consumption is achieved); and 3) energy savings brought about exclusively by other factors (e.g., prices, federal regulations, etc.). The present study attempts to include only the energy savings which are directly caused by the SECP services. In cases where SECP has interacted with other factors, the estimation methods have attempted to identify only that portion of savings attributable to SECP. The Institutional Conservation Program (ICP) and Weatherization Assistance Program have been excluded from this review. The State Energy Offices assume a program management or monitoring role in the weatherization assistance program.

Based on those measures examined in the Energy Extension Service (EES) Pilot Program evaluation, clients surveyed in the twelve emphasis programs saved the equivalent of 6,400 barrels of oil per day beyond what would have been saved without the program. The cost of achieving these additional savings averaged $8.50 per barrel-of-oil equivalent compared to an imported oil cost of $30-$35 per barrel. It was also found that each Federal dollar expended in the EES program leveraged $16 of private investment of energy conservation.

These savings represent savings by EES clients above and beyond what was saved by comparable non-clients. By comparing client actions to non-client actions, EES was able to distinguish the effect of the program from other factors such as price, weather, or other sources of information.

Question. Approximately how many total people in the country are involved in the State Energy Offices in outreach activities funded under your program?

Answer. A preliminary estimate done by the DOE Regional Offices indicated that approximately 1,100 people are involved in 57 State and Territorial Energy Offices on SECP and EES activities. Three things should be noted about this estimate, however. First, this is a preliminary estimate. Some data is incomplete which may change the total number. Second, these levels represent only those individuals employed directly by the State Energy Office. Contractors are not included. Third, some State Energy Offices contract a large part of their work to private firms, universities, community groups and local governments which would likely result in

a doubling or tripling of the total number of those involved in energy outreach in the States.

Question. How long will existing funds carry the programs in the States?

Answer. Based on the date at which fiscal year 1981 grants were awarded or planned for award, we estimate that by the end of March of 1982, SECP funds will have been completely spent by 25 percent of the States and all EES funds by 40 percent of the States. By the end of June 1982 all SECP and EES funds will have been spent by approximately 80 percent of the States. By the end of September 1982 it is estimated that 86 percent of the States will have spent all SECP funds and 94 percent will have spent all EES funds. By the end of December 1982 all funds for both programs will have been spent by all of the States.

Question. Would you expect that if the Federal Government offered the funds on a cost-shared basis, the States would respond by increasing the contributions they make or do you believe they would drop out of the program?

Answer. The matter of whether a given State would drop out of the program if funds are offered on a cost-shared basis is essentially a question of the timing of a cost-sharing provision. For example, in 1980 the States were surveyed in order to assess their ability to provide a 20 percent match for Energy Extension Service funding in fiscal year 1981. It was found that only three States indicated an ability to provide such a cash match. The remainder were not able to provide a match for a variety of reasons, including the fact that most States had already completed their Fiscal Year 1981 budget process. The Congress subsequently required that States provide a 20 percent match for EES funds beginning in fiscal year 1982.

The extent to which States are able to participate in the program is dependent on when Congress acts to require a matching provision so that States are aware of a requirement, when such a provision will begin so that States can incorporate this into their budget considerations, the level of matching funds required so that States can determine whether or not sufficient funds are available and make their decisions accordingly, and the fact that the peculiarities in the budget processes of many States, such as biennial budgets or the need to call special sessions for those legislatures having already completed their sessions may prevent such States from making funds available for such programs.

Question. What kind of evaluations have you done in order to ascertain whether the grant programs actually contribute to saving energy?

Answer. Evaluation of program impact and cost-effectiveness has been an integral component of the Energy Extension Service (EES) since its inception. The evaluation reports, covering each year of the pilot program, have been completed, with the development of a comprehensive evaluation of the nationwide EES program in progress. Congress responded favorably to the evaluation methodology and the program results, and used this evaluation as the basis for agreeing to the expansion of EES into a nationwide program.

The primary purpose of the evaluation was to assess the impact of the program over each year of the program, and on a Year I plus Year II basis. A secondary purpose was to ascertain which programs work best and why, in order to guide States in designing programs for the nationwide EES effort.

The Year I survey was conducted between October and December 1978. The EES clients surveyed were selected randomly from State-held names of clients who received services between October 1, 1977 and September 30, 1978. The non-clients groups were consumers from the same target audiences and, in most cases, from the same geographic areas as the EES clients.

The Year II survey was conducted in November and December of 1979. As in the Year I survey, the EES clients were selected randomly from State-held names, in this case of clients who had been served between October 1, 1978 and September 30, 1979.

Approximately 1,123 clients and 1,319 non-clients were surveyed in Year I and 1,255 clients and 1,068 non-clients in Year II. A 20-minute telephone interview was used that followed a prescribed format. Clients and non-clients of both Year I and Year II surveys were queried systematically regarding attitudes about energy problems and energy conservation actions they had taken and planned to take. Further, survey data were collected about the character of the energy conservation investments taken and planned. Clients also provided their views on the degree to which the EES influenced their decisions to take energy saving actions and on the influence of EES on their attitudes and knowledge about energy conservation.

The 1980 energy savings attributable to SECP (i.e., that occurred above and beyond savings that would have occurred without the program) are 32.5 million barrels of oil equivalent. The total life-time dollar value of these savings was about $13 billion. This can be compared to the cumulative Federal cost of the SECP in terms of dollars appropriated from Fiscal Years 1976 through 1980 of $217 million,

yielding a benefit to *Federal* cost ratio of 60. Not included in the comparison, however, are the costs incurred by the private sector in implementing the conservation actions promoted by the SECP. Nor does the comparison include the value of energy saved in previous years.

Question. What do those evaluations show?

Answer. The evaluation of the two-year pilot phase of the Energy Extension Service shows that 90 percent of the clients found that the service provided information which was at least as useful as that from other sources. It was also found that each EES client took half again as many energy conservation actions as each non-client. In terms of energy savings the evaluation found that for those programs studied, clients saved the equivalent of 6,400 barrels of oil per day beyond what would have been saved without the program. The cost of achieving these additional savings averaged $8.50 per barrel-of-oil equivalent. The evaluations also indicates that for the programs which were analyzed, EES clients invested approximately $60 million more on conservation measures than did comparable non-clients. At a cost of $3.7 million for these measures, each Federal dollar spent leveraged $16 in private investment.

The evaluation of SECP energy savings in 1980 indicates an energy savings attributable to the program of approximately 192 trillion Btu's, the equivalent of almost 33 million barrels of oil. The life-time value of these savings is estimated at $13 billion. When compared to the total Federal investment (FY 1976 through FY 1980) of $217 million, the benefit to Federal cost ratio is 60.

Schools and Hospitals

Question. On page 76 of your rescission justifications for the schools and hospitals grant program you state that "many institutions have expressed concern that the rapid implementation had not allowed them time to fully meet program requirements, and further that "a rescission in the amount indicated ($99,950,000) is proposed in fiscal year 1981 to slow the pace of the program and allow time for these necessary activities to be accomplished." Do you have a backlog of projects for which funding has not been provided?

Answer. During the first two funding cycles of this program, approximately 2.5 applications were received from schools and hospitals for every grant for which there were funds available. At an average amount of $27,115 per grant (from Cycles 1 and 2) and with 8,294 technical assistance (TA) and energy conservation measures (ECM) grants having been awarded during the first two cycles, this leaves a "backlog" of approximately 20,700 school and hospital applications totaling an estimated $561,300,000 from from the first two cycles.

Completion of an energy audit is a prerequisite to applying for a TA grant. As of June 30, 1980, States have reported that in excess of 57,000 buildings have received energy audits. It is reasonable to assume that the majority of these anticipate applying for, and receiving, TA grants. At an average amount of $4,000 per TA grant, this leaves a schools and hospitals "backlog" of TA applications totaling an estimated $228,000,000. This figure does not consider those schools and hospitals which conducted energy audits on their own in preparation for participation in the program.

Also, during Cycles I and II, 4,456 TA grants covering 11,912 school and hospital buildings were awarded. These institutions are now ready to apply for ECM grants. At an average amount of $63,400 per ECM grant, there is an ECM "backlog" totaling an estimated $282,500,000. Therefore, the total "backlog" which can be identified from program experience to date is estimated to be over 82,000 application totaling on the order of $870 million.

Question. Would you expect to receive sufficient applications above that backlog if you went out on another round of grants?

Answer. It is anticipated that there would be sufficient applications above the backlog for another round of grants. Interest in the program has been increasing steadily since program implementation. In Cycle 2, although there were 32 percent fewer funds available, the number of applications increased by 10 percent and the rate of growth in the number of applications submitted is expected to increase for Cycle 3.

Question. What percentage of the universe of schools and hospitals have been covered by your program to date? How many more will be covered in the 1981 and 1982 program?

Answer. Results of the preliminary energy audit phase of the program indicate that there are approximately 310,000 school and hospital buildings eligible under this program. Through the first six months of providing audit services States report that 51,683 school and hospital buildings, or 16.7 percent, have received energy audits. Additionally, through fiscal year 1980 11,912, or 3.8 percent, have received

technical assistance and analyses and 5,982, or 1.9 percent have received energy conservation measures grants.

At the revised levels for fiscal year 1981 and fiscal year 1982, it is estimated that an additional 6,900, or 2.2 percent of eligible school and hospital buildings, would receive technical assistance or energy conservation measures grants in fiscal year 1981, and an additional 8,500, or 2.7 percent, in fiscal year 1982. The energy audit programs funded in fiscal year 1979 and fiscal year 1980 will complete their activities during the first quarter of 1982.

Question. How many in addition could be covered if the rescission of approximately $100 million was denied?

Answer. If the fiscal year 1981 rescission was denied, an additional 9,200 school and hospital buildings, or 2.9 percent, over and above that estimated for the revised level could be covered.

Question. The GAO report of March 23, 1981, numbered EMD-81-47, states that your schools and hospitals program can be more effective. Specifically, it states that energy audits are the most cost effective aspects of the program. What is your reaction to that comment?

Answer. DOE believes that energy audits (EA) have significant energy saving potential and that most institutions could benefit from an EA. For this reason, the programs were structured to require completion of an EA and implementation of its recommendations as a prerequisite to becoming eligible to apply for funds for technical assistance (TA) and energy conservation measures (ECM). However, the implementation of the low-cost and no-cost operating and maintenance procedural changes which form the basis of the EA's effectiveness is far from automatic. The program requirements have seen to it that the tools are provided to the institution and that the work is performed if there is a desire to apply for TA or ECM funding.

Question. Do you believe that more funds should be made available for energy audits on a yearly basis as a percentage of funds available? If so, what kind of level would you support?

Answer. At the present time, DOE has not concluded that additional Federal funds for EA's should, or should not be supported. Evaluation of the EA phase of the program is currently underway and an analysis of the evaluation results will assist DOE in determining whether or not additional funds should be supported and, if so, at what level. DOE intends to provide this information as part of the budget process.

On page 16, the GAO report states that a cost-benefit study was not conducted, although the report seems to imply otherwise. The comparison table used by the GAO merely ranked the potential savings in areas addressed by DOE programs. Thus it is not surprising that programs that address all residential buildings have the potential of saving more energy than a program that address only school and hospital buildings. Additionally, GAO bases much of its conclusions regarding program cost-effectiveness on its calculations of the cost per barrel of oil equivalent (BOE) saved. This calculation utilizes DOE's estimate of 39,000 BOE per year saved per $1 million expended. However, it does not appear to take into consideration the useful life of the ECM. A conservative estimate of the average useful life of an ECM is 10 years. The correct calculation is then $1 million divided by the product of 39,000 BOE per year and 10 years, which equals $2.56 per barrel of oil saved. Further, preliminary results indicate that DOE's initial estimate of 39,000 BOE is, in itself, conservative.

Questions. Do you believe the program can be effective with only energy audits or do you believe that the equipment modifications must also be available in order to have the program succeed?

Answer. There is growing evidence that program effectiveness is less than satisfactory in the absense of any potential for ECM funding. There is no question that for the federal and institutional dollar invested the audit low-cost operating and maintenance portion of the program could be every cost-effective. The real questions are: How efficiently energy audits can be provided; and how can such institutions be encouraged to implement the audit recommendations and to continue their energy conserving practices? Information to date seems to indicate that making the implementation of the energy audit recommendations a condition of eligibility to apply for TA/ECM funding has been successful in encouraging both participation in the audit program and implementation of audit recommendations. DOE feels the GAO report does not adequately take into account the linkages between the various elements which have been built into the program by the legislation.

Question. The GAO study also says that you have been studying alternatives to the 50 percent cost-sharing arrangement for phase II grants. What alternatives have you been looking at, have you completed the study and what are the results?

Answer. The study of alternatives has not yet commenced. In the study, DOE plans to investigate such other vehicles for providing financial assistance as direct loans, interest subsidies and loan guarantees, as well as other cost-sharing percentages for the grants program. The results of the study will be provided to the appropriate House and Senate Committees upon completion of the study.

WEATHERIZATION ASSISTANCE FOR LOW-INCOME PERSONS

Question. The Administration is proposing the transfer of the weatherization program to a community development block grant program in HUD. It is also proposing that the urban development action grant (UDAG) program be transferred to that program. In addition, funds for the combined program are being reduced below 1981 levels. On that basis, what is the expectation that weatherization will not be reduced on a comparable basis?

Answer. The Administration expects that whether or not the low-income weatherization program is reduced on a comparable basis depends largely on the degree to which State and local governments choose to spend available block grant funds for weatherization.

Question. Your justification (page 58) states that about $1 billion annually of the HUD grant is targeted by recipient communities to some form of rehabilitation. How is that relevant to the weatherization program?

Answer. The statement that $1 billion annually of the HUD grant is targeted by recipient communities to some form of rehabilitation is relevant because the weatherization activities that are allowable under DOE weatherization program are also allowable under the rehabilitation part of the block grant program.

Question. How will that increase weatherization, even if rehabilitation continues at the previous rate, if no additional funds are provided directly for weatherization activity?

Answer. Even if rehabilitation continues at the previous rate, we do not know whether or not weatherization will be increased; however, under the Administration's proposal, an increase in weatherization is possible if state and local governments determine that weatherization of low-income homes is a priority need.

Question. Are there areas in the country that are not covered by HUD grants; what sectors of the country would not be covered; what percentage of low-income homes exist in those sectors; and how does the Administration intend to provide funds for those areas?

Answer. The Department of Energy (DOE) does not have information pertaining to the areas of the country that are not covered by HUD grants; the percentage of low-income homes in those areas; or how funds would be provided to those areas.

Question. Please explain the statement that greater levels of efficiency and productivity will be brought to the program by local governments running it? (page 58)

Answer. DOE believes that there is an opportunity for a greater level of efficiency and productivity when Federal regulations governing the operation of the program are reduced and when State and local elected and appointed officials are given the flexibility to tailor the programs to the specific needs of the local community.

Question. Aren't local organizations the primary means for carrying-out the current program?

Answer. States are the grantees for the weatherization program, and as such they are responsible for directing the overall administration of the program throughout the State. States subcontract with local organizations to weatherize the homes of eligible recipients.

Question. Has the national program allowed funds to be shifted between areas depending on the capability of the localities to weatherize homes?

Answer. The national program does allow funds to be shifted between States depending on the capability of those States to weatherize homes. The States may also shift funds between local operating agencies depending on their capability to weatherize homes.

Question. What is the current capacity to weatherize homes and what are the current production rates?

Answer. We do not know the current capacity to weatherize homes. We have contracted with Oak Ridge Associated Universities to perform a study which would answer this question, among others, but their final report has not been submitted yet. The current annual production level is 376,000 dwelling units based on annualizing the production in the last quarter of the calendar year 1980.

Question. At those rates, how much funding would be required on an annual basis?

Answer. An appropriation of $455 million would be required on an annual basis to maintain current production level in fiscal year 1982.

Question. What is the average cost to weatherize a home now?

Answer. The average cost to weatherize a home as of February 1981 is $894.

Question. Has it gone up over the past few years?

Answer. The average cost to weatherize a home during the period 1977–1979 was $399; in 1980 it was $793.

Question. What are the reasons for this increase?

Answer. The increase in cost is due partially to inflation, but primarily to the necessity for DOE to shoulder an increased share of the total Federal cost for weatherization. In previous years the Federal cost of the weatherization program was shared by DOE, the Community Services Administration (CSA) and the Department of Labor (DOL), through the CETA program. CSA has not receive an appropriation for weatherization since fiscal year 1978, and the CETA budget has been reduced significantly since that time.

Question. Is it likely to go down if it is in State or local control?

Answer. It is not possible to predict the impact on expenditure per dwelling that a shift to State or local control would have.

Appropriate Technology Small Grants Program

Question. How many projects have been funded in the Appropriate Technology activity since its inception?

Answer. The Appropriate Technology Program was established as a pilot program in Region IX in 1978. Since its inception, approximately 2,348 proposals have been funded. An insert is attached for the record showing the level of proposals received and funded for each fiscal year.

Question. Over what time period will these projects be completed?

Answer. This program will have active projects through fiscal year 1983 as a result of fiscal year 1981 awards, with close out actions extending into fiscal year 1984. Again, the attached insert for the record provides a graph of project activity.

Question. What kinds of activities would be necessary to provide useful information to the using sector on the results of these projects?

Answer. The attached insert for the record shows that meaningful levels of information from completed projects will not begin to become available until mid-fiscal year 1982. The DOE will respond to any incoming requests regarding the status and success of any projects funded under the grant program.

Question. How much would annual activity like this cost until the projects were essentially complete?

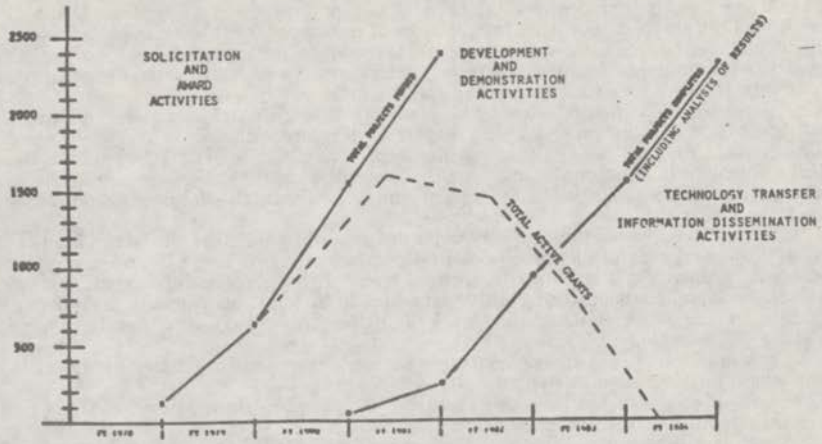
Answer. Since the Administration has proposed termination of the program in fiscal year 1982, there will be no funded projects activities on which to disseminate information.

[Dollars in millions]

Fiscal year	Funding	Proposals		Percent funded
		Received	Funded	
1978 (pilot program)	$1.3	1,120	108	9.6
1979	8.0	12,876	584	4.5
1980	12.0	19,647	856	4.4
1981 (projected)	12.0	[1] 20,000	[1] 850	
Total	33.3	[1] 53.643	[1] 2,398	

[1] Estimated.

About 30 percent of the funded projects have a one-year duration and the remaining 70 percent have a two-year duration. Accordingly, it was not until 1980 that the program began to receive meaningful results from the proposals funded in the pilot year (fiscal year 1978). With a further funding of $12 million for fiscal year 1981, the program expects to receive over 20,000 proposals and will fund an additional 850 projects for fiscal year 1981. Information from these as well as previously funded projects will continue to become available through fiscal year 1984, as indicated on the following graph:



ENERGY-RELATED INVENTIONS PROGRAM

Question. In the Inventions Program your revised justification (page 68) states that the fiscal year 1982 program objectives will be accomplished through the development of an agreement with the Small Business Administration. How was the program accomplished in the past?

Answer. The average inventor recommended by NBS typically requires a variety of resources in order to assure market acceptance of his invention. To date, the program has not had the broad capabilities to support the inventors as needed beyond the grant award phase. We have usually responded to the extent this was possible by the use of contractors to act as field agents on an AD HOC basis.

Question. What is the basis for changing the method of dealing with the program?

Answer. It is proposed, by the development of an interagency agreement with SBA, to more comprehensively and systematically address the program through the use of resources which SBA has already set up to address the same needs of the small businessman. For example, through SBA's SBIC's, it is possible that venture capital could be provided, or through SBA's SCORE, one-on-one technical and financial planning assistance could be obtained.

STATUS OF ENERGY CONVERSION AND UTILIZATION TECHNOLOGY

Question. What is the current status of your Energy Conversion and Utilization Technology Program?

Answer. The Energy Conversion and Utilization Technologies Program was initiated in fiscal year 1981 to conduct applied research and exploratory development on advanced concepts with the potential for substantial improvements in efficiency of energy conversion and utilization systems. The fiscal year 1981 program includes three primary activities:

1. *Engine combustion technology:* Development of advanced instrumentation and analysis methods for combustion processes, and application of these methods to perform analyses of innovative engine combustion systems. Systems being studied currently are lean-burning, stratified charge, and adiabatic diesel. Participants include three national laboratories, four universities, and four industrial research laboratories working cooperatively with five engine and fuel manufacturers: General Motors, Ford, Chrysler, Cummins, and Exxon. Results from this work are being used by the manufacturers in the development of improved engines.

2. *Stirling engine technology:* Evaluation of new component and system design concepts for Stirling engines applicable to both stationary and mobile power systems. Current efforts include adaptation of high-temperature ceramic materials to engine components and investigations of improved working fluids. Contractors include Mechanical Technology Incorporated, General Electric Company, and the Argonne National Laboratory. Future effort will be directed toward modeling and control of free-piston engines.

3. *Heat exchanger technology:* Development of improved components and computer-aided design techniques for heat exchangers used for recovery and use of waste

heat. Current work includes development of design guidelines to reduce effects of corrosion, fouling, and vibration, evaluation of enhanced heat exchanger surfaces, and development of computer-aided design techniques for complex heat exchanger networks. Participants include Garrett Corporation, General Atomic Corporation, Iowa State University, and Argonne National Laboratory.

The program also includes low-level planning and research activities in direct heating and conversion, catalysis, and materials development.

The request for the ECUT Program in fiscal year 1982 is $12,100,000 under the Energy Conservation account. This funding would be used to increase the levels of effort in the three activities listed above and to initiate the following additional primary activity:

4. *Catalytic process technology:* Development of improved technology for application of low-energy catalytic processes in the production of organic and inorganic chemicals. This work is a high-risk technology with high potential energy savings and will be conducted jointly by university and industrial laboratories. Initial participants in the work will be the Jet Propulsion Laboratory and the California Institute of Technology.

The low-level efforts in direct heating and conversion and in materials development would be continued at their fiscal year 1981 levels.

Question. Please explain how the research you do here differs from that in the more targeted areas of the conservation activity.

Answer. The goals of the Energy Conversion and Utilization Technologies Program are to evaluate new concepts for improved efficiency and alternative fuel use in energy conversion systems and utilizing devices and to expand the technology base necessary for development of new systems and devices by the private sector. To achieve these goals, applied research and exploratory development activities are supported that are focused on high-risk, high-payoff opportunities broadly applicable to many end-uses. These activities are conducted in close cooperation with industrial research organizations to minimize duplication of their work and to assure rapid transfer of data.

The goals and activities of the other Energy Conservation R&D Programs are directed toward applications within their respective energy use sectors: buildings, industry, and transportation. Coordination of these programs with the ECUT Program is accomplished through inter-program committees in each of the principal technology areas. The objective of these coordinating committees is to ensure that the ECUT Program encompasses areas of work which are supportive of the other Conservation R&D programs and also to prevent duplication of work among the programs. For example, one of the coordinating committees is concerned with heat exchanger R&D. Through this committee, other programs are kept aware of the ECUT heat exchanger technology activity which includes generic research on corrosion, fouling, and vibration problems, and on basic design techniques for improved performance. Other coordinating committees on engines, heat pumps, materials, and combustion research serve similar functions.

Energy Impact Assistance

Question. You are requesting a rescission of $52 million in the Energy Impact Assistance Program, reducing the fiscal year 1981 budget to $10 million. How much funding has been provided to localities under this program so far?

Answer:

Fiscal year	Site acquisition/ development	Planning	Total
1979	$17,342,000	$2,658,000	$20,000,000
1980	37,102,200	5,987,880	43,000,000

Of the $10 million budgeted in fiscal year 1981, $9 million has been designated for Site Acquisition/Development and $1 million for Planning.

Employee Strength Projection

Question. Your original budget request showed an end of fiscal year 1981 estimate of 621 employees. What do you currently project as your end of fiscal year 1981 employment?

Answer. Conservation and Renewable Energy currently projects its end of fiscal year 1981 employment to be 632 full-time permanent position.

Question. What do you project your end of fiscal year 1982 employment to be?

Answer. Conservation and Renewable Energy management projects its end of fiscal year 1982 employment to represent 553 full-time employment equivalents.

Question. Are you having a problem now with people leaving the Department?

Answer: At the present time, we are not experiencing a significant rate of attrition. Approximately 60 employees have terminated their employment with Conservation and Renewable Energy since October 1980. The rate of attrition has been decreasing to a current rate of less than 10 percent.

Question. How do you expect to reduce personnel to meet your budget ceiling and when will these reductions be necessary?

Answer. Conservation and Renewable Energy planning for personnel reductions has involved the development of various alternative options which would include:

1. Continued attrition, influenced by management initiated actions, such as discontinued service options, optional retirements, outplacement activities, employee counseling, etc., designed to ensure a rate of attrition of approximately 15 percent.
2. Evaluation of certain classes of employees, e.g., those in probationary status or on time-limited appointments, in order to terminate those exhibiting unsatisfactory performance.
3. A Conservation and Renewable Energy imposed freeze on the use of external recruitment to fill vacant positions.
4. Use of reduction-in-force procedures to eliminate positions related to Conservation and Renewable Energy programs being managed by DOE field organizations.
5. Use of reduction-in-force procedures to eliminate positions in Conservation and Renewable Energy Headquarters.

The personnel reductions outlined in the preceding narrative will be finalized by the last day of each fiscal year.

DOE Funding Assessments

Question. The Investigative staff of the Appropriations Committee issued a report in February on the use of a solar energy "tax program" in the Department of Energy. Page 13 of the report shows that taxes and assessments totalling almost $19 million were assessed on the appropriation of this Committee. Our Committee directed an assessment of $2,120,000 in its report. $2 million of that is already deducted for, leading to the $18,870,000 total. Please explain what uses were made of the funds that were taxed. For example, $3,624,000 went to the Solar Energy Research Institute. Please explain why such funds were assessed and what they were used for.

Answer. The figure of $18.9 million, which was cited in the Investigative staff report, cannot be identified from information which we furnished the investigators.

Actually, a total of $16.0 million was contractually authorized. Of the $16.0 million, a total of $10.9 million as reported by the Investigative staff was assessed from the Energy Conservation appropriation under the jurisdiction of this Subcommittee. In addition, the $2.0 million assessment which this Subcommittee specified for the Urban Consortium was included in this $10.9 million figure. The $5.1 million balance of Conservation and Renewable Energy (CE) special project budget was assessed from the Energy Supply Research and Development Operating Expense Appropriation, which is under the jurisdiction of the Energy and Water Development Appropriations Subcommittees.

The data reported on page 13 of the Investigative staff report indicates $3.6 million supported work at the Solar energy Research Institute (SERI). Data provided to the Investigative staff indicated that $0.8 million of special project activities were conducted at SERI. A total of $0.2 million was funded from the Energy Conservation appropriation, and $0.6 million was funded from the Energy Supply R & D appropriation. The Investigative staff reported on page 13 that $0.1 million at SERI was attributed to programs funded and managed by the Economic Regulatory Administration. This funding was not an assessment of CE programs. Furthermore, $1.3 million is shown as work at SERI funded by other DOE Assistant Secretaries. Once again, this does not reflect an assessment of CE programs. The fact that other DOE programs conduct work at SERI reflects the supportive role that this laboratory performs for other programs in the Department.

As you know, in fiscal year 1980 the Office of the Assistant Secretary included functions such as consolidated planning, budget and management, commercialization, and communication. Those activities were funded by assessment directly supporting the CE programs. Such activities would have been supported whether the functions were consolidated under the Assistant Secretary or decentralized among the 50 program divisions at the time. Consolidating the functions resulted in improved coordination and effectiveness. The concept of centralizing control and providing funding support from various sources used by the Assistant Secretary for Conservation and Renewable Energy is the same as that applied within the Department. For example, the Office of the Controller assesses the Assistant Secretary's for Defense

Contract Auditing Service activities. Other DOE organizations such as the former Office of Energy Technology also centralized the control and funding for these functions in fiscal year 1980. Projects supported in the Special Projects Budget include energy analysis and evaluation activities, management support activities, and communications/outreach activities.

It is important to note that all of the activities which we have pursued have been in the best interest of executing the programs approved by Congress. Any apparent inconsistencies which may have existed are more technical in nature. The programs have been substantially improved as a result of these activities.

The budget justification materials submitted by DOE each year reflect broad programs as opposed to an in-depth, all inclusive listing of projects. The concept of justifying and implementing programs presumes that CE managers have the authority to make decisions on specific contractual activities to accomplish the program objectives.

The Surveys and Investigations staff supported the merit of the work accomplished but questioned the authority of senior operating officials to make decisions to support projects which contributed to the overall program objectives. It is important to recognize that a federal manager must be able to exercise such discretion to effectively carry out Congressionally approved programs. This concept becomes even more crucial in times of changing goals, realignments of organizations, complex programs, and budget constraints.

It is our belief that the Nation's energy programs would continue to benefit by a management philosophy which emphasizes the concept of providing managers authority to conduct activities in support of approved programs and hold them accountable for program results and accomplishments.

Question. $4,151,000 went to the international program. Please explain what activities were paid for with these funds.

Answer. The Investigative staff stated on page 13 of their report that $4.2 million was assessed from funds under the jurisdiction of the Interior and Related Agencies Appropriations Subcommittee for international programs. With the exception of the $20,000 attributed to other DOE Assistant Secretaries, Interior related funds were not used to support international program activities. Specifically, the $4.0 million attributed to the international program from the Solar Federal Building funds is in error. The Investigative staff noted in the report that they may have duplicated some data and this appears to account for this error.

Question. Special projects activity totalled $8,985,000. Again, please describe the activity involved.

Answer. As indicated previously the office of the Assistant Secretary for Conservation and Renewable Energy included in fiscal year 1980 functions such as consolidated planning, budget and management, commercialization, and communication.

These activities were funded by assessment directly supporting the CE programs. Such activities would have been supported whether the functions were consolidated under the Assistant Secretary or decentralized among the 50 program divisions at the time. Consolidating the functions resulted in improved coordination and effectiveness. The concept of centralizing control and providing funding support from various sources used by the Assistant Secretary for Conservation and Renewable Energy is the same as that applied within the Department.

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The budget justification materials submitted by DOE each year reflect broad programs as opposed to an in-depth, all inclusive listing of projects. The concept of justifying and implementing programs presumes that CE managers have the authority to make decisions on specific contractual activities to accomplish the program objectives.

Question. How are comparable assessments in fiscal year 1981?

Answer. An estimated $12.0 million will be contractually authorized for Special Project activities in fiscal year 1981. Of this amount, an estimated $4.8 million will reflect an assessment of appropriations under the jurisdiction of the Interior and Related Agencies Appropriations Subcommittee. CE staff is currently compiling all fiscal year 1981 projects which could be considered as being funded from assessments. Following completion of this action, such information will be transmitted to the Subcommittee.

Question. How much are comparable assessments in fiscal year 1982?

Answer. It is projected that an estimated $10.0 million to $12.0 million will be contractually authorized in fiscal year 1982 for these activities. CE staff is currently formulating more specific projections of fiscal year 1982 assessments from appropri-

ated funds under the jurisdiction of this Subcommittee. When completed, these data could be made available to the Subcommittee. The counsel of the Subcommittee and its staff on the procedures the Department has used with suggestions for proceeding in fiscal year 1982 would be welcomed.

MARKETING PROGRAM

Mr. YATES. I wanted to ask about your marketing program. Are these programs working pretty well?

Dr. SAVITZ. The pilot we did in New England on the low-cost, no-cost was very effective. They put in flow restricters in their attic, ceiling ducts. We are doing a low-cost, no-cost at the State of Colorado as part of their utility program, giving out low-cost, no-cost packets, and also we provided them the advertisements and the plates so they can then go ahead and reproduce these.

They are also getting contributions from business. Mississippi, Georgia, and North Carolina are also implementing that program with some technical assistance from us.

Mr. YATES. Mr. DeGeorge, do you want to say anything before we close the record?

Mr. DEGEORGE. I have no more questions, Mr. Chairman.

Mr. YATES. Thank you very much.

MONDAY, APRIL 27, 1981.

ECONOMIC REGULATORY ADMINISTRATION

WITNESSES

BARTON R. HOUSE, ACTING ADMINISTRATOR, ECONOMIC REGULATORY ADMINISTRATION
T. WENDELL BUTLER, ACTING DEPUTY ADMINISTRATOR
AVROM LANDESMAN, ACTING SPECIAL COUNSEL
GORDON HARVEY, ASSISTANT ADMINISTRATOR, OFFICE OF ENFORCEMENT
GEORGE B. BREZNAY, DIRECTOR, OFFICE OF HEARINGS AND APPEALS

Mr. DICKS [presiding]. The committee will come to order.

This is the hearing on economic regulation. Barton R. House is Acting Administrator for the Economic Regulatory Administration. Since it is the first time Mr. Breznay has appeared before this committee, we will put his biography in the record, and we will put Mr. House's statement in the record and Mr. Breznay's statement in the record.

[The information follows:]

Statement of Barton R. House
Acting Administrator, Economic Regulatory Administration
Department of Energy
Before the
Committee on Appropriations
Subcommittee on Interior and Related Agencies
April 27, 1981

Mr. Chairman and Members of the Subcommittee:

I appreciate the opportunity to testify on the FY 1982 budget request of the Economic Regulatory Administration and discuss the specific programs included therein. Our budget request is for $24 million, a decrease of $102.3 from the FY 1981 level. This significant reduction is due to several factors:

- o the President's positive action to decontrol oil;
- o the need to bring a runaway Federal budget under control; and
- o a recognition that Federal government regulatory programs have not worked or have been counter-productive in the energy field.

Domestic production of energy must be increased. President Reagan's decision to end oil price controls is the first strong step toward increasing production. Decontrol will enhance the level of competition in the domestic oil industry, encouraging the industry to lower its operating costs to efficient levels and to increase its ability to respond to sudden changes in supply and demand. The U.S. consumer will benefit directly from these changes. That decision, and the dismantling of a cumbersome regulatory apparatus, will result in both direct and indirect budget savings in the Economic Regulatory Administration. Direct savings are in the petroleum regulatory and enforcement activities. Indirect savings are made in other regulatory activities that were designed to compensate for marketplace imbalances caused by price controls on oil.

A second major factor in determining the Department's budget for FY 1982 is the imperative need to control Federal spending in order to begin to bring inflation under control. As you know, inflation cannot be controlled if the Federal government continues to spend far in excess of its revenues. Every Federal government program has been examined very carefully, and almost every agency has had to contribute to the effort to reduce the rate of growth in Federal spending.

The reductions in the ERA budget also reflect a recognition that the Federal government regulatory programs have not worked or have been counterproductive in the energy field. It will be the free marketplace, not government, which will supply the enormous capital investments necessary to reduce reliance on imported oil. It is the marketplace, not government, that can allocate energy resources most efficiently. The dynamism of the free market as an instrument of progress and social betterment has been proved long ago and confirmed repeatedly.

IMPACTS OF THE FY 1982 BUDGET

I would now like to discuss the Economic Regulatory Administration budget for FY 1982 in view of these factors.

Petroleum Operations

The decision to decontrol petroleum on January 28, 1981, has increased the rate at which personnel and resources asssociated with the price and allocation programs can be eliminated. Before the end of this fiscal year, some two hundred Federal employees associated with administering the price and allocation programs will no longer be needed. We will also be able to reduce the data collection burden on industry.

Fuels Conversion

The Powerplant and Industrial Fuel Use Act (FUA) prohibits the use of petroleum and natural gas in new and existing electric powerplants and major industrial installations. The Department plans to phase-out the discretionary regulatory activities in FY 1981 and has requested no funding for the remainder of the prohibitions for FY 1982. Only three powerplant units have converted to coal under the program in two years and they did so voluntarily. The Fuel Use Act program has not caused any involuntary conversions. Furthermore, the economics of the higher cost of oil resulting from decontrol have diminished, in large part, the need for further mandatory actions.

Therefore, changes to the Fuel Use Act will be proposed in order to eliminate the program in a logical fashion.

Utility Rates and Energy Management

Under the authority of the Public Utilities Regulatory Policies Act (PURPA), this program has, in the past, been geared to assisting the State Public Utility Commissions in the implementation of electric utility rate structures which promote electric generation efficiency, equity and conservation. The timetable under PURPA calls for completion of State rulemaking consideration by November 1981.

The FY 1982 budget contains no further provision for continued financial or technical assistance to public utility commissions. A Federal role of this nature is no longer required since further progress in rate reforms and related conservation initiatives will be undertaken by the utility sector drawing on their own recent experience and the body of information, pilot projects, demonstrations, etc., developed by this program over the years.

Regulatory Interventions

Under the authority of PURPA and the Department of Energy (DOE) Act, the regulatory interventions program has provided testimony on energy related policy before State and Federal regulatory bodies, and through selected proceedings, promoted national energy policy. No funding is included in the FY 1982 budget for this program. Our interventions activities, as currently structured, will be completed in FY 1981.

DEPARTMENT OF ENERGY REORGANIZATION

Secretary Edwards recently announced a realignment of the Department to improve management and to reflect the increased emphasis on research and development. The new organization is expected to bring tighter line management and elimination of duplication in functions. Accordingly, the Economic Regulatory Administration will be reorganized. The reorganization of the ERA will reflect the decontrol of crude oil and petroleum products; the orderly phase-out of programs to be eliminated in FY 1982; the transferral of emergency preparedness functions to the Assistant Secretary for Environmental Protection, Safety and Emergency Preparedness; and the continuance of on-going ERA functions. Programs being transferred to the Assistant Secretary for Environmental Protection, Safety and Emergency Preparedness are the Utility Programs power supply and reliability activity, the Emergency Preparedness program and the Petroleum Operations market price and supply analysis function. The Compliance program, as well as the remainder of the Petroleum Operations programs will remain under the purview of the ERA in FY 1982.

FY 1982 APPROPRIATION REQUEST

Now, let me address the specific activities for which we are requesting a total of $24 million in FY 1982.

Emergency Preparedness Programs to be Transferred

As I've indicated, the following programs have been reassigned within the Department to the new Assistant Secretary for Environmental Protection, Safety and Emergency Preparedness.

Because they are being carried under the ERA appropriation heading, I will address them here briefly; however, it is understood that the Committee will address these programs at a later hearing on DOE Emergency Preparedness programs.

Utility Programs

We are requesting $5 million to continue our power supply and reliability activities. Funds are requested for reviewing international electricity transactions, expanding the Electric Power Monitoring Center, responding to fuel supply emergencies, and investigating major power system outages.

Emergency Preparedness

We are requesting $2 million for the Emergency Preparedness programs. The most important accomplishment in this area has been the decontrol of oil markets. In the past, the country had in place what might be called a "negative emergency preparedness policy" due to controls on petroleum products. These controls amplified tightness in oil markets and, by allocating products on a historical basis, contributed to shortages and gasoline lines.

We are currently taking stock of existing emergency authority to determine which, if any, additional legislation is needed to deal with substantial disruptions in world oil markets. The funding requested for FY 1982 will be used to develop and maintain DOE readiness to deal with defense or peacetime "declared emergencies," and to insure an adequate DOE capability to communicate effectively with State and local governments.

Petroleum Operations

Finally, resources will be used to support a small price and supply analytical capability. Since world oil supplies are influenced by a relatively small number of producers concentrated in an insecure region of the world, we must be prepared to respond to potential supply disruptions. We believe free market forces will generally, under most if not all conditions, provide the necessary incentives to ensure the most efficient allocation of available supplies of crude oil. We also believe, however, that continued monitoring is advisable in case there are any world oil supply disruptions with major economic impacts. Decisions on implementing emergency plans and other actions such as SPRO draw-down require that we maintain information on international and domestic supply situations.

ERA PROGRAMS

Those programs remaining in ERA as a result of the recent Departmental reorganization are the Compliance activity and the Natural Gas and Oil Import components of the Petroleum Operations program. I will discuss each of these separately.

Compliance

The request for compliance, which includes the Office of Special Counsel and the Office of Enforcement, is $12 million.

The Office of Special Counsel audits the top 35 major refiners to ensure compliance with Federal pricing regulations. By the end of fiscal year 1981, the Office of Special Counsel expects to complete audits of the top 35 firms through 1980.

At present, the Office of Special Counsel has 190 enforcement actions pending. Settlements to date include some $500 million in cash restitution, including refunds to customers, price roll backs and payments to the Treasury. In addition, $2.7 million has been deposited to the U.S. Treasury in civil penalties and $50,000 in criminal penalties.

The Office of Enforcement audits the thousands of non-major firms which are engaged in producing and refining crude oil and reselling crude oil and petroleum products to assure compliance with Federal pricing and allocation regulations. As of January 31, 1981, this office has recovered $662 million through negotiated settlements and has drafted and issued documents identifying some $2 billion more in potential violations. Based on the history of the enforcement program, it is estimated that actual recoveries will be substantially less than the amounts initially alleged. Since October 1977, the Special Investigations Division has referred 81 cases to the Department of Justice for criminal investigations and possible prosecution. Since March 1979, 76 defendants have been indicted or convicted to date, 45 of which were involved in alleged illegal crude reselling activities. These defendants have been assessed approximately $800,000 in criminal fines and $6,575,000 in civil penalties, while 14 have received prison sentences.

During FY 1980 and thus far in FY 1981, special attention was given to crude oil reseller activity with emphasis placed on detecting and prosecuting those resellers which failed to certify crude oil properly. During FY 1980, 35 documents were issued to crude oil resellers alleging violations totalling nearly $240 million. Already in FY 1981, one document alone, alleging a violation of $195 million was issued. Since October 1977, 26 matters have been referred to the Department of Justice as potential willful violations involving crude reseller activity.

During FY 1981 and 1982, the program will focus initially on the resolution of compliance cases through negotiated settlements. Viable cases will be litigated only when reasonable settlements cannot be achieved. The reduction of funding for FY 1982 reflects completion and close-out of most audit activities and resolution of as many cases as possible through negotiated settlements in FY 1981. Funds requested for FY 1982 will provide for completion of crude oil reseller audits and continuation of settlement and litigation activities. Thus, during FY 1982 emphasis will be shifted from audit to negotiation and litigation. The proposed budget will enable the Office of Special Counsel to pursue the major cases it has brought against major refiners in the pricing of domestic crude oil, natural gas liquids and disputed claimed increases in non-product costs. During FY 1982, the Office of Enforcement will primarily focus on the resolution and litigation of top priority special investigations, crude oil reseller cases and other significant cases. In those instances, where there is credible evidence of criminal activity, referrals have been and will continue to be made to the Department of Justice.

Petroleum Operations

The request for Petroleum Operations activities is $3.6 million. The continuing activities under this program area include the Natural Gas Import/Export Program, the Oil Imports Program and a reduced price and supply analytical capability which will directly support contingency planning and emergency preparedness activities. This latter activity was described earlier in this testimony.

The Natural Gas Program is required by the Natural Gas Act, Titles III and IV of the Natural Gas Policy Act. Section 607 of the Public Utilities Regulatory Policies Act and the DOE Organization Act, and is distinct from responsibilities under the Emergency Petroleum Allocation Act. In FY 1982, import/export cases will be received and reviewed for approvals. These cases will be increasingly complex. A careful review is necessary to study contracted gas prices and the impact on a regional or national level. ERA will also continue to review the impact of the natural gas curtailment priorities regulations and issue interpretations under these rules.

Under authority of the Defense Production Act, the ERA will issue priority orders, as appropriate, for petroleum products to the Department of Defense programs.

The Oil Import Program will also be administered. It is authorized by the Trade Expansion Act of 1962 and Presidential Proclamation No. 3279, as amended. The program monitors and controls crude oil and product imports by issuing licenses.

Personnel Reductions

The Department has analyzed the continued need for Federal employees in the various areas of the ERA and has found that deregulation of oil obviates the need for continuation of such a large staff. Consequently, the Department intends to reduce Federal employment by approximately 1,554 employees before December 1981 through a combination of attrition and Reduction-in-Force (RIF). The President's FY 1982 budget originally envisioned all employment reduction in ERA occurring prior to FY 1982. However, an orderly phase-down or termination of programs requires that 726 employees remain beyond September 30, 1981. The related personnel cost for these employees for approximately 2 months is about $5 million, while severance costs for FY 1982 for these 726 employees as well as those severed in FY 1981 amounts to approximately $11.2 million.

In order to provide funds for this orderly phase-down, we intend to propose a change in the FY 1981 Economic Regulation appropriation language. The proposal, if approved by the President and enacted by Congress, would allow $16.2 million funds remaining unobligated at the end of FY 1981, which would otherwise lapse, to be used in FY 1982.

This concludes my statement, I will be happy to answer any questions of the Subcommittee.

Statement of George B. Breznay
Director, Office of Hearings and Appeals
Department of Energy
Before the
House Committee on Appropriations
Subcommittee on Interior and Related Agencies

Mr. Chairman, members of the committee, I appreciate the opportunity to appear before you for the first time today to discuss the operations of the Office of Hearings and Appeals.

Until the end of January of the 1981 fiscal year, the Office of Hearings and Appeals reached determinations in 3,230 Applications for Exception, Appeals and other requests for Administrative relief. Consequently, the inventory of open applications had been reduced by 33 percent since the beginning of the fiscal year. You may recall that it was the extreme increase in filings and pending submissions -- reaching an inventory level as high as 9,900 during September 1979 -- and the necessity to resolve these filings which led to increased staffing and budget levels for the Office of Hearings and Appeals during the current and prior fiscal years. As you can see from the attached tables, these inventory levels had been very substantially reduced even prior to the President's January 28 Executive Order, which exempted immediately all products subject to the DOE pricing and allocation regulations. This in itself would have meant that there was a reduced need for funding during the 1982 fiscal year.

The January 28th Executive Order very substantially changed the projected level and nature of the operations of the Office of Hearings and Appeals for the balance of the current year and for the 1982 fiscal year. Following the effective date of the Executive Order, during February 1981 the Office of Hearings and Appeals proceeded to resolve 2,049 pending submissions. In addition, other than submissions involving the Entitlements Program, which I will touch on in a moment, the number of new filings received by the Office of Hearings and Appeals after the Executive Order has declined.

As a result of these trends, the Office of Hearings and Appeals immediately appraised activities for the 1982 fiscal year. These new projections led us to conclude that the Office could operate effectively during fiscal year 1982 at a substantially reduced level of funding. This level of funding is incorporated in the Office of Hearings and Appeals revised 1982 fiscal year budget request.

In addition to the revision of the projected activities of the Office of Hearings and Appeals for 1982 in view of the Executive Order, an intensive review of the operations and existing workload of the Office for the balance of the 1981 year was undertaken. One product of this review is our revised projection of 1982 opening case inventories to begin the reformulation of that year's revised budget request. Of at least equal importance, however, was the need to, insofar as possible, bring to a close pending matters which might unnecessarily delay the speedy and orderly termination of the prior regulatory program. Of principal concern were matters involving the Entitlements Program.

This program operates with a built in two-month delay and has therefore continued to function beyond the effectiveness of the Executive Order based upon activities occuring in December 1980 and until January 28, 1981. In addition, many aspects of the program, including the adjustment of exception relief to appropriate levels, cannot be terminated immediately with the issuance of an Entitlements Notice in March. Furthermore, touched off I believe by the impending termination of the program, the Office of Hearings and Appeals is receiving substantial numbers of new entitlements-related submissions. All of these matters need be resolved before the program can be wrapped up fairly through the issuance of a final Entitlements Notice or "clean up" list. This final clean up action cannot realistically be taken while important matters pertaining to the Entitlements Program are pending before the Office of Hearings and Appeals. We have therefore realigned substantial personnel and resources to insure the expeditious and prompt resolution of these cases with a view toward the speedy termination of the Program.

The actions which I have described were taken first to close matters where further consideration was unnecessary and second to facilitate the prompt and orderly ending of the Entitlements Program. The Office of Hearings and Appeals is also concentrating substantial additional resources in areas involving appellate proceedings such as compliance related cases. These and other matters will continue to be presented to the Office of Hearings and Appeals for review at least throughout the 1982 fiscal year. Realigining resources at this point to expand the expertise of the Office in these areas is a necessary component of an effective operating posture during the 1982 fiscal year -- a posture which will not only permit the Office of Hearings and Appeals to consider cases on a timely basis but also to be in a position to respond expeditiously in emergency circumstances.

This concludes my prepared presentation. I would be pleased to respond to any questions which you might have.

March 5, 1981

TABLE I
INPUT/OUTPUT FISCAL 1980

Total Office of Hearings and Appeals

Month	Beginning Inventory	Receipts	Final National Determinations	Proposed National Determinations	Regional Determinations	Total Determinations	Ending Inventory*
October 1979	9,834	1,810	717	152	1,282	2,151	9,645
November	9,645	1,622	563	279	1,863	2,705	8,841
December	8,841	2,133	390	293	2,450	3,133	8,134
January 1980	8,134	1,941	448	102	1,744	2,294	7,883
February	7,883	1,844	774	88	1,400	2,262	7,553
March	7,553	1,619	704	148	1,436	2,288	7,032
April	7,032	1,252	361	86	1,433	1,880	6,490
May	6,490	1,273	397	77	1,087	1,561	6,279
June	6,279	1,090	391	87	1,062	1,540	5,916
July	5,916	800	451	85	996	1,534	5,269
August	5,269	542	293	43	701	1,037	4,817
September	4,817	518	292	104	550	946	4,493
TOTAL		16,444	5,781	1,544	16,004	23,331	

*Includes cases originating in the Headquarters component for which Proposed Decisions and Orders have been issued but not yet finalized.

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March 5, 1981

TABLE II
INPUT/OUTPUT FISCAL 1980

Headquarters Office of Hearings and Appeals

Month	Beginning Inventory	Receipts*	Final Decisions and Orders	Proposed Decisions and Orders	Administrative Closings**	Total Determinations	Ending Inventory***
October 1979	4,267	419	213	152	504	869	3,969
November	3,969	369	316	279	247	842	3,775
December	3,775	667	212	293	178	683	4,052
January 1980	4,052	476	253	102	195	550	4,080
February	4,080	433	653	88	121	862	3,739
March	3,739	242	372	148	332	852	3,277
April	3,277	211	261	86	100	447	3,127
May	3,127	209	283	77	114	474	2,939
June	2,939	214	293	87	98	478	2,762
July	2,762	212	382	85	69	537	2,523
August	2,523	167	230	43	63	336	2,397
September	2,397	214	202	104	90	396	2,319
TOTAL		3,833	3,670	1,544	2,111	7,321	

*Excludes cases sent to Regions.
**Excludes cases sent to Regions.
***Includes cases for which Proposed Decisions and Orders have been issued but not yet finalized.

March 5, 1981

TABLE III
INPUT/OUTPUT FISCAL 1980

Regional Office of Hearings and Appeals

Month	Beginning Inventory	Receipts*	Final Decisions and Orders **	Proposed Decisions and Orders	Administrative Closings***	Total Determinations	Ending Inventory
October 1979	5,567	1,391	181	376	725	1,282	5,676
November	5,676	1,253	146	721	996	1,863	5,066
December	5,066	1,466	354	1,240	856	2,450	4,082
January 1980	4,082	1,465	466	752	526	1,744	3,803
February	3,803	1,411	303	653	444	1,400	3,814
March	3,814	1,377	349	690	397	1,436	3,755
April	3,755	1,041	267	753	413	1,433	3,363
May	3,363	1,064	296	517	274	1,087	3,340
June	3,340	876	424	347	291	1,062	3,154
July	3,154	588	493	305	198	996	2,746
August	2,746	375	288	223	190	701	2,420
September	2,420	304	239	166	145	550	2,174
TOTAL		12,611	3,806	6,743	5,455	16,004	

*Excludes cases sent to Headquarters and other Regions.
**Excludes finalization of Proposed Exception Decisions and Orders.
***Excludes cases sent to Headquarters and other Regions.

March 5, 1981

TABLE IV
INPUT/OUTPUT FISCAL 1981

Total Office of Hearings and Appeals

Month	Beginning Inventory	Receipts	Final National Determinations	Proposed National Determinations	Regional Determinations	Total Determinations	Ending Inventory*
October 1980	4,493	473	417	56	521	994	4,028
November	4,028	430	216	48	475	739	3,767
December	3,767	393	346	79	417	842	3,397
January 1981	3,397	372	318	33	326	667	3,125
February	3,125	157	784	29	1,237	2,050	1,261

TOTAL

*Includes cases originating in the Headquarters component for which Proposed Decisions and Orders have been issued but not yet finalized.

March 5, 1981

TABLE V
INPUT/OUTPUT FISCAL 1981

Headquarters Office of Hearings and Appeals

Month	Beginning Inventory	Receipts*	Final Decisions and Orders	Proposed Decisions and Orders	Administrative Closings**	Total Determinations	Ending Inventory***
October 1980	2,319	147	311	56	106	473	2,049
November	2,049	114	170	48	46	264	1,947
December	1,947	168	263	79	83	425	1,769
January 1981	1,769	158	224	33	94	351	1,609
February	1,609	112	121	29	663	813	937

TOTAL

*Excludes cases sent to Regions.
**Excludes cases sent to Regions.
***Includes cases for which Proposed Decisions and Orders have been issued but not yet finalized.

TABLE VI
INPUT/OUTPUT FISCAL 1981

Regional Office of Hearings and Appeals

Month	Beginning Inventory	Receipts*	Final Decisions and Orders **	Proposed Decisions and Orders	Administrative Closings***	Total Determinations	Ending Inventory
October 1980	2,174	326	288	115	118	521	1,979
November	1,979	316	305	98	72	475	1,820
December	1,820	225	227	66	124	417	1,628
January 1981	1,628	214	188	52	86	326	1,516
February	1,516	45	55	2	1,181	1,237	323

TOTAL

*Excludes cases sent to Headquarters and other Regions.
**Excludes finalization of Proposed Exception Decisions and Orders.
***Excludes cases sent to Headquarters and other Regions.

Department of Energy
Washington, D.C. 20461

GEORGE B. BREZNAY

Mr. George B. Breznay was named Director, Office of Hearings and Appeals (OHA), U.S. Department of Energy (DOE), on November 14, 1980. He had served as Acting Director, OHA, since September 22, 1980, and as Director of OHA's Office of Legal Analysis since the establishment of DOE on October 1, 1977. Prior to that time he served with OHA's predecessor, the Office of Exceptions and Appeals, with the Federal Energy Administration.

The OHA is responsible for adjudicating appeals of DOE orders and applications for exception from regulatory or mandatory requirements. OHA also issues remedial orders to firms which are found to be in violation of DOE regulations.

From 1969 to 1974, Mr. Breznay practiced corporate law with the legal firm of LeBoeuf, Lamb, Leiby, and MacRae in New York City. In 1968 he was local manager of the Chappaqua Oil Corporation in Libya.

Mr. Breznay received an A.B. degree from Harvard College in 1963. He graduated from Harvard Law School in 1966 and is admitted to the bar in the State of New York and the District of Columbia.

Active in the legal profession, Mr. Breznay has spoken at numerous professional meetings for bar association and other legal groups. He is a member of the Energy Committee of the Bar Association of the City of New York.

Mr. Breznay lives with his wife, the former Susan Phibbs, and their three children in the District of Columbia.

SUMMARY STATEMENT

Mr. DICKS. If you would like to make a brief opening statement please proceed.

Mr. HOUSE. Thank you. I would just like to introduce Wendell Butler, who is my Deputy in the Economic Regulatory Administration.

I appreciate the opportunity to testify on the fiscal year 1982 budget request of the Economic Regulatory Administration. The significant reduction from $126 million in fiscal year 1981 to $24 million in fiscal year 1982 is based on several key factors: first, the President's positive action to decontrol crude oil and products; second, the need to bring the Federal budget under control and stop runaway Federal spending; and third, the recognition that in general Federal Government regulatory programs have not worked and have been counterproductive in the energy field.

In recognition of these factors, we are proposing the orderly phaseout of several ERA activities. The decontrol of crude oil and petroleum products has eliminated the need for the complex regulatory program that has been in effect for the past seven years, and which was originally put in effect to respond to a shortage in 1973. The administration plans to phase out the discretionary activities of the Power Plant and Industrial Fuel Use Act in fiscal year 1981, and requests no funding for the remainder of the prohibitions for fiscal year 1982.

The Fuel Use Act has not caused any involuntary conversions, and furthermore the increasing cost of oil has made coal conversion economically viable without unnecessary governmental intervention. The economic incentive is most visible when you compare the cost of oil versus coal or gas for the same purposes in boilers. We intend to seek amendments to the present legislation during this session of the Congress.

Many of the activities of the utilities sector which have been carried out under the Public Utilities Regulatory Policy Act will be completed at the end of fiscal year 1981 and the fiscal year 1982 budget contains no further provisions for continued fiscal or technical assistance to public utility commissions.

Secretary Edwards has recently announced a reorganization of the Department designed to bring about tighter management and elimination of duplication of functions. ERA will be reorganized to reflect the decontrol of crude oil and petroleum products, the orderly phaseout of programs to be eliminated in fiscal year 1982, and the transfer of emergency preparedness funds into the new Office of the Assistant Secretary for Environmental Protection, Safety and Emergency Preparedness, which has already been addressed by this committee.

The continuation of ERA's ongoing functions will be addressed by me today. The remaining ERA offices will be the Office of Special Counsel, the Office of Enforcement, and certain other ERA functions such as natural gas import-export and oil import programs during fiscal year 1982.

Selected ERA activities being transferred to the new Office of the Assistant Secretary for Environmental Protection, Safety and Emergency Preparedness include the Utility Programs' power supply and reliability activity, the Emergency Preparedness pro-

gram, and Petroleum Operations' market price and supply analysis functions.

I would like now to specifically address what the $24 million that we are requesting in 1982 will be used for. First, we are requesting $5 million to continue our power supply and reliability activities. Funds are requested for reviewing international electricity transactions; expanding the electric power monitoring center; responding to fuel supply emergencies; and investigating major power system outages such as happened recently in the State of Utah.

For emergency preparedness, we are requesting $2 million to develop and maintain DOE readiness to deal with defense or peacetime declared emergencies, and to insure adequate DOE capability to communicate effectively with State and local governments.

For the programs remaining in ERA, the request for petroleum operations activities is $3.6 million. Continuing activities under this program include the natural gas import-export program, the oil imports program, and a reduced price and supply analytical capability which will directly support contingency and emergency planning activities.

COMPLIANCE ACTIVITY BUDGET REQUEST

$1.5 million is requested for program administration. The biggest element, $12 million, is requested for compliance activities which includes both the Office of Special Counsel and the Office of Enforcement.

Mr. DICKS. What is the difference between last year's figure?

Mr. HOUSE. I would say approximately $55 million.

Mr. DICKS. Therefore, you are going from $67 million in compliance activities down to $12 million.

Mr. HOUSE. Yes; the differential is $55 million.

Mr. DICKS. OK.

Mr. HOUSE. My very next point is, we have augmented that $12 million by a request to include $16.2 million in carryover funding to meet the cost of retaining 726 ERA employees for approximately two months in fiscal year 1982 and pay for separation costs for these 726 employees, as well as those severed in fiscal year 1981.

Mr. DICKS. We do not have a budget request for that yet.

Mr. HOUSE. That is correct.

Mr. DICKS. When are we going to have it?

Mr. HOUSE. It has left us and it is in OMB. I would assume it will be up in the near future with the next group of legislative proposals that come forward from the OMB.

Mr. DICKS. All right. I have some questions I want to ask about this particular subject, so why don't we just take them up at this point?

Mr. HOUSE. Sure.

PENDING OVERCHARGE CASES

Mr. DICKS. Would you please tell us the dollar value of overcharge cases now pending in the Office of Special Counsel and in the Office of Enforcement?

Mr. HOUSE. We have pending approximately, gross overcharges—and I want to adjust that number down and I want to try to set the

record clear on that. Gross is the number before you achieve actual settlements.

Mr. DICKS. It is the estimates.

Mr. HOUSE. Yes, it is the estimates, but it is very gross, and in fact we have never settled on anywhere near the identified amount.

Mr. DICKS. Is that why we call them the gross estimates?

Mr. HOUSE. There is a gross figure of approximately $2.3 billion in the Office of Enforcement and about $8.3 billion in the Office of Special Counsel.

Mr. DICKS. What is that now?

Mr. HOUSE. $2.3 billion gross in the Office of Enforcement and $8.3 billion gross in the Office of Special Counsel. Now the net violations, we would expect—after mitigating factors like improper costs identified by audit and not actually passed through to consumers, et cetera, bank reductions that no longer exist because controls have gone away—we figure that the adjustment would be between $4 and $5 billion for the Office of Special Counsel and $1.6 to $1.8 billion for the Office of Enforcement.

Based on settlement experience to date, the range would be approximately $2 to $3 billion for Office of Special Counsel if everything went through, and $700,000 to $1 billion for Office of Enforcement.

Mr. DICKS. Did you say $2.3 billion?

Mr. HOUSE. No, $2 to $3 billion for the Office of Special Counsel——

Mr. DICKS. Yes.

Mr. HOUSE [continuing]. And $700,000 to $1 billion for the Office of Enforcement.

Mr. DICKS. Would you tell us the amount of past overcharges you have collected or returned to the Treasury? Are these in fact returned to the Treasury, or are these returned to consumers?

Mr. HOUSE. I am going to give you various categories. Some are returned to the Treasury, some are returned to consumers.

Basically, Mr. Chairman, in those cases where you can find the directly aggrieved party you try to get a return to the party. In those cases where you cannot find the direct aggrieved party or injured party, the overcharges are deposited to the U.S. Treasury.

For example, since its inception the Office of Enforcement has settled 10,455 violation cases.

Mr. DICKS. How many?

Mr. HOUSE. Ten thousand four hundred and fifty-five.

Mr. DICKS. How could we have that many violations?

Mr. HOUSE. You have to remember that the Office of Special Counsel audits the 35 major refiners, and that the Office of Enforcement audits all the rest of the firms out there, which is the rest of the refiners, the thousands of crude producers, thousands of resellers or wholesalers, retailers, crude oil resellers and NGL processors. I think that speaks for itself. You are talking about 150,000 retail gasoline outlets, 17,000 middlemen, and a number of resellers, et cetera. There are a lot.

Basically, since its inception the 10,455 cases totaling $677,186,000 in overcharges——

Mr. DICKS. Six hundred and eleven million dollars?

Mr. HOUSE. Six hundred and seventy-seven million dollars. Of that, the general categories in which we have returned dollars have been refunds, $156,255,000; price rollbacks, direct price at the pump, $120 million; bank adjustments—these were the things where because you and I are in competition in the marketplace, the law would have allowed the pass through of 20 cents on a gallon of gas but because my competitor was low I could only pass through 16 cents. The remaining 4 cents was allowed to go into a bank to be passed through later if the market changed—amounted to $201.9 million; payments to escrow account—this is an actual escrow account—$186,724,000; payments to the Treasury from the Office of Enforcement, $1.6 million; and direct penalties, about $10.6 million.

Now for Special Counsel we are talking about the top 35 refiners; that is their universe. At present we have already obtained seven global settlements and finalized them, so of the 35, subtract 7. They are completed. Eight more settlements are in proposed form right now, pending final resolution, so we are down to 20. We also are negotiating with respect to the remaining 20; they are in various stages.

Mr. DICKS. I would like to have in the record the 7 global settlements, the 8 proposed, and the 20 remaining, so the committee will know who is there and who is not there.

Mr. HOUSE. Fine.

[The information follows:]

OFFICE OF SPECIAL COUNSEL SETTLEMENTS

The Office of Special Counsel has negotiated final global settlements with the following eight major refiners: Amoco, Citgo, Hess, Phillips, Sun, Getty, Kerr-McGee, and Koch.

Proposed global settlements are pending with the following seven major refiners: Ashland, Charter, Coastal, Corco, Pennzoil, Tenneco, and Tosco.

There are no settlements with the following twenty major refiners: Arco, Chevron, Conoco, Exxon, Gulf, Marathon, Mobil, Shell, Sohio, Texaco, Champlin, Clark, Crown, Energy Coop, Farmland, Fina, Murphy, Tesoro, Texas City, and Union.

REMAINING MAJOR REFINER CASES

Mr. HOUSE. Of the 20 remaining, we are either negotiating with them or litigating with them or finishing the audits with respect to those people right now.

Mr. DICKS. I would like to know if any of the 35 executives from those companies were involved in the Department of Energy transition team. Could you provide that for the record as well?

Mr. HOUSE. Yes, I would be glad to.

Mr. DICKS. Thank you.

[The information follows:]

EXECUTIVES OF THE 35 MAJOR REFINERS

DOE TRANSITION TEAM AND ADVISORY COMMITTEE MEMBERS

No executives of any of the 35 major oil companies served on the DOE transition team. Members of DOE advisory committees are shown below:

Advisory Committee	Members	Affiliation
Energy Research Advisory Board	Dayton Clewell	Mobil.
Fossil Energy Advisory Committee	Melbourne Fryback	Sun.[1]

Advisory Committee	Members	Affiliation
	John Hopkins	Union.
	Charles Matthews	Shell.
	Eric H. Reichl	CONOCO.[1]
	Lawrence E. Swabb, Jr	Exxon.[1]
National Petroleum Council	C. H. Murphy, Jr	Murphy.
	Robert O. Anderson	ARCO.
	R. E. Bailey	CONOCO.
	John F. Bookout	Shell.
	Theodore A. Burtis	Sun.
	John E. Faherty	Crown.
	C. C. Garvin, Jr	Exxon.
	Fred L. Hartley	Union.
	Leon Hess	Hess.
	H. D. Hoopman	Marathon.
	James L. Ketelson	Tenneco.
	J. Hugh Liedtke	Pennzoil.
	Jerry McAfee	Gulf.
	D. A. McGee	Kerr-McGee.
	John K. McKinley	Texaco.
	W. F. Martin	Phillips.
	Sidney R. Petersen	Getty.
	Henry A. Rosenberg, Jr	Crown.
	Robert V. Sellers	Citgo.
	Rawleigh Warner, Jr	Mobil.
	Robert E. Yancey	Ashland.
Consumer Affairs Advisory Committee.	Harlan Snider	Sun.
Energy Policy Task Force	Ralph Bailey	CONOCO.
Environmental Advisory Committee	Merle Lefkoff	Sun.[1]
	Howard Slack	ARCO.
Solar Photovoltaic Energy Advisory Committee.	J. W. Yerkes	ARCO.[1]

[1] Subsidiary.

TYPES OF RESTITUTION

Mr. HOUSE. With respect to the same categories we talked about, refunds, $276.9 million; rollbacks, $37 million.

Mr. DICKS. What are rollbacks?

Mr. HOUSE. Rollbacks are where you are selling at your wholesale rate for 56 cents a gallon. We find you have been overcharging by 3 cents a gallon. You roll back the price at that location from 56 cents to 53 cents.

Bank reductions—which are now going away now with decontrol—$2.3 billion.

Mr. DICKS. Two billion?

Mr. HOUSE. Two billion,three hundred million. Payments to an escrow account, $149 million; payments to the U.S. Treasury, $30.7 million.

Mr. DICKS. Thirty million, seven hundred thousand?

Mr. HOUSE. Yes.

Mr. DICKS. OK. That is it?

Mr. HOUSE. Yes.

Mr. DICKS. In your professional judgment, has the enforcement program in DOE proven cost-effective when you consider dollars spent versus dollars returned?

Mr. HOUSE. Yes.

EXPECTED RECOVERIES

Mr. DICKS. How much of the alleged overcharges could be aggressively pursued in fiscal year 1982 under the proposed budget of $11.9 million as originally requested of the Congress?

Mr. HOUSE. About $3.6 billion, I believe.

Mr. YATES. Is there a difference between the two budgets in relation to the amount?

Mr. DICKS. Yes, because now they have a proposed budget amendment of $16.2.

Mr. HOUSE. That is correct.

Mr. DICKS. This is added to the $11.9 million.

Mr. HOUSE. Yes, and it would change that.

Mr. DICKS. Give me the number with the $11.9 which was in the original Reagan budget. What will that figure allow you to aggressively pursue?

Mr. HOUSE. It amounts to the same.

Mr. DICKS. Yes. In other words, without the $16.2 million you would not have been able to aggressively pursue the $3.6 billion?

Mr. HOUSE. That is correct.

Mr. DICKS. You tell us it is going to take $28.1 million to aggressively pursue $3.6 billion. Is that correct? Is that your testimony?

Mr. HOUSE. Yes.

Mr. DICKS. What would it take to aggressively pursue the entire amount?

Mr. HOUSE. We are pursuing the entire amount but not in this year.

Mr. DICKS. What is the entire amount?

Mr. HOUSE. The point is, very simply, in fiscal year 1982 we have a certain budget to do a certain amount of work.

Mr. DICKS. Now, wait a minute. What if this committee felt that we do not agree that pursuing $3 billion in overcharges out of $8 billion is an aggressive enough program? If we wanted to pursue the entire $8 billion instead of letting it be delayed for extra years—because we think the program has been cost-effective and has resulted in a rather substantial return on investment to the Treasury—how much would it take to pursue the entire amount?

Mr. HOUSE. I will have to provide that for the record.

[The information follows:]

OFFICE OF SPECIAL COUNSEL FISCAL YEAR 1982 RESOURCES

The proposed compliance budget will permit the effective handling of a number of outstanding Office of Special Counsel cases of alleged violation. Secretary Edwards has repeatedly expressed the Department of Energy policy of not granting amnesty for violations. To the extent that cases cannot be completed during 1982—a likely occurrence under any level of effort—the Department will request additional funding for fiscal year 1983.

AUDIT PHASE COMPLETION

Mr. DICKS. What would you estimate?

Mr. HOUSE. Well, let me tell you what our philosophy is. Basically, what we are trying to do——

Mr. DICKS. What was the program of the prior administration?

Mr. YATES. Let's hear what he has to say.

Mr. HOUSE. What we are trying to do is accomplish all of the audit work in fiscal year 1981 and have all of the records done and completed, so at that point in time you have the basis on which to pursue further cases. Those records will then never be lost. The foundation will have been laid to essentially identify the cases that are not resolved at the end of fiscal year 1981, target those cases that have the best settlement potential or the best return potential, and complete the ones that can be completed in fiscal year 1982. Then for fiscal year 1983, the remaining cases will be reassessed, and the budget required to go forward will be submitted accordingly. That is the way we are looking at it right now.

Mr. DICKS. Are you limited by the audit ability? Is that where the bottleneck in pursuing this is?

Mr. HOUSE. No. As a matter of fact, we intend with the resources that we have to virtually complete all of the audit work in fiscal year 1981. The audit work for the Special Counsel's office is essentially completed right now. For example, we have the audits completed on all but 8 of the top 35 firms. Of those top 35, the 8 that are not completed will be 95 percent complete at the end of fiscal year 1981. The reason we have not finished them is because we have had to go through subpoena and other type things to get the data and get the records out.

Mr. DICKS. When do you expect to finish them?

Mr. HOUSE. By February of calendar year 1982 we will have done all of them. However, as I mentioned earlier we are pursuing the negotiated settlement routes all through this period.

Mr. DICKS. What resources are needed to complete the audit responsibility of the——

Mr. HOUSE. We have those.

Mr. DICKS. You have those?

Mr. HOUSE. Yes.

Mr. DICKS. Could they be speeded up?

Mr. HOUSE. Obviously they could be speeded up.

Mr. DICKS. Well, then, how much would you need to speed it up?

Mr. HOUSE. I do not believe it is necessary.

Mr. DICKS. All right.

Mr. HOUSE. Here is the issue: We looked at the dollars to be spent within a certain time frame—I am an engineer/mathematician, not a lawyer, so I am going to try to put it in terms I understand.

Mr. YATES. Well, we are lawyers.

Mr. DICKS. We want it in terms we can understand.

Mr. HOUSE. Yes, you do. I bet you do.

THE PURSUIT OF ALL VIOLATIONS CASES

Mr. HOUSE. We are talking about doing a certain amount of work with a certain amount of dollar expenditure over a certain period of time. What we are saying is that we are not going to do all this front-loading because of the budget restrictions the President has decided on with respect to all of the Federal budget. What we are going to do is a program different from that earlier planned, which is going to stretch some of the enforcement work over other periods.

I want to make sure this committee understands, and the Secretary has said very clearly there will be no amnesty. It is just, if not sooner, then later we will do these cases.

Mr. DICKS. What if we disagree with your priorities—

Mr. HOUSE. I am sure you do.

Mr. DICKS [continuing]. And say that we want to pursue these cases without an 'L curve' or a stretched-out program? We want to pursue it expeditiously. That is what we want you to tell us: What do we have to do to do your first hypothetical rather than your second approach?

Mr. HOUSE. The order of magnitude there is $40 million.

Mr. DICKS. Would this be audits or for people?

Mr. HOUSE. It is for everything.

Mr. DICKS. Is this for fiscal year 1982?

Mr. HOUSE. Yes. The key to either this or this——

Mr. YATES. For the record, will you define what you mean by "this or this"?

Mr. HOUSE. Yes. The audit work, Mr. Chairman, you have to get that done. That has to be first. What we are intending to do in fiscal year 1981 is maximize the probability of finishing all of the audit work that we possibly can so we have all the records.

When you transfer from an audit-heavy workforce to a litigation-heavy workforce, you change the mix of the skills of the people that you need from auditors, accountants, to legal but you still have to have audit support just like you have to have legal support in the early phases of any program.

Therefore, as your manpower-intensive program is shifting, once you have the audit work behind you, once you have the records from which to proceed, you will never lose those. If you decide that you want to go after a case, you can go after it. You have the data to do it. That is how we have been structuring this program, to get the audit work done in fiscal year 1981—and I think the data and the records will show the vast majority is going to be done—so that we can do the litigation phase, if not in 1982 then in 1983 and 1984, if required.

Mr. DICKS. As lawyers, the Chairman and I would agree that the sooner you can pursue these things the better off you are because you lose evidence, you lose facts, and you lose witnesses. If you are talking about billions of dollars as you are here and if you are talking about having to go to Federal court, which usually means a further delay of several years in pursuing these matters, it just does not seem to me to be very wise to delay on litigation where you have this kind of a return on investment to the taxpayer. Doesn't that make sense?

Mr. HOUSE. I understand what you are saying.

Mr. DICKS. I understand your position because you have to defend this.

Now, could you contrast this with the approach that was submitted originally under the Carter budget?

Mr. HOUSE. The fiscal year 1982 Carter base is approximately $67 million.

Mr. DICKS. Was this adjusted down to $11.9 million? I do not know. Somehow that looks like a reduced effort to me.

Mr. HOUSE. It is a reduced effort.

Mr. DICKS. All right.

Mr. HOUSE. However, we have also augmented that now, as you are aware.

Mr. DICKS. Therefore, you went down to $11.9 million and now you have $16.2 million? $28.1 million versus $67 million.

Mr. HOUSE. Excuse me. We evidently had a "bum" number. The fiscal year 1982 Carter budget was $52 million.

Mr. YATES. What is the Reagan budget?

Mr. DICKS. It was $11.9 million; now it is up to $28.1 million. You would have to add another $40 million to the $28.1 million to move as expeditiously as possible. Is that correct?

Mr. HOUSE. You would have to, to move as expeditiously as possible——

Mr. DICKS. Another $40 million, is that right?

Mr. HOUSE. No.

Mr. DICKS. The difference——

Mr. HOUSE. It was about $55 million. Now you see, things have changed. We are getting negotiated settlements. Decontrol occurred quicker. Caseloads have stopped being generated. There are no longer any allocation cases being generated.

NEGOTIATED SETTLEMENTS

Mr. DICKS. Are these negotiated settlements in the best interests of the——

Mr. HOUSE. I believe they are. I believe they are very far in the best interest because of the following four things: One, the legal expenses and delays that you talk about cost the taxpayer because eventually he is going to pay the corporation's legal costs, and also the government's. Two, everybody wants these things settled, wants them behind them, both on our side, the Government's side, as well as on the industry's side.

Mr. DICKS. Does the Justice Department have to sign these off, or are they all done by the Department of Energy?

Mr. HOUSE. I believe they do not have sign-off authority on them, and if there is any difference I will get back and correct it.

Mr. DICKS. That is a very important point here because then it gets down to the judgment of a department that has a direct involvement with the industry versus the Justice Department which has a separate role. I think it would be important to understand how negotiated settlements are arrived at and who has to sign off. Does the Secretary of Energy have to approve these personally?

Mr. HOUSE. As I understand it, the detail work is done by either the Office of Enforcement or the Office of Special Counsel. In the case of the Office of Special Counsel, major cases are reviewed not only by the Office of Special Counsel but also by the General Counsel of the Department of Energy. The Secretary is made aware of what is going on.

I stand corrected. The Department of Justice reviews and is aware of the negotiated settlements but they do not have veto authority over them.

Let me turn to the Office of Enforcement. The Office of Enforcement's cases are typically for much smaller amounts, and are much more numerous, and we have done those within the Office of

Enforcement; the Assistant Administrator for Enforcement has resolved those.

AUDIT PROCEDURE

Mr. DICKS. The Chairman, has asked a pertinent question here. Would you explain what happens after the audits are done?

Mr. YATES. They ought to go back further than that. How do you audit? Do you audit all the companies?

Mr. HOUSE. All 35 majors.

Mr. YATES. You audit them all?

Mr. HOUSE. Yes. We do not audit all of the other potentials that are out there.

Mr. YATES. Just the 35 majors?

Mr. HOUSE. Yes.

Mr. YATES. How do you define a "major"?

Mr. HOUSE. A "major" is defined as one of the 35 largest domestic refiners with respect to refining capacity under their control.

Mr. YATES. Are they automatically audited?

Mr. HOUSE. Yes.

Mr. YATES. Do you take action against them based upon the results of audits?

Mr. HOUSE. Yes.

STATUS OF MAJOR REFINER AUDITS

Mr. YATES. What is the procedure by which further action is taken? Some have been audited completely.

Mr. HOUSE. Yes.

Mr. DICKS. Seven.

Mr. YATES. Seven of them?

Mr. HOUSE. No, more than seven.

Mr. YATES. How many have been been audited completely?

Mr. HOUSE. I believe approximately 20 at this point in time.

Mr. YATES. Twenty have been, so that you have how many, fifteen more to go?

Mr. HOUSE. We have approximately 15 more to go but we believe by the end of this year, this fiscal year, fiscal year 1981, we will have all but 8 completed and of those 8 that remain to be completed, all but 5 percent of the audits will be done.

Mr. YATES. Therefore, with respect to 25 of the 35—am I right in that figure?

Mr. HOUSE. Twenty-seven, actually.

Mr. YATES. The audits of 27 have now been completed?

Mr. HOUSE. They will be by the end of this fiscal year.

Mr. YATES. Are there any of those against whom further action will not be taken?

Mr. HOUSE. Yes. I believe the eight that we have already received negotiated settlements, a global settlement for all cases and all things, it is over.

Mr. YATES. What is the basis for the settlement? You say the "settlements", you have audited them. They have come up with certain deficits. Have they paid those deficits?

Mr. HOUSE. Yes.

Mr. YATES. Have you negotiated settlements of the deficits?

Mr. HOUSE. We have negotiated total settlements with respect to all of their supposed overcharges.

Mr. YATES. Therefore, out of 35, 8 have been cleared?

Mr. HOUSE. That is correct.

Mr. YATES. All right.

Mr. DICKS. I thought you said seven.

Mr. HOUSE. Excuse me, it is seven. That is right, seven.

Mr. YATES. Seven have been cleared?

Mr. HOUSE. Yes. There was one just announced this week, as a matter of fact.

Mr. YATES. Leaving 28 that have not yet been cleared and of the 28 not yet cleared, 8 are——

Mr. DICKS. Eight are in proposed settlement.

Mr. YATES. All have been audited except for eight, and the audit of those eight will be completed by October 1 of this year?

Mr. HOUSE. No.

Mr. DICKS. February of 1982.

Mr. HOUSE. We have two "eights" there. I think the best way to look at it is to start with 35.

Mr. YATES. That is what I tried to do.

Mr. HOUSE. Of those 35, on the first of October this year all but 8 of those will have been completely audited.

Mr. YATES. OK.

Mr. HOUSE. Of those eight, 95 percent of the audits will be complete at that time.

Mr. YATES. Wait a minute. "Of those eight", do you mean of the 27?

Mr. HOUSE. Twenty-seven are done.

Mr. YATES. Okay, 27 are done. Now with respect to the remaining eight, what will happen?

Mr. HOUSE. Ninety-five percent of their audit work will be behind us at that point in time.

Mr. YATES. Therefore, you will have only 5 percent and you expect to finish that by——

DATA GATHERING DIFFICULTIES

Mr. HOUSE. Yes. However, they are the recalcitrant 5 percent where we have had trouble getting the data.

Mr. YATES. Which 5 percent are they?

Mr. HOUSE. I believe it is not 5 percent. Some already gave the data up. We have had to subpoena the records of three of the top majors, I believe, and I will stand corrected if I miss.

Mr. YATES. Which three?

Mr. HOUSE. I can provide it for the record.

Mr. YATES. Doesn't anybody on your staff know?

Mr. HOUSE. I have somebody who does know.

Mr. YATES. Why are you whispering? [Addressing someone in the audience.] He cannot hear you and I cannot hear you.

Mr. DICKS. Why don't you testify?

Mr. HOUSE. I think he is concerned with the——

Mr. YATES. Why don't you speak up so he can hear you and I can hear you? [Addressing someone in the audience.]

Mr. HOUSE. We just do not think it would be good business practice to announce it publicly; is that what you are saying?

Mr. YATES. Tell us why.

Mr. DICKS. This committee has a right to know that.

Mr. YATES. Why wouldn't you let us know, if they have been as recalcitrant as you say they have?

Mr. DICKS. Would you identify yourself for the record?

Mr. LANDESMAN. I am Avrom Landesman. I am the Acting Special Counsel at the ERA.

Mr. YATES. Why don't you come on up and sit next to the court reporter? She wants to hear you, too. We all want to hear you.

Mr. LANDESMAN. Thank you very much, Mr. Chairman.

Mr. DICKS. Are you an engineer?

Mr. LANDESMAN. Oh, no, I am a lawyer.

CONFIDENTIALITY OF INFORMATION

The reason I was reluctant to speak up earlier is that I do not think it would be proper to publicly identify the companies with respect to whom additional audit work has to take place beyond this fiscal year. In all those cases the recalcitrance is not a matter of public information, nor do I think it should be. I would not have any trouble at all providing that information to the committee in correspondence, if that would be your pleasure.

Mr. YATES. What is the difference?

Mr. LANDESMAN. The difference is that it would be explained to you and to the committee with the reservation——

Mr. YATES. Do you want that correspondence to be confidential?

Mr. LANDESMAN. Well, that would be up to the committee but we would describe the desirability of it being confidential, and it would be the committee's decision as to what it would do about that.

Mr. YATES. How is this kind of a question different than asking your what the history of your efforts to enforce the law had been?

Mr. LANDESMAN. When we find a violation and we make a public charge about it, such as by the issuance of a notice of probable violation, that is a public document and everybody knows it is going to be one, as it should be. The Government should operate in the public forum when it brings a charge.

However, when we are talking about recalcitrance in providing us with data, there are many nuances of recalcitrance. In many cases we are in the throes of negotiating acceptable modes of access.

Mr. YATES. Modes of access to their records?

Mr. LANDESMAN. That is correct, and it might appear to them if we made a public statement today that we were trying them before this committee in public. That might actually hurt further access. That is the basis for my reluctance.

Mr. YATES. I think the committee should respect your reluctance because you are on the firing line. I assume all this will come out at a later time.

Mr. DICKS. Why don't we write a letter and ask for the information?

Mr. YATES. We do not even have to write a letter. All we have to do is have him write a letter, is that right?

Mr. LANDESMAN. Yes.

Mr. HOUSE. We will do it.

Mr. DICKS. It would be helpful.

Mr. YATES. Wait a minute. He started to explain the current state of the cases.

Mr. HOUSE. That is correct.

Mr. YATES. We were playing a numbers game.

Mr. HOUSE. Yes, and I want to try to straighten that out.

Mr. YATES. All right, as long as you don't draw a curve.

Mr. HOUSE. No, no, I will not do that again.

That is the audit picture: We have essentially eight that we expect to finish by February of 1982.

Mr. YATES. That is all of them?

Mr. HOUSE. That is it.

Now, let's talk about the 35 in the litigation or settlement phase. We have already reached global settlement for 7 of the 35. We have come to an agreed-upon position with respect to the overcharges and have resolved it with the actual passing of dollars of settlement.

Mr. YATES. Therefore, you have reached a settlement with seven.

Mr. HOUSE. Seven.

Mr. YATES. This leaves 21 with whom you have not reached a settlement.

Mr. HOUSE. Seven from thirty-five is twenty-eight.

Mr. YATES. I see, including the eight that have not been fully audited yet.

Mr. HOUSE. That is correct. Now, in addition to those seven that we have finalized, we have eight more pending in which the company and the Department have come to tentative agreement on how to resolve all cases and have published those cases in the Federal Register.

Is that correct, Avrom?

Mr. LANDESMAN. That is correct.

Mr. HOUSE. They have been published in the Federal Register, so of that 28 remaining another 8 are pending to be resolved, and they have been made public and are in the record. That leaves us 20 of the top 35 remaining to go through either the negotiated settlement phase or the litigation phase to remove the cases and to finish them.

Mr. YATES. Have any cases been brought to court yet? Have any cases been filed yet?

Mr. DICKS. They have settled them all.

Mr. YATES. Well, that is what I am trying to find out, whether they have settled them all.

Mr. LANDESMAN. No, there are some cases that have been brought directly in court in which we have charged that there is a violation of the regulations.

Mr. YATES. Of the 35 just mentioned?

Mr. LANDESMAN. With respect to the 35 majors, yes. In addition to the ones that we ourselves have brought, there are a number of cases that are pending in court that involve controversies affecting enforcement.

Mr. YATES. Suits have been filed to enforce what you consider to be the Government's right to certain revenues. Now you said there are other cases that are filed?

SUITS AGAINST STRIPPER WELL RULES

Mr. LANDESMAN. In addition to the cases that we initiated as enforcement cases, attacks on the regulations have been filed with regard to a number of areas under the EPAA regulations. The most notable, perhaps, is a suit by many major refiners and additional oil producers against the the stripper well rules that the Department of Energy has.

As I think the Chairman knows, there is a suit pending in Wichita, Kansas in which the Department of Energy and the United States are defendants, which involves in excess of a billion dollars—and money has actually been placed in escrow with the court—having to do with how one defines a stripper well, which is a property that produces less than 10 barrels average per well per day. There is a big dispute about how you calculate the denominator in that kind of situation.

Mr. YATES. How many such suits are there?

Mr. LANDESMAN. Those are all joined into one major——

Mr. YATES. Into one suit involving how many companies?

Mr. LANDESMAN. It involves a very, very large number of companies. I really do not know how many.

Mr. YATES. Do you mean all, if not almost all of those with whom you are dealing?

Mr. LANDESMAN. It involves almost everybody who is a substantial producer of domestic oil.

Mr. YATES. Mr. Landesman, your fundamental responsibility is with respect to cases in which the Government is a possible plaintiff?

Mr. LANDESMAN. That is correct.

Mr. YATES. What about cases in which dealers may feel that they have been aggrieved? Is there a possible action that they may file against the company?

Mr. LANDESMAN. Yes, there is a private cause of action that was created when the EPAA was enacted by Congress, called Section 210.

Mr. YATES. Are there any suits filed under that today?

Mr. LANDESMAN. Yes.

SUITS BY PRIVATE PLAINTIFFS

Mr. YATES. Do your settlements, the settlements that you make on behalf of the Government with the companies, close those cases?

Mr. LANDESMAN. No, sir.

Mr. YATES. They are still open, and those suits may continue by private plaintiffs?

Mr. LANDESMAN. That is correct. Sometimes, Mr. Chairman, in connection with a big settlement we might take cognizance or we might be asked to take cognizance of the existence of one of those private causes of action and actually attempt to settle that as well, but then only with the consent of the private plaintiff in those cases.

Mr. YATES. Thank you, Mr. Landesman.

CARRY OVER FUNDS

Mr. DICKS. According to material from a recent House hearing, the proposed ERA budget for fiscal year 1982 including the amendment to carry over funds from fiscal year 1981 to 1982 as proposed by Secretary Edwards will—now this is according to Mr. House—cause so much turmoil and chaos that a substantial portion of the $15 billion in identified violations will not be resolved. That is from a memorandum from you to the Secretary, of which we happen to have a copy.

Mr. HOUSE. In February of this year, a week after I had taken over the program.

Mr. DICKS. It sounds like you had good judgment. That reportedly was from a memo written by yourself. According to the hearing transcript, that memo went on to say that the proposed budget would result in criticism of DOE and the Administration for not pursuing potential criminal and civil violations.

COMPLETION OF COMPLIANCE AUDITS

Is it true that the $11.9 million budget, even when it is supplemented by the $16.2 million, will mean a substantial portion of the $15 billion in overcharges will not be collected?

Mr. HOUSE. In fiscal year 1982, yes, but over time we do not know.

Mr. DICKS. That is assuming you get further money, now.

Mr. HOUSE. Then eventually we will collect it. You see, the point that we have been—the issue and the reason why I introduced this little chart before is, that memo assumed trying to get the program done or the vast majority of it done in fiscal year 1982 without going on beyond that point in time. My memorandum, since you have quoted from it, my memorandum was put forth based on trying to close the program out as rapidly as possible. From my perspective I do not know what are all the demands on the budget and the economy of this country. People above me have decided that they cannot spend that kind of money this year.

The point that the Secretary and I have been testifying to time and time again is that we are not walking away from anything. The reason I put so much emphasis on the audit work is, that gives me the records so that I know if someone has been out of line and we can, if not sooner, then later, go after them.

Mr. YATES. I do not know whether I asked Mr. Landesman this. I asked you were there any suits pending to collect, didn't I? Are there suits that should be filed on audits that have been completed which have not been filed?

Mr. LANDESMAN. There still are additional actions that have to be taken, enforcement actions, yes, sir.

Mr. YATES. Why haven't you filed them, then?

Mr. LANDESMAN. Well, there could be a variety of reasons. Either the writeup of the audit is too recent and it is just not available yet——

Mr. YATES. However, that would indicate that your audits were not complete, if you do not have a writeup. Presumably the writeup is a part of the audit.

Mr. LANDESMAN. Well, Mr. Chairman, you asked earlier what happens at the end of an audit, and then abandoned it, and we started to go through it and we did not do that.

Mr. YATES. It has been a long time since I tried a case, Mr. Landesman.

Mr. LANDESMAN. Me, too.

After the auditors are finished and they write up their report, there still is a good deal of massaging that needs to be done by lawyers. They have to do legal research, find legal theories; they have to apply the regulatory theories to the facts of the case. There is a considerable amount of work. It may take three or four months. We have many cases in that stage now, sir.

Mr. DICKS. In your professional judgment, does cutting the program back encourage oil companies to avoid settlements?

Mr. HOUSE. It would, provided we were not able to say that if we are not going to complete the cases this year, we will next year. You know, we have to keep them on their toes.

Mr. DICKS. If I were out there I would say, maybe next year they will not get any money either, so why settle this year? If we are to help you get this resolved, the best way to do it is to show them that you have the money and the staff people to get the job done.

STAFFING

I understand that the morale there is very low, and that a lot of your best people are trying to leave because they think the program has been gutted. Is this going to be a serious problem in pursuing this matter?

Mr. HOUSE. In answer to your question, and I will try to answer it as directly as I can, one of the toughest jobs in any organization is an orderly phaseout. We are experiencing attrition as a result of the budget reductions. We are also having the good people leave first. This is most logical; they can get the jobs the quickest.

However, we intend to have the necessary forces left to continue the program. When you stop and think about the number——

Mr. YATES. What do you mean by "we intend"? Who is "we"? You?

Mr. HOUSE. Me.

Mr. YATES. Yes. The regal "we".

Mr. DICKS. The Department of Energy.

Mr. HOUSE. Yes, the Department of Energy.

Mr. DICKS. You are losing your best people but are you going to have people?

Mr. YATES. He in in the Department of Energy makes that intention. He is not sure the Secretary——

A PROGRAM OF NO AMNESTY

Mr. HOUSE. Oh, yes, I am sure the Secretary intends that.

Mr. YATES. You are sure of the Secretary?

Mr. HOUSE. Yes, I am. He has testified.

Mr. DICKS. Do you think he has been to enough hearings now that he understands this is an important issue?

Mr. HOUSE. Quite frankly, to be honest, the very first discussion I had with him on the issue was that he had never intended to walk

away from any of this. He made it very clear to me in the very first instructions.

Mr. YATES. The budget does not agree with that, does it?

Mr. HOUSE. Well, there is where I respectfully think you and I will have to disagree, sir.

Mr. DICKS. Has the Secretary testified that he will ask for money next year to complete this program? Has he said that publicly?

Mr. HOUSE. The Secretary has testified that there will be no amnesty and that we will pursue all cases, and we will not drop any. We are going into the fiscal year 1983 budget process just now.

Mr. DICKS. Have you asked for any money?

Mr. HOUSE. I intend to.

Mr. YATES. Have you ever heard of a Secretary changing his mind?

Mr. HOUSE. Yes, I have.

Mr. DICKS. This one has already done it once.

Let me read page 7 from the GAO report:

> Further, we fear that oil companies would perceive such staffing reductions as a lack of commitment on the part of the Government to bring all unresolved violations to a fair and logical conclusion, and that consequently they would probably cease their attempts to settle with DOE.

Now that is the GAO report of April 2, 1981. Do you disagree with that?

Mr. YATES. In other words, would you be sending a signal?

Mr. DICKS. Sending the wrong signal.

Mr. HOUSE. The signal we are trying to send is, if not sooner, then later, so that we are not going to drop any cases.

Mr. DICKS. Therefore, stall now because——

Mr. HOUSE. No, do not stall now; settle now and get it behind you and get on with business.

Mr. DICKS. It would be important on the first seven global settlements to get a figure—if this is possible, and I assume it is—of what you found in your audits they owed the Government and what the settlements were, in fact. Can that be done?

Mr. LANDESMAN. Sure.

[The information follows:]

Office of Special Counsel
Summary of Major Refiners Global Settlements
Relationship of Alleged Violations to Consent Order Remedies

Company	Total Alleged Violations Brought in Enforcement Actions	Consent Order Remedies: Cash Component	Consent Order Remedies: Other Restitution
Amoco 1/	$122,458,157	$100,000,000	$180,000,000 bank reduction; $250,000 payment in lieu of civil penalty 2/
Cities Service	77,041,212	10,000,000	$20,000,000 price rollback; $190,000,000 bank reduction
Getty 3/	131,143,804	25,000,000	$50,000,000 bank reducction
Hess	866,679,001	35,000,000	$100,000,000 bank reduction 2
Kerr McGee 1/	7,210,626	46,000,000	
Koch 1/	-0-	14,000,000	
Phillips	108,179,705	25,000,000	$75,000,000 bank reduction
Sun	601,700,098	30,199,081	$80,000,000 bank reduction
Tenneco	34,227,873	14,000,000	A previous consent order involving $2.2 million in restitution also signed.

1/ Negotiated settlement also included alleged violations which had not been the subject of enforcement action.

2/ The Amoco and Hess settlements included incremental investment commitments not considered part of the restitution package; Amoco - $410,000,000; Hess - $400,000,000.

3/ A number of issues were not included in the settlement and remain open.

CHARGED VIOLATIONS VERSUS SETTLEMENTS

Mr. DICKS. Therefore, we can see here is what your audit said was owed and here is what you settled for. Is it 25 percent less, 50 percent less, 75 percent, or is it different on each one? Can you give us a percentage, just a ballpark number?

Mr. LANDESMAN. Yes, sir. You have asked a great number of questions. Yes, it is possible to give you the numbers of what the charged violations were before the settlement—that had been publicly announced—and what the settlement was for, and then we could do a percentage of one from the other.

However, you would have to understand, and I am sure you do, that not all of the settlements settled only cases that had been brought publicly. In some cases there were additional audit findings which means that if we had gone any further and gone to litigation the charges would have been even higher. There are also, quite frankly, instances where we have brought cases but after we got the responses from the companies and figured some more and calculated some more and thought about it some more, and took into account more recent court decisions involving regulations, we might not have been in as strong a posture as we originally thought.

Therefore, it is hard to extrapolate from one to the other but I think since there are already seven global settlements, perhaps just taking the pluses and minuses the committee would benefit from just getting those statistics.

Mr. YATES. May I ask a question?

Mr. DICKS. OK.

COMPLIANCE AUDIT/LITIGATION ACTIVITY

Mr. YATES. Mr. Landesman, are you in charge of litigation?

Mr. LANDESMAN. The Office of Special Counsel is in charge of its own litigation.

Mr. YATES. Are you in charge of litigation for the Office of Special Counsel?

Mr. LANDESMAN. That is correct.

Mr. DICKS. There are two offices, the Office of Enforcement and the Office of Special Counsel.

Mr. LANDESMAN. The Office of Enforcement is basically a non-legal office and their legal work is done by the Office of General Counsel but for the major refiners, which is my responsibility, we do our own lawyering as well.

Mr. DICKS. Okay.

Mr. YATES. Mr. Landesman, do you have to wait until the audits are through, before the cases are referred to you?

Incidentally, I do not think the administrator ever completely finished his answer with respect to the procedures.

Mr. LANDESMAN. We do our audits and we do the litigation as well.

Mr. YATES. You do your own audits?

Mr. LANDESMAN. That is correct. We are an office that consists of accountants, auditors, lawyers——

Mr. YATES. Therefore, he is testifying for you, then, isn't he, when he talks about the need for audits and so forth? You should be the one to be telling us about this.

Mr. HOUSE. He works for me.

Mr. YATES. I know, but he reports back to you.

Mr. HOUSE. Yes, that is correct.

Mr. YATES. Therefore, he is on the firing line first.

Mr. HOUSE. Yes.

IMPACT OF FISCAL YEAR 1982 BUDGET RESOURCES

Mr. DICKS. He is the one who is being hurt by these reductions.

Mr. YATES. That is what I propose to find out.

Are you hurt by the reductions? I know it is your duty to defend this budget.

Mr. LANDESMAN. I am glad you answered my question for me.

Mr. DICKS. Read those words again: "turmoil and chaos"——

Mr. YATES. However, Mr. Landesman——

Mr. LANDESMAN. I think he meant that we are affected by the budget, yes.

Mr. DICKS. This is where the "turmoil and chaos" will occur.

Mr. YATES. Do you prefer that word to "hurt"?

Mr. LANDESMAN. It would be disrespectful for me to disagree with the Chairman's answer to his question.

Mr. YATES. Not to this Chairman. I am trying to find out, how are you hurt by this budget?

Let me point something out, Mr. Landesman. It is your statutory duty, of course, and the administrator's statutory duty to defend this budget. OMB has importuned you, adjured you, clubbed you into saying you will defend this budget or else something will happen.

Now we have the responsibility of trying to decide how much money you ought to get in order to achieve the goal for which your office was set up. Would you agree with me on that?

Mr. LANDESMAN. I think that is correct. Yes, sir.

Mr. YATES. If we therefore were to ask you whether you were receiving enough money to proceed expeditiously—and of course people may disagree on the word "expeditiously"—would the funds that remain in this budget permit you to proceed as expeditiously as you would have been able to proceed had the original budget been in place?

Mr. LANDESMAN. I think the only way I can answer that question would be factually, and I think as a figure——

Mr. DICKS. That is not a bad way to do it, either.

Mr. LANDESMAN. I think, as Mr. House explained, the difference in how you handle a particular task is a function of how much money and how many people you attach to it at any particular point in time. Since the administration has committed itself not to drop violations that have been discovered, the question is—and that is the question that we ask, and that is the question that you ask—will it be done all up front, will it be done spread out, will it be backloaded? That is a budget question; that is a policy question. It is not my place to——

Mr. DICKS. Yes it is, though. As a lawyer who has to bring these cases, wouldn't you be in a stronger position to be able to proceed

as quickly as possible, having the additional money? Mr. House has already testified that another $40 million would allow you to go forward on these cases this year.

Mr. LANDESMAN. There is no question but that if a lot more resources were applied to a particular activity then it would be done quicker. There is no way to dispute that.

Mr. DICKS. However, I tried to make this point earlier. As years go by it becomes more difficult to assemble the people, the witnesses, and everything else that has to be done if there is to be litigation.

Mr. LANDESMAN. There is no dispute about that either. Those are facts and there is no disputing that, but the question is, taking that into account, what ought to be done in light of the fact that there is an effort to try to reduce Federal outlays? That is a policy question. That is what it is not my place to answer.

Mr. DICKS. Yes, but the same point also is that we would have a chance to collect substantial amounts of revenues, which also helps us reduce the deficit earlier.

Mr. LANDESMAN. I do not think there is any dispute about that either.

SPECIAL COUNSEL SETTLEMENTS

Mr. LOEFFLER. Would the chairman yield?

Mr. YATES. Sure. Mr. Loeffler.

Mr. LOEFFLER. How many consent orders are reached that keep you from going through the tremendous time span of litigation? What has been your record of the past, generally speaking?

Mr. LANDESMAN. So far, in the Office of Special Counsel, which deals with 35 major refiners, we have reached total settlement, that is, comprehensive settlements covering multiyears and multisubjects, with 7 major refiners where the settlements are already final. That means they have gone through the public comment period and they have now been published in the Federal Register in final form and the remedies are already taking place or have taken place.

In addition to that, there are eight additional settlements, global settlements where we have published consent orders in proposed form for public comment, and the public comment period is over. We now have to decide whether to finalize those.

In addition to that, we are now actively negotiating with five major refiners and we are hopeful that those settlements may pan out as well.

Mr. LOEFFLER. That speaks then to the ability to move in a rather expeditious fashion—I know that nothing in Government is expeditious—but to move the alleged violations in a rather expeditious fashion, then, and that a resolution can be reached in those. There is a way that you can speak to the facts. Things are moving and can move basically in a rather responsible manner, notwithstanding the proposed reductions. Is that correct?

Mr. LANDESMAN. We are pleased with the record of settlements. It remains a strong policy of the Department, and Mr. House has been very encouraging in our efforts to try to settle whatever cases can be settled.

Mr. LOEFFLER. You have said and the Secretary has said as well that there is no question that there will be no amnesty, and pursuit will be made to the end, whatever comes.

Mr. LANDESMAN. That is correct.

ADMINISTRATIVE PROCEDURE FOR ENFORCEMENT

Mr. LOEFFLER. Mr. House, I note that the administrative procedure for enforcement, first you have what we call NOPDs, and then OPDs, and then PROs, and then potentially the consent orders. Is there any way that you might be able to expedite the proceedings by not having some of these intermittent steps?

Mr. HOUSE. Yes, there are some ways.

Mr. LOEFFLER. I am looking now at efficiency, at streamlining the work that you must go through and also the alleged violators must go through. If we can get to the meat of the issue, we can get it resolved and get it done.

Mr. HOUSE. That is the so-called beauty of the negotiated settlement. You can go from the PRO, Proposed Remedial Order, to a negotiated settlement and that cuts out, I think there are approximately 15 steps in the procedure to go through between OHA review—Mr. Breznay's office—and the FERC review, and then finally the court.

One of the things we are contemplating doing is taking a look at whether we can streamline that process even further beyond the negotiated settlement process. There are a number of things we are trying to do with respect to it. Could we get to the point where we do not have to have the FERC review? Could we get through that without having to go that route?

There are a number of things we would like to do but the negotiated settlement is the best way. For example, another point that I did not make earlier is, there are interest charges. From the day the proposed remedial order goes out to the day you finally settle there is a penalty or an interest charge just like the IRS has if you don't pay your taxes on time, and that just keeps rolling right on with time. Therefore, there is an impetus to settle by the defendants.

Mr. LOEFFLER. As quickly as possible.

Mr. HOUSE. Yes.

Mr. LOEFFLER. What would be the estimated savings as far as budget requirements are concerned to have the more expeditious process that you have described in general terms? I do not think the committee would hold you to an absolute figure because we understand we are speaking in generalities now but I think that it begins to make the case for reduction of——

Mr. HOUSE. At least a 10 or 15 percent savings, I think, would accrue. The way I get to that number is, I have to do the audit work and that is behind me. I am really now talking about going through the OHA, FERC, and then to litigation. If I could cut out one of those I could get an honest savings, I think, of at least 10 or 15 percent.

TIME INVOLVED IN ADMINISTRATIVE PROCEDURE

Mr. LOEFFLER. What are you talking about in time? For the perfect case situation, how long does the audit take and what is the administrative procedure in resolving the alleged overcharge?

Mr. HOUSE. I would like Avrom to answer that for the Special Counsel's office and I would like Gordon Harvey to answer that for the Office of Enforcement, the two program managers in the compliance area. I have some numbers but I think because of their 4 or 5 years in this area, they could answer that best.

Avrom, why don't you answer it first?

Mr. LANDESMAN. It is a very complex question. For the largest of the refiners, the comprehensive audit—an examination of the books and records of the company dealing with the compliance history from 1973 through the present—will take something like 3 years. In many cases that 3 years is behind us.

All the litigation steps, the notice of probable violation, the proposed remedial order, the trial, the evidentiary trial through the Office of Hearings and Appeals, and then an appeal from that, if we prevail, to the FERC, and then to the district court and then to the court of appeals, that could take anywhere from an additional 2 to 4 or 5 years. It depends on the complexity of the case and how hard it is fought and the time that any particular tribunal has to devote itself to a particular case.

Mr. HARVEY. I am Gordon Harvey. With regard to the Office of Enforcement, we deal with the other segment of the industry which has quite a few firms involved, dealing with the retailers, the small refiners, crude resellers, the independent crude producers, product resellers and NGL processors..

To date, we have completed a total of 26,000 audits in the history of this program. As mentioned earlier, we have some 10,000 violations that were charged. The time required for us to complete an audit really depends on the case and the program. It could be as short as 5 to 10 days for a small firm if we are speaking of just the audit stage, up to say 100 days to complete an audit for a much larger firm.

Mr. LOEFFLER. What is the net figure that you have collected in regard to overcharges from these 10,000 violators?

Mr. HARVEY. As far as consent orders, Mr. House mentioned that earlier when he gave you the breakout, and that number is $677 million in consent orders. That excludes about $470 million that has been alleged and now being contested in the administrative or judicial process.

Mr. YATES. Just a minute. What does that mean, excluding $470 million alleged and now being contested in the administrative or judicial process'?

Mr. HARVEY. What that means, Mr. Chairman, is that if we do not get a consent order, and I issue a proposed remedial order, charging a firm, that case then leaves my inventory and the case is heard before Mr. Breznay in the Office of Hearings and Appeals. I have approximately $470 million in documents that are presently in that stage. The $677 million that I mentioned are final consent orders.

Mr. LOEFFLER. Now, let's talk about the consumer.

Mr. YATES. Would you yield for one other question?

Mr. LOEFFLER. Certainly.

Mr. YATES. How much was claimed by the Government with respect to the consent orders for the $677 million?

Mr. HARVEY. Realizing that that pertains to some 10,000 firms, I really do not have that number.

Mr. YATES. The total claims?

Mr. HARVEY. No.

Mr. YATES. Could that be furnished for the record?

Mr. HARVEY. I could possibly give you some estimates by program because it would depend on the particular program as to what we would settle for.

Mr. YATES. The record should show how effective your process is in the collections.

Mr. HARVEY. I will be glad to provide it.

[The information follows:]

OFFICE OF ENFORCEMENT SETTLEMENTS

Since its inception (July 1, 1974), the Office of Enforcement has settled through the issuance of consent orders and remedial orders, 10,455 (excludes over 9,700 retail gasoline audits) violation cases totaling $677,186,720 in overcharges. The distribution of this amount by type of remedy and Enforcement program is shown below.

Since July 1, 1975, 3,881 violation cases were settled, of which 3,662 (94 percent) were settled by consent order and 219 (6 percent) were settled by remedial order.

OFFICE OF ENFORCEMENT SUMMARY OF SETTLEMENTS BY PROGRAM

[July 1, 1974–Mar. 31, 1981]

	Settlement amounts	Alleged violation amount
Crude producers	$98,432,175	$109,555,756
Crude resellers	37,841,782	37,893,782
Small refiners	260,878,548	278,107,267
Entitlements	12,912,428	12,912,428
NGL processors	120,977,476,	131,628,729
Refined product resellers	91,435,326	98,491,038
Refined product retailers	54,708,985	55,256,566
Total	677,186,720	723,845,566

ECONOMIC REGULATORY ADMINISTRATION, OFFICE OF ENFORCEMENT INFORMATION—SUMMARY OF ENFORCEMENT SETTLEMENTS AND PENALTIES [1]

[Including consent orders pending in Federal Register, July 1, 1974–Mar. 31, 1981]

Program	Refund	Rollback	Bank adjustment	Escrow	Subtotal	Penalty	Total
Crude producer	$64,511,199	$321,132	$0	$27,913,403	$96,745,734	$1,686,441	$98,432,175
Crude reseller	34,577	50,000	11,553	33,553,902	33,650,032	4,191,750	37,841,782
Small refiner	27,201,056	15,378,429	179,945,948	36,740,184	259,265,617	1,612,931	260,878,548
Entitlements	1,133,584	161,277	0	11,602,367	12,897,228	15,200	12,912,428
NGL processor	7,588,797	27,496,788	18,392,510	66,954,568	120,432,663	544,813	120,977,476
Refined product reseller	39,219,869	36,324,994	3,315,396	10,732,453	89,592,712	1,842,614	91,435,326
Refined product retailer	16,566,261	36,428,731	189,089	860,221	54,044,302	664,683	54,708,985
Total	156,255,343	120,161,351	201,854,496	[2] 188,357,098	666,628,288	10,558,432	[3] 677,186,720

[1] Excludes settlements expressed in barrels or gallons.
[2] Total includes $3,071,560 in private escrow and $1,633,022 in U.S. Treasury payments.
[3] Includes $28,948,942 in issued consent orders which are awaiting final publication in the Federal Register and $102,000 in associated penalties.

PROGRAM COSTS VERSUS REVENUES

Mr. LOEFFLER. We have now a basic revenue as a result of the alleged overcharges. How much has it cost us—and I am talking about every one of us, the consumers—for the litigation process, the Government for the compliance abilities of the small and large entities within America's energy industry, to try to be in compliance? In other words, what has it cost the private sector to just deal with the alleged overcharges, legal, accounting, and engineering representation?

Tell me as a consumer what I am paying for on that side of the equation and let's see if it is cost-effective to continue to pursue it. If we are going to cause the private sector to expend this money, they are going to pass it on to you and me when we buy that gasoline.

Now where are we going to break even? Is it still worth it for us to pursue? I believe that anyone who violates the law should be pursued. There is no question of that, but what are we talking about in dollars? What am I paying as a consumer for that company to try to be in compliance, to get all of its material together in the presentation of litigation or administrative resolution?

Mr. HARVEY. I would like to deal with the Office of Enforcement. I have no dollar value regarding what is involved but I can tell you this: Certainly litigation cost is expensive. That is why we need to be looking toward the negotiated settlement.

Now, for one of my programs which is one-third of my working case inventory, we recently negotiated a settlement plan with the National Oil Jobbers Council. We used to settle for 50 cents on the dollar; that was our average. In this particular program, we negotiated a "group settlement arrangement," where we can settle these cases from 30 to 50 cents on the dollar depending on the age of the case and the particular stage of the case.

One of our reasons for going into this arrangement was to reduce our own litigation costs and the firms' litigation costs. While this program is still in the implementation stage, our initial response has been good. Of those firms that have responded, 90 percent have indicated a willingness to participate.

It is sort of an indirect answer to your question but it is a recognition that litigation cost is expensive on both sides.

Mr. LOEFFLER. Yes, and as a consumer we pay our taxes on the one hand for pursuit of vigorous enforcement and as a consumer we pay on the other side. Where do we wash out in final cost terms now that we have decontrol, now that we have this segment behind us? What you are looking at is that window that opened in 1973 and closed in 1981.

Finally, I say to myself, is it worth it all? It is going to cost us one way or the other. Maybe we are at a point of breaking even, and maybe we ought to move on.

Mr. Chairman, I think it would be important if the Department of Energy could put together at least an estimate of the compliance cost to the private sector, whether it is alleged they have violated or not.

Mr. YATES. As I understand your testimony, you have had 10,000 audits and you have settled all of those for $677 million, is that right?

Mr. HARVEY. Yes, sir.

Mr. YATES. Do you propose to put in the record what your original claims were?

Mr. HARVEY. Yes.

Mr. YATES. Have you any idea what the costs were to the Government through the final settlement?

Mr. HARVEY. I could provide for the record, in fact both of us could, I think, what our budget cost has been since the inception. I can provide our equation of the costs. As to the private sector, it would be difficult and perhaps impossible.

[The information follows:]

OFFICE OF ENFORCEMENT SETTLEMENTS COMPARED TO THE COST TO THE FEDERAL GOVERNMENT

From its inception on July 1974 through March 31, 1981, the Office of Enforcement settled 10,455 violation cases totaling $677 million in overcharges. These settlement actions resulted in Treasury payments of $1.6 million. By contrast, the cost to the Federal Government of the program for that same period of time totalled some $159 million.

Mr. YATES. You could not provide the private sector and we would not expect you to. I think what Mr. Loeffler is asking you to do is to show how expensive the negotiating process was to the Government in arriving at $677 million. I would guess it would not be $677 million.

Mr. HARVEY. No, it is not.

Mr. LANDESMAN. I can answer your question exactly for the Office of Special Counsel. To date, the remedies flowing from the results of our cases have been about $494 million directly to consumers by way of refunds or price rollbacks. Included in that are payments to the United States Treasury; included in that also are payments into escrow funds which will go to consumers as soon as that procedure is more fully developed.

The cost to the Government so far for paying our salaries and other expenses through the end of this fiscal year will be $131 million. I do not think we really could estimate with any kind of intelligence what the cost is to the oil industry of fighting our cases——

Mr. YATES. I do not think Mr. Loeffler is interested in that really, are you?

Mr. LOEFFLER. I am interested.

Mr. YATES. He is.

OIL COMPANY DEFENSE COSTS

Well, how would they know what that cost was to the oil industry?

Mr. LOEFFLER. They know everything else about the cost to industry, Mr. Chairman, and I thought they would——

Mr. YATES. Would you know what the cost was to the oil industry?

Mr. LANDESMAN. I would hope that the lawyers for the other side are paid more than we are.

Mr. HOUSE. Would Avrom yield to the Administrator for a minute?

I think the point that needs to be made is this: If it costs this kind of money to get a negotiated settlement—and I think you

gentlemen are lawyers and you know a lot more about law, and we are talking about a lot of time—it obviously must cost a lot to both the private sector and the Government sector to not go the negotiated route but to go all the way through the litigation route. I think that is what you are trying to get at and I do not believe that we can make that estimate.

Mr. YATES. Well, the question Mr. Loeffler wants to know is whether you could supply to this committee directly or for the record the amount that it has cost the oil companies through the time it took to negotiate the settlement. Have you any way of knowing that?

Mr. LANDESMAN. No, sir.

Mr. LOEFFLER. Mr. Chairman?

Mr. YATES. Yes?

Mr. LOEFFLER. Might I rephrase the question somewhat differently?

Mr. YATES. Sure.

CONSUMER COSTS

Mr. LOEFFLER. Of all the points that both you and I have made as far as the costs, the costs of overcharges are paid initially by the consumer in any instance.

When the Government investigates these overcharges and settles for 50 cents on the dollar or 30 cents on the dollar, given all the costs involved, do the consumers really get a break, that is, the person in the private sector? In other words, we are looking at the pursuit of an end and I think these are important numbers to have before us. I think certainly the Department of Energy should be able to answer a question like that.

Mr. YATES. Well, they can answer it for their own costs but I do not know how they can answer it for the oil companies because they do not know all the costs that the oil companies have put into this.

Do you know all the costs, either of you? Mr. Landesman is searching his mind. He has a good mind. He is searching it very carefully. What is your answer, Mr. Landesman?

Mr. LANDESMAN. The reason I have been searching my mind is, that I was trying to think of some indirect way that one could discover that kind of cost but I think the answer is that that is probably a pretty closely held secret.

Congressman Loeffler, you are asking about two kinds of private sector costs: one, the cost to the consumer during the period of time that there was a compliance program in operation, when there were regulations, and whatever excess there was at that time, that is what we charged by way of violations; then the second cost is, how much is it costing the consumers to allow the oil company to defend itself against an overcharge case and if that charge is passed through as well—

Mr. LOEFFLER. You know it is.

Mr. LANDESMAN. You were making the point that the consumer is hurt a second time.

Then you have to add to that cost our salaries to see to it that the consumers are getting their refunds back if they were over-

charged, and I guess the costs of the tribunals in which these matters will be settled.

I think all one can say is what Mr. House correctly said: Surely those costs are so enormous that it ought to be in everyone's interest, both sides, to settle them, whenever it is possible to do so, in the public interest.

Mr. LOEFFLER. Mr. Chairman, I only suggest that these are important figures that perhaps we can get from other sources, too.

Mr. YATES. If you want to bring the oil companies in to testify, we will be glad to hear them.

I doubt they can provide the answer. They can provide it for the cost to the Government, as he has.

What was the relationship of those costs, Mr. Landesman?

Mr. LANDESMAN. We cost the taxpayers $131 million through fiscal year 1981. I am just talking about major refiner compliance now.

Mr. YATES. Yes, and what did you collect?

Mr. LANDESMAN. We have collected $494 million.

Mr. YATES. Therefore, it is 1 to 4 then, roughly.

Mr. LANDESMAN. Right.

Mr. YATES. OK.

SETTLEMENT PROCESS

Mr. LOEFFLER. How do you reach the decision to settle on 50 cents on the dollar or 30 cents on the dollar?

Mr. LANDESMAN. It does not work like that, 30 cents on the dollar or 50 cents on the dollar. You have to first make an estimate of how much of the gross violations that were charged really amounted to an overcharge, and that is different, case by case.

If I might just give you an example, we had brought two cases—one against Sun Oil in which we alleged that they failed to pay an import fee at a time when it was owed. The company had contended that the import fee program had lapsed at that time. There was a fight about whether a boat landed on one side of a time line or another.

We went to court. We won in district court. We knew that in that case, if we would prevail, the entire amount of the money would be owed to the Government, plus interest. When we settled with Sun Oil, we insisted, and they agreed, that the case would have to be settled only by payment of 100 cents on the dollar.

There are other kinds of cases, for example, where, say, a certain oil field did not produce stripper well oil which was exempt from price controls as the company said, but rather that the production from that field was lower-tier oil which should have had a maximum price, say, of $7 per barrel. You cannot necessarily take the excess price that the company charged and translate it into dollars of overcharge because you have to know what year you are talking about.

If it was a year, say, after the middle of 1976, some of the products of a barrel of oil had been decontrolled by then so there was no overcharge on those products. You do not necessarily know who refined that barrel of crude oil. You do not know at that stage whether the company had alternate costs that it could have used to

justify the prices on butane or propane or gasoline, in which case the excess charge for the crude oil might be somewhat academic.

When you are dealing with those kinds of problems, you first make some kind of intelligent estimate of what the overcharge would be in real terms to the consumers. Then you have to figure out how solid your case is evidence-wise, how solid your regulations are, what looms on the horizon in the courts that might upset your case or your legal theories. You have to do a litigation exposure analysis, which the other side does too, and you sit down to trade.

It is sort of like buying a house: You figure out how much it is worth to you to live there, and then you figure out how much it is worth to them for them not to live there, and you arrive at a price. That is the great American way, and that is what we try to do.

REDUCTION IN FORCE

Mr. YATES. This committee is in receipt of a letter dated April 7 from the chairman of the Committee on Energy and Commerce which I would like to get some responses to. It is addressed to me. It says:

> Last week this subcommittee held hearings on the status of the Economic Regulatory Administration's activities and the impact of the budget proposals. . . . The principal focus was on the compliance program.
>
> Enclosed is a copy of the subcommittee's staff memorandum of March 30, 1981 which summarizes the staff investigation. I call your attention particularly to pages 6 through 13 which indicate that compliance alone will have to initiate in fiscal year 1981 a substantial and costly reduction-in-force under the OMB-inspired budget for fiscal year 1982.

Is that correct?

Mr. HOUSE. It is no longer correct.

Mr. YATES. Why is it no longer correct?

Mr. HOUSE. We have reached agreement with OMB to carry forward unused fiscal year 1981 funds to more than satisfy the requirements so that we will not have to have a RIF in the Office of Compliance before November 30 of this year.

Mr. YATES. Of this year?

Mr. HOUSE. Of this year, which is fiscal year 1982.

Mr. YATES. What happens on November 30 of this year?

Mr. HOUSE. Depending on attrition and depending on where we finally come out, we will probably have to have a reduction-in-force.

Mr. YATES. How much?

Mr. HOUSE. The going-in number is 947; the coming-out number at the end of the year is 235, so you are talking about a reduction of 712.

Mr. YATES. If you lose 500 people, what happens to your program? What was the number, 900 going-in and 200 remaining?

Mr. HOUSE. Two hundred and thirty-five.

Mr. YATES. Therefore, you will have lost 700 people.

Mr. HOUSE. Yes.

Mr. YATES. Well, what happens to a program that loses 700 people?

GENERAL COUNSEL LEGAL SUPPORT

Mr. HOUSE. Well, you have to treat this in terms of three other things: First, we have approximately 100 lawyers in the Office of General Counsel that are being used to support this program, so that the 235——

Mr. YATES. Is that in Mr. Landesman's office?

Mr. HOUSE. No, that is in Mr. Harvey's area.

Mr. YATES. He has 100 in his office. How many does Mr. Landesman have?

Mr. HARVEY. They are in the Office of General Counsel but they support my office.

Mr. HOUSE. There is a split, Mr. Chairman.

Mr. YATES. How many people are there in the Office of General Counsel?

Mr. HOUSE. In the Office of General Counsel?

Mr. YATES. Yes.

Mr. HOUSE. I do not know.

Mr. YATES. Would you know, Mr. Harvey?

Mr. HARVEY. I do not know the gross number. I just know that they have well in excess of 100, but 100 deal with my program; they support my program.

Mr. YATES. You are not in the Office of General Counsel?

Mr. LANDESMAN. No, sir.

Mr. YATES. Are you in the Office of Special Counsel?

Mr. LANDESMAN. Special Counsel.

SPECIAL COUNSEL LEGAL SUPPORT STAFF

Mr. YATES. How many lawyers do you have?

Mr. LANDESMAN. About 100.

Mr. YATES. Have you had 100 lawyers since you organized?

Mr. LANDESMAN. Yes.

Mr. YATES. Are you going to lose any by November 1981?

Mr. LANDESMAN. By November 1981, no, sir.

Mr. YATES. Will you lose any after November 1981?

Mr. LANDESMAN. Perhaps a few.

Mr. YATES. How many is "a few"? Will you lose enough to interfere with the operation of your program?

Mr. LANDESMAN. I do not think the loss of lawyers in my program will be more than 10 percent. I have enough staff under the proposed budget to cover about the number of lawyers that I now have.

Mr. YATES. Including what you will need for the next fiscal year?

Mr. LANDESMAN. Under the plan we have for enforcement next year, that is correct.

Mr. YATES. Do you mean, phasing it out?

Mr. LANDESMAN. Not phasing it out, but the——

Mr. YATES. Phasing it onward?

Mr. LANDESMAN. If I understand what you mean, the answer is "Yes." In other words, for the plan that we have on what cases to litigate, it is not lawyers that we will lose, no.

Mr. YATES. Who are you going to lose?

Mr. LANDESMAN. The attrition would not be on the legal side. The attrition in our office would be from the auditing side.

Mr. YATES. Would you need them?

Mr. LANDESMAN. We need audit support to help us with litigation. We will have some audit support, and the plan, the enforcement plan that we have takes into account the character of the skills that we have available.

Mr. HOUSE. Mr. Chairman, one of the things that I am trying to do as a manager is make sure that, as I mentioned earlier, we are going from the audit or labor-intensive, heavy phase of this program in both those office areas to a litigation or negotiated settlement phase, and I believe there is room for economy of force.

For example, there were things like country-wide studies being done. There were some things that were not directly related to audit work being done. We do not need to do those things any more. Once we get the audit material behind us, we can go into a negotiated litigation phase.

Mr. YATES. Let me ask Mr. Landesman that question.

What do you need to try a case? Do you need any country-wide study?

Mr. LANDESMAN. Not usually, no.

Mr. YATES. Then you do not worry about country-wide studies?

Mr. LANDESMAN. No.

Mr. YATES. All you need are your auditors.

Mr. LANDESMAN. We need lawyers, we need auditors and we need computer specialists; those are the three major skills.

OUTSTANDING CASES

Mr. YATES. How many cases do you contemplate you will have to file in fiscal year 1981?

Mr. LANDESMAN. We have 190 cases presently outstanding that we have already filed.

Mr. YATES. Active cases?

Mr. LANDESMAN. Active cases.

Mr. YATES. One hundred and ninety-one?

Mr. LANDESMAN. One hundred and ninety. As a result of the audits now going on, about to be completed, and based on past audit work now being studied we will have about another 65 cases to do.

Mr. YATES. To do in this fiscal year, in 1981?

Mr. LANDESMAN. To start. Well, for some of them the audit work will not be finished in 1981, but say in the next 12 months we would have to start another 65 cases.

Mr. YATES. Therefore, the total number of cases that you envision will have to be filed to complete this program will be be 255, is that right?

Mr. LANDESMAN. Yes. Subtract from that, though, Mr. Chairman, if you would, a certain number that will not have to be done as a result of settlements that we hope will come through.

Mr. YATES. How many?

Mr. LANDESMAN. Well, that is speculation but——

Mr. YATES. How many do you think will come? Give me a guess.

Mr. LANDESMAN. Okay. My guess would be that 55 cases will have been settled by eliminated within the next 12 months, putting us back to 200.

Mr. YATES. Therefore, you are going to have to try 200 cases?

Mr. LANDESMAN. Yes, sir.

Mr. YATES. How many lawyers will you have to try the 200 cases?

Mr. LANDESMAN. Eighty-seven.

Mr. YATES. Eighty-seven lawyers to try—are all of these trial lawyers or are some of them supporting lawyers that do research and so forth? How many trial men do you have?

Mr. LANDESMAN. All 87 have some aspect of litigation skill.

Mr. YATES. They will all be used to try cases in one form or another?

Mr. LANDESMAN. Yes, sir. That is correct.

Mr. YATES. Now that they have some kind of skill for trying the cases, they need witnesses, don't they?

Mr. LANDESMAN. Yes.

Mr. YATES. What kind of witnesses do they need? Auditors?

Mr. LANDESMAN. Often they will need auditors. They will need someone to authenticate documents.

Mr. YATES. Will they have them?

Mr. LANDESMAN. The cases that we are going to bring, Mr. Chairman, in fiscal year 1982 will be those for which we do have audit support and for which we do have witnesses. We do not plan to bring cases that we are going to lose.

Mr. YATES. How many cases are you going to bring in 1982?

Mr. LANDESMAN. Approximately 32.

Mr. YATES. In addition to the 200?

Mr. LANDESMAN. No, sir, of the 200.

COMPARISON WITH JANUARY BUDGET REQUEST

Mr. YATES. On the basis of your original budget, how many were you going to bring?

Mr. LANDESMAN. I am sorry, Mr. Chairman, I do not understand what you mean by the "original budget."

Mr. YATES. Don't you have a reduced budget? It says here compliance lost $55 million.

Mr. LANDESMAN. I think you are referring to the prior administration's budget, aren't you.

Mr. HOUSE. That is——

Mr. YATES. What are you shaking your head about?

Mr. HOUSE. I think there are two things you have to look at. You have to adjust that prior administration budget for the decontrol sooner, you have to adjust it for negotiated settlements.

Mr. YATES. I assume he will do that.

Mr. HOUSE. OK.

Mr. YATES. Mr. Landesman is a pretty smart fellow.

Mr. HOUSE. I know he is.

Mr. YATES. Yes. Okay, Mr. Landesman.

Mr. LANDESMAN. I wish I were not.

Mr. YATES. If you were not, what would your answer be?

Mr. LANDESMAN. If I were not, sir, I would not know how to answer this question.

I do not think I really know the answer to your question but it is probable that——

Mr. YATES. What was your original schedule? I am trying to find out your schedule of filing cases and how it was changed by the reduced budget. That is what I am asking you.

Mr. LANDESMAN. What is changed by the present budget request is that not all of the cases that have to be filed will be able to be aggressively pursued during 1982.

Mr. YATES. Because of budget restrictions?

Mr. LANDESMAN. Because of not enough personnel.

Mr. YATES. Because of budget constrictions?

Mr. LANDESMAN. That is correct.

Mr. YATES. Are there any disadvantages as a result of those budget constrictions?

Mr. LANDESMAN. Well, as we said earlier, life might be more pleasant and easier if there were more people to do more work in 1982 but under the budget request to the Congress, that is not the case.

Mr. YATES. Let me read to you from some proposed language. Suppose I were to read to you, "The committee is concerned about the Department's proposed fiscal year 1982 reduction in the compliance and enforcement program of ERA, specifically the Office of Special Counsel and the Office of Enforcement." Would you agree that the committee should be concerned?

Mr. LANDESMAN. This committee?

Mr. YATES. Yes.

Mr. LANDESMAN. I am sure this committee is concerned about all of the offices for which they make appropriations.

Mr. YATES. Suppose the committee wants to make it clear it considers this activity of exceptional importance and it fully intends to provide adequate funds in fiscal year 1982 to continue vigorous compliance and enforcement activities of ERA.

Would your answer be the same? Is there enough money in this budget to achieve the committee's goal?

Mr. LANDESMAN. That is a very difficult question for me to answer, Mr. Chairman.

Mr. YATES. I know it is but you know, I have an expert witness and that is the reason I am asking the difficult questions.

Mr. LANDESMAN. I am not entirely certain that that is a fair question to ask of me.

Mr. YATES. In what respects is it unfair?

Mr. LANDESMAN. I am not sure that question is a fair question.

Mr. YATES. Congressmen are sometimes called upon to ask unfair questions.

Mr. LANDESMAN. Surely not this Chairman.

Mr. YATES. Will it jeopardize your status for me to press that question? If it does, tell me. Tell me in what respect it is unfair. Are you looking for help from Mr. House?

Mr. HOUSE. I will answer it.

Mr. YATES. I know you will. I am trying to find out from him, though. I know what your answer will be.

Mr. LANDESMAN. If the intention of your question was, have I been threatened with some reprisal if I answer your question differently than I have been, the answer is "No." I am physically free to answer your question.

It is a question of the proper role. As I explained to you earlier, I am not a budget officer and I am not a policymaker in the Department of Energy. I think really all I can do, Mr. Chairman—I mean this very honestly and seriously and respectfully—is provide facts with respect to the budget. That is why I am attempting not to answer policy questions.

Mr. YATES. Let me provide you with certain facts. You have filed 190 cases in this year, right?

Mr. LANDESMAN. No. There are 190 of the cases that we have already filed.

Mr. YATES. Yes.

Mr. LANDESMAN. That is, of the 284 actions that we have already taken, 190 remain outstanding today.

IMPACT OF PROPOSED BUDGET

Mr. YATES. Will the budget cuts that have been proposed affect the enforcement of those cases?

Mr. LANDESMAN. Under the proposed budget, it will not be possible to work actively and aggressively on all of those actions during 1982.

Mr. YATES. Why not?

Mr. LANDESMAN. Because there simply would not be either enough attorneys or enough support for the attorneys to work on so many cases at once.

Mr. YATES. What would you need in funding in order to provide that work?

Mr. LANDESMAN. Again, Mr. Chairman, quite respectfully, that is sort of the same question which I indicated some hesitation about.

Mr. YATES. No, I am proposing a question to you. You are saying you have not the personnel to move forward as expeditiously as had been previously contemplated. Is that a fair statement by you?

Mr. LANDESMAN. Yes.

Mr. YATES. I then asked you what was lacking there, and you said, "not adequate personnel." From that response, you do not have enough money in the budget to provide adequate personnel. Is that a fair statement?

Mr. LANDESMAN. No, that is not entirely what I meant to say. What I meant to say was that the budget that was submitted to the Congress by the administration proposes a plan for enforcement during——

Mr. YATES. I know what that proposal is. I am trying to find out what your plan was before you received the current budget.

Mr. LANDESMAN. The prior administration's budget called for something like 510 staff-years for the Office of Special Counsel. The present budget proposal calls for 120 staff-years, and even with the amendment that will be coming forward, that would only take us to about 164 staff years. Obviously the two budgets proceed on completely different assumptions as to how enforcement would take place during fiscal year 1982.

Mr. YATES. What is the difference in money that is represented by the two staff-years?

Mr. LANDESMAN. The difference is, the prior administration's budget——

Mr. YATES. What is the amount of money for 510?

Mr. LANDESMAN. Twenty-nine million.

Mr. YATES. That is a fair answer to an unfair question: $29 million.

How much money is represented by the 164?

Mr. LANDESMAN. It is about $8.5 million.

Mr. YATES. Therefore, you have $8.5 million requested to do the work for which you had previously asked for $29 million. Is that correct?

Mr. LANDESMAN. It is not the same work, Mr. Chairman.

Mr. YATES. I know it is not the same work because, if I understand you, what you have done is to phase into the future some of the work, so it is not the same work.

Mr. LANDESMAN. That is correct.

Mr. YATES. Therefore, you are taking a lot longer to do the work that you originally contemplated doing in a shorter period.

Mr. LANDESMAN. You have stated the issue properly.

Mr. YATES. What is the breakdown of the $29 million? In other words, the 510 man-hours or man-years? Do you want to put that in the record, Mr. Landesman?

Are you uncomfortable about this? I am really clubbing you into it, so it is not your fault.

Mr. LANDESMAN. Well, if you could give me a note to the teacher to that effect——

Mr. HOUSE. The teacher has the note.

Mr. YATES. Is this the teacher over here?

Mr. LANDESMAN. No.

Mr. YATES. Who is the teacher, Secretary Edwards?

Mr. LANDESMAN. There is no teacher.

JANUARY BUDGET REQUEST

The breakdown of the prior administration's budget request was $24.2 million for normal budget outlays and $5 million for contracts. Is that a fair answer, Mr. Chairman?

Mr. YATES. I do not know that that is adequate. Does that tell me all the personnel you need?

Mr. LANDESMAN. Well, that would surely be——

Mr. YATES. Does that tell me how many lawyers and support and other personnel you need to make up the $29 million? Your answer just now did not tell me that, did it?

Mr. LANDESMAN. No, it did not.

Mr. YATES. Will you tell me that now?

Mr. LANDESMAN. Well, under those numbers, the way the budget had been presented to the Congress there would have been 80 staff-years for audit completion; there would have been 55 staff-years for the issuance of enforcement orders; there would have been 30 staff-years for the conduct of special investigations; and there would have been 240 staff-years for the conduct of OHA and FERC appeals.

There would have also been 55 staff-years to handle court and appellate court litigation, 8 staff-years to handle Freedom of Information Act requests and other discovery requests, and 45 staff-years to pursue settlements and verification of settlement remedies, for a total of 513 staff-years.

Mr. YATES. This is the so-called Carter budget, isn't it?

Mr. LANDESMAN. Yes, sir.

Mr. YATES. If I may use that phrase.

Mr. LANDESMAN. You may, sir.

Mr. YATES. Thank you.

Now, let's go back a little further than the 513. Take each of the figures you just read me and tell me what you asked the Department of Energy for in the start of the budget process. The budget process goes through the whole process of your request from the Department of Energy and the Department of Energy approving that amount, and your going to OMB for that amount. Now can you tell me whether the amount that you asked the Department for was higher than these amounts?.

Mr. LANDESMAN. It was, sir.

Mr. YATES. What was it for audit modules completed?

Mr. LANDESMAN. I am sorry. I do not remember. There were approximately 100 additional——

Mr. YATES. Does your assistant have the exact amount? Let's wait until he finds it.

Would you like to sit up next to him?

Did you help prepare this Carter budget?

Mr. LANDESMAN. Yes, sir.

The answer to your question, sir, is that——

OMB BUDGET REQUEST

Mr. YATES. What are you looking at? Is that something we can put in the record?

Mr. LANDESMAN. I am sure if the chairman of the committee asks for it, we would make it available for the record.

Mr. YATES. May I ask you for it right now, to submit it for the record so that you do not have to go through the whole thing?

Mr. LANDESMAN. Certainly.

Mr. YATES. Okay. May I see it?

[A document was passed to the Chairman.]

Mr. YATES. Is this the OMB budget or is this what you asked the Department for?

Mr. LANDESMAN. I am sorry, Mr. Chairman?

Mr. YATES. Let me just hand this back to you and ask you, is this the OMB budget that you received from OMB or is this what you asked the Department for?

Mr. LANDESMAN. That is what the Department asked OMB for.

Mr. YATES. Then you have not answered my question as to what you asked your department for yet, have you? Would it be the same?

Mr. LANDESMAN. It would be the same.

Mr. YATES. Did the Department give you everything you asked for?

Mr. LANDESMAN. I believe so, yes. The answer is "Yes."

Mr. YATES. These may go into the record. Do you have copies for us for the record? Do you have extra copies for yourself? We will have to photostat a copy. We will be glad to make photostats for you.

[The information follows:]

of consent orders, remedial orders and court decisions rendered concerning the 35 major refiners. This combination of litigation intensification and settlement monitoring will ensure that violations are enforced to the full extent of the EPAA legislation.

Audits will be conducted in all other sectors of the petroleum industry for previously unaudited periods covered by the EPAA including the issuance of enforcement actions and the determination of appropriate penalties and refunds. Administrative and judicial proceedings will continue in all cases opened prior to decontrol as well as in cases opened after decontrol for previously unaudited periods. Such close-out activity is expected to continue through FY 1982. Special investigation activities will continue wherever there is evidence of potential willful violations. Where such cases are referred to DOJ, Enforcement will assist in the prosecution. The EUA and ESECA will be enforced at the projected 1982 workload levels. Price and supply verification audits will be conducted for crude oil and refined oil products following the expiration of EPAA.

Output/workload measures:	1980 Units	1980 SY	1981 Units	1981 SY	1982 This Pkg. Units	1982 This Pkg. SY	1982 Cumulative Units	1982 Cumulative SY
A. Major Refiners								
1. Audit Modules Completed	180	387	130	201			90	80
2. Enforcement Orders	107	94	88	109	-	-	42	55
3. Special Investigations	10	13	15	28	-	-	20	30
4. DOE and FERC Appeals	14	110	50	180	10	32	80	292
5. District Court and TELA Actions	10	22	20	40	5	8	35	73
6. FOI and Other Information Requests	345	7	440	9	-	-	200	4
7. Settlement and verifications	5	16	12	45	-0-	-0-	20	70
Subtotal, major refiners		614		612		40		612
B. All Others								
1. Civil Enforcement Actions	750	235	1,039	234	-	-	1,007	227
2. Special Investigations	99	125	99	125	-	-	94	125
3. Audits Without Formal Enforcement Documents	350	110	387	110	-	-	369	105
4. Retail Gasoline Audits	27,000	237	21,750	191	-	-	3,500	94
5. OHA Actions	177	47	212	56	-	-	150	39
6. FOI and Other Information Requests	1,500	15	1,500	15	-	-	1,500	15
7. EUA/ESECA Enforcement Actions	15	2	41	6	-	-	73	27
8. Price and Supply Verification Audits	0	0	0	0	-	-	40	34
Subtotal, All Others		771		737	-	-		666
Total, Compliance		1,385		1,349		40		1,278

Package 2 of 2 (Cont.)

Impact on major Objectives:

A. Major Refiners

1. Funding the program at this level will ensure that a complete and comprehensive enforcement program will be brought to bear on the petroleum transactions of the 35 major refiners. The Emergency Petroleum Allocation Act (EPAA) pricing and allocation regulations will be audited to the fullest extent possible. For the period up through at least 1986 the lengthy process of litigation and settlement will be undertaken. This will assure that the compliance commitment will not be relaxed in the waning months of control and will assure that refiner violations will be fully pursued by the Department.

2. Monitor and verify terms of Consent Orders, Remedial Orders and Court Decisions rendered concerning the 35 major refiners. This process is necessary to assure that refiners have complied with the terms of the orders by making refunds, rebates, etc.

B. All others

1. This level will permit the realization of all the major objectives. It will allow for the orderly phase-out of EPAA audit activity, thereby assuring an adequate deterrent effect in the industry.
2. The focus will be on court and administrative litigation in the resolution of cases. This approach is cost-effective in that the program will pursue violations of previously unaudited periods after decontrol rather than "forgiving" such violations.
3. This funding level will allow the proper close-out of cases opened prior to decontrol, returning dollars to the public for violations that have already been discovered and where the audit work has begun.
4. It will also assure proper enforcement of the provisions of FOA and ESECA, and provide a "watch dog" effect by verifying prices and supplies after decontrol.

FY 1982 BUDGET TO OMB
CURRENT LEVEL DECISION PACKAGE
Department of Energy
Economic Regulatory Administration
Economic Regulation: 89-0217-0-1-276
Compliance - 7803
Federal Manpower Justification

Mission	Program/Function Objectives	Workload Description	Staff Year Equivalents FY 1980	FY 1981	FY 1982 Cumm. (Incr.)	Output	Workload Quantification Quantity FY 1980	FY 1981	FY 1982 Cumm. (Incr.)
Audit the 35 major refiners for compliance with DOE price and allocation regulations and litigation violations.	Identify overcharges and allocation irregularities at the 35 major refiners and cause financially injured parties to be whole.	Conduct audits and special investigations	94	109	55	Enforcement Orders Issued	107	88	42 (-0-)
			18	28	30 (-0-)	Special Investigations Completed	10	15	20 (-0-)
		Litigate cases resulting from audits	110	180	292 32	DOE & FERC Appeals	14	50	80 (10)
			22	40	73 (8)	District Court and TECA Actions	10	20	35 (5)
			7	9	4	FOI & Other Information Requests	345	440	200 (-0-)
		Settlement and verification	16	45	78 (-0-)	Settlement/ Verification	5	12	20 (-0-)
			347	201	80	Audit Module Completed	180	130	90
	Total Major Refiners		614	612	612 (40)				

FY 1982 BUDGET TO OMB
CURRENT LEVEL DECISION PACKAGE
Department of Energy
Economic Regulatory Administration
Economic Regulation: 89-0217-0-1-276
Compliance - 7803
Federal Manpower Justification

Mission	Program/Function Objectives	Workload Description	Staff Year Equivalents FY 1980	FY 1981	FY 1982 Cumm. (Incr.)	Output	Workload Quantification Quantity FY 1980	FY 1981	FY 1982 Cumm. (Incr.)
Assure compliance with pricing and allocation regulations of EPAA.	Conduct audits and investigations and take proper enforcement actions.	Special investigations	125	125	125 (-0-)	Investigations Conducted	99	99	94 (-0-)
		Civil enforcement actions	235	234	227 (-0-)	Actions taken	750	1,019	1,007 (-0-)
		Audits completed without formal enforcement documents	110	110	105 (-0-)	Audits w/o Formal Documents Completed	350	387	369 (-0-)
		Retail gasoline audits	237	191	94 (-0-)	Retail Audits Conducted	27,000	21,750	3,500 (-0-)
		OHA actions	47	56	39 (-0-)	OHA Actions Taken	177	212	150 (-0-)
		FOI and other Information requests	15	15	15 (-0-)	FOI and other Information Requests Answered	1,500	1,500	1,500 (-0-)

FY 1982 BUDGET TO OMB
CURRENT LEVEL DECISION PACKAGE
Department of Energy
Economic Regulatory Administration
Economic Regulation: 89-0217-0-1-276
Compliance - 7803
Federal Manpower Justification

Mission	Program/Function Objectives	Workload Description	Staff Year Equivalents FY 1980	FY 1981	FY 1982 Cumm. (Incr.)	Output	Workload Quantification Quantity FY 1980	FY 1981	FY 1982 Cumm. (Incr.)
Assure compliance with coal utilization and program rules and orders of the FUA/ESECA.	Monitor terms, conditions, and compliance plans for exemptions and prepare Notices of Violations and develop information for court or administrative law judge.	FUA/ESECA enforcement actions.	2	6	27 (-0-)	Actions Taken	15	41	73 (-0-)
Verify price and supply after decontrol.	Verify price and supply of decontrolled crude oil products.	Price and supply verification audits.	0	0	34 (-0-)	Audit/Verification Projects Completed	0	0	40 (-0-)
	Subtotal, All Others		771	737	666 (-0-)				
	Total, Compliance		1,385	1,349	1,278				

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DEPARTMENT OF ENERGY
FY 1982 Budget to OMB
Current Level Decision Package

Summary of Actions taken Which Increase or Decrease Federal Manpower Requirements:

A. Major Refiners

This level of funding is based on a decrease of 100 staffyear equivalents in the audit and special investigation areas, an increase of 78 staff year equivalents in the litigation phase of the program, and an increase of 21 staff year equivalents in the price and supply monitoring activities. The primary reason for the decrease in the audit and special investigation areas is that, during the budget year, the OSC will be making the transition from audit and audit close-out to intensified litigation activities which will continue at least through FY 1986, and price and supply monitoring activities.

An audit strategy was developed at the outset of the program specifically to accomplish the audit of the 35 major refiners. The audit areas of crude production, natural gas liquids, class of purchaser, crude import, domestic crude purchases, purchased products, non-product costs, transfer pricing, entitlements, cost recoveries, product allocation and energy information reporting will be reviewed for compliance with petroleum pricing and allocation regulations. Under this strategy the audits were intensified by making enhanced resources available to the resident teams by the utilization of attorneys, auditors and systems analysts specially trained to examine the various audit areas of concern. Contractual support is used to assist in the completion of audits and provide paralegal support. This strategy has proven to be very productive.

An organization and program strategy, similar to the intensified audit strategy is evolving for use in managing and resolving the significant volume of important litigative actions that have resulted from the audit phase of the enforcement program.

The strategy of providing enhanced resources initially adopted in the audit phase, will now also be installed in the post-control price and supply monitoring activities of the OSC. Methodologies will be developed to gather petroleum price and supply data concerning the 35 major refiners and to perform economic and market behavior analyses. Spotcheck investigations will be implemented as a means of verifying the data gathered and the results of the analyses performed. The resources applied to this specific activity will not include contract support and will not affect the intensified litigation effort.

The OSC is organized in such a way that no single audit has a unique output, but rather all units, both in the headquarters and the field contribute directly through an audit or litigative team to OSC's productivity and accomplishments.

Summary of Actions Taken Which Increase or Decrease Federal Manpower Requirements (continued:)

B. All Others

This level of activity represents a decrease of 171 Federal positions or 91 staffyears from FY 1981. The reason for the decrease is that decontrol of crude oil and all products is expected on October 1, 1981, resulting in the gradual phase-out of EPAA audit activity. Contract auditors have been used in FY 1980 and FY 1981 and are expected to be used in FY 1982 in order to lessen the impact of a program phase down on Federal personnel. There will be increases in the enforcement of FUA/ESECA by conversion of 28 existing positions and 21 staffyears over FY 1981 as the workload continues to increase. Although some price and supply monitoring functions have been undertaken in previous years, the FY 1982 budget document represents the first report in which this function has been displayed separately. This is intended to point up the expected increased importance of this function in a decontrolled environment. Forty positions and 28 staffyears are shown for this activity in FY 1982.

BUDGET UNDER DECONTROL ASSUMPTION

Mr. LANDESMAN. I think, just for purposes of clarifying the record, it ought to be pointed out that that budget request was presented long before decontrol was announced and we did think that there would be substantially more work to do than it has turned out there will be.

Mr. YATES. Substantially more work?

Mr. LANDESMAN. Yes. We thought, for example, that we would have to audit compliance for most of 1981. As it turned out, price and allocation controls were terminated for 1981. In addition, that was done before we knew that there would be as many settlements as it turned out there were in January of this year.

Mr. YATES. Does that answer mean that, had you known that decontrol was going to come off you would have asked for more money?

Mr. LANDESMAN. If we knew that decontrol would have been accelerated we would probably would have asked for somewhat less money.

Mr. YATES. Somewhat less money?

Mr. LANDESMAN. Yes. Somewhat less than the 612 staff that we asked for.

Mr. YATES. The Carter budget shows that you were asking for 513, as you pointed out, 513 man-years of work through 1982 but then you go on and say, "an estimated functional distribution of end-of-year positions follows," "and that shows that at the end of 1982 you would have asked for 347 positions rather than the 514. I assume that you would have been cutting down all during that year—because of decontrol, or why?

Mr. LANDESMAN. One, because of decontrol, and two, because as Mr. House explained earlier, three-fifths of our staff consists of auditors, field auditors. We knew that at some time at least during fiscal year 1982 the vast majority of that work would be behind us.

Mr. YATES. Is that the reason for that reduction?

Mr. LANDESMAN. That is correct.

Mr. YATES. How would decontrol have changed the 513?

Mr. LANDESMAN. Decontrol would change the 513 only with respect to the first category of audit modules.

Mr. YATES. Can you give us an idea as to how much it would have been changed?

Mr. LANDESMAN. That number of 80 would be about half, had we known of accelerated decontrol.

REFORMULATION OF BUDGET

Mr. YATES. Now let me ask you a question: When the Reagan administration came into being, OMB asked you to reduce your budget, did it not?

Mr. LANDESMAN. Yes, the Department did.

Mr. YATES. With respect to your portion of that reduction, for your work, what was the Department's request to OMB? Was there a change in your request to OMB as a result of the——

Mr. LANDESMAN. We were asked for a new budget. We were asked to take into account the new philosophy of the administration.

Mr. YATES. What figures did you give to the Reagan administration? How do they differ from the figures that make up the 513 that you asked OMB for?

Mr. LANDESMAN. Well, I only know what ERA asked the Department of Energy for. I really do not know what the Department of Energy asked OMB for.

Mr. YATES. Who would know that? Is there a budget officer here who would know that?

[No response.]

Mr. LANDESMAN. I do not know, sir.

Mr. YATES. What did you ask the Department for?

Mr. LANDESMAN. The ERA request to the Secretary is contained in the memorandum that you had alluded to earlier; that was the $44 million number. That was for both offices, for the Office of Enforcement and the Office of Special Counsel.

Mr. YATES. Perhaps I do not understand you. Can you specify how it relates to those figures that you have before you?

Mr. LANDESMAN. No, I cannot. It was not broken out that way.

Mr. YATES. It was not?

Mr. LANDESMAN. No.

Mr. YATES. In other words, you were told to give a lower figure, and you gave a lower figure?

Mr. LANDESMAN. Let me just check the accuracy of my answer.

Apparently we did these calculations ourselves but they were not reflected in the submission to the Department. We merely gave an aggregate number for ERA and it was combined with the Office of Enforcement's aggregate number, and that was the basis of the memorandum.

Mr. YATES. Therefore, you asked the Department for $44 million?

Mr. LANDESMAN. ERA asked the Department for $44 million.

Mr. YATES. What did ERA receive from the Office of Management and Budget?

Mr. LANDESMAN. We received $11.9 million, sir, with the caveat that was explained earlier, that there will be a supplementation of that for purposes of carrying over some 1981 money to do three things: to avoid a reduction-in-force during fiscal year 1981, to pay for a continuation of a higher-level audit staff for two more months for both offices, and to cover the costs of severance pay during 1982 in the event that there should be a reduction-in-force.

Mr. YATES. Suppose there is this reduction-in-force in November 1981. How will it affect the trial of your cases? I assume you are going to lose auditors after November 1, 1981.

Mr. LANDESMAN. Oh, yes. As I explained earlier, we have already scoped that out and the cases that will be pursued aggressively will be the ones for which there will be sufficient audit support.

Mr. YATES. Through when? Forever?

Mr. LANDESMAN. Through fiscal year 1982.

Mr. YATES. Why did you ask for $44 million? That is an unfair question but why did you ask for $44 million? Obviously you thought that you should have $44 million, didn't you?

Mr. LANDESMAN. Yes, sir.

Mr. YATES. Well, if you asked for $44 million and you got $12 million, it is not the same thing, is it?

Mr. LANDESMAN. No. All I can say is that, as often happens with the budget, you make a request and you hope for it but our case was not persuasive and we did not get all we requested.

PROGRAM CHANGE

Mr. YATES. As a matter of fact you asked for more. You wanted $52 million and you cut it back to $44 million, and they cut it back to $12 million. With $52 million you intended to undertake a program of enforcement that will not be possible under your $12 million budget, will it?

Mr. LANDESMAN. It is a different kind of program.

Mr. YATES. I know it is a different kind of program but if you are administering the program, the most effective administration of the program would still be the $52 million, wouldn't it?

Mr. LANDESMAN. A higher number would permit a more aggressive, early pursual of the enforcement program.

Mr. YATES. Right. You are a good lawyer, Mr. Landesman. Suppose you represented the oil companies in this case and you were fighting that very able Government lawyer named Mr. Landesman, and the signal came out that instead of having $52 million to pursue the program he now had $12 million. Would you settle, or would you wait to see what further developments there were? Would your inclination be just to wait for further developments and delay in the hope that perhaps next year the same kind of delay would take place and permit a further procrastination?

CASE SELECTION

Mr. LANDESMAN. Well, I would certainly consider it a relevant factor to put into my mind. I would also wait to see whether I was one of the unfortunate ones to have been selected for aggressive pursuit.

Mr. YATES. How do you know which ones you are going to select? Do you put them into a hat and decide who you are going to take on first by drawing it from a hat?

Mr. LANDESMAN. No, sir.

Mr. YATES. How do you do it?

Mr. LANDESMAN. It is done on the basis of cases that have a large dollar impact; cases that are pretty far along already in terms of their development; cases that are solid; cases that represent precedents, that is, that put the fear of the Lord into other cases. There is a whole complex of criteria that go into that.

CURRENT SETTLEMENT EXPERIENCE

Mr. YATES. What has been your experience since the announcement of the reduced budget?

Mr. LANDESMAN. Since the announcement of the reduced budget, our settlement experience has been as follows: We have been able to finalize one of the settlements that had been in a proposed form previously, and I am quite certain that we will be able to publish a second one in the next couple of days. We have been negotiating pretty actively with four companies since that budget reduction.

Mr. YATES. What happens to your own frame of mind, Mr. Landesman? Are you inclined to be as aggressive as you would

have been if there had not been a reduction, as far as settlements are concerned? You are willing to take settlements now that you would not have taken before, aren't you?

Mr. LANDESMAN. No, sir. Mr. Chairman, as you may know, by nature I am not an aggressive person.

Mr. YATES. I gather a contrary impression, Mr. Landesman. In response to my questions you have been pretty aggressive.

Mr. LANDESMAN. Well, I hope not offensive.

Mr. YATES. No, I was just going to say perhaps "defensive" is a better word.

Mr. LANDESMAN. I do not personally think that it would be in the public interest to settle cases at a level less than I think it should be, just because of the budget.

Mr. YATES. Your standards for settlement have not been lowered, is what you are saying.

Mr. LANDESMAN. Yes, sir.

Mr. YATES. I would hope that would be true.

Mr. LANDESMAN. As a matter of fact, I think in part those standards will of necessity have to be raised, and that is because bank reductions which used to be an important factor in settling a case are no longer meaningful, because there are no prospective restraints on pricing. Therefore, all of the settlements are essentially for money now and it is going to make settlement tougher.

Mr. YATES. Would you repeat that last sentence?

Mr. LANDESMAN. Quite apart from the budget, settlements will be somewhat more difficult to achieve in an atmosphere in which the only remedy that the DOE can consider acceptable will be cash money, either money by way of refunds to customers or payments to the United States Treasury. There is no more possibility of settling by compromising future compliance or future banks of unrecovered costs. That is no longer a viable method of settlement.

Mr. YATES. What if the committee were to restore some of your funds between your $12 million and the $44 million? Would that permit you to have a more aggressive program.

Mr. LANDESMAN. The answer is "Yes."

SETTLEMENT BENEFITS

Mr. YATES. What has your experience been? Are the settlements you have achieved worth the time and the effort you have put in, in terms of their cost?

Mr. LANDESMAN. I believe so, yes. I believe settlements are a very important ingredient of our program because the length of time that it takes to pursue all of these violations through litigation—it is such a cumbersome process—that we would be at it for many, many years as would be the companies.

In addition, the ultimate benefit to the consumers by way of refunds might be so far removed from the occurrence that gave rise to the controversy that a measure of adequate compensation might be lost in any event. That is, it might be much more difficult to determine who were the injured parties and by how much they were overcharged. They may no longer be the same customers that the oil companies were selling to.

Therefore, I think no effort is too great that can be made to have these things settled quickly while there still is the commitment to

do so, and while the data is still live and while the markets are still pretty much the same.

Mr. YATES. Therefore, if the committee restored a portion of that funding it would be of benefit to the taxpayers of the United States, in your judgment?

Mr. LANDESMAN. Well, as I explained earlier, Mr. Chairman, all I can really do is explain facts. It is not my place to make policy.

Mr. YATES. Give us the facts, Mr. Landesman. Is there a relationship between the amount of money that you get in settlement of the cases and the disposition of the cases rather than settlement?

Mr. LANDESMAN. Mr. Chairman, no sane person would come before you and say that you could do as good a job for less money as you can with more money.

Mr. YATES. Let me go back to Mr. Dingell's memorandum now.

PHASE-DOWN COSTS

Mr. Dingell says:

On April 3, the DOE provided to us the "Summary of Phase Down Option Costs" for ERA. It includes a table entitled "Option A" which shows . . . RIF costs as follows: Program Administration, $375,000, compliance and so forth, for a total of $12,942,000.

Under this option, the RIF is now planned for November 30, 1981,

Which is what you have just told us, isn't it?

Mr. HOUSE. [Nods affirmatively.]

Mr. YATES [reading]:

The RIF for the other areas is planned for as early as June 30, 1981. In the case of fuels conversion and utility programs, the RIF is based on enactment of major legislative changes to the Fuel Use Act and to PURPA. Such changes have not yet been submitted to OMB for clearance, let alone to Congress for consideration. They will not be adopted by this committee in any haste.

Secretary Edwards testified that he did not want a RIF in compliance in fiscal year 1981. After realizing that the OMB budget for fiscal year 1982 cannot pay for a RIF and maintain a staff level of 235, he testified he plans to ask OMB to clear a proposal whereby the Appropriations Committee would include in the rescission proposals now before your subcommittee authorization to carry over unobligated and unspent fiscal year 1981 funds of the ERA into fiscal year 1982. These would be used by DOE to pay RIF costs for the compliance program in fiscal year 1982 and salaries for 726 FTP's in October and November 1981, and thus avoid a RIF in fiscal year 1981 for compliance.

Mr. Chairman, these RIF costs resulting from the OMB-inspired budget for 1982 are a gigantic waste of taxpayer's money and result in an even greater waste of human resources.

Do you agree with that? Would somebody like to answer that?

Mr. HOUSE. I do not agree.

Mr. YATES. He says the RIF costs resulting from the OMB-inspired budget for 1982 are a gigantic waste. He is talking about your RIF costs. Is he right? Is he wrong?

Mr. HOUSE. The RIF costs are going to be there by law. There are two things: There is lump sum payment and there is severance pay, and the only way you can avoid those is not having the RIF. Then if you do not have work for the people to do, they will be doing no work and they will still be collecting salary. I don't think that should be done.

Mr. YATES. Let's go on with Mr. Dingell. He says the Secretary says: ". . . there will be no amnesty for violations but he misunderstands the situation.

"Completion of the audits is only the tip of the iceberg."

Is that right? I guess so.

Mr. LANDESMAN. It is only the first phase of an enforcement process.

Mr. HOUSE. However, the iceberg cannot melt.

Mr. YATES. The iceberg cannot melt? I do not know of any iceberg that has not melted, do you?

Mr. HOUSE. My point is, once we have the audit——

Mr. YATES. It depends on the climate. If the climate is cold, the iceberg will not melt.

Mr. HOUSE. That is correct.

Mr. YATES. If heat is applied, the iceberg might melt.

Mr. HOUSE. That is correct.

Mr. YATES [reading]. "Those audits will produce additional civil and criminal actions."

Is that right? Is that right, Mr. Landesman?

Mr. LANDESMAN. "Yes."

Mr. YATES. The answer is "Yes."

Over 200 civil actions are now open in the Special Counsel's office. Another 500 have been opened by the Office of Enforcement. Most are pending in administrative proceedings at OHA. They simply will not be completed in fiscal year 1982 or possibly fiscal year 1983 even under the Carter budget.

Is that correct?

Mr. LANDESMAN. Yes.

Mr. YATES [reading]. "Under the Reagan budget of only 235 staff-years, it may be fiscal year 1985 or 1986 before they are completed."

Is that correct?

Mr. LANDESMAN. I really do not know. That is speculation.

Mr. YATES. Is it a possibility?

Mr. LANDESMAN. Yes.

Mr. YATES [reading]. "Yet these cases represent over $10 billion in civil overcharges. . ."

Is that correct?

Mr. LANDESMAN. No, they are violations. I do not think the word "overcharges" ought to be used in that.

Mr. YATES. All right, what about the amount? How would you describe it? $10 billion in alleged violations?

Mr. LANDESMAN. In regulatory violations.

Mr. YATES. In alleged regulatory violations, plus a number of criminal investigations.

Is that correct?

Mr. LANDESMAN. That is correct.

Mr. YATES [reading]. As shown by the enclosed staff memorandum, over $1 billion in settlements to date have resulted in payments to overcharge customers in many States.

Is that correct?

Mr. LANDESMAN. It is, yes.

Mr. YATES [reading]:

More than $200 million is in escrow accounts awaiting disbursement to customers or the Treasury. More can be expected.

DOE may never recover all of the $10 billion but collection of even half will be a success.

Right?

Mr. LANDESMAN. Yes.

Mr. YATES [reading]. "The OMB budget will ensure amnesty for much of this sum, despite Secretary Edwards' commitments."

Is that right?

Mr. HOUSE. Wrong.

Mr. YATES. Wrong? I'll tell Mr. Dingell that.

Mr. HOUSE. To "ensure" amnesty is pretty tough.

Mr. YATES. To "ensure" amnesty? Well, would you rather have "provide amnesty."

Mr. HOUSE. No.

Mr. YATES. What is it that you object to in "ensure"?

Mr. HOUSE. I object to it. We have been trying to make the point very clearly, Mr. Chairman, in all due respect, that instead of doing everything front-loaded in 1982 we have, because of the restriction on the overall Federal budget, decided to take a different approach with this new administration and it is going to take longer to do the same job.

Mr. YATES. However, this administration might change its mind, might it not? It might take longer, might it not, so that instead of having an amnesty you have a phaseout?

Mr. HOUSE. A phaseout, but no cases will be dropped.

Mr. YATES [reading]. "It will add litigation costs to the taxpayer and to the affected companies, due to the stretchout of enforcement well beyond fiscal year 1982."

Is that possible, Mr. Landesman?

Mr. LANDESMAN. [Nods affirmatively.]

Mr. YATES. He is shaking his head "yes", for the record.

For its cost, the compliance program has already been rewarding.

LOSS OF COMPLIANCE PERSONNEL

I urge your subcommittee to make it clear to Secretary Edwards and to OMB that RIFs in the compliance program will not be tolerated.

How do we stop RIFs in the compliance program? Can we do that? Should we do that? It is a matter of policy, isn't it?

Mr. LANDESMAN. Yes, sir.

Mr. YATES. We have not answered the question.

Efficiency demands that the program be funded at a higher level than the $11.9 million proposed by OMB. . . . Such action is urgent if we are to avoid greater losses of compliance personnel under a threat of a RIF—many of whom are the most experienced and capable.

Is that true: "many of whom are the most experienced and capable?" I would guess your most experienced and capable, if they are threatened with a RIF would want to look for a job somewhere else, wouldn't they?

Mr. LANDESMAN. Yes.

Mr. YATES. Have any of them done so yet?

Mr. LANDESMAN. Yes.

Mr. YATES. How many?

Mr. LANDESMAN. Well, in the Office of Special Counsel we have been losing about six to seven people a week in the last several months.

Mr. HOUSE. Are any of them lawyers, Avrom?

Mr. LANDESMAN. We have lost about 14 percent of our field lawyers since the beginning of the fiscal year.

Mr. HOUSE. Of the six or seven, is that one a month, two a month?

Mr. LANDESMAN. It is one a month.

Mr. HOUSE. Thank you.

Mr. YATES. Are these experienced personnel? Do you need special experience for your type of work, Mr. Landesman?

Mr. LANDESMAN. Well, at this stage in our program it is quite important that the lawyers who handle the cases have familiarity with the regulations, which are pretty complicated, and if possible also with the audits that we are conducting.

Mr. YATES. Would the restoration of funding persuade any of them to stay on?

Mr. LANDESMAN. That would be a matter of speculation, sir.

Mr. YATES. I thought you might know whether it would or not. Is it purely speculation? Have any of your lawyers told you that they were going to leave because of the reductions in force that are threatened?

Mr. LANDESMAN. Well, I think there has been hardly any doubt that the fact that there is going to be a lower budget in future years might persuade some of them to look for other work.

Mr. YATES. Well, is the efficacy of your enforcement program threatened by the prospective RIF?

Let me tell you a story. All Presidents have a portrait painted of them, and the story is told of the time that Calvin Coolidge had his portrait painted and it was to be hung in the White House.

One night Calvin Coolidge had a good friend visit him, and he took him back in a closet where the portrait was and showed it to him, and he said, "What do you think of it?"

There was a long silence. Coolidge said, "I think so, too."

Now you have not answered my question; is that story appropriate?

Mr. LANDESMAN. It is, because I really don't care to hang in the White House.

Mr. YATES. I hope you are not threatened with a RIF, Mr. Landesman.

I think it is just about the best answer to a question I have had all year long.

Mr. HOUSE. That gives him two years in a row.

Mr. YATES. What do you mean by that?

Mr. HOUSE. Last year, if you will remember just for a moment, you asked him why he was not answering one of your questions directly and he said it was because he could not think how to answer without doing it on a preposition.

GAO REPORT

Mr. YATES. There is a GAO report on the DOE compliance program, April 1. I can tell you what the committee's attitude is. As a matter of fact, I read to you what the committee's proposed attitude was, that we think the program is exceptionally important, and we think that it ought to be completed as promptly as possible. You would think so too, wouldn't you? If you had the money, you would like to complete it as promptly as possible and get it out of the way, wouldn't you?

Mr. LANDESMAN. It had been our thinking.

Mr. YATES. It still is your thinking, isn't it? You still want to get it out of the way as promptly as possible?

Mr. LANDESMAN. Yes.

Mr. YATES. Thank you, Mr. Landesman.

Mr. LANDESMAN. Thank you.

FUELS CONVERSION

Mr. YATES. Why should the Fuels Conversion program be completely eliminated?

Mr. HOUSE. Because the economics are such that it is no longer necessary.

Mr. YATES. Will you explain that?

Mr. HOUSE. Yes. The average cost per million BTUs for oil compared to gas compared to coal is on the order of magnitude of 2 to 1 for gas and about 3.5 to 1 for coal. Wherever it makes sense economically to do it that way, we are now going to do it that way.

When this program was initiated the numbers were not anywhere near like that. The differentials were not there. The program itself was to provide the incentive through its regulations and operations.

Mr. YATES. Let me read to you a letter we received from Consolidated Edison, dated March 26, which may go into the record at this point.

[The letter follows:]

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.,
Washington, D.C., March 26, 1981.

Mr. ROBERT KRIPOWICZ,
Staff Assistant, Subcommittee on Interior, Committee on Appropriations, House of Representatives, Washington, D.C.

DEAR MR. KRIPOWICZ: I am writing to your on a budget matter that is within the jurisdiction of the Appropriations Committee, Interior Subcommittee.

In the Administration's Revised Budget released March 10, 1981, the request for funds for the Fuels Conversion program of the Economic Regulatory Administration (ERA) of the Department of Energy has been reduced from a fiscal year 1981 authority of $24 million to zero for fiscal year 1982. The effect of this proposal will terminate ERA Fuel Use Act activity before the issuance of even one final prohibition order under the Act. This will have a devastating impact on the efforts of many electric utilities to convert power plants from oil to coal.

Several utilities, including Con Edison, are expecting the ERA to issue, pursuant to section 301(b) of the Fuel Use Act, prohibition orders for power plants now burning oil. These orders prohibit the burning of oil, thus encouraging the conversion to coal. (The orders do not authorize the burning of coal. Permits to burn coal must be obtained from local, state and federal environmental agencies.) The orders are an important factor in the effort to convert to coal. They focus the efforts of the state and local regulatory bodies on coal conversion with a clear expression of the national policy to reduce oil imports. With the ERA drafting the environmental impact statements (EIS), they provide a central credible source for such statements. In fact, the state and local governments have come to rely on ERA to issue these

EISs. If the work on these EISs is terminated by ERA because of a lack of funds and personnel, it may take several extra months before the state and local agencies can redevelop and complete substitute EISs. The prohibition orders also provide an exemption from the New Source Performance Standards of the Clean Air Act (Clean Air Act § 111). Without this exemption many conversions will not occur.

Con Edison provides an excellent example of the impact of the prohibition orders and the effect the proposed budget cuts on this program will have.

Con Edison wants to convert three of its most modern, efficient electric power plants in New York City to coal burning in order to reduce oil imports by 15 million barrels annually and save its customers over $350 million annually in fuel costs and related taxes. The Company's program calls for the use of low sulfur coal (1 percent sulfur content) with very efficient electrostatic precipitators (99 percent efficiency). The conversions cannot be made, however, without a change in the New York State and City air pollution regulations (and the State Implementation Plan) which preclude Con Edison's use of coal as a normal boiler fuel in New York City.

Assistance from the Department of Energy in the form of final prohibition orders for these three plants will be an extremely important factor with respect to the success of the Company's efforts to implement its coal conversion program. Since final prohibition orders hold the potential for the shutdown of these three efficient units (assuming the existing ban on coal burning is not to be lifted by both the State and City) both the State and City will be forced to focus attention on their present policy with respect to coal use in New York City by utilities.

However, the issuance of final prohibition orders is dependent on completion by ERA of the environmental impact statements it is preparing with respect to Con Edison and also with respect to the cumulative impact on coal conversions in the Northeast region of the country. ERA commenced preparation of the Con Edison site specific environmental impact statements in the Fall of 1979 and has continued work on these statements since then. A tremendous amount of time and effort by ERA and its consultant and by Con Edison has gone into these statements which are nearing completion. Also, ERA has coordinated its preparation of these statements with interested State and federal agencies including the U.S. Environmental Protection Agency. This entire effort will constitute a massive waste of time, effort and money if ERA is forced to abandon its Fuels Conversion program.

The issuance of final prohibition orders are vital to Con Edison for other reasons:

1. Coal conversions under final prohibition orders are exempt from the provisions of the Clean Air Act which mandate scrubbers at all new or modified electric power plants. Without the prohibition order, Con Edison will be required under the Clean Air Act to install scrubbers at all three units. Such a requirement, in addition to being very costly and without significant environmental advantage, would delay coal burning several years—and probably preclude the use of coal at Ravenswood 3 since there is inadequate space available for such equipment at that plant.

2. New York State law authorizes State and City agencies to issue permits and licenses for a project such as Con Edison's coal conversion program where a final environmental impact statement has been issued by a federal agency. It has been the intention of the New York State Department of Environmental Conservation (DEC) which has the primary responsibility for licensing Con Edison's coal conversion, to rely on the environmental impact statement which ERA has been preparing. With the completion of ERA's environmental impact statements State and City agencies (as well as other federal agencies such as the Corps of Engineers) will be able to issue to Con Edison permits which the Company needs to commence coal conversion activities. If the DEC is required to prepare its own impact statement because of ERA's failure to complete its statement, Con Edison's coal conversion program could be delayed, perhaps significantly.

The remedy for this situation is to continue funding of the Fuels Conversion program until the current proposed prohibition orders are issued. It is estimated that for fiscal year 1982 this will only require less than $3 million. This is a relatively small price to pay for expediting a savings of over $300 million per year in the Con Edison area alone.

Sincerely yours,

JONATHAN R. SHEINER.

UTILITY CONVERSIONS

Mr. YATES [reading]:

In the administration's revised budget released March 10 . . . the request for funds for the Fuels Conversion program of the Economic Regulatory Administration of the Department of Energy has been reduced from . . . $24 million to

zero. . . . The effect of this proposal will terminate ERA Fuel Use Act activity before the issuance of even one final prohibition order under the Act. This will have a devastating impact on the efforts of many electric utilities to convert power plants from oil to coal.

The utility says,

The orders are an important factor in the effort to convert to coal. They focus the efforts of the State and local regulatory bodies on coal conversion with a clear expression of the national policy to reduce oil imports.

Mr. HOUSE. Mr. Chairman, there are some utilities who voluntarily want to switch, who have been using this program to get at the real cause which is the Clean Air Act, to get delayed compliance orders. The answer there is to modify the Clean Air Act to the extent that you can.

Mr. YATES. Either that or have State legislation.

Mr. HOUSE. That is correct.

Mr. YATES. The conversions cannot be made, however, this company says, without a change in the New York State and City air pollution regulations, so they cannot convert, can they? You are talking about a change in the Clean Air Act, too, aren't you? If that does not take place, what happens to your fuels conversion program? Shouldn't it continue?

Mr. HOUSE. The manpower part of the fuels conversion program is not associated with the delayed compliance orders. The intent is to try to function so that where the program can help a utility we would be able to do so until the Clean Air Act is changed. That is a very small part of the overall program. We are talking about presently 11 plants and potentially another 10.

Mr. YATES. Has the Fuels Conversion program had any successes so far? Have there been any conversions?

Mr. HOUSE. There have been voluntary conversions. As I mentioned in my statement initially, there have been no involuntary conversions associated with the Fuels Conversion program.

Mr. YATES. If there are changes in the Clean Air Act will there be any conversions? They will not have to convert. Why spend the money? They will not move from oil to coal, will they?

Mr. HOUSE. I bet they will.

Mr. YATES. Do you think so?

Mr. HOUSE. The Btu equivalent cost that I just gave you earlier on—you are talking about roughly $5.30 per million Btu for No. 6 oil, low sulphur content, now; coal is $1.42. That is day in and day out, sir.

FUEL USE ACT EXEMPTIONS

Mr. YATES. Would you know how many exemptions have been granted under the Fuel Use Act?

Mr. HOUSE. Of all types?

Mr. YATES. Yes.

Mr. HOUSE. I would say on the order of 1,100.

Mr. YATES. What is the duration of the exemptions?

Mr. HOUSE. They vary between 18 months and 5 years for temporary exemptions.

Mr. YATES. Well, who is going to process or act on the applications for exemptions in the future?

Mr. HOUSE. One of the things we are in the process of doing right now, Mr. Chairman, is doing whatever is possible to loosen up the regulations where we can: One, do it discretionally within the present regulations; and, two, modify the regulations so that we can handle the exemption process on a self-certifying or very routine basis.

Mr. YATES. What is the attitude of the public utility commissions toward conversion?

Mr. HOUSE. It varies by State.

Mr. YATES. The January budget says that the Fuel Conversion program provides a stimulus to start the process of conversion. Would you agree with that?

Mr. HOUSE. I think the economics is the stimulus, sir.

Mr. YATES. Not the Government suggestion?

Mr. HOUSE. I believe that there have been cases on a voluntary basis where we have been the catalyst to bring the State and the utility together and to make both of them look at the problem and get a resolution or a change in the State, where it has not been affecting primary standards, to get them to go forward.

Mr. YATES. Have you issued any prohibition orders on industrial boilers?

Mr. HOUSE. We issued two but they were rescinded when they converted.

Mr. YATES. None, then?

Mr. HOUSE. Yes.

UTILITY PROGRAMS

Mr. YATES. Let's talk about your Utility program for a minute. What emergency response or contingency preparedness does the Utility program maintain?

Mr. HOUSE. The Utility program maintains the following: They have the expertise and the technical knowledge on their staff to monitor the grid network in the country, so that when we are getting interruptions, be they coal—like the coal strike—or oil, we can tell very quickly what areas of the country are going to be affected. We can look to see who is in a position to bring up their generating units through economic dispatch to send coal by wire or essentially—I don't want to say "oil by wire," I would much rather say, "other ways of generating electricity." But, if necessary, to maintain the stability of a grid for a major area you may want to bring on an oil-fired plant if you are in the middle of a coal strike.

CONTINGENCY RESPONSE CAPABILITY

That group does those types of things for the Department. In an emergency, they would become involved in hands-on, day-to-day operation.

Mr. YATES. What would trigger an emergency response?

Mr. HOUSE. For example, a major generating unit going off line that was not expected to do so and the situation getting to the point where we are concerned about having a brownout or a major problem like what happened recently in Utah. If we see something coming, my people have been told not to stand on ceremony but go

right to the operator and say, "Something is coming. Please look at it." That is the type of thing. It is a hands-on operation, sir.

Mr. YATES. Do you have any responsibilities with respect to the current coal strike?

Mr. HOUSE. The situation is very routine right now. We have no responsibilities.

Mr. YATES. You have no responsibilities?

Mr. HOUSE. No.

Mr. YATES. How much of the $5 million for utility programs is for contingency measures? Can you tell us that?

Mr. HOUSE. It is a combination. I can provide it for the record but just let me tell you how I am trying to use that group.

I need people who are knowledgeable in operations, and the only way they can do that is be constantly monitoring and involved with the various reliability councils and with the various utilities. In addition, I need someone who can understand and review the utilities' curtailment plans and how they would respond.

Therefore, in a business-as-usual condition they are doing normal things with respect to power connections, review of local, case-specific problems, and the status of the grid and interconnections. However, in an emergency situation they go on-line and they get themselves located and plugged into the various regions, so they are providing us with up-to-date information for decisionmaking.

[The information follows:]

UTILITY PROGRAM REQUEST FOR CONTINGENCY PLANNING

The $5 million fiscal year 1982 budget request for the Power Supply and Reliability activity continues programs to assure an adequate, reliable, and cost-effective supply of electricity but reorients these programs toward emergency response and contingency preparedness. Of the total requested, it is anticipated that approximately $3.5 million will be directly used for emergency response and contingency preparedness activities. Powerplant productivity analysis and electric utility coordination activities, which, in part, also support the emergency preparedness effort, are budgeted at $1.1 million. The remaining $400,000 is for environmental impact statements required for international transmission facility licensing.

The emergency functions budgeted for the Power Supply and Reliability activity essentially involve emergency operations. Emergency plans and scenario development functions are budgeted under ERA's Emergency Preparedness activity. Both of these activities will be organized under the new Assistant Secretary for Environmental Protection, Safety, and Emergency Preparedness.

Mr. YATES. Are there marked incentives to encourage utilities to transfer larger amounts of coal to generate electricity?

Mr. HOUSE. The answer is "Yes." Generating with coal is much cheaper.

INTERVENTIONS

Mr. YATES. Are you are going to terminate Federal interventions in 1982?

Mr. HOUSE. Yes.

Mr. YATES. Is there no need for interventions?

Mr. HOUSE. It is felt there is no need.

Mr. YATES. Why not?

Mr. HOUSE. The States are in a position to intervene on their own behalf. All our target interventions are completed by November of 1981.

Mr. YATES. Yes, but what do you do about the GAO statement which says that it is important for DOE to intervene when DOE's oversight of electricity planning indicates the interests of power consumers are not being met?

Mr. HOUSE. We personally believe that at this point in time, let the marketplace handle that and let the power consumers do it.

OFFICE OF HEARINGS AND APPEALS

Mr. YATES. What about the Office of Hearings and Appeals? Mr. Breznay, how are you doing? Are you going to be hurt?

Mr. BREZNAY. No, we think that the funding request for fiscal year 1982 is adequate to handle our estimates of what our workload will be.

Mr. YATES. If the committee puts more money in for compliance will that speed up your work?

Mr. BREZNAY. Well, we would have to assess that. It would depend on what happens to the compliance effort. If the money were to go, for example, for increased auditing work and not result in proposed remedial orders that would come before my office, we would be essentially unaffected by an infusion of additional funds.

In the event that more money meant more litigation activity before the Office of Hearings and Appeals by the Office of Special Counsel or by the Office of Enforcement, we would have to take another look at our manpower and see if we can cope with an increased level of compliance activity.

Mr. YATES. Will your budget be large enough to handle your responsibilities for the next fiscal year?

Mr. BREZNAY. Based on our anticipation of what the workload will be, and this is absent any changes in the budget for compliance, we do think it is adequate. There are two reasons for this. One is the President's decontrol order which resulted in a large reduction in the number of exception cases which are being filed with our office. We received a huge number of those cases during the allocation crisis and they are a continuing part of our workload. The elimination of DOE regulations which affect current activity in the petroleum industry means that the number of exceptions filed has gone down dramatically.

Moreover, our office had been experiencing some major changes in workload even prior to the President's decontrol order, and they were reflected in the inventory and case receipt figures that are attached to my prepared statement. We had been working off the inventory of allocation cases which grew out of the gas shortage in 1979 throughout the year 1980, and by the end of 1980 we had gotten our inventory of allocation cases down to a very manageable level.

When that was combined with the President's decontrol order, it meant that we have essentially no allocation cases left in the office. That means we can devote all our attention to areas which were not getting intensive analysis while we were burdened with that caseload—and I am talking about 10,000 cases at the peak of our influx of allocation cases—so we have three primary areas of activity left in the office and I think we can meet the demands associated with those areas.

One is entitlements cases, and they are related to the old oil entitlements program and the exceptions which we had approved during the period prior to decontrol. We are moving very successfully towards winding down involvement in that program, although it is hard to predict precisely when regulatory and exception activity associated with the entitlement program will end.

The second major area is enforcement, and that is the primary area of our activity now that the regulatory program has come to an end on an ongoing basis. The final area involves Department-wide matters that have adjudication implications, like Freedom of Information Act and so on.

Mr. YATES. Mr. Landesman said that if additional funds are provided for his office in the next fiscal year, they may find additional violations, in which case the negotiations may lead to additional hearings and appeals. Would you not consider that a possibility?

Mr. BREZNAY. It is certainly a possibility. It depends upon settlement chances and that sort of thing but I would suspect that increased compliance activity would inevitably produce more cases for my office, particularly because we are at the end of the program and a lot of these cases are going to be vigorously contested, which will mean that inevitably they are going to come before us with teams of lawyers representing all parties.

Mr. YATES. You do not look as harrassed as Mr. Landesman did with the the new budget. Is there a reason for that? Are you naturally happier?

Mr. BREZNAY. I cannot answer that.

Mr. YATES. Are you happier with the new budget? Let me put it that way.

Mr. BREZNAY. I think inevitably with the decontol order we were going to see a substantial change in the way OHA functioned, particularly in the regional OHA offices where the predominant part of their activity concerned the allocation regulations and the pricing regulations. Therefore, I would expect——

Mr. YATES. Are your badly hurt by the reduction?

Mr. BREZNAY. We are affected but I think some of our people were devoting their activities to work which is just going to go away with decontrol.

Mr. YATES. Would you not be able to use them for other work?

Mr. BREZNAY. No, they have not been trained to do the kind of detailed enforcement work that is concentrated in Washington.

Mr. YATES. How will the proposed RIF affect you?

Mr. BREZNAY. There has not been any discussion of a RIF for OHA.

Mr. YATES. After November?

Mr. BREZNAY. No, sir.

Mr. YATES. Therefore, that does not affect you at all?

Mr. BREZNAY. I have not been so advised, at any rate.

Mr. YATES. It does not affect him. The administrator is just shaking his head.

Mr. HOUSE. I do not think our RIF will affect him.

Mr. YATES. I see.

PETROLEUM OPERATIONS

Let's talk about petroleum operations. With the reduction of the budget, what responsibilities will remain in the petroleum?

Mr. HOUSE. Import-export gas case handling and the oil imports program, primarily.

Mr. YATES. Are there any authorities under the DPA that can be used for civilian allocations?

Mr. HOUSE. There are some authorities that potentially could be used under the DPA.

Mr. YATES. Do you want to place those in the record?

Mr. HOUSE. Yes.

[The information follows:]

DEFENSE PRODUCTION ACT

The Defense Production Act of 1950, as amended could be used for the civilian location of petroleum and petroleum products. Title I—Priorities and Allocations, Section 101(b) of the Act reads as follows:

(b) The powers granted in this section shall not be used to control the general distribution of any material in the civil market unless the President finds (1) that such material is a scarce and critical material essential to the national defense, and (2) that the requirements of the national defense for such material cannot otherwise be met without creating a significant dislocation of the normal distribution of such material in the civilian market to such a degree as to create appreciable hardships.

DEFENSE RELATED PROGRAMS

Mr. HOUSE. With respect to definite defense-related programs, for example, if you have a jet engine manufacturer who cannot get his fuel, that is the type of thing.

Mr. YATES. Yes. What staff resources will you have to maintain for information on domestic and international supply situations?

Mr. HOUSE. That is the prime responsibility of EIA and IA but I intend to—in the emergency preparedness group that we are transferring over there will be an element there that will be knowledgeable in the market supply/distribution patterns in the U.S. You just have to have that, and not just petroleum; you have to have it across the board.

PROGRAM ADMINISTRATION

Mr. YATES. Let's talk about program administration which is being reduced from $3.5 million to $1.5 million. Will that level be adequate in the event Congress decides to restore some funds for the economic regulation program?

Mr. HOUSE. Yes, I do believe so.

Mr. YATES. Even if that happens?

Mr. HOUSE. Yes.

Mr. YATES. There will not be a bottleneck?

Mr. HOUSE. I do not think so.

Mr. YATES. How much of a backlog do you have in the hearings and appeals office?

Mr. BREZNAY. Currently our case load at the end of March, which is the last day for which I have figures, is 1,114 cases. That represents a reduction throughout 1980 of anywhere from 5,000 to 10,000 cases.

Mr. YATES. Five to ten thousand?

Mr. BREZNAY. Allocation, that was the big one.

Mr. YATES. You only have 1,200 such cases? When will your backlog be eliminated?

Mr. BREZNAY. It depends on new cases being filed. Some of these cases, namely the large enforcement cases, we estimate the processing would be in terms of years rather than days or months.

Mr. YATES. Do you have any idea how many such cases you have? Could you put it in the record?

Mr. BREZNAY. I can.

[The information follows:]

LARGE ENFORCEMENT CASES

The Office of Hearings and Appeals currently has 36 enforcement cases pending where the value of the alleged violations exceed $1,000,000. The total amount of the violations alleged in these 36 cases is $2,153,417, 041, excluding interest.

Mr. YATES. Will your field offices continue at the same staffing levels?

Mr. BREZNAY. No. As I indicated earlier, practically all of the work they were doing had to do with the allocation and pricing regulations on an ongoing basis, and I would expect that since our activity will be focused on enforcement matters and regulatory matters that originate from Washington and can be handled in Washington, there is less reason to maintain the original offices at their current staffing levels.

Mr. YATES. What are you going to do with them?

Mr. BREZNAY. I am not sure what the Department is proposing to do with the regional offices.

Mr. YATES. Do you have to worry about severance pay there?

Mr. BREZNAY. If we were to have a RIF, yes, sir.

Mr. YATES. We just got through learning you were not going to have a RIF, didn't we?

Mr. HOUSE. No. I said that my RIF would not affect him. I do not know about the rest.

Mr. YATES. What kind of a RIF will affect you? Who will you hear from if you do have one?

Mr. BREZNAY. I do not know what the proposal is with respect to the regional offices.

Mr. YATES. How many people do you have in the regional offices?

Mr. BREZNAY. We have about 75 people in our regional offices.

Mr. YATES. In all your regional offices?

Mr. BREZNAY. About 15 per regional center, and we have 5 regional centers.

Mr. YATES. However, you are closing down some of the regional centers.

Mr. BREZNAY. Well, we have not taken steps to do that. We have pointed out to each regional center that the nature of the workload has changed dramatically. They had all been expecting that decontrol was coming and that long term prospects for work at the regional centers were not good. Decontrol came earlier than anticipated, but still, these individuals had been on notice that their particular kind of activity was winding down.

We have been encouraging them to look elsewhere and making it possible to the extent we can to place them elsewhere.

Mr. YATES. What is going to happen to the Department of Energy? It is now a shambles, isn't it?

Mr. HOUSE. No, it is not a shambles.

Mr. YATES. How many Assistant Secretaries have been approved?

Mr. HOUSE. None. There are a lot of us working, though.

Mr. YATES. I think you need Mr. Landesman here to answer that question.

Thank you very much for your answers. We have some questions for the record for which we ask you to supply the answers. Mr Dicks has some questions he would like answered also.

Mr. HOUSE. Fine. We will answer them.

Mr. YATES. Good luck.

Mr. HOUSE. Thank you, sir.

[The questions and answers follow:]

ADDITIONAL COMMITTEE QUESTIONS

Motor Gasoline Decontrol

Question: On January 28, 1981, President Reagan decontrolled crude oil and refined products. What continuing responsibility do you have for monitoring prices?

Answer: Under the Department of Energy Organization Act, prices must be monitored to comply with: Title I, Sec. 102 (9) which mandates that we "promote the interests of consumers through the provision of an adequate and reliable supply of energy at the lowest reasonable cost", Title I, Sec. 102 (12) which mandates that we "foster and assure competition among parties engaged in the supply of energy and fuels"; Title I, Sec. 102 (17) which mandates that we "foster insofar as possible the continued good health of the Nation's small business firms, public utility districts, municipal utilities, and private cooperatives involved in energy production, transportation, research, development, demonstration, marketing, and merchandizing; Title VIII, Section 801 (b)(1) which mandates that we report to Congress on "... price stability, energy security, (and) economic growth ..."; and Title VIII, Sec. 801 (c)(3) which mandates that we report to Congress on "current and foreseeable trends in the price ... of energy resources and the effects of those trends on the social, environmental, economic, and other requirements of the Nation."

Question: What is your current estimate of the price increase in motor gasoline attributable to decontrol?

Answer: Our analyses indicate that decontrol has accounted for no more than five cents per gallon of price increases. Having at least equal influence, were OPEC crude oil price increases in late 1980 and the early part of this year which refiners had not fully passed through in gasoline prices when decontrol occurred.

Since February, gasoline prices actually dropped somewhat as a result of weak demand, abundant supply, and competition in the marketplace. Thus, we believe the impact of decontrol has fully been absorbed into gasoline prices. The exact impact of decontrol is difficult to measure because prices today are being set by competition and demand rather than by cost of supply. In any case, gasoline prices in the coming months will be the result of market forces.

Question: What residual responsibilities do you have for motor gasoline now that there is total decontrol?

Answer: The Department has no residual responsibilities for motor gasoline resulting from the Federal pricing and allocation programs per se. We continue to monitor price and supply in conjunction with our contingency planning responsibilities. While the Administration plans to rely generally on market mechanisms to cope with supply emergencies, we are currently analyzing the impacts of various mitigating measures that could be used in the event of a supply disruption.

Question: There were news reports that decontrol allowed oil men to cash in on a $1 billion loophole in Federal regulations. Are these reports accurate? If so, please explain to the Committee what was involved and how it happened.

Answer: We believe these news reports refer to the Department's Tertiary Incentive Program.

The Tertiary Program has been in existence since August 1979. Its primary purpose was to encourage operators to initiate high cost, high risk oil production projects by providing additional revenues through the release of price-controlled crude oil to market level prices, up to a value of $20 million per property. To qualify, the operator had to enter into contracts obligating him to pay for 100 percent of the cost of certain items or materials in advance of their actual use, and the revenues from the released crude oil would be applied toward 75 percent of those expenses. The program authorized by the regulations was expected to have a constantly diminishing impact because the phased decontrol of crude oil would reduce the amount of crude available to generate the revenues, with an eventual termination on September 30, 1981, when the Emergency Petroleum Allocation Act expires.

As a result of an amendment adopted January 5, 1981, allowing recoupment of inter-affiliate expenses, we did expect an acceleration in the rate of price controlled crude oil being converted to tertiary incentive oil. Since the amendment was based on an August 8, 1980, Notice of Proposed Rulemaking (NOPR) regarding inter-affiliate transactions, we expected that there would be an influx of certifications shortly after the final regulatory amendment authorizing those transactions. Moreover, we believe it is likely that many projects were accelerated to enable them to qualify for recoupment before March 31, 1981. (Because of the lag built into the regulations, this was the last date by which expenses would be recoupable.) Since decontrol, 110 certifications for tertiary projects have been filed. We do not believe, however, that the value of the additional crude oil released as a result of these certifications will aggregate to as much as a billion dollars. While reported entitlements adjustments do indicate that as much as a billion dollars of price-controlled oil has been recertified as market level oil for the months of December 1980, and the first 27 days of January 1981, many of these recertifications relate to expenses paid and reported to DOE before decontrol.

Question: What actions have you taken to correct this situation?

Answer: To address the situation resulting from the tertiary recertifications, we took two steps. First, on March 17, 1981, the Economic Regulatory Administration issued an Advanced Notice of Proposed Rulemaking which announced that we would propose to rescind the tertiary program with respect to allowed expenses that had not been incurred and paid prior to March 19, 1981. Then on April 28, 1981, we issued a NOPR proposing that rescission. In addition, we proposed to rescind the incentive program with respect to any in-house expenses incurred or paid after January 4, 1981, and with respect to any prepaid allowed expenses incurred or paid after January 27, 1981.

We believe these proposals were warranted because the significant costs that would be incurred by refiners either directly through payments for recertifications or indirectly through the Entitlements Program as a result of oil certified as incentive crude oil based on such expenses might outweigh whatever benefit that might occur if the program were to continue without modification through March 31, 1981, the date on which the program would automatically expire.

Question: The Emergency Petroleum Allocation Act (EPAA) authorities expire on September 30, 1981. What authorities under EPAA will you keep operational until the end of this fiscal year?

Answer: Those standby provisions of the EPAA related to the operation of the Crude Oil Allocation and Pricing activities (Standby Regulations 211-1, and 212-1) will remain in effect through the end of FY 1981. Moreover, the certification and reporting requirements of the Tertiary Crude Oil Programs will also remain in effect through the end of this fiscal year. The entitlements clean-up will be continued through the end of FY 1981.

Question: What have you done and what will you do in the remainder of the fiscal year to phase out EPAA activities?

Answer: We have already begun to eliminate certain EPAA regulations. We have eliminated from the Federal Energy Guidelines a number of paragraphs covering regulatory programs which were directly related to the EPAA; such as, all of the petroleum product allocation and price regulations, the Buy/Sell Program, the Canadian Allocation Program, major portions of the Tertiary Enhanced Recovery and the First Purchaser Programs, and the Refinery Certification Program. In addition, we are preparing a rule for a "clean-up" of the Entitlements Program.

Question: Does the Administration have any plans to propose legislation to maintain allocation authority for use in an emergency?

Answer: The Department is currently reviewing the question of needed energy emergency authorities. This review is on a timetable that will be compatible with possible legislative proposals prior to September 30, 1981.

Question: What residual problems remain in closing out the Entitlements Program?

Answer: The January 1981 Entitlements Notice has been enjoined on five different occasions. The most recent of these is a preliminary injunction by a New York court for Mobil Oil Corporation. The ERA is also drafting a final rule to provide a clean-up mechanism which would finally close out the program by September 30, 1981. There are rulemaking proceedings going on with respect to the Tertiary Program and in the area of petroleum substitutes which will impact the entitlement clean-up; both of these areas are the subject of proposed rules.

Question: When do you expect to have the Entitlements Program closed?

Answer: It is not possible to give a date as to when the Entitlements Program will be closed out. There have been numerous court actions which have enjoined us from issuing the Entitlements Notice for January, 1981. This notice is currently enjoined by court actions on behalf of Oklahoma Refining and Mobil Oil Corporation. These litigations will have to be resolved by the Temporary Emergency Court of Appeals before any Entitlements Notices can be issued. A hearing has been scheduled before TECA on June 4, 1981, concerning a motion made by Tosco Corporation requesting a Writ of Mandemus which, if granted, would allow the January, 1981 Entitlements Notice to be issued.

We have also issued a Notice of Proposed Rulemaking with regard to adjustments and corrections to the Entitlements Program for periods prior to decontrol. We expect to issue a Final Rule in the near future. The final rule will provide for a final clean-up entitlements list that will probably be issued in December 1981.

There are a number of outstanding law suits involving the Entitlements Program. It is not within DOE's power to control the date of final action on these cases, and we expect that they will continue well into 1982.

Question: Is litigation likely?

Answer: Since decontrol on January 28, 1981, there have been at least twelve lawsuits which have been filed against the program. It is likely that the clean-up list of the Entitlements Program will also be subject to numerous suits. This litigation could extend the termination date of the program. In addition, it should be noted that there are numerous cases involving challenges to OHA exception decisions. Undoubtedly not all of those cases will be finally completed by the end of 1981.

Question: What budgetary impact might these problems have?

Answer: The FY 1981 budget has sufficient personnel dollars and staffing levels to accomplish the clean-up of the Entitlements Program. In addition, an amount of $275,000 is available in FY 1981 to provide contractual support necessary for the termination of the program. The level of resurces contained in the FY 1982 budget will provide funding to complete any Entitlements Program activity in that year.

Fuels Conversion

Question: There is no request for funds or staff for FY 1982 to carry on the Fuels Conversion program as authorized by the Powerplant and Industrial Fuel Use Act of 1978. What is your estimate of the potential oil displacement possible through the Fuel Use Act?

Answer: We believe the operation of free market economic forces. not the Fuel Use Act program, drives fuel choice decisions by industry. The Fuel Use Act program has not caused any involuntary conversions. Only three powerplant units have converted to coal under the program in two years and they did so voluntarily. The Fuel Use Act program is presently under review within the Administration. We expect in the near future to propose changes to the Powerplant and Industrial Fuel Use Act in order to eliminate the program in a logical fashion.

Question: What prohibition orders do you have underway presently?

Answer: There are 33 outstanding ESECA orders to powerplants at 14 generating stations. Fuel Use Act (FUA) orders have been issued to an additional 41 powerplants at 19 generation stations. In addition, there are six FUA orders to Federal facilities. There are no orders outstanding to industrial facilities.

Question: How many of these prohibition orders do you plan to complete in fiscal year 1981?

Answer: During fiscal year 1981, the Office of Fuels Conversion expects to complete environmental analyses on 35 powerplants. This work will be completed to the level of either an environmental assessment or a draft environmental impact statement. Some may not be published as NEPA compliance documents, however, but rather as environmental reports for States and other parties to use in permitting the conversions. Four powerplants at one generating station may be processed to the point of final orders by the end of fiscal year 1981.

TABLE I

PROPOSED PROHIBITION ORDERS ISSUED UNDER FUA IN 1980

Date Issued	Owner	Generating Station (and Unit Number)	Location	Capacity (Megawatts)	Potential Oil Displacement (Barrels/Day)	Potential Coal Utilization (Tons/Year)
1/17/80	Virginia Electric and Power Co.	Possum Point (4)	Dumfries, VA	239	6,700	622,000
3/28/80	New England Electric System	Salem Harbor (1, 2, 3)	Salem, MA	334	8,900	812,000
3/28/80	Department of Defense	Naval Ordnance Station (1, 2, 3)	Indian Head, MD	561*	700	61,000
5/16/80	Virginia Electric and Power Co.	Possum Point (3)	Dumfries, VA	114	3,000	277,000
5/16/80	Public Service Electric and Gas	Burlington (7)	Burlington, NJ	195	5,500	498,000
6/23/80	Tampa Electric Company	F.J. Gannon (1, 2, 3, 4)	Tampa, FL	616	8,000	1,088,000
6/24/80	General Services Administration	West Heating Plant (3, 5)	Washington, D.C.	550*	600	25,000
7/11/80	J. P. Stevens	Delta Finishing Plant (1, 2)	Wallace, SC	196*	100	10,000

*MMBTU/hr.

TABLE 2

OUTSTANDING POWERPLANT ORDERS ISSUED UNDER FSECA
(As of December 31, 1980)

Date Issued	Owner	Generating Station (and Unit Number)	Location	Capacity (Megawatts)	Potential Oil Displacement (Barrels/Day)	Potential Coal Utilization (Tons/Year)
6/30/75	Delmarva Power and Light Co.	Edgemoor (1, 2, 3, 4)*	Wilmington, DE	392	11,100	1,002,000
6/30/75	Georgia Power Co.	McManus (1, 2)*	Brunswick, GA	115	3,200	294,000
6/30/75	Baltimore Gas and Electric Co.	C. P. Crane (1, 2)*	Baltimore, MD	399	11,200	1,019,000
6/30/75	Baltimore Gas and Electric Co.	Riverside (4, 5)*	Baltimore, MD	153	4,300	391,000
6/30/75	Baltimore Gas and Electric Co.	H. A. Wagner (1, 2)*	Baltimore, MD	268	7,500	684,000
6/30/75	Detroit Edison Company	St. Clair (5)*	Baltimore, MI	358	10,000	915,000
6/30/75	Central Hudson Gas and Electric Corporation	Danskammer (3, 4)	Roseton, NY	386	10,800	987,000
6/30/75	Niagara Mohawk Power Company	Albany (1, 2, 3, 4)*	Bethlehem, NY	400	11,200	1,020,000

*Units certified by EPA for conversion.

Question: What criteria did you use in choosing these prohibition orders to complete?

Answer: In selecting the prohibition order activity to be completed in fiscal year 1981, the criterion was the ability to complete and document a substantive environmental analysis before October 1, 1981. Work has been curtailed on those outstanding orders where such a milestone could not be achieved in fiscal year 1981, and continued on the others where a useful document could be made available for any State or other agency needing the information. Further, we are only working on cases where the utilities desire to convert.

Question: For the record, please provide a list of the prohibition orders you issued under the Fuel Use Act and under ESECA.

Answer: Table 1 provides a list of FUA orders, and Table 2 is a list of active ESECA orders.

Question: Under the Fuel Use Act, authority is granted to exempt a utility from the prohibition on burning petroleum or natural gas as the primary energy source in a new facility. Please tell us what action you have taken on requesting to exempt new facilities from the prohibition on burning petroleum or natural gas in a new utility facility? What do you have to do in order to determine that an exemption is warranted?

Answer: The following table indicates the status of new powerplant exemption petitions:

Petitions for Exemption Received	45
- Permanent Peakload Exemptions Requested	(41)
- Permanent Cogeneration Exemption Requested	(1)
- Permanent Fuel Mixtures Exemption Requested	(1)
- Temporary Exemptions Requested for Future Use of Synthetic Fuel	(2)
Permanent Exemptions Granted	14
Exemption Requests Withdrawn	1
Exemption Requests in Process	15

Note: Each petition represents one powerplant unit.

In order to determine that an exemption is warranted, the information furnished by the petitioners is analyzed in accordance with the criteria of the final rule published by ERA on June 6, 1980 (45 FR 38276, 38302). These criteria vary by type of exemption. There are public comment periods after petition acceptance and after preparation of the Tentative Staff Analysis (TSA), to the extent that a TSA is appropriate. Interested parties have an opportunity to request a public hearing before a decision is made, and to date we have conducted two. Copies of all petitions are furnished to the Environmental Protection Agency and appropriate State regulatory authorities for review and comment. Copies of petitions requiring consultation with the Federal Energy Regulatory Commission (FERC) are furnished to FERC for its review and comment.

Question: Please give the Committee a general description of the nature of the exemptions.

Answer: In general, the majority of the exemptions have been for peakload powerplants, which are limited to 1500 hours of operation per

year for peakload purposes. The cogeneration exemption is for facilities where both electricity and another useful forms of energy are produced. The fuel mixtures exemption is for facilities where a minimum amount of petroleum or natural gas is needed, in a mixture with an alternate fuel such as coal (or electricity in the case we had), to maintain operational reliability of the unit, consistent with maintaining a reasonable level of fuel efficiency.

Question: Please share with the Committee any information you have on the extent of voluntary conversions of industrial boilers.

Answer: There are basically two kinds of voluntary conversions. The first is for existing coal capable units, which because of economic factors, are being converted from oil to coal. The second group consist of new units, replacing older oil or natural gas burning boilers. Although the Department does not have an accurate data base of these conversions, the trend in recent boiler sales has been to coal capable units. The economics of coal over oil and natural gas should continue this trend.

During 1980, a sample of approximately 60 potential industrial conversions revealed that all units which had the technical capability of using coal were then burning coal or were in the process of converting units back to coal burning.

Question: Your prepared statement (p. 2) indicates that the Administration will propose changes to the Fuel Use Act. What changes will be proposed, when will the changes be submitted and will these changes alter the budgetary requirements?

Answer: The Fuel Use Act program is presently under review within the Administration. We expect, in the near future, to propose changes to the Powerplant and Industrial Fuel Use Act in order to eliminate the program in a logical fashion.

Utility Programs

Question: The budget justification indicates that the requested resources will allow the utility program to "fulfill various obligations under the Federal Power Act, DOE Act, Defense Production Act, and various Executive Orders." Please be more specific about what these obligations are.

Answer: The Utility Program's obligations under the aforementioned laws are as follows:

Federal Power Act

- Section 202(a)
  Assurance of an adequate and reliable supply of electric energy. Includes the conduct of need-for-power reviews of utility power plant additions.

- Section 202(c)
  Order emergency electric interconnections and power transfers as appropriate (by petition or on own motion).

- Section 202(d)
  Approve temporary interconnection for emergencies for non-FERC jurisdictional utilities.

- Section 202(e) (also Executive Orders 10485 and 12033)
  Process Presidential Permits and licenses for electric power exports and international electric interconnections.

- Section 202(f)
  Delineates Federal regulatory control over international electricity exchanges.

- Section 206(b)
  Investigate and determine cost of production and transmission of electric energy.

- Section 311
  Direct and conduct investigations regarding the generation, transmission, and distribution, and sale of electric energy.

Public Utility Regulatory Policies Act

- Section 209
  Conduct a study on electric system reliability and standards; prepare an annual report which includes further reliability recommendations and status of utility actions; perform necessary follow-on studies.

Executive Orders 11490 and 12038

- Transfers from DOI, FPC, and ERDA the responsibility to prepare national emergency plans and develop preparedness programs through a standby organization -- Emergency Electric Power Administration (EEPA). The EEPA program will derive certain of its functional authorities from the Defense Production Act.

Statutory obligations for which other entities are responsible but which are supported by the Power Supply and Reliability function are as follows:

Atomic Energy Act

- Need-for-Power Reviews and some financial analysis.

Public Utility Regulatory Policies Act

- Section 204
  Conduct a study of power pooling.

- Section 210
  Promote electric utility adoption of cogeneration, solar, and other renewable technologies.

Fuel Use Act

- Sections 211 and 212
  Promote analytic support for electric reliability of financial exemptions.

Clean Air Act

- Section 110(f)
  Provides for waiver of State environmental restrictions during emergencies.

Question: Please provide the Committee with the workload data related to these obligations?

Answer: The staff year requirements for fulfilling these obligations are as follows:

	Staff Years
Federal Power Act	14
Section 202(a)	(5)
Section 202(c)	(1)
Section 202(d)	(1)
Section 202(e)	(3)
Section 311	(4)
Defense Production Act	2
Clean Air Act	1
Public Utility Regulatory Policies Act	1
Total, FY 1982 staff years	18

Question: You maintain a field office organization for data gathering, program support, contingency response, and utility outreach abilities, what do you mean by "utility outreach activities?"

Answer: The field office outreach activities consist of developing a positive and continuing relationship with the electric utility companies in the regions. The rapport is established through visits and frequent conversation with key utility personnel. Thus, DOE is able to gather valuable data and insight while providing to the utilities an information dissemination service. By understanding the regional utility perspective the field office personnel are able to accurately reflect regional utility positions and concerns. Often these offices are able to persuade the utilities to voluntarily embark on specific system improvement projects and procedures. Additionally, these offices provide a mediation service that promotes achievement of projects supporting improved and cost effective power supply reliability and adequacy. This service has provided the impetus for resolving conflicts that were blocking major power system improvement projects.

Also, the contact between the field office personnel and the utilities is necessary to effectively perform the licensing and electric outage investigation activity. Contact points between DOE and the utilities also contributes to the Department's emergency preparedness functions.

Question: What data gathering do you do?

Answer: The data gathering activity of the field offices is one of their most valuable functions. Most of the data that they obtain pertains to specific generation and transmission project status or analysis and is voluntarily supplied by the utilities. Relationships with the utilities within the region have been established to the extent that this type of data gathering can be accomplished quickly and easily. The data on peak summer and winter demands and electric system operations contained on ERA form 411 is usually received at about the same time at the field offices as it is at headquarters. The field does not gather this data but they do review it for accuracy and consistency and if necessary reconfirm with the submitting utility any data items that provoke questions.

Question: How is this data gathering coordinated with the Energy Information Administration?

Answer: The data contained on ERA form 411 as well as for the other ERA power supply and reliability data gathering efforts is fully coordinated with the Energy Information Administration (EIA). Because of the specialized nature and technical review required, this data is submitted directly by the utilities to ERA. Data that is voluntarily supplied by utilities is usually requested so that a special purpose power supply assessment can be made. These assessments usually involve individual generation stations on transmission lines for which data is available solely from the company(s) involved. There is no wide spread need for type of data to be gathered by EIA, because such specific analyses are not performed on a wide spread basis, nor does EIA have the required technical staff to perform the study. The analysis objective is generally supported by the utility and thus they are willing to supply the necessary supporting data.

Question: According to the budget justification, (p. 121) there will be "expanded monitoring of power system transfers to evaluate performance and encourage oil displacement via this mechanism by as much as 25,000 to 50,000 additional barrels per day." What will have to be done to accomplish this oil displacement?

Answer: The attainment of additional barrels of oil per day savings in electric utility consumption by the use of increased electricity transfers is based on a real-time monitoring that confirm actual transfers. During the high load period this past summer, the electric utility industry, in cooperation with the Department of Energy, performed an actual three-day monitoring test of electricity transfers for most of the U.S. Power Grid. The 25,000 to 50,000 additional barrels per day are based, in part, on the findings of this test. The Department of Energy will continue to monitor the industry fuel oil savings through such electricity transfers. The information gathered through this ongoing monitoring will be utilized to further confirm theoretical attainment levels, identify regions where greater levels can be achieved, and identify equipment and contractual constraints to greater achievement. Once such identification is made, this information is communicated to the utility so that the available non-oil fired generation can be more fully utilized. The communication is in the form of a suggestion that the utilities have historically followed on a voluntary basis.

Such savings through the continued monitoring and reporting could be achieved in about three or four months. The relative level of additional savings achieved, of course, will depend on economic conditions and the degree of fuel disruption or other electric operating emergencies.

Question: Sections 116(b) and 309(b) of PURPA establish annual reporting requirements for the state regulatory authorities with a follow-up report to be prepared by the Secretary for transmission to the President and Congress. How will this responsibility be met under the budget request?

Answer: The Department is presently reviewing the need for administrative or statutory action regarding Sections 116(b) and 309(b) of PURPA, as well as Section 102(c), 133, 210, and 301(d). We will be able to meet any of these statutory obligations in FY 1982 within the budget request.

Compliance Settlements

Question: To date you have taken credit for more than $1 billion in settlements. Describe, for the Committee, the various options for settlement the companies have.

Answer: The options available for settlement include cash payments to the U.S. Treasury, refunds to customers, price rollbacks, the elimination of banks, investment commitments and restitution payments. Due to the termination of price controls, the elimination of banks would not, in general, now be considered an appropriate form of compensation. Civil penalties are deposited as miscellaneous receipts in the U.S. Treasury. Additionally, in settlements where the harmed party can be identified readily, direct restitution is being made by check or credit memo. Where the harmed party or the amount due the harmed party cannot be identified readily, the settlement amount is being deposited in a special refund escrow account maintained by the U.S. Treasury.

Question: How much has been taken in as cash to the treasury, in escrow, distributed as refunds, price reductions and other settlement options?

Answer: The settlement amounts through March 31, 1981, by type and major refiner are as indicated on the enclosed "Office of Special Counsel Settlements" chart. Since its inception, the Office of Enforcement has settled 10,455 violation cases totalling $677,186,720 in overcharges. The distribution of this amount is as follows:

Refunds	$156,255,343
Rollbacks	120,161,351
Bank Adjustments	201,854,496
Payments to Escrow Account	186,724,076
Payments to U.S. Treasury	1,633,022
Penalties	10,558,432
Total	$677,186,720

Question: Since January of 1981, what has your settlement experience been? How does this year's experience compare with the first quarter of 1980?

Answer: For the Office of Special Counsel, in January of 1981, preliminary notice of nine global consent orders was published in the Federal Register (Ashland, Charter, Coastal States, Corco, Hess, Koch, Pennzoil, Tenneco and Tosco). Two of these nine consent orders (Hess and Koch) have subsequently been finalized. Settlement negotiations are presently being conducted with five other major refiners. In the first quarter of 1980, one global consent order (Standard of Indiana) was concluded. Negotiations with two other firms, one of which was subsequently concluded, were underway in the first quarter of 1980.

Since January of 1981, the Office of Enforcement has settled cases totalling over $208 million. The following chart is a comparison of the Office of Enforcement's settlements, by program, for 1980 and 1981.

Office of Special Counsel Settlements
As of March 31, 1981

Refiner	Document	Date	REMEDY: Payment to U.S. Treasury	Refund to Customer	Price Rollback	Elim. of Banks	Investment 2/ Commitment	Restitution Payments	Total	Civil Penalty	Criminal Fine
Other Consent Orders (cont.)											
Conoco	CO	03/12/79		972,463					972,463		
Conoco	CO	03/12/79		93,183					93,183		
Exxon	CO	10/05/78				292,353			292,353		
Exxon	CO	11/02/78		508,000					508,000		
Exxon	CO	01/25/79				3,980,000			3,980,000		
Exxon	CO	01/30/79				426,424			426,424		
Exxon	CO	07/18/79				208,328			208,328		
Exxon	CO	09/11/79				5,628,750			5,628,750		
Exxon	CO	02/01/80				377,200			377,200		
Gulf	CO	07/26/78						42,000,000	42,000,000		
Gulf	CO	09/10/79		1,618,884					1,618,884	10,000	
Gulf	CO	11/21/79		10,543,220	1,195,032				11,738,252	100,000	
Kerr-McGee	CO	05/16/78		6,636,626					6,636,626		
Marathon	CO	12/05/78				1,074,331			1,074,331		
Mobil	CO	08/08/79		2,236,166		11,510,222			13,746,388	50,000	
Phillips	CO	05/27/78		977,891					977,891		
Phillips	RO	11/22/78		8,863					8,863		
Sohio	CO	11/29/79				16,626,079			16,626,079	10,000	
Sohio	CO	01/15/80				251,744			251,744		
Tenneco	CO	08/21/80	$1,017,900	1,244,100		20,000,000			22,262,000		
Texaco	CO	04/25/78		3,382,964					3,382,964	100,000	
Texaco	CO	06/08/78		2,101,584					2,101,584	75,000	
Texaco	CO	07/31/78		2,408,769					2,408,769		
Texaco	CO	01/25/79		18,226					18,226		
Union	CO	01/04/79				1,333,776			1,333,776	12,500	
Union	CO	07/23/79				2,413,517			2,413,517		
Union	CO	09/13/79		390,733					390,733		
Other Settlement Totals			$ 1,017,900	$ 33,421,096	$ 1,195,032	$ 80,296,724	$ -0-	$ 53,000,000	$ 168,930,752	$2,452,500	$50,000
Grand Totals			$ 30,773,986	$276,865,629	$37,893,494	$2,325,296,724	$1,010,000,000	$149,000,000	$3,830,404,979 4/	$2,712,500	$50,000

1/ Although M&A Petroleum and Foremost Petroleum are not among the major refiners being audited by Special Counsel, they were parties to the Conoco consent order issued by Special Counsel on August 11, 1978.

2/ Many remedies are in the process of being effected. A system for monitoring individual comprehensive consent orders has been established.

3/ Amoco agreed to pay $250,000 as compromise in full settlement for any penalties for which it may be or may have been liable.

4/ Includes $575,146 Arco repaid in interest associated with a clerical error relative to excess Supplemental Fee Refund Claims.

Office of Special Counsel Settlements
As of March 31, 1981

Refiner	Document	Date	Payment to U.S. Treasury	REMEDY						Civil Penalty	Criminal Fine
				Refund to Customer	Price Rollback	Elim. of Banks	Investment Commitment [2]	Restitution Payments	Total		
Global Settlements											
Amoco	CO	02/14/80		$29,000,000		$180,000,000	$410,000,000	$71,000,000[a]	$690,000,000	$250,000 [3]	
Ashland	CO	01/16/81		10,301,538	14,698,462	650,000,000	100,000,000		775,000,000		
Charter	CO	01/16/81		28,200,000		62,000,000			90,200,000		
Cities Service	CO	10/31/79		10,000,000	$20,000,000	190,000,000			220,000,000		
Coastal States	CO	01/14/81		17,500,000		300,000,000			317,500,000		
Conco	CO	01/08/81		10,000,000		142,000,000			152,000,000		
Getty	CO	12/04/79				50,000,000		25,000,000[b]	75,000,000		
Hess	CO	01/06/81		35,000,000		100,000,000	400,000,000		535,000,000		
Kerr-McGee	CO	02/07/79		38,000,000		8,000,000			46,000,000	10,000	
Koch	CO	01/16/81		12,000,000	2,000,000	277,000,000			291,000,000		
Pennzoil	CO	01/18/81		10,000,000		33,000,000			43,000,000		
Phillips	CO	11/09/79		25,000,000		75,000,000	$100,000,000		200,000,000		
Sun	CO	09/11/80	$29,756,086	442,995		80,000,000			110,199,081		
Tenneco	CO	01/18/81		14,000,000		60,000,000			74,000,000		
Tosco	CO	01/15/81		4,000,000		38,000,000			42,000,000		
Global Settlement Totals			$29,756,086	$243,444,533	$36,698,462	$2,245,000,000	$1,010,000,000	$96,000,000	$3,660,899,081	$260,000	-0-
Other Consent Orders											
ARCO	RO	08/06/79		65,914					65,914		
ARCO	CO	10/25/79		16,813					16,813		
Chevron	CO	09/22/78							Not Specified	25,000	
Chevron	CO	12/04/78		83,000					83,000		
Chevron	CO	07/17/79				4,100,000			4,100,000		
Chevron	CO	11/15/79				12,074,000			12,074,000		
Chevron	CO	11/19/79		113,697					113,697		
Coastal	CO	01/11/80						9,000,000	9,000,000	1,000,000	$20,000
Conoco	CO	08/11/78						2,000,000	2,000,000	985,000	15,000
M&A Pet. [1]		08/11/78								40,000	10,000
Foremost Pet. [1]		08/11/78								45,000	5,000

a/ Held is escrow.
b/ Held in special Treasury account.

	January-March 1980	January-March 1981
Crude Producers	$ 8,456,883	$ 1,504,867
Crude Resellers	10,050,000	20,328,485
Small Refiners	2,100,000	133,937,375
Entitlements	713,571	625,642
NGL Processors	24,945,478	48,396,781
Refined Product Resellers	1,242,936	2,513,856
Refined Product Retailers	681,507	941,918
Total	$48,190,375	$208,248,924

Question: Please give the Committee an update on the status of the audits of the 35 major refiners.

Answer: As of April 1, 1981, audits of 18 of the major refiners were complete, with work on the remaining 17 major refiners averaging 84 percent completion.

Question: What resources are needed to complete the audits of the 35 majors up until the period when controls were lifted?

Answer: To complete the audits of the 35 majors up until the period when controls were lifted is expected to require 115 staff years of effort in the last half of FY 1981 and 47 staff years in FY 1982.

Question: When do you now anticipate completion of these audits?

Answer: The Office of Special Counsel expects to complete all audits by February, 1982.

Question: What resources are needed to complete the audit responsibility of the Office of Enforcement?

Answer: The FY 1981 Appropriation together with the FY 1982 budget request of $11.9 million, and a portion of the $16.2 million FY 1981 funding proposed to be carried over into FY 1982, will enable the Office of Enforcement to virtually complete audits in all cases that are now unfinished, including targeted firms.

Question: When do you now anticipate completion of Office of Enforcement audits?

Answer: The Office of Enforcement's audits are expected to be completed by the end of FY 1981. However, expected success could be impacted if industry takes an unreasonable, adversary position whereby we have to obtain many records by subpoena. Should this occur, carryover audits, with particular emphasis on crude oil resellers, will be completed in FY 1982.

Question: Through what period of time will the planned audits cover?

Answer: The period of time covered by these audits varies with the program area. However, the vast majority are for current audit periods.

Question: Give the Committee some examples of the teams you need to put together in order to go to settlement. What skills are needed and how many of each?

Answer: The typical Office of Special Counsel settlement team is composed of the Special Counsel, the Solicitor, the Director of Field Operations, the District Director, the Chief Counsel of the District, the audit team leader, the lead team attorney, a computer specialist and a Headquarters attorney to coordinate the drafting of settlement documents. Members of this team must have a detailed knowledge of the pertinent statutes and DOE regulations, a knowledge of the particular company's alleged violations and its market structure, familiarity with past settlements, and applicable precedents regarding DOE's authority to fashion remedial relief.

For the Office of Enforcement there is a wide range of programs, as well as size of firms. This range includes small firms, as well as very large companies encompassing crude oil resellers, crude producers, small refiners, natural gas liquid processors, and product resellers/retailers. Consequently, there is no typical settlement team. Some settlements are negotiated by the auditor while others are negotiated by a team of auditors and attorneys or attorneys only. The number of people making up a team depends on the circumstances of the case. It is seldom more than three people and usually two.

Question: According to a GAO report, "Department of Energy Needs to Resolve Billions in Alleged Oil Pricing Violations," the Department has prepared a five-year plan for phasing out the compliance program after deregulation. Please provide a copy of the five-year plan for the record.

Answer: During fiscal year 1980, the Department prepared a five-year plan which addressed decontrol on September 30, 1981, and the resulting phase-down of the Compliance program. However, this plan has been superseded by events; for example, the plan does not take into account early decontrol, progress in the resolution of outstanding violations, changes in the caseload projections, or improved audit techniques, etc. The current budget assumes that compliance activities associated with the EPAA would continue to be phased-down by pursuing settlement of identified violations, that most audits would be completed for periods prior to the expiration of the EPAA, and that activities associated with criminal violations would continue as necessary. A copy of the five-year plan is provided for the record.

COMPLIANCE

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I. SUBPROGRAM TITLE: Compliance
SECRETARIAL OFFICER: Administrator for Economic Regulatory Administration

II. RESOURCE REQUIREMENTS: ($000; Manpower in full-time permanent ceiling personnel.)

	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
				Basic Level				
Major Refiners (BA)	(25,243)	(40,773)	(35,594)	(25,000)	(17,600)	(6,400)	(-0-)	(-0-)
EPAA Audits	16,660	22,425	14,950	6,250	-0-	-0-	-0-	-0-
EPAA Litigation	8,583	18,348	20,644	(18,750)	17,600	6,400	-0-	-0-
Pricing & Supply Monitoring and Verification	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
All Others (BA)	(21,863)	(31,468)	(31,742)	(26,200)	(19,900)	(15,000)	(12,700)	(12,700)
EPAA Audits	14,915	21,361	21,551	16,806	9,467	5,913	2,843	2,420
EPAA Litigation	6,948	10,033	9,945	7,276	5,929	1,732	1,348	579
FUA	-0-	74	246	1,040	1,271	1,348	1,425	1,500
Price & Supply Monitoring and Verification	-0-	-0-	-0-	1,078	3,233	6,007	7,084	8,201
Total Budget Authority (BA)	47,106	72,241	67,336	51,200	37,500	21,400	12,700	12,700
Total Budget Outlays (BO)	40,776	69,405	68,220	46,800	37,600	23,000	15,400	12,700
Total Positions	1,344	1,365	1,302	984	621	325	325	325
Headquarters	214	270	303	346	323	45	45	45
Field	1,130	1,095	999	638	298	280	280	280

III. [redacted]EAM CONTEXT

A. History.

1. Legislative. Major refiners activities are carried out under the authority of Section 203 (a) (3) of the Economic Stabilization Act of 1970 as amended, P. L. 93-28 April 30, 1973 (ESA). Enforcement authority for the ESA was contained in Section 209 of that Act. Section 4 of the Emergency Pretroleum Allocation Act of 1973 as amended, P.L. 93-159 dated November 27, 1973 (EPAA), required the President to issue pricing and allocation regulations on petroleum transactions. Section 5 of the EPAA contained the authority to enforce the pricing and allocation provisions issued pursuant to Section 4 of that Act. By Executive Order No. 12038 dated February 7, 1978, the President delegated to the Secretary of Energy the EPAA and ESA enforcement authorities. For the all others activities of the Compliance program, the operating authority is also governed by the provisions of the ESA of 1973 as amended and the EPAA of 1973. In addition the all others activity was granted enforcement authorities under the Powerplants and Industrial Fuel Use Act of 1978 (FUA) (P.L. 9562), Title VII, Section 721.

2. Policy. The Sporkin Report of July 14, 1977 disclosed that overcharges by the major refiners to the consuming public, could amount to billions of dollars and that the DOE enforcement program had been ineffective in dealing with the major refiners. As a result of the recommendations contained in the final Sporkin report entitled "The Federal Energy Administration Task Force on Compliance and Enforcement", the Administrator of the ERA delegated to the Special Counsel for Compliance the authority to: a. complete the EPAA Compliance audits of the 35 major refiners for the period the regulations are in effect; b. identify violations of EPAA regulations by those refiners; c. initiate and prosecute appropriate enforcement actions to remedy improper pricing activities of refiners that had violated the EPAA; and d. develop innovative remedies for the violations. DOE Order No 1100.2 formally established on December 1977 the Office of Special Counsel for Compliance to intensively audit and pursue remedial actions against the major refiners.

In accordance with the Department's Policy, Programming and Fiscal Guidance both the major refiners the all others activities will be phasing out their audit responsibilities with the expiration of the EPAA Controls. However, enforcement audits and litigation will continue beyond the expiration of controls to complete the inventory of pending cases and to assure enforcement of violations that occured for unaudited periods immediately preceeding the expiration of controls. The Office of Enforcement has projected the phase-out of EPAA enforcement audits in 12 to 14 months after lifting of the controls except for litigation activities which will continue through FY 1986. Special Investigations are expected to continue at least through FY 1986. With the uncertainty prevalent in the world oil market today, it is increasingly difficult to develop

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a five-year plan for enforcement activities. Therefore, through FY 1981, as directed by the Department in its acceptance of the FY 1981 budget level, this plan assumes there will be no critical shortages which would divert resources from planned audit work in order to respond to current market situations. As the resources devoted to enforcement of EPAA decline due to the expiration of that law, additional resources will be devoted to enforcement of the FUA. Additionally, resources will be devoted to Compliance's responsibilities for price and supply monitoring and verification.

8. Status. The Office of Special Counsel has implemented a two phased program with the 35 major refiners to assure compliance with the pricing and allocation provisions of the Emergency Petroleum Allocation Act of 1973 as amended. The first phase of the enforcement program involves the audit of the transactions of the 35 major refiners for the years 1973 thru 1981. The second phase of the enforcement program is concerned with the settlement and litigation of violations. The administrative and judicial resolution activities include appeals before the DOE Office of Hearings and Appeals, the Federal Energy Regulatory Commission, U. S. District Courts and the Temporary Emergency Court of Appeals; with suspected criminal violations being pursued in conjunction with the Department of Justice. The audit activities will be pursued thru FY 1981; the on-going settlement and litigation will continue through at least FY 1984, and in some instances beyond.

For the all others activities the Office of Enforcement's backlog of embargo cases was substantially cleaned up by the end of FY 1979. While the case inventory has dropped dramatically, the significance of the remaining cases being pursued has increased substantially. The dollar amount of alleged violations in open cases has quadrupled (from about $400,000,000 in October 1977 to over $1,633,000,000 at the beginning of FY 1980). Efforts are now focused on audits of current period violations with a substantial number of cases having already been forwarded to the Office of Hearings and Appeals, the Federal Energy Regulatory Commission, Office of General Counsel and the Department of Justice. Working in conjunction with the Office of Fuels Conversion, the office is also involved in enforcement of the Powerplants and Industrial Fuel Use Act of 1978 (FUA) to assure compliance with provision of the Act which prohibit the use of petroleum and natural gas by certain electric powerplants and major fuel burning installations. The Office of Enforcement also assures adherence to the terms of exemptions to provisions of the Act which may be granted specific firms by the ERA. As the program gets underway, the workload is expected to increase significantly.

Resources have been diverted from other Enforcement activities areas to manage shortage situations and monitor and verify pricing and supplies of decontrolled products. Enforcement has had limited resources to devote to such activities and, consequently, has been criticized by the Congress and the General Accounting Office. Beginning in FY 1982, resources will be specifically earmarked for and efforts will be directed to monitoring and verification of decontrolled products in accordance with the Administrators guidance.

IV. SUBPROGRAM GOALS/OBJECTIVES AND DESIGN CONSIDERATIONS

A. Goals/objectives. The goals/objectives of ERA's Compliance Program are to:

- Conduct audits of all segments of the petroleum industry to determine their compliance with pricing and allocation programs for petroleum and products.

- Take administrative enforcement actions such as the issuance of Notices of Probable Violation (NOPV), Notices of Probable Disallowance (NOPD), Proposed Remedial Orders (PRO), Consent Orders (CO), and determine appropriate penalties and refunds.

- Initiate and participate in administrative and judicial proceedings, including interventions, settlements and appeals.

- Conduct special investigations where there is evidence of willful or criminal violations and, where appropriate, refer such cases to the Department of Justice and assist in the prosecution of them.

- Formulate a consistent compliance policy with respect to all aspects of the petroleum industry.

- Achieve an orderly phase-out of EPAA audit activity to assure an adequate deterrent effect in the industry and to discourage cheating between now and the time controls are lifted. Focus on court and administrative litigation cases during FY 1982-86.

- Perform price and supply monitoring verification audits for decontrolled products, i.e., currently monitoring the heating oil industry, and in FY 1982-86 monitoring domestic crude oil and refined oil products following the expiration of the EPAA.

- Assure compliance with the provisions of the FUA which prohibit the use of petroleum and natural gas by certain electric powerplants and major fuel burning installations, and within terms of exemptions to provisions of the Act which may be granted specific firms by the ERA.

- Provide management of supply shortages caused by strikes, uncertain world environment or any other causes.

8. Design Consideration. The strategy adopted to accomplish the goals/objectives of the Office of Special Counsel's major refiners activities is to provide resources to the resident audit teams. These resources include attorneys, auditors and system analysts who are specially trained to examine crude oil production, natural gas liquids and other refinery activities. Contractural support is used to assist in the completion of audits and to provide paralegal support. This strategy of providing specially trained resources will continue to be implemented in resolving the significant volume of litigative actions that have resulted from the comprehensive audit phase.

The litigation phase is the culmination of a successful and complete enforcement program. The extensive audit effort to identify violations of the price and allocation regulations would prove to be meaningless if the violations were not administratively and judicially pursued through the litigation phase. The litigation process is extremely long and involved, but necessary due to the extremely large amounts of money at stake. The Office of Special Counsel currently estimates that the total amount of violations detected will exceed $13 billion by the end of FY 1984. The total cost of operating the OSC through FY 1984 is projected to amount to approximately $176 million. This results in a highly favorable cost benefit ratio of more than 70 to 1. Although many of these violations are being contested, total settlements so far (refunds, rollbacks, price decreases and other settlements) amounted to approximately $1.2 billion as of February 20, 1980. The regulations as currently constituted attempt to establish maximum lawful prices for crude and controlled products and to spread equitably the burden of the petroleum shortage. Also, the regulation as currently constituted tend to foster competition among the various elements of the distribution chain by the workings of the price and allocation regulation mechanisms.

all others activity cost for the FY 1979 - FY 1981 time frame range from a low of $21,863,000 in FY 1979 to a high of $31,724,000 in FY 1981. The benefits as of December 31, 1979 include issued or drafted documents citing civil violations amounting to $1.3 billion with an additional $320 million already recovered for total identified violations of $1.6 billion. The working inventory is about 690 cases with an additional 300 or so cases in the legal process. The strategy of the all others activity is to target potential violations of the greatest magnitude so that the best utilization of resources is obtained, i.e. the maximum return on the dollar. This strategy has the added advantage of providing a deterrent effect.

V. SCHEDULE AND DELIVERABLES

A. Schedule. The total time frame for the Office of Special Counsel's major refiners enforcement activity is from December 1977 through September 1984.

- The intensified audits of the 15 largest refiners for the 1973-1976 period were completed in December 1979 and the litigative process covering those identified violations is presently underway.

- The update of the audits of the 15 largest refiners through 1979 are presently underway and are scheduled to be completed by the end of FY 1980.

- The intensified audits of the 20 lower-tier refiners for the period 1973-1979 are scheduled to be completed in FY 1981 and audit program close-out activities completed in FY 1982.

- The litigation activities will continue through FY 1984 and in some instances could conceivably continue into subsequent fiscal years well beyond FY 1984.

The Office of Enforcement's all others activities began with the Economic Stabilization Act of 1970, as amended (P.L. 92-210) and when the Congress passed the Emergency Petroleum Allocation Act of 1973 (EPAA), Public law 93-159 as a result of the Arab oil embargo of that year. Current price regulations for the petroleum industry are still being administered under this law. Executive Order No. 11748, which established the Federal Energy Office (FEO), delegated to the FEO all of the President's authority under the EPAA. FEO compliance and enforcement responsibility was performed by the IRS for the period December 26, 1973 to June 30, 1974. On June 27, 1974 these responsibilities were transferred from FEO to the Federal Energy Administration (FEA) and then to the Department of Energy in August 1977. Enforcement of the EPAA controls continue through September 1981. Beginning in FY 1980, the Office of Enforcement is also involved in enforcement of the Powerplants and Industrial Fuel Use Act of 1978.

Enforcement is a continuing function with audits being performed for different audit periods. As EPAA audit work declines during the 12-24 months following decontrol in September 1981, litigation activities for previously opened EPAA cases will increase as cases are moved through the courts and administrative processes for final resolution.

A significant increase is expected in the workload associated with the Fuel Use Act beginning in FY 1982 and continuing through FY 1986. The responsibilities associated with enforcement of the provisions of the FUA include the following: monitoring the terms, conditions and compliance plans for temporary and permanent exemptions; monitoring new facilities that are denied or do not apply for exemptions; verifying financial and other data submitted with exemption petitions; monitoring the system compliance plans of existing powerplants and their gas use; and preparing Notices of Violation and developing information for court or administrative law judge.

The workload associated with price and supply monitoring and verification of decontrolled products will also increase during the FY 1982 to FY 1986 time period with the trained force of auditors managing minor supply shortages during that time. The following schedule depicts the workload flow anticipated beteen now and FY 1986.

All Others
Functions to be Accomplished by Fiscal Year

FUNCTION	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
EPAA								
1.Non-Special Investigations								
a.Act.Auds.	X	X	X	X	X			
b.Lit. Supp.	X	X	X	X	X	X	X	X
2.Spec.Invs.	X	X	X	X	X	X	X	X
FUA		X	X	X	X	X	X	X
Price and Supply Monitoring and Verification				X	X	X	X	X

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B. Deliverables. The use of a combined workforce of Federal and contractural personnel has proven effective so far towards completion of the first phase of major refiners operations. Accomplishments during the first two years (through February 20, 1980) of the intensified audit program include initiating enforcement actions by filing court claims against the major refiners currently total approximately $1.7 billion. Also, a total of 237 enforcement actions of all types amounting to $10,687,000,000 of overcharges have been issued to major refiners as of February 20, 1980. Total settlements so far amount to approximately $1,245,000,000.

The Department directed that the audit of the major refiners be accomplished in a timely manner. The first goal called for the completion of the 15 largest refiners for the 1973-1976 period and follow-up audits of the 35 major refiners for the 1977-1979 period to be accomplished during FY 1981; and the achievement of real time audits at all refiners in FY 1981. These goals will beraccomplished along with sustaining the very important settlement and litigation efforts required to complete the full enforcement process. The current projections are that the requested resources will provide for the detection of an estimated amount in excess of $13 billion in violations over the life of the Office of the Special Counsel. Changes in the funding level will be most noticeable in the period FY 1982 and FY 1984 when settlement or litigation activities are the primary thrust of the Special Counsel's enforcement programs. The litigation phase will also be subject to the control of external forces (i.e., District Court judges' decisions) during this period. Therefore, any litigation remaining unfinished as of the termination of the Office of the Special Counsel is directly related to the funding levels and manpower provided, and to the external forces which are totally outside of the Department's control.

The benefits or results of the all others activities under EPAA include refunds, roll-backs, bank adjustments and penalties recovered from firms which have overcharged consumers. For the most part, where the injured party cannot be identified, dollars recovered are returned to the U. S. Treasury. Currently, alleged violations total over $1.3 billion with actual recoveries of over $320 million, bringing the total identified violations to over 1.6 billion. Additional overcharges are expected to be identified in the remaining years of the audit activity. An enforcement presence also provides a deterrent to violations.

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The backlog of embargo cases was substantially cleaned up by the end of FY 1979 at which time Enforcement's inventory was reduced from 2,500 cases to approximately 550 cases. While the case inventory has dropped dramatically, the significance of the remaining cases being pursued has increased substantially. The dollar amount of alleged violations in open cases has quadrupled (from about $400,000,000 in October 1977 to over $1,633,000,000 at the beginning of FY 1980).

Efforts are now focused on audits of current period violations. Enforcement's working inventory is about 690 cases. An additional 300 or so cases have been forwarded to the Office of Hearings and Appeals (OHA), the Federal Energy Regulatory Commission (FERC), Office of General Counsel (OGC) Litigation, or the Department of Justice (DOJ).

In 1978 and 1979, approximately 65 cases involving 145 firms were referred to the DOJ for possible criminal investigations. Criminal charges are pending against 7 firms and 12 individuals. Eight firms and 28 individuals have been convicted on various DOE felony and misdemeanor counts.

Currently there are over $300 million in alleged violations in the crude reseller program. Over $14 million has already been recovered. The single largest Notice of Probable violation in that program to date totals nearly $82 million.

In addition, there have been 21 crude reseller matters involving approximately 37 cases referred to the DOJ for criminal investigation. Many of the individuals and firms involved in these cases have pled guilty. In other cases, there have been criminal trials and convictions.

From about $50 million in identified violations between September 1973 and October 1978 in the NGL program, identified violations have grown to nearly $395 million since October 1978. About $30 million in overcharges has been directly recovered in just the past year, while individual cases involving violations of $200 million have also been cited.

In the Small Refiner program, identified violations have grown from a little over $200 million in October 1978 to over $350 million today. And in the Entitlement's program, identified violations have grown to nearly $217 million today. To date, nearly $3 million in overcharges have been collected.

Efforts in the retail gasoline area were significantly expanded during FY 1979 and are expected to remain at a high level through FY 1981. At the beginning of calendar year 1980, almost 33,500 consumer complaints were referred to the program from the "ERA hotline" in regard to retail sales of gasoline. Over 29,000 audits have been conducted and over 6,600 retailers had been found in violation. More than $1,000,000 in penalties had been collected. Recent market activities of hundreds of resellers of gasoline are currently being investigated.

Enforcement of the FUA will help assure achievement of a portion of the expected near-term savings of approximately 400,000 barrels per day of petroleum and natural gas resulting from currently planned conversions and long-term savings of between .6 and 1.2 million barrels of oil equivalent per day by 1990.

VI. ISSUES.

Due to the legislative and overall time restraints of the major refiners activities, a number of alternatives are available for the accomplishment of the program goals/objectives. These alternatives follow:

- Increase the manpower and budget resources within the current program time frame to further enhance and thereby, accelerate the accomplishment of the audit and litigation activities.

- Reimposition of pricing and allocation controls. If the controls were reimposed, as currently constituted (crude oil, motor gasoline and propane), the equivalent of 812 positions and related support funds would be required to implement the audit and litigation activities. A variation to the degree and complexity of the controls as presently imposed would have a corresponding effect on the resources required. However, the above increase is required in order to assure the level of enforcement obtained to date under the current legislative authorities.

- Merger of the Special Counsel and Enforcement Offices. The economics of this merger have already been taken into account and are reflected in the out-year estimates of this plan. The reductions are identified in supervisory positions located at three field sites in Dallas, Philadelphia and San Francisco and administrative and program positions in the Headquarters office, which are estimated to be about 102. Since the out-year estimates are predicated upon a merger, the positions would have to be restored if the merger were not consummated.

- In addition, it must be recognized that regardless of the maintenance of current program time frames or the implementation of the identified alternatives, the continuation of litigation activities beyond the life of the program is a real possibility and therefore, consideration should be given to the establishment of a special unit or assignment of this responsibility to an existing organization. This would ensure the successful completion of the activities initiated during and up to the conclusion of the enforcement program.

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Options or alternatives to the accomplishment of the goals/objectives of the all others activities are as follows:

- Cessation of all EPAA audit activity immediately after decontrol. This alternative would mean giving up the recoveries from currently identified violations($1.3 billion) and from future potential violations which would likely be lost in the absence of the EPAA enforcement presence.

- The States could assume enforcement activities for selected programs. This alternative was explored in the retail gasoline area, and after extensive contacts, only four states accepted. The degree of enforcement by these states has been mixed. However, one of the four has made a special effort in this area. Even if more states responded, Federal employees still would have to police non-cooperating States and the Office of Enforcement has to provide assistance to cooperating states.

- Continuation of controls in their present form. This alternative would take approximately the same resources Enforcement has in the current year (FY 1980). Additional resources would be required if controls were reinstituted on currently decontrolled products such as middle distillates.

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Compliance
Contracts Listing
(In thousands of dollars)

Basic Level

Major Refiners:	FY 82	FY 83	FY 84	FY 85	FY 86
o Program Management Information System - The program management information system is known as the Special Counsel Information Processing System (SCIPS). Presently, SCIPS offers five (5) functions essential to OSC program management: Tracking of audit issues and the resolution process; a personnel locator at national, district or team level; a reports function which presents information necessary to management control of audits in progress; audit calculations to compute overcharges and violations, the products of which are used as exhibits to NOPV's issued, and audit sampling techniques which verify the statistical relevance of sample transactions to the overall group of transactions.....	400	200	-0-	-0-	-0-
o Expert Testimony - Current OSC contractural agreements with both Alexander Grant & Co. (Audit Support) and CEXEC, Inc. (Computerized Audit Support) require the contractors to provide expert testimony in any litigation resultant from the audits in which the contractors participated. Such testimony will be necessary to emonstrate the basis for and validity of the Government's litigment's.....	400	200	-0-	-0-	-0-
- Generic Computer Program - The generic software will provide a uniform approach for audit area dealing with refiner cost recoveries. It eliminates a large number of individual computer software development efforts, simplifies the quality control exercise and stand better against any legal challenges. Primarily, the generic computer program will provide a means of automating the audit of a refiner operation to the greatest extent possible. This automation will provide a method of uniform and consistent recalculation of data to reflect subsequent court decisions and rulemakings.....	200	-0-	-0-	-0-	-0-

	FY 82	FY 83	FY 84	FY 85	FY 86
o Litigation Support - The litigation support contract will provide management information and paralegal services to the OSC legal and audit staff for the processing of information contained in documents collected and/or produced during audits and litigation. The contract will provide necessary information search and processing systems and procedures applicable to the current OSC data processing capabilities. Litigation support will be primarily concerned with the analysis of information contained in the documents acquired by the OSC. This could include the review of the documents for subject content, classification and organization. Management of large amount of evidentiary documents will provide relief to staff attorneys from the demands of document information management. The information management support provided by the contractor will enable the OSC attorneys to concentrate their efforts more completely on litigation and thus provide the government the opportunity to present the best possible cases.....	1,555	761	-0-	-0-	-0-
Subtotal, Major Refiners.....	2,555	1,161	-0-	-0-	-0-
All Others:					
o Maintenance of and Modification of the Management Informative Systems.					
- These funds will be used to enhance Enforcement's Information Systems, including Case Tracking System, (RECATRK), Compliance Time and Activity Reporting System, (CTARS), etc., in support of workplan, resource mobility, budget management, targeting, measurement of accomplishments of program goals, and to provide capability for computer audit assistance to program managers.....	65	79	94	9	9

o Contract Audit Support - These funds will be used to procure audit support services for the crude oil production, small refiners, product resellers, and entitlements programs. This contract will assist the program in completing audits with the designated time-frame in the previously listed program areas).....	1,225	1,495	1,777	178	178
Subtotal, All Others.....	1,290	1,574	1,871	187	187
Total, Compliance.....	3,845	2,735	1,871	187	187

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Department of Energy
FY 82-86 SUBPROGRAM SUMMARY

I. SUBPROGRAM TITLE: Compliance
SECRETARIAL OFFICER: Administrator for Economic Regulatory Administration

II. RESOURCE REQUIREMENTS: ($000; Manpower in full-time permanent ceiling personnel.)

	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
				Minimum Level				
Major Refiners (BA)	(25,243)	(40,773)	(35,594)	(22,500)	(15,840)	(5,760)	(-0-)	(-0-)
EPAA Audits	16,660	22,425	14,950	6,250	-0-	-0-	-0-	-0-
EPAA Litigation	8,583	18,348	20,644	16,250	15,840	5,760	-0-	-0-
Price & Supply Monitoring and Verification	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
All Others (BA)	(21,863)	(31,468)	(31,742)	(23,580)	(17,910)	(13,500)	(11,430)	(11,430)
EPAA Audits	14,915	21,361	21,551	14,985	7,994	4,339	2,853	2,433
EPAA Litigation	6,948	10,033	9,945	6,554	5,553	1,770	882	263
FUA	-0-	74	246	1,040	1,271	1,348	1,425	1,502
Price & Supply Monitoring and Verification	-0-	-0-	-0-	1,001	3,092	6,043	6,270	7,232
Total Budget Authority	47,106	72,241	67,336	46,080	33,750	19,260	11,430	11,430
Total Budget Outlays	40,776	69,405	68,220	42,120	33,840	20,700	13,860	11,430
Total Positions	1,344	1,365	1,302	886	559	292	292	292
Headquarters	214	270	303	339	291	40	40	40
Field	1,130	1,095	999	547	268	252	252	252

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V. SCHEDULES AND DELIVERABLES

B. Deliverables.

Minimum level funding (10% reduction) would result in a reduction in the resources available to complete the EPAA litigation phase of the major refiners activity. A reduction in the resources which are earmarked for completion of the EPAA audit phase is not being considered since this phase is to be completed, including close-out activities, in FY 1982. By not completing the audits, future possibilities for the litigation of violations would be adversely impacted because it would not be possible to identify them, whereas the primary effects of reducing litigative funding would be to leave unfinished a great number of litigation cases and also the loss of litigation cases in process.

Although the adverse effects upon the litigation phase are not really acceptable from a programmatic standpoint, it is more important to pursue the audits to completion for the duration of the legislated mandatory regulatory period thereby, 1. signaling to the companies that stonewalling will not be an effective impediment to the enforcement process, and 2. identifying the maximum number of violations.

The basic level resources which are shown for the all others activity reflect a 13 percent reduction in the number of positions the Office of Enforcement requested in its FY 1981 Departmental budget submission. There is no single subprogram element that can be totally eliminated to reach the minimum level. Due to the difficulty in predicting future market situations and the fluidity of the international situation, the minimum level can only be achieved by an across the board cut in staff years and a reduction in contracts. Any further reduction would render the program ineffective and result in a "caretaker" approach. It is felt that if selected, this reduced funding level would send signals to the industry to cheat during the phase-out of controls and result in the lack of follow through on violations already identified and deminish the ability to identify and recover additional overcharges.

Compliance
Contracts Listing
(In thousands of dollars)

Minimum Level

Major Refiners:	FY 82	FY 83	FY 84	FY 85	FY 86
o Program Management Information System - The program management information system is known as the Special Counsel Information Processing System (SCIPS). Presently, SCIPS offers five (5) functions essential to OSC program management: Tracking of audit issues and the resolution process; a personnel locator at national, district or team level; a reports function which presents information necessary to management control of audits in progress; audit calculations to compute overcharges and violations, the products of which are used as exhibits to NOPV's issued, and audit sampling techniques which verify the statistical relevance of sample transactions to the overall group of transactions.....	360	200	-0-	-0-	-0-
o Expert Testimony - Current OSC contractural agreements with both Alexander Grant & Co. (Audit Support) and CEXEC, Inc. (Computerized Audit Support) require the contractors to provide expert testimony in any litigation resultant from the audits in which the contractors participated. Such testimony will be necessary to emonstrate the basis for and validity of the Government's litigment's.....	360	200	-0-	-0-	-0-
- Generic Computer Program - The generic software will provide a uniform approach for audit area dealing with refiner cost recoveries. It eliminates a large number of individual computer software development efforts, simplifies the quality control exercise and stand better against any legal challenges. Primarily, the generic computer program will provide a means of automating the audit of a refiner operation to the greatest extent possible. This automation will provide a method of uniform and consistent recalculation of data to reflect subsequent court decisions and rulemakings.....	180	-0-	-0-	-0-	-0-

	FY 82	FY 83	FY 84	FY 85	FY 86
o Litigation Support - The litigation support contract will provide management information and paralegal services to the OSC legal and audit staff for the processing of information contained in documents collected and/or produced during audits and litigation. The contract will provide necessary information search and processing systems and procedures applicable to the current OSC data processing capabilities. Litigation support will be primarily concerned with the analysis of information contained in the documents acquired by the OSC. This could include the review of the documents for subject content, classification and organization. Management of large amount of evidentiary documents will provide relief to staff attorneys from the demands of document information management. The information management support provided by the contractor will enable the OSC attorneys to concentrate their efforts more completely on litigation and thus provide the government the opportunity to present the best possible cases.....	1,300	645	-0-	-0-	-0-
Subtotal, Major Refiners.....	2,300	1,045	-0-	-0-	-0-
All Others:					
o Maintenance of and Modification of the Management Informative Systems.					
- These funds will be used to enhance Enforcement's Information Systems, including Case Tracking System, (RECATRK), Compliance Time and Activity Reporting System, (CTARS), etc., in support of workplan, resource mobility, budget management, targeting, measurement of accomplishments of program goals, and to provide capability for computer audit assistance to program managers.....	25	20	15	9	9

	FY 82	FY 83	FY 84	FY 85	FY 86
o Contract Audit Support - These funds will be used to procure audit support services for the crude oil production, small refiners, product resellers, and entitlements programs. This contract will assist the program in completing audits with the designated time-frame in the previously listed program areas).....	475	380	285	178	178
Subtotal, All Others.....	500	400	300	187	187
Total, Compliance.....	2,800	1,445	300	187	187

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I. SUBPROGRAM TITLE: Compliance
SECRETARIAL OFFICER: Administrator for Economic Regulatory Administration

II. RESOURCE REQUIREMENTS: ($000; Manpower in full-time permanent ceiling personnel.)

	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
				Enhanced Level				
Major Refiners (BA)	(25,243)	(40,773)	(35,594)	(26,250)	(18,480)	(6,720)	-0-	-0-
EPAA Audits	16,660	22,425	14,950	6,500	-0-	-0-	-0-	-0-
EPAA Litigation	8,583	18,348	20,644	19,750	18,480	6,720	-0-	-0-
Price & Supply Monitoring and Verification	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
All Others (BA)	(21,863)	(31,468)	(31,742)	(27,510)	(20,895)	(15,750)	(13,335)	(13,335)
EPAA Audits	14,915	21,361	21,551	17,692	10,040	6,425	3,257	2,949
EPAA Litigation	6,948	10,033	9,945	7,700	6,351	1,970	1,569	683
FUA	-0-	74	246	1,040	1,271	1,348	1,425	1,502
Price & Supply Monitoring and Verification	-0-	-0-	-0-	1,078	3,233	6,007	7,084	8,201
Total Budget Authority	47,106	72,241	67,336	53,760	39,375	22,470	13,335	13,335
Total Budget Outlays	40,776	69,405	68,220	49,245	39,475	24,050	16,170	13,335
Total Positions	1,344	1,365	1,302	1,157	653	341	341	341
Headquarters	214	270	303	350	340	47	47	47
Field	1,130	1,095	999	807	313	294	294	294

V. SCHEDULE AND DELIVERABLES

B. Deliverables. Enhanced level resources provide a 5 percent increase over the amount available at the basic level. For the major refiners activities the additional resources will permit the audit phase to be completed earlier than is allowed at the basic level and thus accelerate efforts into the litigation phase of the program. For the all others activities the increase impacts EPAA audits, EPAA litigation and Special Investigations and recovers 5 of the 13 percent cut received by the Department in its acceptance, for FY 1981, of the 690 level rather than the 797 level. The 690 level assumed decontrol but no shortages. The 797 level assumed current controls with shortages. The reality has been that we have experienced shortages in FY 1979 and FY 1980 and will probably continue to experience them in FY 1981 and beyond. This level would permit a small increase over the Basic level for audit, litiation, and special investigation activities associated with the EPAA, thereby identifying and returning additional overcharges to the public and the Treasury.

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Compliance
Contracts Listing
(In thousands of dollars)

Enhanced Level

Major Refiners:	FY 82	FY 83	FY 84	FY 85	FY 86
o Program Management Information System - The program management information system is known as the Special Counsel Information Processing System (SCIPS). Presently, SCIPS offers five (5) functions essential to OSC program management: Tracking of audit issues and the resolution process; a personnel locator at national, district or team level; a reports function which presents information necessary to management control of audits in progress; audit calculations to compute overcharges and violations, the products of which are used as exhibits to NOPV's issued, and audit sampling techniques which verify the statistical relevance of sample transactions to the overall group of transactions.....	400	200	-0-	-0-	-0-
o Expert Testimony - Current OSC contractural agreements with both Alexander Grant & Co. (Audit Support) and CEXEC, Inc. (Computerized Audit Support) require the contractors to provide expert testimony in any litigation resultant from the audits in which the contractors participated. Such testimony will be necessary to emonstrate the basis for and validity of the Government's litigment's.....	400	200	-0-	-0-	-0-
- Generic Computer Program - The generic software will provide a uniform approach for audit area dealing with refiner cost recoveries. It eliminates a large number of individual computer software development efforts, simplifies the quality control exercise and stand better against any legal challenges. Primarily, the generic computer program will provide a means of automating the audit of a refiner operation to the greatest extent possible. This automation will provide a method of uniform and consistent recalculation of data to reflect subsequent court decisions and rulemakings.....	200	-0-	-0-	-0-	-0-

	FY 82	FY 83	FY 84	FY 85	FY 86
o Litigation Support - The litigation support contract will provide management information and paralegal services to the OSC legal and audit staff for the processing of information contained in documents collected and/or produced during audits and litigation. The contract will provide necessary information search and processing systems and procedures applicable to the current OSC data processing capabilities. Litigation support will be primarily concerned with the analysis of information contained in the documents acquired by the OSC. This could include the review of the documents for subject content, classification and organization. Management of large amount of evidentiary documents will provide relief to staff attorneys from the demands of document information management. The information management support provided by the contractor will enable the OSC attorneys to concentrate their efforts more completely on litigation and thus provide the government the opportunity to present the best possible cases.....	1,555	761	-0-	-0-	-0-
Subtotal, Major Refiners.....	2,555	1,161	-0-	-0-	-0-

All Others:

o Maintenance of and Modification of the Management Informative Systems.					
- These funds will be used to enhance Enforcement's Information Systems, including Case Tracking System, (RECATRK), Compliance Time and Activity Reporting System, (CTARS), etc., in support of workplan, resource mobility, budget management, targeting, measurement of accomplishments of program goals, and to provide capability for computer audit assistance to program managers.....	65	79	94	9	9

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o Contract Audit Support - These funds will be used to procure audit support services for the crude oil production, small refiners, product resellers, and entitlements programs. This contract will assist the program in completing audits with the designated time-frame in the previously listed program areas).....	1,225	1,495	1,777	178	178
Subtotal, All Others.....	1,290	1,574	1,871	187	187
Total, Compliance.....	3,845	2,735	1,871	187	187

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I. SUBPROGRAM TITLE: Compliance
SECRETARIAL OFFICER: Administrator for Economic Regulatory Administration

II. RESOURCE REQUIREMENTS: ($000; Manpower in full-time permanent ceiling personnel.)

	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
				Overguidance Level				
Major Refiners (BA)	(25,243)	(40,773)	(35,594)	(33,500)	(32,000)	(26,600)	(26,600)	(26,600)
EPAA Audits	16,660	22,425	14,950	9,500	6,500	1,100	1,100	1,100
EPAA Litigation	8,583	18,348	20,644	21,000	21,000	21,000	21,000	21,000
Price & Supply Monitoring and Verification	-0-	-0-	-0-	3,000	4,500	4,500	4,500	4,500
All Others (BA)	(21,863)	(31,468)	(31,742)	(27,510)	(20,895)	(15,750)	(13,335)	(13,335)
EPAA Audits	14,915	21,361	21,551	17,692	10,040	6,425	3,257	2,949
EPAA Litigation	6,948	10,033	9,945	7,700	6,351	1,970	1,569	683
FUA	-0-	74	246	1,040	1,271	1,348	1,425	1,502
Price & Supply Monitoring and Verification	-0-	-0-	-0-	1,078	3,233	6,007	7,084	8,201
Total Budget Authority	47,106	72,241	67,336	61,010	52,895	42,350	39,935	39,935
Total Budget Outlays	40,776	69,405	68,220	55,095	49,495	42,830	38,470	36,335
Total Positions	1,344	1,365	1,302	1,157	828	806	806	806
Headquarters	214	270	303	283	325	322	322	322
Field	1,130	1,095	999	874	503	484	484	484

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III. SUBPROGRAM CONTEXT

A. History

1. Legislative. Although there will be no legislation after expiration of the EPAA upon which to base a policy of spot checks and price and supply monitoring, the Office of Special Counsel (OSC), however, feels it is imperative to plan as though such legislation did in fact exist. The nation's dependence on petroleum supplies and the potential for shortages creates the opportunity for improper gains. With this in mind, OSC believes the President will want standby authorities concerning crude and refined products.

2. Policy. The Office of Special Counsel assumes that any requirements for price and supply monitoring including spot check investigations that involve the 35 majors refiners will continue to be assigned to this Office.

B. Status.

The Office of Special Counsel assumes that any requirements for price and supply monitoring including spot check investigations that involve the 35 majors refiners will continue to be assigned to this office.

IV. SUBPROGRAM GOALS/OBJECTIVES AND DESIGN CONSIDERATIONS

A. The Goals/Objectives of the program are to:

- Conduct a program of price and supply monitoring that will provide trend and other economic analyses from data on petroleum products for the 35 major refiners.

- Conduct limited investigations of selected major refiners for the purpose of obtaining data that can be used in the determination of the need to reimpose controls.

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B. Design Considerations.

The Office of Special Counsel will develop methodologies to gather petroleum price and supply data concerning the 35 major refiners and perform economic trend analyses, market behavior and the potential for national, regional and local supply imbalances. This information that be useful in determining the need for future regulations relative to the operations of the 35 major refiners.

By implementing price and supply monitoring, including spot check type investigations, the OSC will utilize the talents of the highly experienced and successful teams of experts that have been put together over the life of the intensified major refiner enforcement program. This will enable the government to preserve intact the competent management and enforcement staff that would be able to respond quickly and effectively to a reimposition of controls as well as a short-term government response (i.e., rationing or other measures to cope with a supply shortage) required by an emergency energy crises involving petroleum and its products.

V. Schedule and Deliverables

A. Schedule.

The total time frame for the Office of Special Counsel's enforcement program begins in December 1977 and extends into the future for as long as the need for these activities exist.

- The price and supply monitoring efforts will begin in FY 1982.

- The limited investigations will also begin in FY 1982.

B. Deliverables

This effort will provide the necessary data concerning the price and supply policies and related strategies of the 35 major refiners. Analyses of data will result in meaningful periodic status reports depicting various price and supply relationships that can be used in determining market conditions and the need for future controls.

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Compl[illegible]e
Contracts Listing
(In thousands of dollars)

Overguidance Level

Major Refiners:	FY 82	FY 83	FY 84	FY 85	FY 86
o Program Management Information System - The program management information system is known as the Special Counsel Information Processing System (SCIPS). Presently, SCIPS offers five (5) functions essential to OSC program management: Tracking of audit issues and the resolution process; a personnel locator at national, district or team level; a reports function which presents information necessary to management control of audits in progress; audit calculations to compute overcharges and violations, the products of which are used as exhibits to NOPV's issued, and audit sampling techniques which verify the statistical relevance of sample transactions to the overall group of transactions.....	600	600	600	600	600
o Expert Testimony - Current OSC contractural agreements with both Alexander Grant & Co. (Audit Support) and CEXEC, Inc. (Computerized Audit Support) require the contractors to provide expert testimony in any litigation resultant from the audits in which the contractors participated. Such testimony will be necessary to emonstrate the basis for and validity of the Government's litigment's.....	600	400	400	400	400
- Generic Computer Program - The generic software will provide a uniform approach for audit area dealing with refiner cost recoveries. It eliminates a large number of individual computer software development efforts, simplifies the quality control exercise and stand better against any legal challenges. Primarily, the generic computer program will provide a means of automating the audit of a refiner operation to the greatest extent possible. This automation will provide a method of uniform and consistent recalculation of data to reflect subsequent court decisions and rulemakings.....	600	400	400	400	400

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	FY 82	FY 83	FY 84	FY 85	FY 86
o Price and Supply Monitoring and Verification - Under this contract, the contractor performs reviews of specific refiner activities in order to monitor and verify the refiner's pricing and supply activities. Reviews will be made based on information provided through industry, DOE and other channels. Results of these reviews will be utilized to impact to impact national economic and regulatory policies.....	1,500	1,500	1,500	1,500	1,500
o Litigation Support - The litigation support contract will provide management information and paralegal services to the OSC legal and audit staff for the processing of information contained in documents collected and/or produced during audits and litigation. The contract will provide necessary information search and processing systems and procedures applicable to the current OSC data processing capabilities. Litigation support will be primarily concerned with the analysis of information contained in the documents acquired by the OSC. This could include the review of the documents for subject content, classification and organization. Management of large amount of evidentiary documents will provide relief to staff attorneys from the demands of document information management. The information management support provided by the contractor will enable the OSC attorneys to concentrate their efforts more completely on litigation and thus provide the government the opportunity to present the best possible cases.....	6,000	6,000	6,000	6,000	6,000
Subtotal, Major Refiners.....	9,900	9,400	8,700	8,700	8,700

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	FY 82	FY 83	FY 84	FY 85	FY 86
All Others:					
o Maintenance of and Modification of the Management Informative Systems.					
- These funds will be used to enhance Enforcement's Information Systems, including Case Tracking System, (RECATRK), Compliance Time and Activity Reporting System, (CTARS), etc., in support of workplan, resource mobility, budget management, targeting, measurement of accomplishments of program goals, and to provide capability for computer audit assistance to program managers.....	65	79	94	9	9
o Contract Audit Support - These funds will be used to procure audit support services for the crude oil production, small refiners, product resellers, and entitlements programs. This contract will assist the program in completing audits with the designated time-frame in the previously listed program areas).....	1,225	1,495	1,777	178	178
Subtotal, All Others.....	1,290	1,574	1,871	187	187
Total, Compliance.....	11,190	10,974	10,571	8,887	8,887

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21 MAR 1980

Question: The GAO report states that "DOE has generally been unable to obtain restitution for parties that have been injured through overcharges." What are the major obstacles to restitution?

Answer: Because of the complex cost passthrough mechanism of the EPAA pricing regulations, it is often not possible to associate a regulatory violation with a particular refined petroleum product. This is particularly so in instances where the violation involved excessive claims of increased raw material or overhead costs by a refiner, which costs have no specific relationship to a particular product. This kind of violation impacts upon a refiner's entire market structure, but with no precise impact upon a particular product.

In many cases, even where the regulatory violation did involve a particular product, injury to a specific customer may be difficult to identify. This is often the case where the regulatory infraction involved excessive allocation of increased costs to a given product (e.g. gasoline) resulting in the refiner having overrecovered the total prices charged for all gasoline during a particular month. Because of the large number of gasoline customers (often in excess of 100,000), the

injury to a particular customer is difficult to ascertain. The difficulty of identifying injury to specific customers is aggravated by the fact that, of necessity, auditing must be conducted on a sample basis. As a result, even where the magnitude of injury to a specific customer is known with respect to several months, the injury impact is difficult to project for non-sampled months even where the challenged practice is known to have occurred.

Another major problem faced in fashioning restitution remedies relates to the complex distribution pattern of the major refiners. Gasoline, for example, is marketed through a complex network of jobbers, wholesalers, resellers, bulk plants, retail dealers, and company-owned retail stations. Where an intermediary reseller is the major refiner's direct customer, a refund to such reseller in the amount of the overcharge may well exceed the actual injury to such reseller, since those reseller customers were permitted under applicable regulations to pass through the excessive prices to the next distribution level. In most cases, it is virtually impossible to guarantee that refund recipients will, in turn, redistribute an appropriate portion of the overcharge refund to their customers. For this reason, the Office of Special Counsel has utilized indirect restitutional devices in some of the consent orders, including refunds to utilities where the refund can be calculated in the utility ratemaking procedures and, therefore, ultimately benefit a large number of customers through reduced utility prices.

For money deposited in the Government Special Refund Account, the claim process under Subpart V of the Department's regulations is rather involved. The Department is considering requesting that Congress provide that monies not readily refundable to harmed parties be deposited directly to miscellaneous receipts.

Question: If there are legal impediments, are there any remedies this Committee could provide?

Answer: There are no legal impediments to the development of effective restitution, although the Department is considering whether to propose legislation to specifically authorize payment of refunds directly to the U.S. Treasury where injured parties cannot be identified.

Question: Over $500 million in agreed to settlements has called for investments by the oil companies. What investments are the companies required to make?

Answer: Three of the final global consent orders (Amoco, Hess, and Phillips) contain provisions requiring substantial incremental investment commitments in the United States on the part of the companies. The proposed Ashland consent order contains a similar provision. The total of these incremental investment incentives is slightly over $1 billion.

The type of investments vary from company to company, although all of them involve either exploration and development of new gas and oil facilities or the construction or renovation of new or modernized refining capacity in the United States.

Question: How does this redress the problem of overcharges?

Answer: The Office of Special Counsel has never considered these investment commitments as part of either the direct or indirect restitutional package negotiated in the consent order. Therefore, such invest-

ments have no direct restitutional relationship to alleged overcharges. Rather, it is considered a good faith gesture on the part of the company in negotiation of the settlement and as a device to enhance the energy independence of the nation by intensifying exploration and development of new oil and gas reserves and developing new energy related technology.

Question: What mechanisms do you have to verify that the companies are upholding the terms of the settlements?

Answer: In the case of each global consent order, the Office of Special Counsel has developed a monitoring system to determine the company's compliance with all terms of the consent order. These monitoring plans, in the case of the companies that are committed to incremental investment commitments, contain detailed audit plans for determining that the commitments made by the company have been carried out. There are three key elements in this process: (1) a determination that the investment proposed by the company is truly incremental from a financial management and accounting standpoint; (2) that the commitments have been made in a timely fashion in accordance with the provisions of the consent orders; and (3) that the exploration, development, construction, or renovation called for is actually undertaken and completed.

Question: In January, $4,000,000 from a negotiated settlement was distributed to four charities. What was the final disposition of that case?

Answer: The Department of Energy's Acting General Counsel signed an agreement on February 27, 1981, with the four charities whereby each agreed to return $250,000 to the Department and distribute $750,000 in accordance with the terms of each of their Janaury 19, 1981, letters of assurance.

Question: What safeguards have you installed to prevent similar occurrences?

Answer: On February 2, 1981, the DOE Director of Administration issued DOE Order No. 2100.1 entitled "Financial Management of Money Received from Persons Who Have Allegedly Violated Department of Energy Regulations," whereby the DOE Controller was made responsible for custodial control of all such escrow accounts. A copy of this directive is inserted for the record.

Question: What obstacles are there to settlements that result in refunds to the U.S. Treasury?

Answer: The major obstacle to refunds to the U.S. Treasury being deemed a remedy are that they are not generally regarded by the consuming public as a compensation to the those overcharged and that companies do not consider this type of remedy as protection from subsequent private party overcharge suits.

Oil Jobbers and Retailers Settlement Program

Question: On March 23, 1981, the Department announced a settlement program to expedite dollar recoveries of a large portion of alleged civil violations of Federal pricing and allocation regulations by oil jobbers and retailers. Please explain to the Committee how this settlement program will operate?

Answer: A copy of the settlement plan which explains how the settlement program operates is provided for record.

Department of Energy
Washington, D.C. 20461

March 23, 1981

Mr. William Quortrup, President
National Oil Jobbers Council
1707 H Street, Northwest
Washington, D.C. 20006

Dear Mr. Quortrup:

As you know, during recent weeks representatives of the Office of Enforcement of the Economic Regulatory Administration (OE) have had a series of discussions with members of your staff. We have been working together to develop a mechanism for resolving current civil enforcement disputes between the OE and certain refined petroleum product resellers, product reseller/retailers, and product retailers. I believe that we have devised a settlement process which will produce fair and equitable settlements of unresolved enforcement matters on uniform terms.

Most of the firms which are eligible to participate in this settlement process have allegedly violated the product reseller and reseller/retailer regulations of 10 C.F.R. Part 212, Subpart F, which were in effect until May 1, 1980. Effective May 1, the Department completely revised these regulations. In addition, the Department had revised these regulations, effective July 15, 1979, to provide new and different regulations for motor gasoline retailers.

While some of the eligible firms are not members of the National Oil Jobbers Council (NOJC), the OE expects to receive the full cooperation of the NOJC to assure the success of this settlement process. In particular the OE will be unable to continue this settlement process if the NOJC fails, for whatever reason, to act in accordance with paragraphs 14 and 20 of this letter.

As a result of our discussions, the settlement process will operate in three phases.

I. The first phase involves signing this letter and recognizing the following:

1. The OE will not negotiate individual substantive issues as part of this settlement process.

2. Potential liability will include interest on the violation amounts which the OE will compute at applicable rates from the date of the alleged violation(s) through December 31, 1980.

Date of Violation	Cents Per Dollar of Potential Liability: Prior to Proposed Remedial Order	Proposed Remedial Order
Prior to 1979	30	38
On or After January 1, 1979	38	50

9. The OE will compromise civil penalties for the settled matters according to the following uniform formula:

Date of Violation	Percentage of Settlement Amount: Compromise of Penalties
Prior to 1979	2
On or After January 1, 1979	3

10. A firm which chooses to participate in this settlement process will distribute its settlement amount in the following manner:

(a) to the maximum extent practicable, as direct refunds to identifiable end-users, as determined by the OE, accompanied by a letter which explains the reason for the refund and the method used to compute it.

(b) the remainder as payments into the Department's deposit fund account.

11. A participating firm may have up to two years to repay its settlement amount in installments; however, notwithstanding paragraph 6, the OE will apply to the unpaid balance its March, 1981 interest rate of 14.03 percent unless the participating firm selects the varying interest rate recomputed quarterly by the OE. Interest on installment payments will begin to accrue as of the date the OE finalizes a particular C.O.

18. Notwithstanding any other provisions of this letter, the OE will continue its enforcement activities without alteration with regard to those eligible firms which do not participate in this settlement process.

19. A signed uniform C.O. offered by an eligible firm which has litigation(s) pending against the Department which concerns the regulations covered in the C.O. or concerns related claims arising under the Freedom of Information Act (5 U.S.C. §552), shall include the requirements that (i) the firm stipulate to the dismissal with prejudice of this litigation and (ii) the firm incur the expense and take the action required to obtain, where necessary, the court's approval for the dismissal.

II. The second phase of this settlement process involves the following steps:

20. Within two weeks of the date of this letter, the NOJC will communicate with its members and explain the benefits of participation in the OE's settlement process. The OE will review, prior to its issuance, the NOJC's statement to its members.

21. Shortly after the NOJC's notification to its members, the OE will notify all eligible firms of the details of this settlement process and require any interested firm to respond within 15 days, in which event it must provide a list of all litigation of the types discussed in paragraph 19 initiated by the firm.

22. The OE will send each interested firm a computation of that firm's potential liability and a uniform C.O. for the firm to sign and return within 15 days.

23. Within 15 days of signing this letter, the OE will notify each firm undergoing an audit as of the date of this letter, about this settlement process. At the time of that notification, the firm becomes an eligible firm and may choose, within 15 days of that notification, to participate in this settlement process, in which event it must provide a list of all litigation of the types discussed in paragraph 19 initiated by the firm. Within 60 days of receiving notice of the firm's interest, the OE will notify each interested firm of its potential liability and will send a uniform C.O. for the firm to sign and return within 15 days.

If this letter accurately reflects your understanding of this settlement process, please sign both copies of this letter and retain one for your records.

Sincerely,

March 23, 1981
Date

Gordon W. Harvey
Assistant Administrator
for Enforcement
Economic Regulatory Administration

3-13-81
Date

William Quortrup, President
National Oil Jobbers Council

Department of Energy
Washington, D.C. 20461

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

William H. Bode
Batzell, Nunn & Bode
Suite 1100
1015 Fifteenth Street, N.W.
Washington, D.C. 20005

APR 17 1981

Re: Case No. BES-0149

Dear Mr. Bode:

The Department of Energy has considered the Application for Stay which you filed on behalf of the Independent Terminal Operators Association. As the enclosed Decision and Order indicates, the DOE has determined that your submission be denied.

If you have any questions regarding this Decision and Order, please contact Richard T. Tedrow, Deputy Director, Office of Hearings and Appeals, Department of Energy, Washington, D.C. 20461, telephone number (202) 653-3070.

Sincerely,

George B. Breznay
Director
Office of Hearings and Appeals

Enclosure

cc: Theodore A. Miles
Assistant General Counsel
for Administrative Litigation

Department of Energy
Washington, D.C. 20461

APR 1 7 1981

DECISION AND ORDER

OF THE DEPARTMENT OF ENERGY

Application for Stay

Name of Petitioner: Independent Terminal Operators Association

Date of Filing: April 3, 1981

Case Number: BES-0149

On April 3, 1981, the Independent Terminal Operators Association (ITOA) filed an Application for Stay with the Office of Hearings and Appeals of the Department of Energy. The ITOA states that it is an organization of non-branded independent marketers of refined petroleum products. In its submission, the ITOA seeks a stay of the provisions of an agreement entered into by the Office of Enforcement of the Department of Energy Economic Regulatory Administration and the National Oil Jobbers Council (NOJC) on March 23, 1981. The NOJC is a federation of trade associations representing independent petroleum marketers. The March 23, 1981 agreement sets forth a procedure for resolving civil enforcement disputes between the Office of Enforcement and certain refined petroleum product resellers, reseller-retailers, and retailers. The ITOA states that it intends to file an Appeal of the March 23, 1981 agreement at a later date.

Section 205.125 of the DOE procedural regulations sets forth the criteria to be considered by the Office of Hearings and Appeals in determining whether a stay should be granted:

(1) Whether a showing has been made that an irreparable injury will result in the event that the stay ...is denied;

(2) Whether a showing has been made that a denial of the stay...will result in a more immediate hardship or inequity to the applicant than to the other persons affected by the proceeding;

(3) Whether a showing has been made that it would be desirable for public policy reasons to grant immediate relief pending a decision on the merits of the underlying appeal or exception application;

(4) Whether a showing has been made that it is impossible for the applicant to fulfill the requirements of an outstanding order or regulatory provision; and

(5) Whether a showing has been made that there is a strong likelihood of success on the merits.

In its Application for Stay, the ITOA argues that it should be granted a stay of the March 23, 1981 agreement because there is a strong likelihood that the firm will succeed on the merits of an Appeal of that agreement which it intends to file. ITOA argues that the March 23, 1981 agreement establishes new substantive rules with respect to enforcement matters and that because those rules were adopted without regard to the procedural requirements of the Department of Energy Organization Act, 42 U.S.C. § 7101, et seq., and the Administrative Procedure Act, 5 U.S.C. § 551, et seq., the March 23, 1981 agreement is erroneous in law.

Based upon the present record in this matter, we are unable to conclude that a stay of the March 23, 1981 agreement is warranted. ITOA advances a very complicated rationale in support of its challenge to the procedural validity of the agreement. Its submission, however, fails to present sufficient factual material and legal documentation to enable us to make a threshold determination that it is appropriate for the Office of Hearings and Appeals to entertain the submission, or, assuming that the OHA should entertain the submission, to determine that the ITOA has met the grounds for approval of a stay.

The initial determination which must be made is whether the March 23, 1981 agreement can be stayed by or appealed to OHA. We have serious reservations as to whether the DOE Procedural Regulations permit ITOA to file an Application for Stay or an Appeal of the March 23, 1981 agreement. ITOA indicates that it will file an appeal of the agreement under

10 C.F.R., Part 205, Subpart H. Subpart H sets forth procedures for the filing of appeals of certain agency actions, including actions taken under Part 205 Subpart O. 1/ 10 C.F.R. § 205.100(a)(1). Subpart H permits the filing of an appeal by any person aggrieved by an "order" issued by the agency under Subpart O. 10 C.F.R. §§ 205.100(a)(1), 205.101. It is doubtful that the March 23, 1981 agreement is an order. The agreement is in the form of a letter from the DOE to the NOJC and is signed by both parties. Nowhere does the agreement indicate that it is an order issued by the agency pursuant to Subpart O. Rather, the March 23, 1981 agreement by its terms specifically contemplates the future issuance of Consent Orders pursuant to 10 C.F.R. § 205.199J. That provision authorizes the DOE to "at any time resolve an outstanding compliance investigation or proceeding...with a Consent Order." The ITOA has failed to explain why the Office of Hearings and Appeals should review an agreement which merely establishes a process by which future Consent Orders may or may not be issued. 2/

Aside from the procedural problems addressed above, on the basis of the present record we cannot sustain the ITOA's position that the March 23, 1981 agreement is erroneous in law and that the firm is therefore likely to succeed on the merits of the Appeal it intends to file. The ITOA argues in this regard that the March 23, 1981 agreement is a substantive rule and that it is therefore subject to the rulemaking procedures of the Administrative Procedure Act. The ITOA states that the agreement amends 10 C.F.R. § 205.199I, which sets forth the remedies which the DOE may require pursuant to a Remedial Order or Consent Order, and 10 C.F.R. § 205.199J, which sets forth procedures applicable to issuance of Consent Orders. In support of this contention, the ITOA points to three paragraphs in the March 23, 1981 agreement which it alleges prescribe the manner in which the Office of Enforcement will pursue its enforcement activities with respect to firms that do not execute Consent Orders in accordance with the agreement. Our review of those paragraphs, however, reveals that the ITOA has mischaracterized them. Paragraphs 8 and 9 of the March 23, 1981 agreement, to which ITOA refers, merely provide the formula for computing the amounts to be refunded under each Consent Order executed pursuant to the procedures set forth in the agreement. The other paragraph to which ITOA refers, Paragraph 13, states that the Office of Enforcement will not make any future settlement on terms more favorable than those currently being offered. We cannot conclude that the provisions cited, which merely provide a process by which firms will be informed of the terms upon which the DOE is willing to settle outstanding

enforcement actions against them, substantively amend the DOE regulations. The agreement does not bind any firm either to the process set out in the agreement or to the signing of a uniform Consent Order under the agreement.

Moreover, the March 23, 1981 agreement itself states that it does not bind the DOE Office of Enforcement with regard to future resolution of enforcement actions involving firms outside of the framework of the agreement. Paragraph 18 of the agreement states that "[n]otwithstanding any other provisions of this letter, the OE will continue its enforcement activities without alteration with regard to those eligible firms which do not participate in this settlement process" (emphasis added). Thus, firms that do not choose to participate in the uniform Consent Order process do not appear to be affected by the agreement. Nevertheless, it is possible that the provisions in Paragraphs 13 and 18 are simply inconsistent. In that event, further clarification by the NOJC and the Office of Enforcement is necessary as to what they intended in the March agreement. As a result, we are unable at this time to agree with the ITOA's position that the March 23, 1981 agreement substantively amends the DOE regulations concerning Consent Orders. On the basis of the foregoing considerations, we are unable to conclude at this time that the ITOA is likely to succeed on the merits of the Appeal it intends to file.

Finally, we do not believe that the ITOA has fulfilled any of the other criteria for approval of a stay set forth above. We fail to see how an offer of settlement by the DOE, which does not bind any party to which it is directed, in any way irreparably harms a firm. ITOA argues, for example, that it is entitled to a stay on irreparable injury grounds because implementation of the agreement will adversely alter the conduct of enforcement activities with respect to ITOA members, since the conduct of those proceedings will not depend upon the individual merits of a firm's claims or defenses. Since a firm's decision to participate in the agreement is voluntary, we cannot conlude that a firm that chooses to participate would experience an irreparable injury. In addition, a firm that does not choose to participate will still be entitled to challenge any enforcement action against it pursuant to the procedures in 10 C.F.R., Part 205, Subpart O. 3/

Moreover, a stay of the March 23, 1981 agreement could operate to postpone indefinitely the resolution of many outstanding enforcement matters which might otherwise be

settled. We have often stated that it would be inappropriate and contrary to public policy for the OHA to delay enforcement proceedings to await the outcome of other proceedings involving the same firm. See, e.g., Henry Petroleum Corp., 4 DOE 82,015 (1979). For these reasons, we are not convinced that public policy considerations favor the issuance of a stay.

We note that the ITOA requests a hearing in order to make an oral presentation in support of its Application. Hearings in connection with Applications for Stay are held at the discretion of the OHA. See 10 C.F.R. § 205.126(a). In view of the lack of factual or legal support in the record for the ITOA's position, we have determined that a hearing on this matter would not materially advance this proceeding. Accordingly, the ITOA's request for a hearing is denied.

Based upon the considerations discussed above, we have determined that the ITOA's Application for Stay should be denied.

It Is Therefore Ordered That:

The Application for Stay submitted by the Independent Terminal Operators Association on April 3, 1981 is hereby denied.

George B. Breznay
Director
Office of Hearings and Appeals

Date: APR 17 1981

Footnotes

1/ 10 C.F.R., Part 205, Subpart O establishes the procedures for determining the nature and extent of violations of the DOE petroleum price and allocation regulations.

2/ While we are aware that regulations pursuant to which an agency has yet to take action are sometimes reviewable on appeal, the ITOA application fails to provide legal support for treating the March agreement as a "regulation" or for the proposition that, if the March agreement were treated as a regulation, review is appropriate at this time. If such an argument were presented in the ITOA's Appeal of the March 23, 1981 agreement, we would, of course, fully consider and address it.

3/ Subpart O provides ample opportunity for an individual firm to contest the merits of any formal enforcement action taken against it. See, e.g., 10 C.F.R. §§ 205.191(b); 205.193(a); 205.199C(a).

Question: What response from the oil jobbers have you received?

Answer: To date, about 90 percent of the responses received indicate a desire to participate in the program. The date for all firms to file a response has not yet expired.

Question: Why do you offer a settlement rate of between 30 to 50 cents on the dollar?

Answer: The Office of Enforcement's history has shown that product reseller settlements have averaged approximately 50 cents on the dollar. A group settlement of from 30 to 50 cents on the dollar is permitted as an incentive for a firm to settle quickly with very little administrative and legal expense. When completed, this program will reduce the Office of Enforcement's working inventory by about one-third. This will enable resources to be redirected to resolving remaining cases.

Question: What is the potential of settlements under this program?

Answer: The potential settlements under this program are about $100 million.

Question: What is DOE's authority to compromise overcharge claims?

Answer: In Executive Order Number 11790 (3Q F.R. 23785; 43 F.R. 4957), the President delegated to the Secretary of Energy, all of his enforcement authority under the Economic Stabilization Act of 1970 and the Emergency Petroleum Allocation Act of 1973. In Department of Energy Delegation Number 0204-4 (42 F.R. 60725), the Secretary delegated his enforcement authority to the Administrator, Economic Regulatory Administration. On December 22, 1977, DOE's authority to compromise overcharge claims was delegated to the Assistant Administrator for Enforcement from the Administrator, Economic Regulatory Administration. This Delegation Order states in paragraph 4 that the Assistant Administrator for Enforcement has the authority to: "Enter into Consent Orders and into agreements of compromise, including for payment of civil penalties in cases involving violations of DOE rules and regulations described herein and any other orders issued thereunder."

Question: What is the status of the suit which challenges DOE's authority to compromise overcharge claims?

Answer: The application for stay filed on behalf of the Independent Terminal Operators which challenged DOE's authority to compromise overcharge claims was denied by the DOE's Office of Hearings and Appeals. A copy of the DOE Office of Hearings and Appeals' decision is provided for the record.

U.S. Department of Energy
Washington, D.C.

ORDER

HQ 2100.1

2-2-81

SUBJECT: FINANCIAL MANAGEMENT OF MONEY RECEIVED FROM PERSONS WHO HAVE ALLEGEDLY VIOLATED DEPARTMENT OF ENERGY REGULATIONS

1. PURPOSE. To establish the policy, objectives, procedures, and responsibilities for the financial management of monies received from persons who have allegedly violated or who have violated the Department of Energy price and allocation regulations.

2. COVERAGE. This Order applies to monies received pursuant to Consent Orders, Remedial Orders, Remedial Orders for Immediate Compliance, Orders of Disallowance ("orders") issued by the Department of Energy, Consent Decrees and decisions of the courts ("decisions"). This Order provides the following:

   a. A detailed accounting and reporting system for the monies received and subsequently distributed under each order or decision;

   b. Procedures for the investment of money in U.S. Government Securities, use of commercial banks, and for the allocation of interest earned; and

   c. Designation of responsible officials to certify withdrawals of monies and authorize appropriate distributions.

3. REFERENCES.

   a. Department of Energy, Department of the Treasury Agreement on Establishment of a Deposit Fund Escrow Account for Payments by Alleged Violators of DOE Regulations, of 4-7-80 (Attachment 1), which establishes a Treasury account for the deposit of monies collected by the Department and procedures for investment in U.S. Government Securities.

   b. Statutes.

      (1) Economic Stablization Act (ESA) of 1970, § 209, 12 U.S.C. § 1904 note (1976), which provides restitution authority to individuals that suffer a loss because of the alleged violation or violation of the Department of Energy Price and Allocation regulations.

      (2) Emergency Petroleum Allocation Act of 1973 (EPAA), 15 U.S.C. § 751 et seq. (1976), which:

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All Headquarters Elements
Federal Energy Regulatory Commission (info)

INITIATED BY:
Office of the Controller

(a) § 5(a)(1) of this act incorporates § 209 of the Economic Stabilization Act which concerns injunctions and other relief for violations.

(b) § 4(a) of this act gives the Department of Energy authority to promulgate regulations for the mandatory allocation and pricing of crude oil, residual fuel oil, and refined petroleum products in the United States.

(c) § 4(b) of this act states the objectives of the Mandatory Petroleum Allocation and Petroleum Price Regulations including: equitable distribution of crude oil and refined petroleum products at equitable prices among all users and the maintenance of residential heating.

(3) Federal Energy Administration Act of 1974 (FEAA), 15 U.S.C. § 761 et seq. (1976), which § 2(a) of this act gives findings of FEAA--one finding is to insure the maintenance of fair and reasonable consumer prices for scarce energy supplies.

(4) Department of Energy Organization Act of 1977, 42 U.S.C. § 7101 note (1977), which section 503 provides that the Department of Energy can issue a Remedial Order to a violator of any regulation, rule or order promulgated pursuant to the Economic Petroleum Allocation Act.

c. Regulations.

(1) Mandatory Petroleum Allocation and Petroleum Price Regulations, 10 CFR 205, 210, 211, 212, and 214, which provides guidelines for pricing and allocating petroleum.

(2) Enforcement documents

(a) Remedial Orders, 10 CFR 205.199B, which provides that the Director of the Office of Hearings and Appeals of the Department of Energy or his designee may issue a final Remedial Order and serve a copy to the person to whom it is directed after considering all information received during the proceeding.

(b) Remedial Orders for Immediate Compliance, 10 CFR 205.199D, which provides that the Department may issue an Interim Remedial Order for Immediate Compliance, which shall be effective upon issuance until rescinded or suspended.

(c) Order of Disallowance, 10 CFR 205.199E, which provides that the Director of the Office of Hearings and Appeals of the Department of Energy or his designee may issue a final order of disallowance after a proposed order of disallowance has been issued and reviewed.

IIQ

(d) Consent Orders 10 CFR 205.199J, which provides that the Department may at any time resolve an outstanding compliance investigation or proceeding, or a proceeding involving the disallowance of costs pursuant to § 205.199E of paragraph 3c(2)(c). A Consent Order must be signed by the person it is issued to and must indicate the terms agreed to. A Consent Order need not constitute an admission by any person that a violation has occurred.

(3) Remedies.

(a) 10 CFR 205.199I, which provides that a Remedial Order, Remedial Order for Immediate Compliance, and Order of Disallowance, or a Consent Order may require the person to whom it is directed to roll back prices, to make refunds equal to the amount (plus interest) charged in excess of those permitted by regulation or to take such action as the Department determines is necessary to eliminate or compensate the effects of a violation.

(b) 10 CFR 205.280 et seq. (subpart V), which establisn special procedures implemented by the Office of Hearings and Appeals to refund monies to injured persons who are not readily identifiable and are entitled to refunds specified in 3c(3)(a) above. Under the provisions of Subpart V, the Office of Hearings and Appeals issues decisions and orders which set forth the standards and procedures that will be used in evaluating refund applications and in distributing refunds.

4. BACKGROUND. The Economic Regulatory Administration's Office of Enforcement and Office of Special Counsel have the authority to commence enforcement actions against persons who are subject to the Mandatory Petroleum Allocation and Price Regulations and to enter into Consent Orders with these persons in settlement of alleged violations. The Office of Hearings and Appeals has the authority to review formal enforcement documents issued by the Office of Enforcement and the Office of Special Counsel, to implement special refund procedures pursuant to the procedures in Subpart V of paragraph 3c(3)(b) upon petition by the Office of Enforcement and the Office of Special Counsel, and to issue final remedial orders, orders of disallowance, and decisions and orders in Subpart V proceedings referenced in 3c(3)(a), above. In addition, the Office of Enforcement, Office of Special Counsel, and Office of Hearings and Appeals have the authority to take other action to compensate for the effects of a violation or cost disallowance. As a result, many decisions or orders involve the payment of money from persons to the Department of Energy for subsequent distribution to remedy the effects of the alleged violations. In accordance with the terms and conditions of Attachment 1, the deposit fund escrow account (hereinafter "the Account") has been established for these monies and will be invested by the Controller. Funds in the Account shall be invested in U.S. Government Securities or deposited with commercial banks for investments in securities paying an interest rate comparable to U.S. Government Securities.

POLICY. It is Department of Energy policy that:

a. The Account shall be used to deposit all or any part of monies received from persons who have allegedly violated the Department of Energy regulations.

b. Monies initially deposited in commercial banks, and under the signature authority for disbursement by other offices within the Department of Energy shall be transferred immediately to the Account for management by the Controller's Office in those cases for which same is authorized pursuant to agreement by the parties or by the order or direction of the Department of Energy.

c. Monies in the Account shall be invested in U.S. Government Securities or shall be deposited in commercial banks for investment at the then prevailing U.S. Government Securities rate.

d. Monies deposited in commercial banks shall either be (1) completely insured by the Federal Deposit Insurance Corporation or (2) invested at all times by the commercial banks in investments backed by the full faith and credit of the United States.

e. Monies deposited in the Account, or subsequently invested, shall be disbursed only to remedy the effects of the alleged violations of the Department of Energy regulations.

f. The monies shall not be used to pay or reimburse Departmental administrative expenses.

GENERAL.

a. The financial management of the monies received shall include a separate accounting (subsidiary account) for each remedial order, order of disallowance, consent order, or decision and order (hereinafter referred to collectively as "order") and shall list the principal, interest, unpaid balance and disbursements against each order. A copy of the order shall be included with the initial deposit. The total monies collected and deposited to the Account shall be pooled for investment purposes without regard to the amounts applicable to individual orders in accordance with the agreement between the Treasury and Department of Energy (Attachment 1).

b. All monies deposited to the Account shall be invested by the Controller in U.S. Government Securities or deposited in commercial banks for investments in accordance with policy formulation by the Investment Policies Committee and approved by the Chief Financial Office. For investment planning purposes, the offices responsible for determining distribution of the money shall arrange, to the maximum extent possible, disbursements that coincide with the maturity date of the investments. Until a disbursement plan is established, the Controller, Office of Financial Policy, Analysis and GAO Liaison shall restrict investment terms to a maximum of 6 months.

c. The interest on investment shall be credited to the individual subsidiary accounts established for each order based on the number of days the funds are available for investment during the investment period. Interest shall be credited daily.

d. Request for disbursements shall be approved by the Assistant Administrator of Enforcement, the Special Counsel for Compliance, the Director of the Office of Hearings and Appeals, or their designees and shall be forwarded to the Director, Office of Finance and Accounting, Washington Financial Services Division. Each request shall specify the amount and purpose, and the order the payment is to be charged to. Orders issued by the Office of Hearings and Appeals in accordance with Subpart V directing the disbursement of funds from the Account shall not be subject to formal concurrence by the Office of Enforcement, the Office of Special Counsel or the Office of General Counsel and shall be implemented by the Director, Office of Finance and Accounting, Washington Financial Services Division.

e. The Director, Washington Financial Services Division shall provide a status report each month to the appropriate office on their subsidiary account(s). Such reports shall include the principal balance, interest earned for the current month, and cumulative interest from inception.

f. The Agreement between Treasury and the Department of Energy (Attachment 1) is the basis for the Department of Energy to invest the amount deposited in the Account in U.S. Government Securities. The investments shall be managed by the Director, Office of Financial Policy Analysis and GAO Liaison.

7. RESPONSIBILITIES.

a. The Chief Financial Officer is responsible for the overall management and execution of activities related to the financial management of monies in the accounts that are the subject of this Order.

b. The Office of Enforcement, Office of Special Counsel, and Office of Hearings and Appeals, or Designees within each Office shall:

(1) Arrange for payments made pursuant to orders to be sent to the Office of Finance and Accounting, Washington Financial Services Division for deposit to the Account.

(2) Provide a copy of each order to the Office of Finance and Accounting and indicate whether the payment made is full or partial, and if partial, provide a schedule of payments including interest assessment if applicable.

(3) Designate an approving official to authorize disbursement of monies from Account to remedy the effects of a violation of the Department of Energy regulations.

(4) Be responsibile for the collection of monies from violators or alleged violators of the Department of Energy regulations.

(5) Issue determinations specifying the distribution of funds received pursuant to paragraph 7b(1) above, which determinations shall be executed by the Chief Financial Officer or Controller, whichever is appropriate, pursuant to paragraphs 7a and 7c.

(6) Ensure that orders requiring monies to be deposited in commercial banks for DOE specify that the DOE Controller or his designee is the only authorized official to withdraw such monies from the bank.

c. The Office of the Controller shall:

(1) Maintain subsidiary ledgers for each order and separately account for the monies received from the Office of Enforcement, Office of Special Counsel, and Office of Hearings and Appeals for each such order.

(2) Allocate daily the interest on investments to each subsidiary account.

(3) Distribute funds, including interest earned, in accordance with directives issued by the responsible official for any particular disbursement effort pursuant to paragraph 7b(5) and pursuant to policies established by the Secretary for the distribution of such monies.

(4) Provide monthly reports to the responsible officials on their respective subsidiary accounts together with a detailed listing of transactions affecting each subsidiary account.

(5) Ensure compliance with the terms and conditions of the agreement between Treasury and the Department of Energy (Attachment 1); and request changes to the agreement as may be required.

(6) Make deposits with commercial banks for investment upon approval by the Investment Policy Committee.

(7) Designate a member to the Investment Policy Committee and develop investment proposals for consideration by the committee.

d. The General Counsel shall:

(1) Provide a representative for the Investment Policy Committee.

4) AT SUCH TIME AS DOE DECIDES THAT AMOUNTS IN THE ACCOUNT WILL NOT OTHERWISE BE APPLIED IN ACCORDANCE WITH THE EPAA AND/OR OTHER APPLICABLE PROVISIONS OF LAW, THE PRINCIPAL BALANCE REMAINING IN THE ACCOUNT, TOGETHER WITH ALL EARNINGS ON THAT BALANCE, SHALL BE DEPOSITED BY DOE IN THE UNITED STATES TREASURY TO THE CREDIT OF MISCELLANEOUS RECEIPTS;

5) TREASURY'S FUNCTIONS UNDER THIS AGREEMENT ARE EXPRESSLY LIMITED TO ACCEPTING SUCH AMOUNTS AS DOE, IN ITS SOLE DISCRETION, TENDERS FOR DEPOSIT TO THE ACCOUNT; INVESTING ALL OR PART OF THE BALANCE IN THE ACCOUNT IN ACCORDANCE WITH INSTRUCTIONS GIVEN BY DOE IN CONFORMITY WITH THE REQUIREMENTS OF THIS AGREEMENT AND OF THE MEMORANDUM OF UNDERSTANDING REFERRED TO IN NUMBERED PARAGRAPH 3 OF THIS AGREEMENT; AND MAKING SUCH DISBURSEMENTS FROM THE ACCOUNT AS DOE INSTRUCTS. IT IS EXPRESSLY ACKNOWLEDGED THAT TREASURY HAS NO RESPONSIBILITY TO MAKE ANY INVESTMENTS NOT REQUESTED BY DOE IN CONFORMITY WITH THE REQUIREMENTS OF THIS AGREEMENT AND OF THE MEMORANDUM OF UNDERSTANDING REFERRED TO IN NUMBERED PARAGRAPH 3 OF THIS AGREEMENT. IT IS FURTHER EXPRESSLY ACKNOWLEDGED THAT TREASURY HAS NO RESPONSIBILITY FOR INTERPRETATION OF STATUTORY OR OTHER AUTHORITY AVAILABLE TO DOE; FOR THE COLLECTION OF THE FUNDS WHICH ARE THE SUBJECT OF THIS AGREEMENT; OR FOR DETERMINATIONS OR PROCEDURES RELATED TO THE ULTIMATE OWNERSHIP OR DISPOSITION OF SUCH FUNDS.

6) THIS AGREEMENT SHALL BECOME EFFECTIVE ON THE DATE IT IS SIGNED FOR DOE AND TREASURY AND, IF NOT SIGNED BY BOTH ON THE SAME DATE, THEN ON THE LATER DATE SIGNED; AND

7) THIS AGREEMENT SHALL REMAIN IN EFFECT UNTIL FIVE YEARS FROM THE DATE OF ITS EXECUTION UNLESS TERMINATED, AMENDED OR EXTENDED BY MUTUAL AGREEMENT OF DOE AND TREASURY. UPON EXPIRATION OR TERMINATION OF THIS AGREEMENT, ANY AND ALL FUNDS REMAINING IN THE ACCOUNT SHALL BE REFUNDED TO DOE FOR SUCH DISPOSITION AS DOE, IN ITS SOLE DISCRETION, DETERMINES IS AUTHORIZED.

FOR THE DEPARTMENT OF ENERGY

BY Jack E. Hobbs, Controller 4/4/80
(NAME & TITLE) (DATE)

FOR THE DEPARTMENT OF TREASURY

BY _____ 4/7/80
(NAME & TITLE) (DATE)
Paul N. Taylor
Fiscal Assistant Secretary

GPO 877 124

DEPARTMENT OF ENERGY ("DOE") DEPARTMENT OF THE TREASURY ("TREASURY") AGREEMENT ON ESTABLISHMENT OF A DEPOSIT FUND ESCROW ACCOUNT FOR PAYMENTS IN REGARD TO POSSIBLE OR ACTUAL VIOLATIONS OF LAW ENFORCED BY DOE

WHEREAS, DOE HAS IN THE PAST AND WILL IN FUTURE RECEIVE AMOUNTS IN REGARD TO POSSIBLE OR ACTUAL VIOLATIONS OF THE EMERGENCY PETROLEUM ALLOCATION ACT OF 1973, AS AMENDED ("EPAA"), 15 U.S.C. 751 ET SEQ., AND/OR OTHER PROVISIONS OF LAW ENFORCED BY THE DEPARTMENT OF ENERGY;

WHEREAS, AMOUNTS SO PAID IN WILL BE RETAINED BY DOE PENDING DETERMINATION BY DOE OF THE APPROPRIATE DISTRIBUTION IN ACCORD WITH APPLICABLE PROCEDURES;

WHEREAS, DOE WISHES TO LIMIT, TO THE EXTENT POSSIBLE, THE INCREMENTAL LOSSES SUFFERED BY PERSONS WHO HAVE BEEN ADVERSELY AFFECTED BY SUCH VIOLATIONS, WHICH MIGHT ARISE BECAUSE OF THE TIME ELAPSED IN DETERMINING APPROPRIATE DISTRIBUTIONS; AND

WHEREAS, TREASURY IS CONCERNED WITH THE SECURITY OF AMOUNTS SO PAID IN TO DOE, BECAUSE SUCH AMOUNTS MAY EVENTUALLY BECOME MONIES FOR THE USE OF THE UNITED STATES WITHIN THE MEANING OF 31 U.S.C. 484;

NOW THEREFORE, DOE AND TREASURY AGREE AS FOLLOWS:

1) IN ACCORDANCE WITH TITLE 7 GENERAL ACCOUNTING OFFICE POLICY AND PROCEDURES MANUAL FOR GUIDANCE OF FEDERAL AGENCIES, SECTIONS 4.10(6), 5.1 and 5.2, DOE SHALL ESTABLISH A DEPOSIT FUND ESCROW ACCOUNT (HEREINAFTER "THE ACCOUNT") IN TREASURY BEARING AN ACCOUNT SYMBOL AND TITLE ASSIGNED BY TREASURY. DOE AGREES TO ADMINISTER THE ACCOUNT IN ACCORDANCE WITH THIS AGREEMENT.

2) DOE MAY AT ANY TIME AND IN ITS DISCRETION DEPOSIT TO THE CREDIT OF THE ACCOUNT ALL OR ANY PART OF THE AMOUNTS RECEIVED BY IT BECAUSE OF SUCH VIOLATIONS;

3) AMOUNTS IN THE ACCOUNT SHALL BE INVESTED BY TREASURY AT THE REQUEST OF DOE IN TREASURY NON-MARKETABLE GOVERNMENT ACCOUNT SERIES SECURITIES (HEREINAFTER "MARKET-BASED SPECIALS"); PROVIDED THAT, IF AT ANY TIME THE BALANCE OF THE ACCOUNT FALLS BELOW $100,000, TREASURY IS NOT REQUIRED TO MAKE ANY REQUESTED INVESTMENT UNTIL THE ACCOUNT BALANCE EXCEEDS $100,000. INCOME EARNED THEREBY IS TO BE CREDITED TO THE ACCOUNT. THE OPERATING PROCEDURES FOR SUCH INVESTMENTS ARE DESCRIBED IN A SEPARATE MEMORANDUM OF UNDERSTANDING BETWEEN TREASURY AND DOE DATED APRIL ____, 1980, AND ARE AGREED TO AND INCORPORATED IN THIS AGREEMENT BY REFERENCE, WITH THE SAME EFFECT AS IF FULLY STATED HEREIN;

(2) Provide general legal advice to the Controller or Chief Financial Officer upon request, regarding the implementation of the determinations made by the Office of Enforcement, Office of Special Counsel, and Office of Hearings and Appeals for distributions to remedy the effect of alleged violations.

e. Investment Policy Committee shall:

(1) Consist of the Chief Financial Officer who shall chair the committee, provide policy direction and give final approval on all investments; the Controller who shall develop investment proposals for consideration by the committee; and the General Counsel who shall provide legal counsel on investments. A representative from the Office of Hearings and Appeals, the Office of Enforcement, and the Office of Special Counsel shall serve as ex-officio members and shall provide disbursement data to the committee as required.

(2) Meet as required, but at least quarterly, to review the status of investments made pursuant to this Order; approve the use of commercial banks for deposit and investment of funds; and consider alternative investment approaches.

William S. Heffelfinger
Director of Administration

Alleged Fraudulent Practices

Question: Recently a field office of ERA alleged fraudulent practices on the nation's vast system of crude oil pipelines. What is the nature of those alleged fraudulent practices.

Answer: In order to insure fairness to subjects of investigations and to preclude unnecessary interference with investigations, it is DOE's policy not to comment publicly on specific ongoing investigations.

However, the DOE's Economic Regulatory Administration (ERA) has taken aggessive actions to enforce DOE's crude oil pricing regulations and intends to continue to do so. DOE is conducting investigations which involve inquiries into possible miscertification of the regulatory tier of crude oil. As of April 1, 1981, more than 220 crude oil reseller firms were under audit by the Department. The ERA has cited 59 crude oil resellers for alleged violations totaling approximately $600 million.

Question: What action do you plan to take in pursuit of these allegations?

Answer: Twenty-six cases involving over 42 crude oil resellers have been referred to the Department of Justice for criminal investigation and possible prosecution. As of April 20, 1981, these referrals have resulted in the prosecution of 45 defendants. To date, a number of these defendants have received prison sentences in addition to being ordered to pay approximately $48,000,000 in criminal fines, civil penalties and refunds. The Office of Enforcement has issued 29 Notices of Probable Violation totaling $512.9 million in alleged violations as of March 31, 1981, on the "so called" pipeline investigation.

Question: Your prepared statement indicates that you have proposed that $16.2 million appropriated for FY 1981 remain available for FY 1982. What programs are the source of the $16.2 million?

Answer: The programs that have been identified as the source of the $16.2 million amount proposed to be carried over from FY 1981 to FY 1982 to fund severance and personnel costs will derive from the following ERA program components: Fuels Conversion, $9.6 million; Utility Program's Rates and Energy Management activity $3.7 million; Program Administration, $.5 million; and a general reduction in the level of FY 1981 contracting and staffing, $2.4 million. This FY 1981, contractual and personnel funding excess is available due to the impact in FY 1981 of the FY 1982 budget decisions.

Question: What will the additional $16.2 million provide in FY 1982?

Answer: The additional $16.2 million of FY 1981 funding which is being proposed for carry over to FY 1982 would be used to (1) meet the cost of retaining 712 Compliance program employees for approximately two months in FY 1982 at a cost of $5 million; and (2) pay for separation costs in FY 1982 for these 712 employees as well as those ERA employees severed in FY 1981 ($11.2 million).

Question: When will the Congress receive the formal proposal?

Answer: The appropriation language to accomplish the deferral of FY 1981 funds was transmitted to the Congress by the President on May 4, 1981.

Question: Over the past several years, you have used contract auditors. Will their support be continued into the litigation phase? If so, how much have you budgeted for contractor support in FY 1982? If not, what audit support will be available to provide expert testimony in any litigation resultant from the audits in which the contractors participated?

Answer: The Office of Special Counsel audit support contract will end in September 1981, and no funds have been requested for contract auditors in FY 1982. The current contract obligates the contractor to provide

expert testimony in the future as required and as separately funded. Contract audit support for the Office of Enforcement ends at the end of FY 1981. This support is not needed in FY 1982. Office of Enforcement staff can function as expert witnesses for Enforcement cases. As auditors leave Enforcement, they are requested, in writing, to be available to serve as witnesses for two years after their departure. They are further requested to inform us of any address changes during those two years. The Department of Energy will pay travel costs related to such testimony.

Fuel Use Act

Question: The original FY 1982 budget (p. 227) included a modest increase for the Office of Enforcement to enforce provisions of the Fuel Use Act which prohibits the use of petroleum and natural gas by electric utilities. Will you do this under the new budget? If not, what enforcement capability will exist?

Answer: The original FY 1982 budget assumed a rigorous mandatory program to implement the statutory provisions of the FUA. The Department intends to submit legislation to eliminate these regulatory programs. Therefore, no resources are needed to enforce the Fuel Use Act in the current FY 1982 budget.

Program Administration

Question: How much of the $1,500,000 for program administration do you propose to transfer to the new Assistant Secretary for Environmental Protection, Safety and Emergency Preparedness?

Answer: None of the $1.5 million identified for ERA program administration has been targeted for transfer to the new Assistant Secretary for Environmental Protection, Safety and Emergency Preparedness.

The funding level of $1.5 million for ERA program administration is being proposed in order to fund the level of staff years associated with the reduction from the higher level of FY 1981 positions. The FY 1982 budget level for the Program Administration account represents the resources required to manage and direct the programs administered by the ERA effectively. Funding for this program has been reduced by 57 percent below the FY 1981 level and is the base amount necessary to provide adequate financial and personnel support program analysis, evaluation and coordination; and other management and administrative support.

OHA Budget

Question: The Office of Hearings and Appeals FY 1982 request is for $4,500,000, a reduction of $3,422,000 from the amount appropriated in FY 1981. With the expiration of the Emergency Petroleum Allocation Act, what are the major remaining workload items for you?

Answer: The Office of Hearings and Appeals has taken all the steps necessary to dismiss items which were mooted by Executive Order 12,287, the President's decontrol order. The cases still pending before OHA generally consist of proceedings which involve the Entitlements Program, enforcement actions, Freedom of Information and Privacy Act Appeals, exception requests which relate to the appliance testing standards, Petitions for Special Refund Procedures, and applications for exception and other submissions which relate to events which occurred during the period in which price and allocation regulations were in effect. Submissions in all of these categories will remain in the docket on September 30, 1981 when the EPAA expires.

Question: When will you be able to eliminate the backlog of cases that developed during the period of shortages in 1979?

Answer: The bulk of the case load which developed as a result of the 1979 shortage period has been eliminated. We believe that in the absence of any unusual events, the inventory of open cases of the Office of Hearings and Appeals will reach acceptable levels on or about the beginning of FY 1982.

Question: Will the budget request permit elimination of the backlog?

Answer: Yes, the budget request will permit elimination of the backlog.

Question: At page 134 of the justifications, in the key activity summary, you show that 1,500 petitions will carry over into FY 1981, that you will receive 1,700 new petitions in FY 1982 with resolutions of 900 petitions in the fiscal year. Yet, you show only 800 petitions on hand at the end of the fiscal year. What happens to the 1,500 that are to be carried into FY 1982?

Answer: The 900 petitions figure results from a typographical error with respect to case resolutions for FY 1982. We assumed that the Office of Hearings and Appeals would have a professional staff in FY 1982 of 85 analysts and attorneys operating at a productivity rate of 2.5 cases resolved each month. On this basis we project that approximately 2,400 requests will be resolved during FY 1982, and if this number is subtracted from 3,200 petitions (1,500 carried over and 1,700 new petitions), 800 petitions remain at the end of FY 1982.

QUESTION SUBMITTED BY CONGRESSMAN NORMAN D. DICKS

Compliance

Question: According to the DOE Controller, "the President's and the Secretary's commitment to provide no amnesty for the price violators.... is not consistent with a $24 million budget. We have now made a detailed workload analysis that will show that we cannot complete the workload that would provide no amnesty to price violators." Does your detailed workload analysis indicate whether the budget plan of the Secretary to carry-over funds will change this situation? If so, by how much?

Answer: The Office of Special Counsel estimates that it will be able to aggressively pursue $4 billion in alleged violation cases during FY 1982 under the Secretary's budget plan that includes FY 1981 carry-over funds. Major refiner cases that are not resolved by the end of FY 1982 will be pursued to completion in later fiscal years. Under present plans, in FY 1981 the Office of Enforcement will issue Consent Orders and Proposed Remedial Orders in cases that involve about 70 percent of the violations identified as of February 28, 1981, and complete virtually all audit work. In regard to FY 1982, specifically, the program will continue its dollar driven strategy to resolve identified violations through administrative and judicial proceedings as well as through the negotiation of settlements.

Question: How many staff people would be left in ERA -- specifically in the Office of Special Counsel and the Office of Enforcement -- for compliance and enforcement work in FY 1982? What will be the number in each after the anticipated RIF in November 1981?

Answer: Under the Department's current plan to supplement the FY 1982 budget request with FY 1981 carry-over funds, it is estimated that the Office of Special Counsel will have 375 employees during October and November 1981, and 130 staff as of December 1, 1981.

Estimates for the Office of Enforcement are that approximately 550 will be on board at the end of FY 1981, to be carried through until November 1981. For the remainder of FY 1982, the Office of Enforcement will have 115 positions.

Question: According to DOE testimony before the House Energy and Commerce Committee, a staffing level of 120 in the Office of Special Counsel -- as provided by the $11.9 million ERA budget and the Secretary's proposed carry-over of unobligated funds -- would mean that over $6 billion in overcharge violations would not be pursued aggressively. Is this true? Is this the case even after the carry-over of unobligated funds as proposed by Secretary Edwards?

Answer: In the case of the Office of Special Counsel, of the $10 billion in estimated violations by major refiners, $2.6 billion in cases would be aggressively pursued in FY 1982 under the $11.9 million compliance budget. With the supplemental carryover funds, approximately $4 billion worth of cases would be aggressively pursued. To the extent that cases cannot be completed or settled during FY 1982, they will be pursued in FY 1983.

Question: If 726 people are kept on for an additonal two months in FY 1982 -- as the Secretary's amended budget proposes -- what will be their main duties?

Answer: The Office of Special Counsel will have 255 of these additional people (mostly auditors) during October and November 1981. They will help insure the completion of all of the audits of the 35 major refiners and assist lawyers in the converting of audit findings into enforcement actions.

For the Office of Enforcement, the main duties of these people will be to continue the Department's dollar driven strategy to resolve identified violations through administrative and judicial proceedings, as well as through the negotiation of settlements. The Enforcement program will focus on the resolution and litigation of top priority special investigations, crude oil reseller cases and other significant violations. Heavy emphasis will be placed on negotiated settlements. If any unfinished audits remain, these people will complete them.

Question: How much will they contribute to reducing the backlog of overcharges?

Answer: The Office of Special Counsel's efforts will help increase the level of cases aggressively pursued in FY 1982 from $2.6 billion to $4 billion.

The Office of Enforcement does not now have a backlog. The present working inventory of cases are, for the most part, cases involving recent audit periods. Enforcement expects to carry over into FY 1982 about 400-600 cases in the working inventory. This carry-over staff for the two month period in FY 1982 will significantly improve Enforcement's ability to complete all audits and accelerate negotiated settlements in these remaining cases.

Question: How long does it take to transform an audit finding into some sort of legal action?

Answer: To convert the audit findings into enforcement actions takes the Office of Special Counsel about four months on the average.

The Office of Enforcement's responsibilities cover a number of segments of the petroleum industry. The audits of these separate industry segments involve both routine and complex cases. This variance makes it difficult to predict, with any degree of accuracy, the amount of time it takes to transform an audit finding into some legal action. However, the Office of Enforcement has initiated a plan to resolve its inventory as rapidly as possible by accelerating negotiations and implementing an administrative process which skips the Notice of Probable Violation stage in appropriate instances. For all intents and purposes, the final Enforcement document is the Proposed Remedial Order. The issuance of the Proposed Remedial Order could range from two to three weeks after the audit to 30 to 60 days, depending on the individual case.

Question: According to earlier DOE testimony, some criminal cases might have to be dropped under the $11.9 million budget for FY 1982. What would be the dollar amounts of cases you would have to drop and how many cases would be included? Asked another way, would any criminal cases not be "pursued vigorously" under the proposed $11.9 million budget? Will the Secretary's carry-over of unobligated funds have an effect upon that?

Answer: In earlier testimony Secretary Edwards has stated that the Department will continue to refer appropriate cases to the Department of Justice for criminal investigation during Fiscal Year 1982. Mr. Barton R.

House, the Acting Administrator, Economic Regulatory Administration, testified on April 27, 1982, that during FY 1982 the resolution and litigation of special investigations would be top priority of the Office of Enforcement and that referrals would continue to be made to the Department of Justice in those instances where there is credible evidence of criminal activity. Under the proposed budget, the Department plans to fully support special investigation cases. This support will be directed towards special investigation cases which have potential statute problems, and those cases which have economic and enforcement significance, such as the crude reseller cases. Similarly, no criminal cases will be dropped by the Office of Special Counsel under either of the budget alternatives mentioned.

Question: If the ERA compliance staff dwindles to a level where it simply does not have the resources to handle overcharge claims, what other agency - either inside or outside of DOE - would have the expertise and resources to do the job?

Answer: It is our intention to keep adequate staff to pursue overcharge claims, however, a number of attorneys in the Department of Energy's Office of General Counsel (OGC) and in the Department of Justice have a general familiarity with the Emergency Petroleum Allocation Act (EPAA) regulations and with the case law developed from EPAA litigation. These attorneys have sufficient background to handle major refiner enforcement litigation if augmented by Office of Special Counsel personnel, including attorneys, auditors and computer specialists, who are familiar with specific audit findings and with the recordkeeping systems maintained by the major oil companies. The OGC has approximately 100 positions to support the Office of Enforcement, and that level of support is expected to continue into FY 1982.

Question: The Department of Justice relies, to a great extent, on DOE staff in the litigation of overcharge and other pricing violations. Isn't is true that severe reductions in the staff of the Office of Special Counsel and the Office of Enforcement would have an adverse effect upon the prosecution of current cases? Wouldn't it effectively prevent prosecution of any new cases that are likely to be found by Fiscal 1981 audits?

Answer: Presently, all affirmative judicial enforcement cases initiated as a result of Office of Special Consel (OSC) audit and enforcement activity are being conducted by DOE lawyers pursuant to the Memorandum of Understanding between DOE and Department of Justice (DOJ). Accordingly, a reduction in OSC staff may result in increased burdens with respect to such judicial cases falling on DOE's Office of General Counsel (OGC). Since DOJ has lead litigation responsibility mainly in cases involving pre-enforcement regulatory challenges (for which it is primarily supported by DOE's OGC), DOJ's work should not be affected by a reduction in OSC staff.

Cases resulting from OSC's FY 1981 audits would most likely be brought as administrative litigation before the Department's Office of Hearings and Appeals. Litigation of these cases is the responsibility of OSC legal personnel. While a reduction in OSC staff may require such cases to be deferrred beyond FY 1982, the Department intends to pursue prosecution of all such cases that are not able to be resolved by negotiated agreement.

Even with the staffing reduction, 115 staff years would remain in the Office of Enforcement. In addition, 120 staff years would remain in the Office of Special Counsel, and the approximately 100 positions in the Office of General Counsel which support the Office of Enforcement are expected to remain. This is a sufficient staff to support prosecution cases. The Secretary has stated that if industry is not interested in negotiating settlements and getting the program behind us, he will extend the program if needed.

THURSDAY, MAY 14, 1981.

OFFICE OF THE FEDERAL INSPECTOR FOR THE ALASKA NATURAL GAS TRANSPORTATION SYSTEM

WITNESSES

JOHN T. RHETT, FEDERAL INSPECTOR
PETER COOK, DEPUTY FEDERAL INSPECTOR, WASHINGTON, D.C.
JAMES M. TRENT, ASSISTANT DIRECTOR, FINANCIAL MANAGEMENT

INTRODUCTION

Mr. MURTHA. Do we have Mr. Rhett here?

Mr. RHETT. Yes, sir.

Mr. MURTHA. The hearing will come to order.

Mr. Rhett, if you will, please bring your colleagues to the table and introduce them for the recorder.

Mr. RHETT. Mr. Chairman, it is really a pleasure to be here today. I would like to introduce Mr. Peter Cook, the Deputy Federal Inspector here in Washington, who handles our lower Legs of construction, and Mr. James Trent, the Director of Financial Management.

Mr. MURTHA. You have a statement and you have a biography. Both of those will appear in the record in their entirety. The biographies of Mr. Cook and Mr. Trent will appear as well.

[The statement and biographies follow:]

STATEMENT OF JOHN T. RHETT
FEDERAL INSPECTOR
OFFICE OF THE FEDERAL INSPECTOR
FOR THE ALASKA NATURAL GAS TRANSPORTATION SYSTEM

Before the Appropriations Subcommittee
on the Department of the Interior and Related Agencies

House Appropriations Committee
May 14, 1981

Mr. Chairman and Members of the Committee, I appreciate the opportunity to appear before you today to discuss our budget request for Fiscal Year 1982 and the status of the pipeline project. I am John T. Rhett, Jr., the Federal Inspector for the Alaska Natural Gas Transportation System. With me are Mr. Peter Cook, the Deputy Federal Inspector for Washington, D.C.; and Mr. James Trent, the Director of Financial Management.

As you know, the Alaska Natural Gas Transportation System is one of the most ambitious construction projects undertaken in modern times. It is the most expensive project to be privately financed, the most expensive pipeline project in the world, and the first buried, chilled gas pipeline ever built. There is enough gas in Prudhoe Bay, the source of the reserves, to supply approximately 3.5 percent of the annual needs of the United States for 25 years, based on a 2.5 percent annual increase in gas consumption. This system will not only augment America's energy supplies but will also mean more opportunities for U.S. workers and industries. In other words, this construction project will support the twin goals of greater American energy independence and increased American production at a most critical time.

The 4,800 mile pipeline system will traverse eleven states and four Canadian provinces, from the north slope of Alaska to the Chicago and San Francisco areas. The magnitude of the project and the range of ecosystems involved pose an awesome challenge to all of the project participants. This challenge is made even greater by the need to get the system built expeditiously.

Completion of the project will require a tremendous joint effort on the part of government and industry to tackle difficult arctic engineering problems and to protect sensitive environments, in conjunction with cost-effective and timely pipeline construction. Indeed, the success of the project will to a great extent hinge upon the level of effort made by both government and private entities to cooperate with each other and coordinate individual responsibilities. This is especially important in regard to our dealings with the Canadian Government, which last summer

approved the early transport of Alberta gas to the United States through a "prebuild" system. A committed and responsive attitude on our part toward our Canadian counterparts is essential to timely and efficient completion of the pipeline project.

As Federal Inspector, I am responsible for coordinating all Federal activities related to the construction of the pipeline, and specifically for scheduling, expediting and enforcing the permitting actions of eight Federal agencies. Under the Alaska Natural Gas Transportation Act of 1976 and the President's Decision and Report to Congress, the mission of the Office of the Federal Inspector (OFI) is to assure timely completion, quality of construction, cost control, safety, and environmental protection. These responsibilities are basically divided into two phases. The first involves review and approval of the sponsor companies' management plans; final design and cost estimates; construction schedules; environmental protection measures; quality assurance and control procedures; and plans for equal employment opportunity and minority business participation. These tasks are accomplished in conjunction with the permit scheduling and expedition process, the bulk of which is also conducted prior to the start of actual construction. The second phase focuses on the enforcement by the OFI of the terms and conditions of permits issued by participating Federal agencies, other project-specific Federal authorizations, and Federal laws transferred to my authority for the duration of the project. To ensure proper compliance with these requirements, my staff will conduct periodic on-site inspections and review progress and compliance reports prepared by the sponsors.

Because the OFI is the focal point for all Federal decision-making on the project, delays resulting from conflicting government requirements will be minimized. Furthermore, as the single Federal decision-maker, I can ensure that every Federal requirement reflects a balanced approach to the entire range of project related objectives. My philosophy is to develop a climate in which the private sector has every opportunity to supervise its own efforts to build this system safely, efficiently, and expeditiously. Finally, I strongly believe that close working relationships with all groups involved in the pipeline project are extremely important if we are to identify and resolve problems early, and thereby avoid delays and cost overruns later on.

I would now like to summarize some of the major accomplishments to date on the project, and describe some of the current activities of the agency.

Several major events have occurred during the past few months. As a result, the Federal government has completed its overall approval process for the first phase of construction. Financing for both the Eastern and Western Legs has been secured and construction has already begun on the Western Leg in both the U.S. and Canada and on the Eastern Leg in the U.S. Despite a temporary delay due to bad weather, the Western Leg of the project is still proceeding toward the scheduled completion date of the fall of 1981.

Construction of the U.S. portion of the Eastern Leg began in early May 1981. The major problem facing this portion of the project has been resolved. I am referring to a decision made last fall by the Public Service Commission (PSC) of the State of North Dakota to disallow a portion of the Federally approved pipeline route through that State. This action prompted the OFI and the Federal Energy Regulatory Commission to jointly file a suit against the PSC, claiming that the PSC's ruling was unconstitutional. The project sponsors simultaneously filed a companion suit. On April 3, 1981, the Federal District Court of North Dakota, Southwestern Division, granted the OFI/FERC motion for summary judgment, stating that the PSC did not have authority to change the approved pipeline route. The Court issued an order implementing this decision on April 30. The legal proceedings, coupled with other factors, resulted in a shift to a 2-year construction cycle, with completion now scheduled for the fall of 1982.

On December 1, 1980, the Department of the Interior issued its Right-of-Way Grant for the Alaskan Leg, thus authorizing the crossing of approximately 430 miles of Federal lands in Alaska. Aside from this Grant, no major approvals have been issued for the second phase of the project, which entails construction of the entire Alaskan Leg, the remainder of the Canadian Leg, and completion of the Eastern and Western Legs.

The current schedule for the Alaskan Leg calls for completion of detailed engineering design work in late 1982, construction of temporary facilities from early 1982 to late 1983, and mainline pipe installation from late 1983 to late 1985. The OFI's FY 1982 budget request was based upon this schedule. Maintaining this schedule depends upon the successful completion of the construction financing arrangements, the timely resolution of the necessary regulatory decisions, and the timely completion of the design of both the pipeline and the gas conditioning plant. At this time, the development of an acceptable financing plan is the critical item.

In my opinion, the viability of this schedule is presently in question. Thus, part of the current financing negotiations is a re-evaluation of the present project schedule. These efforts may result in the development of a new schedule. Although the sponsors' engineering and design efforts have sucessfully progressed at the pace necessary to achieve the 1985-1986 completion date, other elements of the schedule are becoming critical. Specifically, the gas conditioning plant is the critical schedule determinant particularly since the sponsors must be able to make major commitments for the procurement of equipment and materials by mid-1981.

Obviously, the ability to make substantial commitments rests upon the status of the financing plan currently being negotiated by the Prudhoe Bay producers and the project sponsors. These negotiations appear to be progressing well and all parties are committed to continuing to work together to develop viable financing arrangements as quickly as possible. In the absence of firm financing plans, the sponsors could make the necessary commitments, but they would be faced with the risk of incurring severe cancellation charges.

Before I leave the subjects of the gas conditioning plant and the financing plan, one final note is appropriate. Under the existing regulatory structure, the conditioning plant is not legally part of the project. However, the potential inclusion of the plant in the project is a major point of discussion in the ongoing financing negotiations. The results of these negotiations will determine what, if any, changes in the regulatory treatment of the plant are considered. I am following the progress of the conditioning plant closely and I will keep you apprised of any major changes in the schedule of the plant or its relationship to the project.

There is also every reason to believe that the financing plan will provide for equity participation by the Prudhoe Bay producers. If so, additional Congressional action will be necessary. At this time, I believe that there is a good chance that the necessary action could be handled through the expedited waiver provisions of the Alaska Natural Gas Transportation Act.

One other issue which has been raised by the Canadian participants may require Congressional attention. Briefly, the Canadian participants want to be assured that they will be allowed to begin recovering their costs as soon as the Canadian segment is completed. The concern is that the President's Decision appears to preclude any payments before the commencement of gas deliveries.

Since the Right-of-Way Grant has been issued, the Federal Energy Regulatory Commission's Certificate of Public Convenience and Necessity is the major outstanding Federal approval necessary for the second phase of construction. The sponsor's submission of the Certification Cost and Schedule Estimate and other materials in July 1980 was the first step necessary to obtain this critical permit. Since that time, the Federal Energy Regulatory Commission's Alaskan Delegate and the OFI's Director of Audit and Cost Analysis have been evaluating these materials. They expect to be able to submit their report to the Commission on the estimate, Center Point, and related Incentive Rate of Return matters in about two months. While the review of the Cost Estimate is a major part of the FERC's Certificate proceedings, the final Certificate cannot be issued until the sponsors submit their financing plan for approval.

In summary, the next few months will be very critical to the project. As always, the level of my Office's activities and resource needs are directly dictated by the pace of the project. Should a significant change in the project's activities occur, I will be working with the Office of Management and Budget and we will, of course, promptly inform you of any changes to the OFI's budget request. All indications are that this information should be available before final Congressional action on our budget is necessary.

Despite these difficult issues, the fact that almost one-third of the system is under construction illustrates that the project is moving forward. Steady progress continues in the areas of engineering and environmental design review, field surveys, and expedited permit processing. In addition, field oversight of actual construction on the first

phase of the Western and Eastern Legs is underway. This office is also continuing to refine policies, procedures and organizational mechanisms to ensure safe, cost-effective and timely pipeline construction, as well as to fulfill its responsibility for coordinated Federal oversight of the project.

Some of the major ongoing activities of the agency include:

- in-depth studies of specific arctic engineering and environmental problems, such as frost heave, in conjunction with the design review process;
- analysis of the Alaskan Leg Certification Cost Estimate in conjunction with the FERC;
- preparation of a field compliance handbook to assist the OFI surveillance teams in carrying out their responsibilities properly and consistently;
- continued monitoring of the status of the permits required for the whole project via a computerized system and the "one window" process instituted at the field office level; and
- monitoring the field data gathering activities in Alaska and monitoring construction on the lower 48 portions.

In the past few months, the Office of the Federal Inspector has reviewed or is now reviewing sponsor plans on equal employment opportunity (EEO/MBE) goals; specific engineering and environmental issues, such as quality control procedures; cost and schedule control systems; and general project management. The necessary approvals have already been granted for the Western and the Eastern Legs.

Although the OFI has been able to accomplish a great deal in the past year, we have deliberately kept our build-up of staff and operations to a minimum as a result of construction schedule uncertainties on the Alaskan segment and, until recently, on the Eastern Leg prebuild segment.

To effectively conduct its responsibilities on this project, the OFI has established six separate offices. In addition, our Omaha and San Francisco Offices have established a total four Construction Field Offices along the Eastern and Western Leg rights-of-way. While the large number of offices presents some difficult coordination problems, it effectively provides close contact between the agency and the specific problems associated with the different segments of the project.

At the start of FY 1981, our staff totaled 98 full-time employees; however, we did not have clearance to hire above that level until late December 1980, at which time a ceiling of 189 positions was approved. Shortly thereafter, the President ordered a strict hiring freeze, from which we did not receive an exemption until March 26, 1981. Due to

the limitations on hiring, our projected staffing plan for FY 1981 has been altered considerably. While we fully intend to reach our employment ceiling by the end of the fiscal year, the rate of hiring has been slowed. As a result, our original man-year estimate will decrease by approximately 16 percent. This in turn reduces our original salary cost projections. The reduction in personnel compensation, along with other budget cuts in the travel and procurement areas ordered by the new Administration, prompted the recent rescission proposal of $445,000 in our FY 1981 appropriation.

Currently, OFI has a total of 130 employees divided between our six Field Offices and our four Field Construction Offices. The bulk of employees are stationed in Washington, D.C. Most of the staff growth in FY 1981, however, will occur in the five field offices, particularly in Irvine, California, where our engineering and environmental programs are based. By the end of FY 1981, approximately 50% of the total staff will be located in Washington, D.C. The Alaska office will account for 16% of the total; the Omaha Office, 6%; the San Francisco Office, 3%; and the Irvine Office, 25%.

At this point, I would like to turn to the FY 1982 request. As with all our budgets, the estimates are geared to the construction schedules established by the pipeline companies. The timing and extent of the sponsors' activities define our level of effort, which in turn determines the resources we need in any given year. This particular budget request was based on the assumption that pipeline construction would commence on the lower legs during the fall of 1980 and be completed by the fall of 1981. It was also assumed that construction in Alaska would begin in earnest in 1983 and be completed by the winter of 1985-86. Under this schedule, we planned to move the headquarters office to Alaska during the summer of 1982 to assure that operations would be running smoothly before main pipeline construction began in 1983. Our FY 1981 request, therefore, contains approximately $3,500,000 to accomplish this transfer.

Although we do not presently know when a financing strategy for the Alaskan segment will be agreed upon or implemented, we expect that the outcome of this issue will be clear in a few months. At that time, we will be able to make the necessary adjustments to our FY 1982 and outyear requests. The most likely consequence of any possible delay with financing would be a postponement of our headquarters relocation to Alaska from FY 1982 to FY 1983.

Since the budget was first formulated, the schedule for construction of the Eastern Leg prebuild segment has been stretched out by another year; however, we anticipate only minor budget adjustments, which can be accomplished through internal agency reallocations.

In formulating the FY 1982 request, two other important guidelines were utilized. The first was that contract support should be used to provide specialized skills not currently available in government service and/or to conduct short-term studies as needed. This approach was and still is viewed as the most economical to the government because it would be more costly to hire a large, full-time staff of experts since the project

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is of limited duration and it would be difficult to place such individuals after the pipeline system is finished. The second guideline concerns the extent of our regulatory responsibilities--our job is to oversee the sponsors' activities, and not perform the required work for them. In addition, we must apply the requirements of law in a reasonable and balanced fashion to assure not only expeditious, but also cost-effective, construction. Both of these philosophies contribute toward keeping our budget requests to the minimum necessary to get our job done well.

Our initial request of $36,568,000 and 223 full-time permanent positions was approved by the Office of Management and Budget in its entirety last fall and has not been changed. The increase in funding from FY 1981 to FY 1982 will assure that agency oversight and enforcement responsibilities are effectively carried out as planning and construction activities increase. Accordingly, the increase in workload in FY 1982 is primarily due to additional engineering and field surveillance efforts required to complete design review for the Alaskan segment on schedule.

During FY 1982, our efforts will concentrate on: final audits, evaluations, and oversight of the operations of the completed Western Leg prebuild segment; oversight of full scale construction on the Eastern Leg segment; engineering design review, field surveillance, and permit issuance for the Alaskan Leg; and overall coordination of systems and program activities in preparation for main pipeline construction on the Alaskan segment, the most difficult and costly portion of the entire system. The impending construction in Alaska will also require an intensive administrative effort to move the majority of the Washington, D.C., and Irvine, California, offices to Alaska.

I would like to highlight briefly the major goals planned for each program activity in FY 1982. The amount identified for each program includes a pro-rated share of executive direction, administration, and central support costs.

Permits and Compliance

The requested level of funding for this program is $4,182,000, an increase of $2,381,000 over the FY 1981 level. This amount will enable proper coordination and scheduling of the many permits required for full-scale construction in Alaska. It will also allow monitoring of all enforcement actions and continual refinements of compliance guidelines to assure that the agency's construction oversight responsibilities are discharged in a balanced and effective fashion.

Audit and Cost Analysis

The $6,755,000 request for this program is necessary to conduct required audits on the project sponsors' records and expenditures for the lower 48 segments, to assess the impact of any design changes on the total project cost, to monitor the sponsor companies' cost and progress reporting systems, and to implement the incentive rate of return by approving scope changes and certifying costs for inclusion into the rate base. The FY 1982 request reflects an increase of $3,749,000 over the FY 1981 estimate.

Engineering Review

The $11,577,000 request, which is $3,766,000 above the FY 1981 level, will support intensive engineering design review activities for the Alaskan Leg. These activities encompass analysis of bid and awards for major material items such as pipe and valves, evaluation of requests for design changes and their associated costs, and review of station and pipeline drawings, civil engineering designs, and specifications submitted by the sponsor companies. Substantial contract funds are included in this request to enable the Engineering Review staff to complete its required review and approvals within a tight time frame, and to conduct highly technical, short-term engineering studies on arctic construction methods.

Environmental Review

The requested level of funding for this program is $3,052,000, and is $905,000 above the estimate originally projected for FY 1981. This amount will enable thorough review of the sponsors' environmental programs as contained in proposed pipeline designs, full oversight of the environmental aspects of preconstruction and construction activities in the field, and in-depth analyses of the environmental impacts of the first phase of construction in the lower 48 states.

Field Surveillance

The $11,002,000 request is required to monitor all on-site activities for the three Legs of the system, including expediting permits; enforcing terms, conditions, and other Federal regulations; monitoring costs; processing field design change requests; and overseeing all other sponsor activities in the field. The request is $4,729,000 above the FY 1981 level. A substantial portion of the request is comprised of logistics costs for food, lodging and transportation which are needed to support the field effort. In Alaska, logistics support costs are extremely expensive due to the cost-of-living differential and the special means of transportation necessitated by the difficult terrain.

In order to fulfill the mission of the OFI and to ensure successful completion of the project, especially in light of the challenges this project poses, sufficient resources for agency operations will be essential. It is believed that with proper staffing and funding to carry out all oversight and enforcement functions, delays and cost overruns during construction will be minimized, ultimately resulting in less costs for American gas consumers.

Mr. Chairman, that concludes my presentation. I will now be pleased to answer any questions you may have.

BIOGRAPHICAL SKETCH

JOHN T. RHETT, JR.
Federal Inspector

John T. Rhett, Jr. was confirmed the Federal Inspector for the Alaska Natural Gas Transportation System by the U.S. Senate on June 12, 1979.

Mr. Rhett is a professional engineer and administrator with almost 36 years' experience supervising major construction in both the civil works and military construction fields. He was with the U.S. Army Corps of Engineers from 1945 to 1973, retiring as a Colonel after serving at posts both here and abroad. His assignments included two years with SHAPE; Chief of the Engineering Division of the U.S. Army Construction Agency in Vietnam; District Engineer of the Louisville Engineering District; and Resident Member, Board of Engineers for Rivers and Harbors.

In 1973, Mr. Rhett joined the Environmental Protection Agency as Deputy Assistant Administrator for Water Program Operations. There he administered EPA's major operation programs in the water pollution control field, such as the multibillion dollar grant program for construction of municipal wastewater treatment facilities.

Mr. Rhett was born in 1925 in Fort Benning, Georgia. He received his B.S. from the U.S. Military Academy in 1945, a Masters in Engineering from the University of California in 1952, and a Masters in International Relations from George Washington University in 1965.

Mr. Rhett is a member of the American Society of Civil Engineers (Fellow), American Academy of Environmental Engineers (Diplomate), Society of American Military Engineers, and Water Pollution Control Federation. He is also a Registered Professional Engineer in both Florida and the District of Columbia.

Mr. Rhett received EPA's highest award, the Gold Medal for Exceptional Service in 1976, as well as Outstanding Performance awards in 1978 and 1979.

Mr. Rhett is married, with two children and one grandchild. He and his wife, the former Helen Watson, reside in Arlington, Virginia.

BIOGRAPHICAL SKETCH

PETER COOK
Deputy Federal Inspector for Washington, D.C.

Peter Cook, an engineer, administrator, and environmental expert, was appointed Executive Officer in July 1979, and Deputy Federal Inspector for Washington, D.C. in October 1980.

Before joining the Office of the Federal Inspector, Mr. Cook had been at the Environmental Protection Agency (EPA), where he served as Assistant Director of the Office of Environmental Review.

At EPA, Mr. Cook was involved in management of multimedia environmental programs and worked extensively with environmental impact statements. Prior to EPA he was with the National Oceanic and Atmospheric Administration, working on the design of weather satellite instrumentation.

He served as an Officer with the Commissioned Corps of NOAA (National Oceanic and Atmospheric Administration) after graduating from college, spending almost a year offshore the coast of Northwest Alaska gathering scientific data.

Mr. Cook, who is thirty-six years old and a native of Baldwin, New York, received a B.S. degree in Electrical Engineering from Clarkson College of Technology in Potsdam, New York, in 1966, and a Masters in Business Administration from American University in Washington, D.C., in 1971.

He, his wife, and two children reside in Ft. Washington, Maryland.

BIOGRAPHICAL SKETCH

JAMES M. TRENT
Assistant Director, Financial Management Division

James M. Trent is an accountant with extensive experience in financial management. He came to the Federal Inspector's Office from the Department of the Interior where he held the positions of Chief, Budget and Program Coordination, and Director, Information Systems and Management. Prior to that he was the Budget Officer for the Office of the Secretary, Department of Labor.

Mr. Trent, a native of Albany, Georgia, received a B.A. degree from Tennessee State University. He also did extensive graduate work in business administration and financial management at Ohio State and George Washington Universities.

He is married, has four children and currently resides in Landover, Maryland.

STATUS OF CONSTRUCTION

Mr. RHETT. My prepared statement presents highlights of our 1982 program and budget, and is quite long and detailed. Consequently, I will summarize the high points.

The first phase of construction on the pipeline has begun and is proceeding on schedule. The Western Leg in Canada is almost complete.

This is the Leg that starts in Alberta, primarily in the Calgary area, and terminates in California. Between Idaho, Washington——

Mr. MURTHA. Where does that originate?

Mr. RHETT. In the Calgary area of Alberta, where there is excess gas. This Leg will bring gas in from Canada until such time as the Alaskan gas starts flowing.

Mr. MURTHA. You start in Calgary and are going down towards San Francicso. Number 5 is in Calgary. How far along are you with number 5, how many miles?

Mr. RHETT. We have completed about 30 percent of that Leg, which will be finished by this fall.

The Western Leg takes an odd twist. It first goes to Stanfield, Oregon. Then it connects with other lines that go through Utah, Colorado, New Mexico and back into southern California through the El Paso system in Arizona.

The connecting lines are not directly part of our project. But the gas will flow through that system.

Mr. MURTHA. When did you actually start construction in Calgary?

Mr. RHETT. August.

Mr. MURTHA. Is that the first construction on any part of the pipeline?

Mr. RHETT. On any of the pipeline.

Mr. MURTHA. We started work on this in 1976, if I remember. It was about that time it was approved by Congress, is that right?

Mr. RHETT. Yes.

Mr. MURTHA. The decision made by the President and Secretary Schlesinger at that time was that you would go forward through Canada.

Mr. RHETT. Right.

Mr. MURTHA. Why did you pick Calgary to start the pipeline?

CANADIAN GAS SUPPLIES

Mr. RHETT. In Alberta, there is what they call bubble gas. The Canadians started hitting gas in Alberta at such a high rate that an excess of gas resulted, and a bubble was formed in Canadian production.

So consequently, the Canadians agreed that this gas could be shipped down to the United States during the interim period of time until such time as the Alaskan gas began flowing.

But there is a major condition—that the Alaska gas has to be brought in. In other words, we had to give the Canadians major assurances that we were going to bring in the Alaskan gas, and that this was not just a project to export Canadian gas to the United States.

Mr. MURTHA. What is the price we are paying, do you know offhand; or is that out of your field?

Mr. RHETT. No, it is somewhat out of my field. It varies considerably. The gas, by the time it gets into California, will probably cost as much as $7 per thousand cubic feet. And my figures might be slightly off.

That includes the cost of transport. The gas has to be distributed, too. Of course, there is a lot of trouble on the West Coast, because now there is also a lot of regulated cheap gas. This creates a short-term pricing problem.

Mr. MURTHA. Is gas going through this pipeline at this point?

Mr. RHETT. No, except for the gas through the old systems. This project consists of looping an existing pipeline which comes down through Washington and Oregon.

So gas is going through the original line now to bring the additional gas out of the Alberta fields.

Mr. MURTHA. I didn't mean to interrupt your statement; go ahead.

EASTERN LEG ISSUES

Mr. RHETT. Well, you know, while we are doing this, let me discuss the other Leg, because I think it is quite important. We are building the southern portions first, which may seem somewhat backwards.

Mr. MURTHA. You are talking about the Leg from six down to seven?

Mr. RHETT. Yes. And the Leg there is what we call the Eastern Leg. It is a 42-inch new pipeline being built by a consortium of five major gas transmission companies, for which Inter North, or Northern Border, the old Northern Natural, is acting as project manager.

Inter North has designated their company, Northern Plains, to build it.

Mr. MURTHA. Where are they from?

Mr. RHETT. Omaha. The thing of interest about this project is that when we look at the billions of dollars that the entire project will cost, the Eastern Leg effort seems very small. But, it is the longest and most expensive gas pipeline that has ever been built in the Lower 48.

So we are talking——

Mr. MURTHA. You mean it will be?

Mr. RHETT. Yes. It is under construction now.

Mr. MURTHA. Is it the largest pipeline in diameter?

Mr. RHETT. Well, in throughput volume. It will use 42-inch pipe.

PIPE DIAMETERS

Mr. MURTHA. Who decided on the diameter of the pipe?

Mr. RHETT. The companies, FERC and the Department of Energy. The President's Decision required that, before the project could start, the Department of Energy would have to determine capacity.

This was done by the Secretary of Energy, who specified the diameter at 42-inches and the pressure at 1425 psi, so the pipeline would move a tremendous amount of gas.

PARTICIPATION BY U.S. PIPE COMPANIES

Mr. MURTHA. Is any of that pipe produced in the United States?

Mr. RHETT. Yes, in fact, the bulk of it. There has been major concern in the pipe area. On the Western Leg, 100 percent of the pipe being used is made in the United States..

It is about 60 percent on the Eastern Leg, and it's split between the three large-diameter pipe companies: Kaiser, Bethlehem and U.S. Steel.

I might add, American industry was competitive. There is a small portion of Italian and Japanese steelpipe that will be used.

There were some problems, but these were straightened out to everyone's satisfaction.

Mr. MURTHA. Will there be also some American pipe as part of the section that runs through Canada up to Alaska?

Mr. RHETT. No. At the time the bidding went on, which was a number of years ago, in 1978, the American steel industry was not competitive.

There are a number of reasons for this. But it was not that the American firms didn't make competitive bids, because they did.

The orders for pipe, in general, ended up with Canadian companies, with Japanese backup. The segment that has not yet been bid upon is the Alaskan Leg.

There we will need 741 miles of high-grade, high-strength, special-tough, and cold-resistant pipe.

Mr. MURTHA. 42-inch?

Mr. RHETT. No, it is 48.

Mr. MURTHA. Do we have pipe that large in the United States?

Mr. RHETT. The only American company that makes it is United States Steel. There have been some other indications that others are looking into this now, but 48-inch pipe is only made in Baytown.

Mr. MURTHA. It appears the Canadian section is controlled by the Canadian producers, and everything that is in the United States is going to be controlled by the American section?

Mr. RHETT. Yes, but this has resulted from a competitive process. You charged me, both the Congress and the President, with assuring that competitive bidding would occur.

Mr. MURTHA. I brought along some concerns that we have. I am glad you have paid attention to our concerns.

We wanted to make sure there was some American pipe and that we had an opportunity to make some of that pipe.

Mr. RHETT. Yes, sir. I think there is quite an effort being made right now to ensure this for the Alaskan Leg.

By this, I am speaking of procurement specifications, which are all of serious concern.

PROJECT COST ESTIMATES

Mr. MURTHA. I saw a figure the other day that was an estimate of overall project cost, $25 billion. Do you have an idea what the overall cost of the project will be?

Mr. RHETT. Mr. Chairman, that is a tough question to answer. The reason why you see such conflicting figures is because each

estimate is based on different assumptions and includes different elements.

When the figures are anywhere from $25 billion up to as high as $40 billion, the primary difference is due to escalation assumptions.

For example, how fast is construction going to escalate? Do you include interest during construction?

Do you consider a major overrun, or not? In general, I would guess we are talking somewhere in the neighborhood of between 30 and 40 billion dollars before the pipeline is finished.

ALTERNATIVE ROUTE PROPOSALS

Mr. MURTHA. Do you see any chance of proposing to follow the Alaskan pipeline, and then changing to methanol and shipping it down to California?

Mr. RHETT. I do not believe that that is the best way. I do believe we should investigate it, and investigate it in detail. These options are being analyzed simultaneously by the State of Alaska.

The State has a contract with Dow Chemical and a number of others to study this. As I see it, we have 26 trillion cubic feet of gas, or 5 percent of the Nation's total supply, that needs to be extracted.

Most people figure there is five to ten times that amount up there. In my opinion, we cannot afford to leave that much energy untapped.

This gas is within the boundaries of the United States. We need to pursue this project, and after two years, I am completely convinced that the ANGTS is the route we should go.

It is the best way to do it. But it isn't cheap.

PROJECTED COMPLETION DATE

Mr. MURTHA. If you decide to proceed through Canada how long would it take you to complete the pipeline from Alaska to the Lower 48, and to have gas going through the system?

Mr. RHETT. The present schedule calls for 1985. But in my opinion, that schedule is in serious jeopardy. It is in jeopardy because of the financing plan.

Mr. MURTHA. Of course, financing has always been a problem.

Mr. RHETT. Yes, and in my opinion, to keep us on the 1985 completion schedule, the companies have got to order the major equipment for the conditioning plant and the compressor stations by mid-year.

There is a possibility that the companies could say, "We are going to put the money up front, wait for the regulatory process, and then obtain the financing."

But I am not sure that this is very likely. I think that in all likelihood, the companies are going to let the project slip a year.

FINANCING PLAN

We should know this very soon, because the financing plan seems to be nearly completed. By this, I mean in the next few weeks.

I don't mean that the plan will be completely acceptable at that time, but at least then we'll have something concrete to work with.

Today, we don't really have a solid plan. There was an article on the financing in the Energy Daily this morning.

Mr. MURTHA. Let's enter this article in the record also, "Financing Accord Near on Gas Line," by Burt Solomon.

[The newspaper article follows:]

[From the Energy Daily, May 14, 1981]

FINANCING ACCORD NEAR ON GAS LINE

(By Burt Solomon)

At long last, agreement seems to have been reached between sponsors of the Alaskan natural gas pipeline project and Prudhoe Bay gas producers over a financing plan for the costly 731-mile Alaskan segment of the line.

"There is an acceptable package, all subject to a very careful canvassing of all the participants," a souce close to the project said on Wednesday. John McMillian, chairman of the sponsoring consortium, sent out a letter last Friday to all prospective participants, detailing his understanding of the financing arrangements agreed to after months of painstaking negotiations, this source reported. Responses were to have been received by Wednesday, and it was hoped that would wrap matters up, he said. Last-minute hitches could develop, but those involved in the bargaining weren't expecting any trouble.

Under the agreement, the North Slope gas producers would contribute 30 percent of the project's cost, sources say. The 11 sponsoring pipeline companies would share the remaining 70 percent. Those proportions would apply to equity in the pipeline itself, to the planned gas condition plant, and to a cost overrun pool big enough to handle a 30 percent overrun on pipeline construction costs, according to one source. Counting the project's Canadian segment, the lower-48 segments already under construction, and the gas conditioning plant now expected to cost $6 billion, the project's participants "are looking at a total of $40 billion" in as-spent project costs, assuming 12 percent interest rates, this source said. Any financing agreement will have to be presented to Wall Street financiers before it can be determined if the project will go forth.

Mr. MURTHA. They are predicting $40 billion.

Mr. RHETT. Probably, Burt Solomon is like me. He's been hearing things, but right now, it's strictly private negotiations.

I think within a couple of weeks, we will know the figures. At that time, we will come back up here and brief you and your staff.

LENGTH OF CANADIAN AND U.S. PORTIONS

Mr. MURTHA. How many miles of this pipe is actually in Canada?

Mr. RHETT. 2,000. I think it is 2,100.

Mr. MURTHA. How many miles are in the United States, combining Alaska and the Lower 48?

Mr. RHETT. About 2,600.

Mr. MURTHA. The figures are almost the same.

EFFECT OF DELAYS ON OFI BUDGET PROJECTIONS

Mr. RHETT. 750 in Alaska, and the rest of it down in the Lower 48. You know, I would like to touch back on the financing plan and schedule, because it is very important to my budget, too.

My budget is based on the schedule which projects completion in 1985. I think once this financing plan is made public, we are going to know the direction the companies are taking.

If the companies are slipping to 1986, I will go to OMB—in fact, I have already been talking to the staff there. Then we will be back up here to show you the effects of a one-year slip on our activities.

Mr. MURTHA. Do you have a rough idea now what you will need to do?

Mr. RHETT. Do you mean how much to cut? I would say somewhere between 10 and 20 percent. Let me try to explain why I cannot be more precise.

We have to see what their agreement is first. I would assume that the companies are going to keep their design going full-blast.

I would also assume they would keep working on the regulatory process full-blast to get those requirements behind them.

FEDERAL INSPECTOR RESPONSIBILITIES

Mr. MURTHA. What role do you have in that part of the process?

Mr. RHETT. I am responsible for reviewing designs. The companies are not permitted to start construction until most of the design is approved.

Mr. MURTHA. What will be done once the construction starts?

Mr. RHETT. We have an oversight responsibility. We are not construction inspectors—the companies are responsible for doing that. Our job is to check it.

Mr. MURTHA. How do you do that? For instance, I was up to General Dynamics not long ago. They had discovered 9,000 welds missing on the Trident Submarine out of 45,000, which is obviously a significant number of welds.

The reason the government hadn't discovered this is because they had just audited the welds, rather than checked the welds.

Now, how are you sure the company is doing an honest job in monitoring and supervising the system?

Mr. RHETT. We are already working on it. The head of the office which oversees the Western Leg happens to be in the room here; the sponsors have already run into major trouble with welds on that segment. How do we get into it? We get into the certification program.

The companies watch; we check. Then we will conduct a series of spotchecks or audits up and down the line. All of this information is computerized to ascertain trends and trend lines.

Those trend lines are not just programed for the welds, but also for labor availability, management analyses, material requirements, and so on.

We concentrate attention on areas that require us to make a major effort. We are not doing 100 percent. It is basically a private project.

WELDING ISSUES

Mr. MURTHA. What were the troubles you were having with the welds?

Mr. RHETT. There were a whole series of problems that we are now trying to figure out.

The major one is whether the equipment to check welds is ahead of the technology. This possibility is presently being studied for me by DOT.

Mr. MURTHA. Is this seamless pipe, or does this pipe have to be welded?

Mr. RHETT. The length is pre-welded. The girth weld is usually double-jointed. The pipes are 40 feet long and are double-jointed in a yard.

The girth weld is then put on out in the field.

Mr. MURTHA. Do you check the quality of the lengthwise welds also?

Mr. RHETT. In general, that would be done within the factory.

Mr. MURTHA. Do you have responsibility for that?

Mr. RHETT. Yes, I think I do.

We would do some checking within the factory.

Mr. MURTHA. Somebody from your department checks the welds, just like you do in the Defense Department, they check them as they are being produced in the factory?

Mr. RHETT. Yes.

Mr. MURTHA. Is this an audit, or an actual check?

Mr. RHETT. It is an audit, because this is a private project. Theoretically, the government doesn't have a dime in it. But, again, the pipeline industry is a regulated business, and this project will go over much public land. To receive Federal government support, part of the agreement was to permit Federal oversight.

Of course, TAPS is where this idea came from. So I think we understand the problems, and the parallels between procurement and construction, and quality assurance and quality control.

Mr. MURTHA. You start out working and approving the plans. After the plan is finished and approved do you supervise the actual construction by auditing the work and by giving them training in welding and so forth?

Mr. RHETT. We watch their training. The companies do it; we monitor. Regarding the welding, it is interesting, because the technology of checking welds may be getting ahead of the current skill levels of the welders. The welding itself may also have deteriorated. We are checking this.

There hasn't been a lot of pipeline construction in a long time. All of a sudden, several pipelines are in the works.

I think the labor force is being——

Mr. MURTHA. I can see that as being a problem. Have you had any problem with the welds done in the factory?

Mr. RHETT. No, the factory work presents almost no problem.

Mr. MURTHA. Are most of them machine welds?

Mr. RHETT. Yes.

ALBERTA GAS DELIVERY DATES

Mr. MURTHA. Let me clarify a couple of things we have talked about. When can you project that we will have gas flowing from Calgary to San Francisco?

Mr. RHETT. It will flow to Los Angeles. We expect gas will begin to flow there in October of this year.

Mr. MURTHA. You are moving rapidly, then?

Mr. RHETT. Yes, I think the companies are moving very quickly.

Mr. MURTHA. Are you talking about the fall of 1982.

Mr. RHETT. Fall of 1981. The Western Leg involves only 160 miles of pipeline looping. There is also some looping required on the connecting portion that is called the Western Delivery System;

however, my major responsibility for that system basically involves expedited permitting and expedited judicial review.

Mr. MURTHA. I thought it was a longer distance. That is 160 miles?

Mr. RHETT. Right. The other Leg is going to take two years.

Mr. MURTHA. The Eastern Leg is from Calgary to Chicago. How long will that take?

Mr. RHETT. Two years, to be completed in the fall of 1982. Construction of the Canadian portion of the Eastern Leg starts next week.

Mr. MURTHA. What direction?

Mr. RHETT. The Canadian portion is from Calgary down to the U.S. border.

Mr. MURTHA. Okay.

Mr. RHETT. To the Eastern Leg of the U.S. portion.

ALASKAN FINANCING DECISIONS

Mr. MURTHA. When will the decision be made for this Alaskan Leg?

Mr. RHETT. It depends on financing. The certification for the Alaskan Leg cannot be given by the Federal Energy Regulatory Commission until there is a financing plan.

Mr. MURTHA. Is that going to be made in two weeks?

Mr. RHETT. All that does is put it in front of the financial community. My guess is that there are still going to be some tough decisions.

We will also have to come back to Congress after the plan is made known.

ADDITIONAL LEGISLATION POSSIBLY REQUIRED

Mr. MURTHA. What items will you have to come back to Congress about?

Mr. RHETT. The President's Decision, which was part of the law, required that the gas producers, which are primarily Exxon, Sohio and Arco, could not be equity owners in the pipeline.

From a private financing viewpoint, there is just no way to obtain the money without them. The producers entered into negotiations with the sponsors a year or so ago.

Mr. MURTHA. Do you think the decision should be that we must change the rules so that they can be part of the financing?

Mr. RHETT. Yes. But that can be done without any antitrust implications. There are ways to do it where they can't control throughput or who puts gas in the pipeline.

VOLUMES OF GAS TO BE TRANSPORTED

Mr. MURTHA. How much gas is expected to go through each portion of these lines? Principally, the Eastern and the Western lines.

Mr. RHETT. On the Eastern Leg, we start off with 975 million cubic feet per day.

Mr. MURTHA. 975 million per day?

Mr. RHETT. Per day.

Mr. MURTHA. What size pipe is this?

Mr. RHETT. 42-inch. That is equivalent to 200,000 barrels of oil per day.

Mr. MURTHA. The pipe through Alaska is 48, and the pipe through Canada is 48.

Mr. RHETT. 56 and 48.

Mr. MURTHA. 56 and 48.

Mr. RHETT. 48, and there is a little bit of 56.

Mr. MURTHA. Will all the gas that comes through the Eastern and Western Leg come through Alaska?

Mr. RHETT. Yes.

Mr. MURTHA. Once we get the entire pipeline opened up, will we close down the Calgary operation?

Mr. RHETT. That's correct.

Mr. MURTHA. We won't buy any more from them?

Mr. RHETT. That's correct. You know, these lines can always be looped in the future.

Mr. MURTHA. How much gas are you talking about us buying from Canada before the pipeline is completed?

Mr. RHETT. I will have to furnish that.

[The information follows:]

CANADIAN GAS EXPORTS

The Canadian government has authorized the following total volumes for export through the first phase of construction of the Alaska Natural Gas Transportation System: Western leg, 0.702; Eastern leg, 2.600; for a total of 3.302 trillion cubic feet (tcf).

STATUS OF NORTHERN CANADIAN PORTION

Mr. MURTHA. What is the construction status of the Calgary portion?

Mr. RHETT. Nothing is being done there yet. It will not start until such time as there is assurance that the Alaskan Leg will be built.

Mr. MURTHA. It goes through Indian lands. Is that all cleared up?

Mr. RHETT. No; they have done some preliminary design. They need to take it further, because they still have Indian problems, primarily up in the Yukon.

But the Canadian Government has assured us they will be able to take care of it.

Mr. MURTHA. You say that is all worked out, or do the Canadians say they have worked it out?

Mr. RHETT. No, they say they can work it out. The issue has never really been the pipeline; it is part of an overall problem.

Mr. MURTHA. The construction on the Alaskan portion will begin after the decision, and that makes sense. The decision on the Alaskan section is complete.

Mr. RHETT. Yes.

ENGINEERING DESIGN ON ALASKAN LEG

Mr. MURTHA. How is the design and engineering for the Alaskan portion progressing?

Mr. RHETT. It's going very, very well. We have moved to the point where we are fairly comfortable with estimates on schedules, money, materials, and so on.

If there is no slow-down, the design should be wrapped up about the first quarter of next year. We are geared up right now to start reviewing the whole series of complex design packages.

It is looking good. We are very much pleased with what Northwest and Fluor have done. We have a beautiful check. We have 11 gas companies and four oil companies that are watching, too.

GAS PRICING RESPONSIBILITIES

Mr. MURTHA. What would that convert to in terms of a reasonable price for the gas from Alaska?

Are you involved at all with pricing, or is that not in your jurisdiction?

Mr. RHETT. Well, I am in and out of it. It is not basically my responsibility, but, of course, you don't build anything if——

Mr. MURTHA. It is all based on the end product?

Mr. RHETT. Yes, on the end product. Again, we will, I think, have better figures in the next couple of weeks as this financing plan breaks and the companies issue their new figures.

The figures that I have here were generated internally by my staff.

Mr. MURTHA. Why don't you send to the committee the answers to some additional committee questions when the financing is worked out.

Mr. RHETT. I think that would be much better. Really, this is no time for me to be getting in the middle of their negotiations.

STATUS OF THE GAS CONDITIONING PLANT

Mr. MURTHA. What is the status of the gas treatment plant that needs to be built before the gas enters the pipeline?

Mr. RHETT. It is under design under the same consortium, which is headed by Northwest Energy.

It is being designed by Parsons Company of Pasadena, California, and it is coming along very, very well.

I was at Pasadena about a month ago getting briefed in detail. It is moving along well, and should marry into the pipeline, I think, with no problem.

Mr. MURTHA. Will the producers finance that?

Mr. RHETT. That is part of the current financing negotiations. There are about three or four options being studied.

The inclusion of the gas conditioning plant is another issue which we will either have to try to solve administratively, or through Congress, according to how the companies present it.

POSSIBLE REDUCTION IN THE FISCAL YEAR 1982 REQUEST

Mr. MURTHA. Your budget states that should fiscal year 1981 program objectives be changed as a result of delays and securing financing for the Alaskan segment, it will result in dispute over the Eastern Leg corridor for the fiscal year 1982 budget and will have to be revised accordingly.

You said earlier that would be reduced by 20 percent.

Mr. RHETT. Yes. That is a very rough estimate. I will be back to give you a more accurate estimate before you have to mark up the bill, sir.

I think I said 10 to 20 percent, so as to keep some latitude.

Mr. MURTHA. We go to the floor in July, so we will need to know in June.

LAWSUIT OVER THE EASTERN LEG

Mr. RHETT. Yes. We have not touched upon the Eastern Leg. There was a recent lawsuit against the State of North Dakota over the pipeline route. That has now been settled.

Mr. MURTHA. Is that the Eastern Leg, or Western?

Mr. RHETT. It was the Eastern Leg through North Dakota. That suit has been settled. We have now reached an agreement with the State.

HEADQUARTERS RELOCATION

Mr. MURTHA. Let us talk about the relocating of the headquarters from D.C. to Fairbanks.

Mr. RHETT. This is where the major savings will occur in FY 1982. If we slip a year.

Mr. MURTHA. You are not really saying "savings." Are you saying it is actually a deferral?

Mr. RHETT. Deferral.

Mr. MURTHA. Really costs more money.

Mr. RHETT. Right. At the same time, we are looking at other ways to handle this relocation.

Mr. MURTHA. What is the date for implementing your move?

Mr. RHETT. Summer of 1982.

REVIEW OF COST ESTIMATE

Mr. MURTHA. What process do you go through in order to ascertain that the cost estimate provided by the pipeline constructors is appropriate?

Mr. RHETT. Primarily, the responsibility for this is with FERC. We are jointly reviewing that estimate with the Federal Energy Regulatory Commission

In fact, one of my major engineering efforts now involves the review of that estimate. We have hired one of the top pipeline contractors to provide the bulk of the technical support to go over that estimate line-by-line.

Mr. MURTHA. FERC is the one that finally makes the decision?

Mr. RHETT. Yes. The estimate goes to the Commissioners of FERC for review, and I may go before them as a party.

Mr. MURTHA. Do they actually make a decision on the percentage of the profit?

Mr. RHETT. Yes.

ENVIRONMENTAL PROTECTION RESPONSIBILITIES

Mr. MURTHA. You state in your justification on page 39 that one of the functions of your environmental review process is to "ensure that only necessary and reasonable environmental requirements are imposed during project planning, construction and subsequent operation."

Who has responsibility for placing the overall environment requirements on the pipeline?

Mr. RHETT. Basically, the individuals agencies. The individual agencies, through their permitting process, and according to the general laws, determine the requirements.

But there are some other considerations, including the reason for the establishment of the OFI. I am responsible for scheduling and for monitoring permits to make sure that everything blends in together.

If there are conflicts, I resolve them and I assure that the solutions are reasonable.

To date, we have had no real problem. Ultimately, if you want to look to the one person who is responsible, it's me.

ATIGUN PASS ROUTING

Mr. MURTHA. Your justification on page 45 speaks to several problems with Alaskan pipe construction. The first has to do with the congestion at the Atigun Pass where both the oil pipeline and State highway cross, occupying essentially all the relatively level space of the past floor.

What alternate solutions are you looking at, and when will this problem be solved?

Mr. RHETT. We have looked at two. One was routing it another way, which had to be looked at very, very quickly.

The second and more viable alternative, tunneling, is being studied right now.

But, and I am guessing, it is probably going to be too expensive to tunnel. I am trying to get enough information to look at that tunnel from a broad scope.

I mean trying to look at that as an energy corridor where there is the potential for more oil and gas to be transported. New oil is now being brought in by Arco.

Mr. MURTHA. How critical a solution to this problem is the pipeline construction?

Mr. RHETT. I think this pipeline can go over the top of the pass.

Mr. MURTHA. Are you far enough along to estimate how much more it will cost?

Mr. RHETT. No, the estimates have been so gross that we really don't know the cost of a tunnel.

YUKON RIVER CROSSING

Mr. MURTHA. The second area you mentioned as being of concern is crossing the Yukon River, and whether the bridge across the river is structurally capable of supporting a second, and possibly a third, pipeline.

Mr. RHETT. The structural end of it, I think, has been settled—the bridge can carry it. However, there has to be some agreement among the State, the Federal Government and the company to put the pipeline on it.

Mr. MURTHA. What is the third pipeline?

Mr. RHETT. That would be looping the oil pipeline. Alyeska, and Interior have tried to make sure we are not precluding later loop-

ing of the oil pipeline, so as new fields come in, the capacity can be increased.

SUFFICIENCY OF BUDGET ESTIMATE

Mr. MURTHA. Do you have enough money to adequately supervise and do your role? We are cutting back. In my mind, there is nothing more important than not allowing some major mistakes here which disrupt this vital flow of energy at some point.

Do you have enough money? Staff tells me your budget was not reduced, but did you ask for enough, because sometimes we have agencies come in here, and they are very conservative.

You went to OMB, they didn't reduce it, and you feel you asked for the proper amount?

Mr. RHETT. The proper amount.

Mr. MURTHA. When you get these decisions, will you be back up here with new estimates of what needs to be done?

Mr. RHETT. Yes, sir.

Mr. MURTHA. We have some additional questions we would like you to answer for the record. Thank you very much.

Mr. RHETT. Thank you, it has been a pleasure.

[The questions and answers follow:]

ADDITIONAL COMMITTEE QUESTIONS

Project Cost Estimate

Question: What is the latest status of the cost estimate?

Answer: A draft report to the Federal Energy Regulatory Commission (FERC) on the evaluation of the Certification Cost Estimate by the FERC and the Office of the Federal Inspector (OFI) was released for comments to interested parties on March 12, 1981. A conference was held in Tulsa, Oklahoma on March 23-26, 1981, at the offices of Williams Brothers Engineering Company, the OFI consultant assisting in the evaluation, to discuss the report. Williams Brothers is presently evaluating the additional materials filed by Northwest Alaskan as a result of the conference, and the final report is expected to be completed in July.

Question: Your quarterly report of April 28 says a report on Alaskan costs is being delayed and will not be completed before late June. Once that report is completed, what additionally has to occur to the cost estimate?

Answer: The report on Alaskan costs will be released by the FERC for public comment after evaluations have been completed on additional information recently received. After this, a final report and order will be prepared on the estimate and certain related incentive rate of return (IROR) matters.

Status of Organization

Question: What is the overall status of your organization?

Answer: The organization of the OFI has been structured according to both the geographical demands of the project and the timing of construction. Consequently, our headquarters office is currently located in Washington, D.C., and houses most of the executive direction and administrative staffs, as well as the permits and compliance and audit and cost analysis programs. Our engineering and environmental staffs are now based in an office in Irvine, California during the design review stage, to be near the company (FLUOR) which is responsible for the design of the Alaskan segment of the pipeline. Four other field offices have been established in Fairbanks, Anchorage, San Francisco, and Omaha to oversee on-site activities along the three different U.S. portions of the pipeline route. Staffs from the various program areas of the OFI may be detailed on a temporary basis to any of the field offices as construction activities warrant.

Most of the offices are now staffed at a level appropriate to oversee the pace of current project activity. The one exception is our Irvine office, which is below its full employment level due to the difficulties we are having recruiting qualified engineers and

environmentalists at government salaries. Once full scale construction gets underway, however, more personnel will have to be hired, particularly for field surveillance in Alaska. At the same time, the headquarters office will shift from Washington, D.C. to Alaska; the engineering and environmental staffs in Irvine will also relocate to Alaska as the design review phase is completed and actual construction begins.

Current Employment Level

Question: How many people do you have on board now?

Answer: As of May 17, 1981, OFI had filled 133 permanent full-time positions. In addition, we have made job offers to six people, who are scheduled to come on board within the next month. We also have 15 other than permanent full-time positions currently filled.

Offices and Their Functions

Question: How many offices have you set up and what operational functions are now in place?

Answer: The Washington, D.C. office is reponsible for the overall management, direction and administrative functions. It consists of the Immediate Office of the Federal Inspector and the following staff functions: Equal Employment Opportunity, Administration, General Counsel, External Affairs and Policy Analysis. Two critical line functions are also located in the D.C. office: Permits, Schedules and Compliance and Audit and Cost Analysis. The Omaha field office and the San Francisco field office are responsible for surveillance and inspection of the Eastern and Western Legs, respectively. The Irvine field office is responsible for the environmental and engineering design review functions. The Alaska field office consists of an office in Fairbanks, which is responsible for the pre-construction field surveillance activities, and an office in Anchorage, which is responsible for the one-window permitting function for the Alaskan Leg as well as the overall management and administrative functions for the Alaskan Leg.

Critical Construction Dates

Question: Could you provide for the record a detailed listing of the critical dates for construction of each of the pipeline sections according to current schedule?

Answer: The schedule for construction of Phase I of the Alaska Natural Gas Transportation System (ANGTS) is:

	Western Leg		Eastern Leg	
	In U.S.	In Canada	In U.S.	In Canada
Start construction	12/80	8/80	5/81	5/81
Complete construction	10/81	1/81	9/82	9/82
Partial gas flow	6/81	--	--	--
Full gas flow	10/81	--	9/82	--

The current schedule for the Alaskan Leg calls for: completion of detailed engineering design work in late 1982; construction of temporary facilities from early 1982 to late 1983; mainline pipe installation from late 1983 to late 1985; and compressor station construction from early 1984 to late 1985. The remainder of the Canadian segment and the U.S. Eastern and Western Legs will be constructed to coincide with the completion of the Alaskan portion. Maintaining this schedule depends upon the timely resolution of the necessary regulatory decisions, and the timely completion of the design of both the pipeline and the gas conditioning plant. At this time, the development of an acceptable financing plan is the critical item.

The viability of this schedule is presently in question. In fact, part of the current financing negotiations is a re-evaluation of the present project schedule. These efforts may result in the development of a new schedule. Although the sponsors' engineering and design efforts have successfully progressed at a pace necessary to achieve the 1985-1986 completion date, other elements of the schedule are not as certain. Specifically, the gas conditioning plant is now the critical schedule determinant since the sponsors must be able to make major commitments for the procurement of equipment and materials for it by mid-1981. In my opinion, the Alaskan Leg schedule has already slipped by 1 year. Thus, the above dates for work on the Alaskan Leg should be adjusted by 1 year.

Alaska Travel Costs

Question: Your budget justification shows $1,354,000 for travel and transportation expenses for the Alaskan Leg of the pipeline in fiscal year 1982, even though the Leg will not at that point be under construction. Why are the costs so high?

Answer: According to the construction schedule upon which the travel estimate is based, the construction of temporary facilities, such as workpads, material sites and camp site restorations, is slated to take place throughout most of FY 1982. This phase of civil construction will require an increase in travel such that field personnel can oversee the progress of work along the pipeline route and ensure the proper level of compliance with Federal regulations.

The $1,354,000 estimate is comprised of approximately $550,000 for ground transportation, $600,000 for aircraft rentals, and $200,000 for inflation. The vehicle costs are based on usage and capitalization fees for 30 cars, each expected to be driven about 20,000 miles per year at 60¢ per mile. The vehicles are specially equipped four wheel drives, which are not only expensive at Alaskan rates, but require a significant amount of maintenance because of the rugged conditions in Alaska. The aircraft rental estimate is split between $150,000 in reimbursable charters provided by the sponsor company, and $450,000 in regular aircraft service for aerial surveys and transport between camp sites. The cost of renting fixed wing aircraft and helicopters ranges between $400-$1,500 per hour. At those rates, even 10-15 hours of total flying time per week produces staggering costs on an annual basis.

An OMB approved inflation factor of 8.7% was applied twice to the base estimate (in 1980 dollars) to determine the ultimate 1982 cost.

Coordination of Permits

Question: Please explain how the Federal Inspector coordinates the involvement of Federal agencies in ther permitting process for the pipeline.

Answer: Coordination with the Federal agencies with respect to permitting varies slightly for the Alaskan Leg and the Eastern and Western Legs (Lower 48). For the Alaskan Leg, the OFI's Alaska field office serves as the "one-window" point for the filing and issuance of all necessary Federal permits, certificates, grants or other authorizations. Upon receipt of an application from the sponsor, the field office sends the application to the agency responsible for processing the permit and to other involved agencies, for concurrent review and comment. Throughout the processing of the permit, the field office coordinates the various agencies' review, assists in the preparation of permit stipulations, resolves conflicts and, in general, insures issuance of the permit within 60 days after receipt of the application. Efforts are aimed at avoiding discrepancies between State and Federal permits and to review all government-imposed requirements for reasonableness and cost effectiveness.

For the Eastern and Western Legs, the sponsors apply for and receive permits directly from the Federal agencies with copies of applications, permits, and related correspondence sent to the appropriate field office.

Disagreements between Federal agencies and/or problems with particular permits are brought to the Federal Inspector's attention by the sponsor or a Federal agency. At that time, we work with the sponsor and the Federal agency(ies) to resolve the problem.

Coordination with Canada

Question: How is your responsibility in the United States' sectors of the pipeline coordinated with the Canadians'?

Answer: At least semi-annually, officials from the United States (Office of the Federal Inspector) and Canada (National Energy Board and Northern Pipeline Agency) meet to discuss project status. These meetings also serve as a vehicle for the two governments to share experiences with respect to the pipeline. Topics of discussion include interaction with sponsors, government-imposed stipulations and conditions, and compliance activities.

Various members of the Federal Inspector's staff have traveled to Canada to tour portions of the line under construction, and the Canadians have been invited to visit all U.S. portions. A Canadian group is scheduled to visit Alaska the first week in June.

Compliance Activities and Enforcement Powers

Question: What kinds of compliance activity will you undertake and what enforcement powers do you have?

Answer: The OFI, in coordination with all affected Federal, State and other agencies, has prepared and issued procedures that are designed to comply with the congressional mandate that the Federal Inspector reduce delays and cost overruns on the Alaska Natural Gas Transportation System. Our compliance activities integrate field observations, management reviews and informal and formal enforcement procedures. The intent of our compliance activities is to minimize the Federal presence during project construction and avoid burdensome regulations, but at the same time to establish effective Quality Assurance and Quality Control (QA/QC) during the monitoring, observation, and enforcement of all stages of the ANGTS project.

General OFI procedures designed to implement our compliance program can be categorized under the assurance mode and the enforcement mode. The assurance mode utilizes information from field observations, reports and analyses obtained from sponsor field inspectors as well as Federal Inspector Field Representatives (FIFR), which is then communicated to sponsor(s) with appropriate recommendations for preventive or corrective action. The enforcement mode utilizes information from FIFR's observations, with OFI compliance orders, stop orders or other enforcement procedures being used if the sponsor's timely implementation of preventive or corrective action is lacking or incomplete. A reporting and review hierarchy from FIFRs up to the Federal Inspector, with consultation available at any point by either contract personnel or agency technical specialists, assures that the sponsor will have a clear avenue of communication.

Specific compliance activities will be carried out on construction sites by the FIFR or other designated contractor or agency personnel under the direction of OFI Field Directors. They will utilize the assurance mode, consisting of systematic spot checks of sponsor's QA/QC procedures and reports, observations of the more critical engineering and environmental aspects of the project, and more detailed, in-depth "special observations" by assigned technical staff or teams. Upon identification of probable or actual failure to comply with the terms and conditions of the grant and/or variance with approved design, construction or other plans, the FIFR or special observation official will initiate the necessary documentation to enforce compliance. This enforcement procedure will be by documents such as Field Memorandum, Compliance Order, Stop Order, or other specified documents established by the Federal Inspector.

Authority of the Federal Inspector to take enforcement actions during the pre-construction, construction and initial operation of ANGTS is contained in the following:

1. The Alaska Natural Gas Transportation Act of 1976 (15 U.S.C. 719).

   a. Sec. 7(e)(5) specifies that the Federal Inspector shall monitor laws, terms and conditions of permits, etc., to assure timely completion, quality of construction, cost control, safety and environmental protection.

   b. Sec. 11(a)(b)(c) adds enforcement authority to issue compliance orders if a violation of law or of an authorization occurs, and states that civil actions may be brought for violations of the compliance order.

2. The President's Decision and Report to Congress, September 1977. Sec. 5 states that the Federal Inspector shall have supervisory authority over the enforcement of these terms and conditions.

3. Reorganization Plan #1 of 1979. Sec. 202(a)(b) establishes Federal Inspector supervision and direction of Agency Authorized Officers, and the responsibility to implement and carry out the enforcement authorities, policies and procedures of the agencies.

Certification of Costs into the Rate Base

Question: One of the functions of your Office of Audit and Cost Analysis as stated in your justification (page 36), is to certify, on a quarterly basis, allowable costs into the rate base. Are such costs allowed to be charged off currently even though the pipeline is only under construction? Is this a normal procedure for the financing of pipelines?

Answer: The "charge off," i.e., the collection of revenues and the depreciation of assets, of allowable costs commences on the "First Service Date" when the entire segment commences delivery of gas for a shipper.

The periodic certification of rate base costs is not a normal procedure for the financing of pipelines. It is unique to the ANGTS project and is mandated by the President's Decision.

Contract Support for Design Review

Question: Please explain the function of Unified Industries, Inc. in your design review of the pipeline. What are their qualifications to do such reviews? How were they chosen?

Answer: Unified Industries, Inc. (UII) serves as the principal contractor to support the OFI in its required engineering and environmental design review responsibilities. UII reviews project sponsor design data submitted for OFI approval and provides advice to the OFI on a range of design issues involved in the pipeline project.

We believe that UII, along with its principal subcontractor, Systems Development Corporation, is qualified to assist in such reviews because it has experienced engineering, environmental, and construction management personnel as well as previous experience in Alaskan and general pipeline construction projects.

UII is a minority-owned firm that was competitively selected under an 8(a) set-aside by the Department of Transportation (DOT) prior to the OFI's inception. The OFI participated in the contract negotiations, and the UII contract was awarded by DOT. The contract was subsequently transferred to the OFI for continued administration and funding.

Field Surveillance Costs

Question: Please provide for the Committee a breakdown of the cost of your field surveillance activity by individual field office (page 46).

Answer: Including their share of administrative overhead charges, the costs of the individual field offices are as follows:

Alaska (Fairbanks & Anchorage)	$ 8,437,000
Omaha	2,079,000
San Francisco	486,000
Total	$11,002,000

Reimbursement under the Mineral Leasing Act

Question: Please explain to the Committee what reimbursements you will seek from the pipeline constructors, and why you limit the reimbursements you will seek to a small portion of your activity. When will you have a project specific policy on reimbursement, and when will final regulation be issued?

Answer: The OFI will seek reimbursement for the costs it incurs in enforcing ANGTS right-of-way and permit requirements on Federal land, as directly required by Section 28 of the Mineral Leasing Act. OFI enforcement related to the Alaskan Leg will produce the vast majority of reimbursable costs. This includes work performed by the OFI engineering, environmental, permits, and field office staffs.

This approach to reimbursement comes directly from the Mineral Leasing Act. Although the OFI has many functions other than enforcing Federal land rights-of-way, the portion of reimbursement will not be "small." To seek a greater portion, however, the OFI would have had to implement a fee system under the Independent Offices Appropriations Act (IOAA). After substantial policy and legal deliberation, that approach was rejected; the substantial litigation invariably accompanying use of the IOAA was considered harmful to the OFI mandate of expediting ANGTS.

The project-specific policy on reimbursement has been completed for some time, but a Court of Claims decision last year held that such reimbursement requires regulations. The rulemaking process is now complete, and the final regulations will be issued very soon.

Status of Financing

Question: On page 53 you state that financing is the most critical aspect of the project's staying on schedule because the sponsors must make their major material commitments for the Alaskan segment by summer 1981 to stay on schedule. What is the latest status of financing, and do you believe at this point that such financing will be in place by the summer of 1981? If it is not, what would the effect be on your office's budget in fiscal year 1982?

Answer: The Prudhoe Bay producers and the project sponsors are continuing their efforts to develop a plan for financing the construction of the Alaskan segment. Because these are private negotiations, the OFI has not been involved. At this time, it appears that the producers and the sponsors are nearing agreement and that a financing plan will be presented to the financial community within a few weeks. The structure of this plan will determine what additional congressional action will be necessary and the length of time required to obtain the concurrence of the financial community and the Congress.

The OFI's resource needs are dictated by the sponsors' schedules. Thus, if the financing negotiations result in a substantial revision to the current project schedule for the completion phase of the pipeline system, the OFI will have to make appropriate adjustments in its fiscal year 1982 budget request. We expect that the information necessary to make these adjustments will be available before final congressional action on our budget is taken. We will work closely with the Office of Management and Budget and the appropriate congressional committees to assure that the necessary revisions are made in a timely fashion.

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