

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR 1998

HEARINGS BEFORE A SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES ONE HUNDRED FIFTH CONGRESS FIRST SESSION

SUBCOMMITTEE ON THE DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES

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NOTE: Under Committee Rules, Mr. Livingston, as Chairman of the Full Committee, and Mr. Obey, as Ranking Minority Member of the Full Committee, are authorized to sit as Members of all Subcommittees.

DEBORAH WEATHERLY, LORETTA BEAUMONT, JOEL KAPLAN, and CHRISTOPHER TOPIK,
Staff Assistants

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WASHINGTON : 1997

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U.S. DEPARTMENT OF AGRICULTURE

Secretary of Agriculture

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR 1998

THURSDAY, MARCH 20, 1997.

U.S. DEPARTMENT OF AGRICULTURE

WITNESSES

**HON. DAN GLICKMAN, SECRETARY, DEPARTMENT OF AGRICULTURE
JAMES R. LYONS, UNDER SECRETARY, NATURAL RESOURCES AND ENVIRONMENT**

(3)

December 1994

Mr. REGULA [presiding]. We'll call the subcommittee to order.

We're pleased to welcome the Secretary of Agriculture and a former Member and a colleague, and the Under Secretary, Mr. Lyons.

I have to tell you, Mr. Secretary, in my 23 years on this subcommittee this is a first, to have the Secretary of Agriculture appear on behalf of one of your important functions, and that's the Forest Service. We've never had that. We've always had the Under Secretary or the Chief. So I think with the growing interest in the Forest Service, and of course with freedom to farm, I assume you'll be out of business on the farm end of it. [Laughter.]

[Secretary Glickman shakes his head indicating no.]

Mr. REGULA. You don't think so?

Secretary GLICKMAN. Show my head is going like this [shaking his head indicating no.]

[Laughter.]

Mr. SKEEN. No comment. [Laughter.]

Mr. REGULA. It's interesting that 40 percent of the employees in your Department are Forest Service people, and what, about 10 percent of the budget, and a very important function. It's kind of unique in that, for whatever reason, it's not in Resources, but in Agriculture, but it's in our committee for funding purposes.

We'll put your statements in the record, and any comments you'd like to make or summarization we'd welcome.

OPENING REMARKS

Secretary GLICKMAN. Well, thank you, Mr. Chairman and Chairman Skeen. You know, when I saw you, Ralph, I guess it was four or five weeks ago, you said you were going to invite me, and you commented that the Secretary had not testified in your memory, and we have checked back with Steve Dewhurst, our Budget Officer, and I do not know how long it has been, but people cannot remember when a Secretary has testified before this subcommittee. Of course, I owe great allegiance to Chairman Skeen, who has always shown great courtesy and interest in the general affairs of the Department of Agriculture, but I think it is appropriate that we come here, and I might make just a couple of off-the-cuff comments.

One is, as you say, the U.S. Forest Service is the largest single part of the Department of Agriculture. It has about 35 percent of our total employment, because we have a lot of what are called county office employees in farm offices who are paid for by the Federal Government, but are not classified as Federal employees. But, in any event the Forest Service is the largest grouping. When you combine land management and conservation agencies, we are the largest in the Government. When you combine the Forest Service and the old Soil Conservation Service, which is now called the Natural Resources Conservation Service, we are the agency responsible for obviously managing the nearly 200 million acres in the Forest Service, but we are also the agency responsible for conservation efforts on private lands in the United States. So when you combine these together, we often do not get the attention for it, but we are the largest land management agency in Government. So, obviously, we work closely with the Interior Department, which has the other

very big piece of it, but, for historic reasons, the Forest Service was put in the Department of Agriculture. Actually, it was in the Department of Interior, I think, initially—

Mr. REGULA. Oh, is that right?

Secretary GLICKMAN [continuing]. And then it was put in the Department of Agriculture. I am not sure of all the historical reasons, but I think that a lot of those stay with us until today in terms of functions and roles and relation to production agriculture and how we viewed trees back then as a crop in some respects, as opposed to other functions. But, be that as it may, it is a very significant part of USDA.

I would also say that it has, certainly in my nearly two years I have been in this job, it is a very controversial part of the Department. As you know, issues regarding timber and how much we cut and issues regarding salvage have become very important during the last two years. The role of the Secretary in managing the Forest Service has received a lot of national attention, a lot of congressional attention, a lot of Executive branch attention. We have been through a very tough period of time, and trying to figure out, I think as much as anything, what is the appropriate function of this agency in a changing world. We are moving from an agency that focused almost exclusive on—let us say not almost, but rather significantly—on the harvesting of timber to one that does that, but also does recreation, habitat protection, and resource management. You know, it is a multiple-use agency. It does a lot of different things; it affects a lot of communities.

This has been an extremely controversial issue as we try to figure out where we ought to be going and what we ought to be doing. We are fortunate to have a new Chief of the Forest Service. I don't know if he's testified—he follows me, Mike Dombeck—

Mr. REGULA. Yes.

Secretary GLICKMAN [continuing]. Who himself has extensive land management experience, and was originally in the Forest Service. Then he was in the Bureau of Land Management, where he was Acting Director. So I think it is an important time for us, and I think when you suggested I come here, it was important because I can honestly say to you that in terms of size and employees and everything else, this is a very significant part of the Department of Agriculture. It is not some separate organization in a line item budget sense. It has nothing to do with the rest of what we do, and so I think to some extent over the last 50, 60, 70 years, it has tended to operate as a separate entity.

Mr. REGULA. True.

Secretary GLICKMAN. And I think that that has maybe been a phenomenon of the historical nature of the Forest Service. It may have been a phenomenon of congressional interest. It may have been a phenomenon of how the Forest Service perceived itself as kind of a professional cadre of land management people that were separate and apart from the political functions of the Department of Agriculture.

But, be that as it may, I think that Mr. Dombeck, Mr. Lyons, and I working with you, understand that this is an important part of the Department of Agriculture. We intend to give it the priority that it needs to have.

As I mentioned, Jim Lyons is with me, and I have a couple of comments I would like to make more specifically, and my full statement will be in the record.

Mr. REGULA. Right.

SECRETARY'S POLICY ROLE

Secretary GLICKMAN. There are a couple of things I wanted to make sure you are aware of: One is that while my office is engaged in the operations of the Forest Service from a policy perspective, it is my belief that the Chief is the manager of the Forest Service, not the Secretary of Agriculture. I am not in the position of micro-managing day-to-day decisions, and should not be. These are a group of talented professionals who need to know that their judgment is paramount when it comes to land management decisions.

Now policy, obviously, the policy of any administration has to come into play in this regard. I mean, that is why you have elections. That is why you have administrations. That is why you have Congress. So we are obviously involved in policy issues of where the Forest Service ought to be going from a conceptual point of view.

Mr. REGULA. Well, that's my concern, to get you involved in the big policy decisions, because I know CEQ is getting involved, the Council on Environmental Quality, and there's a growing interest in the overall management because it transcends selling trees for fiber. It gets into recreation. It gets into habitat, the things that you've outlined, and I think there are important policy questions about the future of the Forest Service.

Secretary GLICKMAN. Right, and I need to be, in the same way that I am involved institutionally in determining, let us say, what a farm program implementation is going to look like or how we do meat and poultry inspection, or all the other issues—I also have to be involved in working with the Chief, recognizing he is the chief professional, however.

Mr. REGULA. I understand.

Secretary GLICKMAN. And I do not want to second-guess his professional judgment, but working with him is an appropriate role for me to be personally involved, along with Under Secretary Lyons, who is my chief policy officer for this area within the Department.

And I do think it is fair to say in the past Secretaries have not been terribly personally involved in Forest Service decisions. When I said I was going to get more involved, some people said, "You have got a tiger by the tail and you are going to choke yourself on this thing." But the fact is that that is not true. This is an extremely important matter. This is a legacy that we will leave our children and grandchildren far beyond almost anything else we do in the Department of Agriculture, and so we need to preserve that legacy, and I think that this is the important part of it.

BUDGET INITIATIVES

If I might, I might just make a few specific comments. Obviously, we are operating within constrained budgets, and the Nation does face an increasing number of environmental problems on public as well as private lands, especially endangered species, water quality, and forest health problems. But even with these problems and even

with constrained budgets, I think we are trying to make some important investments.

For instance, we are proposing the Forest Ecosystem Restoration and Maintenance Fund, which provides funding for watershed restoration and other forest health work that needs to occur. The Chief will talk to you more about the details, but we need to work together with you to move the forest health debate forward in a constructive manner.

The salvage rider, as I said, was so controversial that it actually turned the words "forest health" into dirty words for the public. They also became politically-charged words, both for the timber industry, as well as for the environmental community. Working together, I think that we can come to a reasonable meeting of the minds on those forest health needs issues and how to deal with them over the long term.

Another way to care for the land and improve forest health is to look at the way we manage fire. I think we may all agree that the fire funding system we have in place is inadequate, particularly as we reduce hazardous fuels, as we prevent fires from occurring before they actually go into a suppression situation.

After reviewing it extensively within the Government and our co-operators, our budget proposes to change the fire-funding mechanism to accomplish two main goals. First, we have to have the money to fight fires when they occur. Our budget provides \$211 million with a \$5.8 billion proposed governmentwide emergency contingency fund to tap into once we run out of appropriated dollars. Of course, the contingency fund would deal with a lot of issues beyond fires.

Second, the Forest Service needs to reduce hazardous fuels through prescribed burns and other means to minimize the risk of large, intense fires. Our budget proposes between \$30 and \$50 million for these types of activities, which is a 25 to 100 percent increase over the 1997 budget.

FOREST PLANNING

Another way we are investing in land is through our regional forest planning management and research efforts. Experience has taught at the Forest Service that it needs to manage resources on a broader scale. This is a very different approach to managing land than what people are used to at the local, State, and national level, and so it involves a lot of controversy. In fact, the Forest Service is struggling with it to some degree because they have had to alter their management style and their interaction with people. But investment in this type of research and planning, such as the President's Northwest Forest Plan, the Tongass Land Management Plan, the Columbia River Basin effort, will ensure that we have a sustainable flow of resources in the years to come. I would strongly encourage the committee to support us in these efforts on regional forest planning management and research efforts.

STATE AND PRIVATE FORESTRY

Serving people is the other important component of the Forest Service's overall mission, and I continue to be amazed at the number of services we provide. Tens of thousands of our Nation's non-

industrial forest owners rely on our State and private forestry programs for technical advice, financial incentives, and education for managing their land. This assistance is extremely critical when you think of the amount of forest land they own in this country, about 60 percent of the total, and the contributions these lands make toward improving our environment while providing timber and other services to our Nation.

In fact, if you compare the amount of money we invest in conserving crop and grazing land, which is about \$3 billion, to the amount devoted to State and private forestry programs, less than \$200 million, I believe that you can see that funding those programs to the maximum extent possible is important to help the continued productivity of these critical forest lands.

OTHER PROGRAMS

The Forest Service provides more recreation opportunity for Americans than any other agency in the Nation. Millions of Americans visit the forest system to hunt, camp, hike, fish, sightsee, climb, ski, canoe, among other activities. These recreationists also bring large sums of money with them, which helps many rural economies. Recreation is an economic engine which makes investing in it important.

In addition to recreation, many other Americans go to work on the national forest system to operate timber sales, graze cattle, and mine. As you know, these activities are also important economic engines. The total volume for projected timber offer for Fiscal Year 1998 is 3.8 billion board feet with a projected harvest level of 3.9 billion board feet.

COLLABORATIVE MANAGEMENT

In closing, I believe the Forest Service budget reflects the multiple objectives and goals that the agency seeks to achieve. As I said, we have a new Chief who I believe will be an outstanding leader. He understands the need to build up the public's trust in land management efforts by constructively including the public in the discourse and management of our lands. He is a bridge-builder, and that is one of the reasons why Jim and I asked him to come over to the Forest Service from the Bureau of Land Management. He will also add a lot of budget details to the issues I raised briefly in my remarks to you today, and he also is not a polarizer. By saying that, I am not saying that anybody else is. I am saying that the debate on these land management issues has got to become less polarized, and every issue does not have to become World War III. Every timber sale does not have to become World War III. We can try to see in a collaborative sense whether we can resolve some of these issues before they reach that kind of level, and besides, when they reach that kind of level, I end up getting involved in individual timber sales, which is what I certainly want to avoid in the future if I can.

So, again, I thank you very much for asking me to be here, and Jim Lyons and I would be glad to answer any questions. The Chief follows us, but if there is anything specific that he needs to answer, he will be able to come up here.

[The prepared statement of Secretary Glickman follows:]

**Statement of
DAN GLICKMAN**

**SECRETARY
UNITED STATES DEPARTMENT OF AGRICULTURE**

**Before the
Interior Appropriations Subcommittee
United States House of Representatives
March 20, 1997**

Introduction

Mr. Chairman, Congressman Yates, and Members of the Committee:

Thank you for inviting me to appear before you to discuss the FY 1998 budget for the USDA Forest Service. I am joined by Under Secretary Jim Lyons today, and I understand that you will also have the opportunity to hear from the new Chief of the Forest Service Mike Dombeck.

As you review the specifics in our budget proposals for 1998, I hope you can keep in mind five key themes and principles which provide the foundation for all the goals, objectives and programs in this budget.

1. The broad scope and mandate of the Forest Service mission;
2. The imperative of restoring and protecting healthy ecosystems;
3. Our need to demonstrate accountability to our board of directors, the American public;
4. Our efforts to help spread conservation and forest stewardship beyond the National Forest System borders; and
5. Organizational Effectiveness.

The Forest Service Mission

The Forest Service mission is "caring for the land and serving people." I want to focus first on "caring for the land." Many people cannot comprehend exactly how much land we care for. The National

Forest System's nearly 192 million acres is the equivalent land area of Michigan, Ohio, Kentucky, West Virginia, Virginia and the whole northeast -- a total of 16 states combined. We manage 156 forests with the average size of the State of Delaware.

Consider this: In caring for the land, we need to address all of our assets -- clean streams, abundant fisheries, wildlife, trees, grasslands and clean air, to name a few. We have enormous responsibilities to make sure this land is healthy and most of our proposed budget will be spent on trying to do just that.

The second part of the Forest Service mission is "serving people." Tens of thousands of non-industrial private forest owners -- people who own and manage more than 350 million acres of private forest land -- look to our State and Private Forestry Programs for technical advice and financial incentives.

National forests provide more outdoor recreation opportunities than any other federal land agency. Millions of Americans visit the National Forest System to hunt, camp, hike, fish, sight-see, climb, ski, canoe, birdwatch and other activities. Our goal is to provide high quality outdoor recreation opportunities to meet users' demands while still being good stewards of the land.

Since 1973, more than one million Americans have spent a day, a week or even more working with Forest Service employees as campground hosts, trail builders, researchers and dozens of other activities.

In addition, many other Americans go to work on National Forest Lands to operate timber sales, grazing permits, mining claims, guiding companies and carry out other commercial uses.

When you consider all of these customers coupled with the people who depend on Forest Service research, international expertise, urban and community forestry and the rest of our activities, you begin to realize the scope and breadth of "caring for the land and serving people." This is the philosophy behind the \$3 billion dollar budget.

Restoring and Protecting Ecosystems

The best and most credible science today validates the vision of our nation's first conservationists -- everything is connected to everything else. One of this country's early environmentalists, Aldo Leopold, advises us to "not throw away the parts" when we tinker with our natural ecological systems. I am proud to say that the USDA Forest Service is demonstrating to the world the cutting edge in ecosystem management. Restoration and protection of ecosystems is a major priority in this budget.

Let me mention several examples of ecosystem management. In the Pacific Northwest, we have standards and guidelines in place which are not directed at one outcome, one product or one use. We have a system in place that, according to the best available science, ensures that we are on track to manage those ecosystems for perpetual sustainability. We will continue to learn more, but today that region is on track and the services we provide and the health of the land will be dependable.

Elsewhere, efforts are underway across entire landscapes such as in the Columbia River Basin, in Alaska, in California, in Appalachia and in the Great Lakes region.

Our budget provides the tools and funding necessary to keep the Forest Service at the forefront of forest management. Throughout our ecosystem efforts you will begin to see the evidence of Chief Dombeck's "collaborative stewardship" concept, and I will leave this point for his remarks. For now, I can say I am very optimistic about the potential.

Financial Accountability and Budgetary Improvements

Our budget and our efforts in 1998 will focus largely on building better accountability. We are making a concerted, Department-wide effort to address financial management issues. The Forest Service is a pilot agency for the new accounting system being implemented at our National Finance Center. Being responsive to the recent requirements of the Chief Financial Officer Act and improving our accounting systems will enable us to better explain how our tax dollars are being spent and accounted for. I know this is a primary concern for you as appropriators.

We are also making significant proposals in the road building program, funding for fire fighting, and the salvage fund to help accomplish this.

The public has become increasingly concerned with the Forest Service's Purchaser Credit program. This program gives the Forest Service the option to require that timber purchasers construct or reconstruct the roads necessary to harvest the timber they have bought from National Forests. Ultimately, the timber purchaser can receive credit for the cost of these roads and reduce the amount of cash they must pay for that timber sale. This requires additional accounting by the Forest Service, and has resulted in a significant amount of litigation. There also a perception that the engineering program of the Forest Service is justified primarily to support a specific timber harvest level. The President's Budget proposes the use of Purchaser Credit be discontinued. Forest Service engineers will continue to work with private contractors to ensure roads in the National Forest System are acceptable.

Following the disastrous 1994 fire season, USDA, in conjunction with the Department of the Interior and our cooperators seriously reviewed our fire management policies. Part of this effort pointed to the need to change our fire funding process. We have changed the fire funding mechanism to accomplish two main goals. First, we will continue to assure that the money necessary to fight fire is there. In addition to the \$211 million specifically identified in the Forest Service budget, \$5.8 billion in a proposed government-wide emergency contingency fund would be available, if needed. Second, to ensure the management techniques necessary to avoid fires in the first place -- the opportunity to do prescribed fires and other activities to reduce hazardous fuels -- will be available to Forest Supervisors when the window of opportunity presents itself. For instance, between \$30 and \$50 million will be available for hazardous fuels reduction -- a 25 to 100 percent increase over 1997. These are two greatly needed improvements that address our financial and ecosystem needs, and I hope you will support us in this effort.

Finally, we are proposing a change in the salvage fund so that our funding and accounting more closely reflect the type of work that we are doing in the field. Our proposal will maintain the salvage functions of the original account, and create a distinct account to fund ecosystem health and restoration projects. This fund will be called the "Forest Ecosystem Restoration and Maintenance" fund -- or FERM -- and I look forward to working on legislation with you to accomplish this. This is an important first step to providing funding for necessary watershed restoration work that is not directly tied to the timber receipts of a single forest. The Chief will describe in more detail how we intend to create a mechanism with accountability that will accomplish the kinds of projects that many forests need. This fund will draw from several existing salvage fund balances and a base of overall National Forest receipt sources to begin the 1998 year with \$121 million.

Forestry Beyond the National Forest System

USDA is the premier forest landowner assistance organization in the world. The Department conducts extensive scientific research, has a workforce with technical expertise across the country, and provides financial incentives to help landowners increase the conservation contributions that private land makes to our nation's fish, wildlife and clean water resources. Our 1998 budget includes funding to support this well-established, broadly supported leadership role in the Department of Agriculture.

We have included in the 1998 budget a \$5.7 million increase in cost-share funding to continue our stewardship incentives program. I want to emphasize that the increases in certain state and private forestry programs are not offset by national forest system cuts; the state and private budget is essentially flat. However, we strongly believe that willing landowners deserve the technical and financial support of the Forest Service if they want to go the extra mile to deliver food and fiber to the marketplace while practicing good stewardship on their lands.

The other state and private forestry programs -- including Urban and Community Forestry, Forest Legacy, Forest Health Management, and Cooperative Fire Management -- enhance urban and rural forest resources and protect timber land and forest ecosystems from fire, insects, disease, and conversion to non-forest uses.

The assistance to Pacific Northwest Programs meets the Interagency Memorandum of Understanding and the Economic Action program is continued at \$9 million, reduced from 1997, but still providing critical assistance to forest dependent communities looking for the best ways to use the forest resources in a sustainable manner. Assistance to these communities will also be available through proposed increases in USDA's rural development programs. This budget also supports a timber volume offer level of 763 million board-feet for the Forest Service portion of the Pacific Northwest Plan. The total projected timber offer volume for the Forest Service for FY 1998 is 3.8 billion board-feet and the projected harvest level is 3.9 billion board-feet.

The Forest Service is a science-based organization and our research products are used across the globe. Each day, private landowners, foresters, land managers, farmers, ranchers, mill operators, urban foresters, public interest groups and many others apply the knowledge developed by Forest

Service scientists and cooperators in academia and industry. The Forest and Rangeland Research Budget is to be funded at \$179.8 million, the same funding level as FY 1997. However, the programs are continually being adjusted to meet changing and emerging national and regional issues and maintain a broad-based scientific capability.

We also intend to step up our nationwide forest health monitoring efforts so that we can be better informed about forest trends across the landscape. The program will cover 60 percent of the forest land in the lower 48 states, compared with 53 percent in 1997 and 40 percent in 1996. Coupled with our level budget in research, we will have the basis to make good decisions.

Organizational Effectiveness

The Chief and I have committed to improve the organizational effectiveness of the Forest Service. I want to highlight our civil rights efforts for you.

I have made this issue a top priority to resolve. We have an excellent Department-wide effort in place to ferret out systematic and individual civil rights problems nationwide. I initially appointed a team of USDA leaders to look into this and make recommendations for change. This Civil Rights Action Team (CRAT) has recently completed their review and we are beginning to implement many of their recommendations, including a direction to legitimately reduce the backlog of civil rights complaints currently filed against the Department as quickly as possible. We will be working to solve this problem permanently and welcome support from Congress in our efforts to address something that I hope is a mutually shared objective.

Conclusion

Let me close by saying that the changes I have highlighted represent our goals for the future management of the national forest system. Within the framework of a balanced budget by the year 2002, this budget meets the highest priorities of a very expansive mission and ever increasing public demands.

I am confident that the budget before you meets our central challenge: Caring for the Land and Serving People. The job is large, the demands are great and the stakes for the future are high.

That concludes my testimony, Mr. Chairman, Members of the Committee. I would be happy to answer any questions.

UNDER SECRETARY LYONS

Mr. REGULA. Mr. Lyons, do you have any comments you'd like to make?

Mr. LYONS. No, Mr. Chairman, I think the Secretary has said well what it is we're trying to achieve, and the discussions we have had over the past few years I think give a good sense of where I hope we are going to head, trying to emphasize the multiple-use management activities we have and make prudent investments with the limited resources that you are able to provide us. So we will look forward to working with you in the future.

AGENDA

Mr. REGULA. For the committee members, the Secretary would like to be out in less than an hour, and I know there are eight other subcommittees of Appropriations meeting. So I think I have only a couple of questions, and then I'll defer to those of you that are here to get a five-minute chance to question the Secretary, in the event you have to leave. And then what I would hope to do is follow up with Mr. Dombeck at about 11:15, and perhaps we can get this finished by 12:30 or so.

ADMINISTRATION COMMITMENT

Mr. Secretary, the President has committed to many initiatives that are expensive: Headwaters, \$250 million; New World Mine, \$65 million; Tongass, \$140 million on the sale cancellation; Everglades, \$135 million; the Northwest Forest Plan, \$408 million; some buyouts in the Northwest, \$200 million; KV reforestation, \$443 million; wildfire management, \$515 million, and then I understand that he may make a commitment on Lake Tahoe which is about a billion. This is a lot of money, and I wonder if you've been a party to these decisions, and if there's been any thought as to how we're going to pay for them.

Secretary GLICKMAN. Well, obviously, I have been a party to some of the decisions. For example, you talk about the fire-related decisions, how we fund fire and fire management. This is a matter of very high priority. Secretary Babbitt, I, people in the Forest Service and BLM, people in the White House, we have talked about that initiative, and that is a demand that just has to be met. There is just no question about that. We also need to deal with fire before it occurs through some of the things I mentioned in my testimony.

Some of these Presidential issues are being met and will continue to be met. The President's Northwest Forest Plan is a high priority of the administration. We are on track on that. That involves collaborative efforts between State and local communities and the Federal Government. It has been an extremely important program, and it is one that we continue to work on very strongly.

I agree with you that within limited budgets one has to make some priority choices here. All the things you mentioned are very important, and ultimately working with Congress and the President, we will decide which ones are most deserving of the highest priority. But, you know, by and large, all of them that you mentioned are high priorities of the President, and most of them have actually been working. Some of these are in the budget, like the

Pacific Northwest—the Northwest Forest Plan. Others require offsets like Headwaters and the New World Mine, which has been in the news lately. Given the PAYGO requirements of our budget, those decisions are a lot more difficult than they used to be.

Mr. REGULA. Well, Mr. Secretary, I hope prospectively that you will be engaged in this process because these are tough decisions and our whole subcommittee's got tough priority judgments on the agencies we fund.

Mr. SKEEN, I know you have a hearing, and I see we have a vote on.

PERSONAL REGARDS

Mr. SKEEN. Thank you, Mr. Chairman.

I wanted to come here today to pay my respects to the Secretary because we have multi-faceted responsibilities that bridge all kinds of subcommittees, and so on, and coming up with some of the answers that we need to come up with takes an attitude of cooperation that he certainly has shown us. He was my next-door neighbor when I first came up to this place. So, Dan, you've been a good leader.

Mr. YATES. He's overcome bad influence. [Laughter.]

Mr. SKEEN. I beg your pardon?

Mr. YATES. He's overcome bad influence. [Laughter.]

Mr. SKEEN. I know that. I'm down here checking on my turf. [Laughter.]

But it's not the Secretary that I'm really worried about; it's Steve Dewhurst because he's a fixture in our committee over there; we don't want to lose him. [Laughter.]

But I just want to congratulate you on it, and we have a good working relationship between these subcommittees, and I appreciate your interest in bridging all of this and congratulate you on it.

And he did overcome it, by the way. [Laughter.]

He rose to much greater levels.

So thank you, Mr. Chairman.

Mr. REGULA. Mr. Dicks, you are next in line here. Do you have another committee commitment—

Mr. DICKS. Yes.

Mr. REGULA [continuing]. And do you want to try to get done before we vote?

Mr. DICKS. Yes, if the chairman would yield, I would be delighted—

Mr. REGULA. Yes.

Mr. DICKS [continuing]. Mr. Yates, if that's all right with you—

Mr. YATES. Oh, please do. I can hardly wait to get at the Secretary, but I'll yield. [Laughter.]

Mr. DICKS. Well, Congressman Glickman and I came to—Secretary Glickman and I came to Congress in the same class; we've been very good friends ever since, and we're all thrilled that he's down at the Department of Agriculture. And Jim Lyons, of course, came from the staff up here on the House side, the Agriculture Committee. So we want to welcome them both here.

PACIFIC NORTHWEST SITUATION

I would just say that I think—I want to say thank you to the administration for the good work that's been done in the Pacific Northwest. I agree that the timber salvage rider turned out to be a mistake in that sufficiency language was used, and I think it caused a lot of heartburn in the Northwest, and it's expired now, and I think in the future we should really try to stay with the existing laws that are on the books and do these timber sales accordingly.

But we do appreciate the tremendous support for the communities that have been hard-hit, and are still being hard-hit. Just a few months ago, the Ranier Mill in Port Angeles, Washington, announced that it was shutting down. One of the reasons they argued was that they were having a hard time getting enough wood for their mill. I think actually economics were a much more important part of their decision, but it caused tremendous problems, and, yet, just a couple of days ago we were able to announce a reserve grant under the Department of Labor to help all the workers with retraining, et cetera. And that is part of the President's—there was \$12 million in the President's Forest Plan in the Northwest to deal with that. So that still is a major concern, and we're still going through the repercussions.

The downsizing, I'll give you an example. I think I've explained this to you both: the Olympic National Forest in my district used to do about 225 million board feet in timber sales. We're now lucky if we get 10 million board feet. It's like a 98 percent reduction. My constituents have a hard time understanding why it can't be just a little bit more than that, and we don't have matrix areas. We're hoping that now that the State's HCP is done that we can look at adaptive management. This is one of the things I would really emphasize. There's been a lot of science out there that says we just have to put circles around these areas and make them reserves, and that you can't do adaptive management.

On the east side of our State we see that adaptive management is very essential in terms of prescribed burns and clearing out the understorage in order to really make the forests more healthy. We also believe on the west side that, through thinning, pruning, and some adaptive management, you could actually create larger trees faster, and we've got a whole series of companies out there that by thinning created huge trees in a much more rapid time than if you just leave the forest all to itself. So I'm hoping that we can at least look at the potential of doing more thinning and pruning, and then looking at some of the new science, I would call it, in these adaptive management areas.

TIMBER SALES

If there's one area, besides getting up to the 1 billion board feet that was committed to under the President's plan in green sales, it's the failure to really look at new approaches, and I hope that we can do that. I mean, I hope we can do the experimentation. Let's look and see what science is the best, and I would urge that on the Forest Service. This is a major, still a major concern out there.

I am told that this year we are going to get to the 1 billion board feet that's been committed to under the President's plan, and I hope that will be something that we all can agree on. In the past there's been, well, they added some sales that weren't—salvage and this and that, or firewood, or whatever, and we hope this is going to be green sales and that it's going to be what the President committed to.

Jim, maybe you want to take this, but, first of all, we're very thrilled to have Secretary Glickman here, and we know that he will work with us. You helped us on a whole series of problems with the Forest Service, but maybe, Jim, do you want to comment?

Mr. LYONS. Well, Norm, I would say that we, first of all, are committed to meeting that goal this year, and we will be there. I would also indicate that we are going to continue to support the research work at the University of Washington to look at the new approaches to try to improve productivity, address forest health concerns, and hopefully also increase the value of the products that come off those forests. And particularly on the Olympic Peninsula, I think there is a tremendous opportunity to use the adaptive management area——

Mr. DICKS. Yes, and of course——

Mr. LYONS [continuing]. To try those methods out.

Mr. DICKS. And the Olympic experimental forest has been held up, in essence, while the State was doing its habitat conservation plan, which now has been signed. So it looks to us now that maybe we can get them involved, so you can have the State lands and the Federal lands, and do the adaptive management.

Mr. REGULA. We've got to vote. We have about eight minutes, seven.

[Recess.]

Mr. NETHERCUTT [presiding]. The hearing will come to order.

NEW WORLD MINE

Mr. Secretary, I also want to welcome you here on behalf of the fifth congressional district of Washington. I'm on the Agriculture Subcommittee of Appropriations as well, and you've been a gentleman to work with there. We're glad to see you here too because of the joint relationship between the two committees and the Forest Service.

I want to bring to your attention an issue that I'm sure you're familiar with relating to CRP——

Secretary GLICKMAN. I've heard of that. [Laughter.]

Mr. NETHERCUTT [continuing]. Especially as it relates to the Federal Government's acquisition adjacent to Yellowstone. The Administration proposes using the reduction in the enrollment acres for CRP to pay for the withdrawal of this particular property from mining.

Let me, before I have you answer, tell you that this is causing great distress among the farm community, certainly out West where we are struggling to maintain CRP acres. The program is a tremendous environmental benefit. As you know, we're facing PM 10 and possibly PM 2.5 air quality regulations. We have a great wind erosion problem in eastern Washington. It seems wrong-head-

ed to me that we're trading off the CRP acres in connection with taking this mining land out of production.

I guess my question to you, sir, is I think this is a dangerous precedent. Do you see it as a dangerous precedent? Are you concerned about it? Are you supportive of it?

Secretary GLICKMAN. Well, let me just say that this was a very tough decision by the administration. Let me make a couple of comments. Number one is that we have a lot of important programs in the Department of Agriculture, but there is no question in my mind that the CRP is, if not the most important program that we are doing now, it is close to it. It will take a period of years to sign up all the people into this program, and with the changes that are taking place, we are making it a more environmental program in terms of the kind of land that goes into it, so that we do not get good productive farmland into it. It remains, I think, the greatest contribution to the legacy of fertile productive farmland that we have in any program in government. So I want to make that clear.

I have been out trying to provide the leadership through the countryside to let people know that this is important. And, by the way, the signups, which are right now, indicate a great deal of interest, probably more than we anticipated in the program. So that is my position; that is the position of the Department; that is the position of the administration.

BUDGET TRADEOFF

The issue involving the Crown Butte New World Mine is also a high priority of the administration. To a large extent this involves trying to prevent degradation associated with the gold mine from occurring in and around Yellowstone. This has also been a high priority. And given the budget situations in the government and the PAYGO requirements in the budget, that when you provide dollars for a function like, let us say, the purchase of a mine, you must find the dollars elsewhere. As the administration looked around, the judgment was made that you could defer a portion of CRP signups from Fiscal Year 1998 into the following year, Fiscal Year 1999 and the year 2000, under the theory that we would probably have great difficulty signing up 19 million acres in Fiscal Year 1998, because we have about—how many acres do we have coming out?

Mr. LYONS. Twenty.

Secretary GLICKMAN. Twenty million acres, 22 million acres coming out on September 30, and we believe that the acreage could be deferred into the following year or years without disturbing the total amount of acres that would ultimately be coming into the CRP.

Now through this period of March, we will be in a better position to determine what the level of interest really is. We know that it's going to take more than one year to get up to the 35 million or so acres that are going to go in this thing. It is going to take two, three, or four years to do that kind of thing. Can I tell you it was an easy decision in the administration? It was not, but—

Mr. NETHERCUTT. Can you tell us that it is a good decision?

Secretary GLICKMAN. I would tell you that it is a matter of trying to accomplish a priority which is to prevent this mine from operat-

ing, and to do it in a way that would minimize any negative or deleterious effect on the CRP. Therefore, we reduced our projected total CRP signup goals for next year by 2 million acres and deferred the enrollment of these acres to the following year. If we did not have the PAYGO requirements, probably we would not be going down this road, to be honest with you. It ultimately is a congressional decision. We will have to work with you on it because, you know, this is not something that can be done without Congress taking action.

Mr. YATES. Which mine are we talking about?

Secretary GLICKMAN. The New World Mine, the Crowne Butte—

Mr. YATES. Is this one next to Yellowstone?

Secretary GLICKMAN. Yes, that is the one that is next to the Park. And so, you know, we have had a lot of concern expressed from the Hill on this—not so much on the issue of making sure that the mine doesn't operate. That is one that I think there is general agreement on. The question is, How do you come up with the resources to pay for it and do it in the natural resources general area of the budget?

So that is about the best I can tell you right now.

Mr. NETHERCUTT. Well, my sense is that there's great concern about attacking essentially the integrity of a program that has long been isolated in its application. In other words, what else won't we dip into that should be inviolate?

Secretary GLICKMAN. No, I understand that, and I have to tell you from my perspective what I have told people for the last six months, that this program, the Conservation Reserve Program, is the farm bill of the future in a sense, especially after the 1996 farm law by which we went down the road to deregulate row crop agriculture. And so the CRP and related conservation programs in the 1996 farm bill are really the heart of farm policy right now. When you combine that with an aggressive trade posture, that is kind of the heart of where farm policy is.

So I want to make it clear that this should not be interpreted as a lack of support for the CRP. I think it is more a matter of honoring the President's commitment on the mine issue and finding dollars to pay for it someplace in a PAYGO environment. In looking for offsets, we considered a program which looked like it was going to take more than one year or two years even to get signups in. We felt that this could be done without harming the integrity of the program.

Mr. NETHERCUTT. Well, I hope that's the case. I think we're going to have a good debate on it, not only in the Ag Committee, but in this committee. We will try to figure out whether that's very smart policy or not, and my inclination, for what it's worth, is it is not, but there may be some other places that can be used to pay for that commitment that the President made.

INTERIOR COLUMBIA BASIN ECOSYSTEM MANAGEMENT

Let me turn, if I may, to the Interior Columbia Basin Ecosystem Management Project. I don't know how engaged you've been in this, Mr. Secretary. The Forest Service has been involved along with BLM and a lot of Interior agencies. I have concerns about the

implementation of the project. It affects one-quarter of the national forest land in our country. I don't know if you're aware, but the former co-manager of the Columbia Basin Project, Steve Mealey, who's now the Idaho Fish and Game Director, recently sent a letter to the governor of Idaho in which he recommended that the governor "not support a preferred alternative or release of a draft EIS until the major concerns with the project can be resolved."

Are you also aware that five Forest Service superintendents prepared feasibility studies early this year of what the cost would be of implementing the two most likely alternatives? I looked at these feasibility studies, and they're very interesting. I don't know if the subcommittee is as deeply involved in this as I am, but it affects us from an appropriations standpoint. The superintendent of the Colville National Forest in my own district estimated that in order to complete all of the analysis work mandated by the EIS, he would need to hire an additional 43 staff people, for a total first-year budget increase of \$4.7 million, about a 50 percent increase in funding. Without this funding increase, the timber sale program on the Colville would drop 60 million board feet to zero in the first year of implementation. In the second year, under alternative four, they would have a target of 4.4 million board feet, and under alternative six they would still be at zero.

I know you've spoken this morning in your testimony about a sustainable flow out of the forest, and certainly I support that. In the third year, it's the same thing. The superintendent summarizes that the program impacts, even with additional staff and budget, are extreme and will result in unacceptable impacts to local communities and users. Now I acknowledge to you that he's retiring, but, on the other hand, he's made this judgment.

The superintendents of other national forests that are affected by the study have concerns about the requirements that they'll have to implement that will be difficult, and they're worried about declining budgets and implementation and reduced staffing. The Deschutes National Forest found that implementation would require an additional \$789,000 per year for one alternative and over a million per year in additional funds to implement alternative six. And I want to be fair to you because I know this is a multi-agency subject and multi-agencies in the Department of Interior are involved in it.

My question really is this: it seems to me that there has not been adequate thought to implementation of this ecosystem study. And it seems also to me that the Forest Service, is going to be spending its time on more studies and implementation rather than forest management for the next few years. And that bothers me from the standpoint of your commitment, your expression of support for a sustainable flow of timber.

To the extent that you've gotten involved in this one directly and looked at the study implications, I'd be interested to know whether you agree that this is an awful lot of study rather than management, and that there is going to be not an unacceptable level of sustainable flow, given your commitment to sustainable flow.

Secretary GLICKMAN. Well, let me just say that—I'm going to ask Jim Lyons to respond. This is one of those issues where I wish I had more knowledge.

Mr. NETHERCUTT. I understand.

Secretary GLICKMAN. I was in Boise and I was briefed by a lot of the folks involved with this. I think underlying it all is the idea that you have a much better, more comprehensive, and realistic way of dealing with planning on a broad scale than if you have a bunch of separate forest plans. And so not only does it make more regional sense, but also it will save money, compared with having to have a forest plan for each forest that is out there. And I think that is one of the ideas behind this thing.

I would also tell you that I am aware of the concerns about the counties and I know that we have met in the last week with them to try to ensure that we get their concerns clarified, whether they are procedural or whether they are substantive, and to make sure that they have the appropriate input into this process.

But I would ask Jim to comment on the larger question that you talk about which is, in doing this, will it somehow disturb some of the more fundamental functions of the Forest Service and whether we have the resources to even get it done.

PLANNING INFORMATION NEEDS

Mr. LYONS. Mr. Nethercutt, I think what's important to recognize is that one of the goals that we have, in addition to the goal that the Secretary highlighted—attempting to do planning in a much more efficient way and in that way reduce costs—is to also develop a plan that will provide us a database to do a much more efficient job in implementing that plan over time.

One of the things that we face that I know has been a cause for concern for this subcommittee and for the authorizing committee is continuing concern over legal challenges to management actions. And I think, as is evidenced by the Northwest Forest Plan where we have had no successful legal challenges, we feel that developing that kind of database through a collaborative process, working with other agencies in USDA, as well as the Departments of the Interior and Commerce, allows us to do a better job of integrating management. Ultimately, we will make more efficient use of funds, and, hopefully, reduce the litigation risk that is associated with the challenges that are inevitable.

The laws provide the public with an opportunity to have some say in how their public lands are used. That is the way it should be. I think we as professionals have to ensure that we are making the best professional judgments we can, and to the best of our ability. I think this integrated approach allows us a better chance of ensuring that the best scientific information is being applied in a way—

FUNDING REQUIREMENTS

Secretary GLICKMAN. But I think his question is also related to, do we have the resources to do it, can it be done in an intelligent, balanced way? I mean, I understand—

Mr. LYONS. And I agree.

Secretary GLICKMAN. I do not mean to be the interlocutor in this effort, but—

Mr. NETHERCUTT. Thank you. That is my question and it was not answered. Is there money to implement whatever you're trying to do in connection with these alternatives for 1998?

Mr. LYONS. Well, let me say, first of all, we must find out what it is we are going to implement. If no plan or alternative has been decided, frankly, I am shocked to hear that forest supervisors are making judgments about implementation costs.

Mr. NETHERCUTT. They've been asked to.

Mr. LYONS. Well——

Mr. NETHERCUTT. They've been asked to. That's their job.

Mr. LYONS. But there is a range of alternatives that we are looking at and so it is hard to make those judgments.

Mr. NETHERCUTT. They looked at several alternatives and costed them all out. So——

Mr. LYONS. But I think what is lost in this dialog is that there are savings that will be associated by the closer working relationship between agencies. I think one of the things that is lost in this process is that we cannot do business the way we normally did business.

For example, in the Colville National Forest, as would have been the case from the former Forest Supervisor's perspective, we cannot simply go out and lay timber sales out by ourselves, prepare the documentation, make the investments in sales, then turn those over to Fish and Wildlife and, in essence, say, "What do you think?" and have them come back and say, "No, that's inadequate. Go back and do the analysis again."

The difference is we are working together much more closely and I think it really has helped us. In fact, I hate to bring up the salvage rider, but maybe the only silver lining in that effort, in terms of what we learned in the process, was that we found that the working relationships between the agencies actually streamlined the process and saved us money.

In fact, the interagency review of that whole salvage program indicated—and this is actually described in a report that was generated—that the involvement of Fish and Wildlife and the National Marine and Fishery Service in sale planning added to, rather than duplicated, the efforts of BLM and the Forest Service. This indicates that whether or not the process functions well depends on the commitment of all the agencies involved. That is where the savings will be.

And I would share with you, and this is no slight of the former Forest Supervisor, who is actually someone I knew for a long period of time, but we are trying to change mindset and focus, so that we work in a much more collaborative way. And I think estimates of the savings that come of that are not factored into our own people's thinking right now because it is a new way of doing business.

Mr. NETHERCUTT. Is there money in the 1998 budget to implement the study?

Mr. LYONS. Well, we will only have the draft out in April, so we will probably not have the final in place until the fall. So really, it is in part reflected in here, in terms of our normal operating procedures, but we do not know if we are going to need additional resources until we get that final alternative selected.

Mr. NETHERCUTT. So I take it your answer is no. There is no money?

Mr. LYONS. We do not know what we are going to need. Yes, the answer is no.

Mr. NETHERCUTT. Thank you.

Mr. REGULA. Mr. Yates.

TIMBER THEFT

Mr. YATES. Thank you. It's a pleasure to see you again, Mr. Secretary. I want to congratulate you upon your administration of the Department of Agriculture. I haven't seen any criticisms levied against you.

Secretary GLICKMAN. You have not been looking the same places that I read everyday. [Laughter.]

Mr. YATES. Well, perhaps that is true. But, at any rate, I think you're doing a superb job.

Mr. REGULA. Being former Members gives them unique qualities.

Mr. YATES. Oh, yes.

Mr. TAYLOR. And you haven't gotten through the whole thing yet. [Laughter.]

Mr. YATES. And he was well-trained. He was well-trained. [Laughter.]

I want to ask a few questions. Some years ago, we were importuned by, I think it was a district attorney out in the Northwest, who had a great number of fraud cases that arose from improper payments for trees because of use of the scaling process rather than tree measurement. And so, in line with that district attorney's recommendation, our committee urged you to go to the tree measurement, rather than the scaling process. You didn't want to do it then and, apparently, now that we've changed administrations and the committee, you don't want to do it now because you think it costs too much.

Are you avoiding fraud? Do you know whether you're avoiding fraud? Do you still have the same number of cases out there? Tree measurement obviously will avoid the fraud. And the scaling process is subject to it because, as I understand, what happens is you let the contractor pick the person who does the measuring. And it seems to me that you're letting the fox into the chicken coop.

Secretary GLICKMAN. My knowledge of tree-scaling is pretty limited.

Mr. YATES. "Timber theft" is the phrase.

Secretary GLICKMAN. But the Chief may want to comment on this as well.

Mr. YATES. Which Chief?

Secretary GLICKMAN. The new Chief of the Forest Service.

Mr. YATES. Oh, OK.

Mr. REGULA. He'll be on at 11:15.

Mr. YATES. OK.

Mr. LYONS. Mr. Yates, I think timber theft remains a concern for the agency and it is one that we are focused on. In regard to scaling versus tree measurement, frankly, I am not sure why we have not moved more quickly to address some of the issues that you have raised, so as to ensure that we reduce concerns related to tim-

ber theft associated with the different approaches to measuring the value of trees.

I think, to some degree, the changes have been inhibited by the rapid changes that are occurring in the Timber Sale Program overall. Our product mix is changing; the kinds of trees we sell are changing.

Mr. YATES. Incidentally, what are you selling?

Mr. LYONS. Well, we are selling more material that is not sawtimber, green sawtimber, but it is material that we sell as biomass. So as a result, tree measurement would not apply, individual tree measurement would not apply, and we would use a different method to do so.

I might yield to Mike Dombeck, who maybe can give you more details on his thinking on where we are headed, since this is an issue that we have actually discussed in the last few months.

Secretary GLICKMAN. Before Mike speaks, I just might want to say that I have talked with our Inspector General about this. He has been very involved, along with the U.S. Attorney, in the whole issue of timber theft.

You might be aware of this, but in Fiscal Year 1996 there were 120 felony and serious misdemeanor-level timber theft cases investigated nationwide. Fifty of these cases have been closed with 24 convictions thus far, recovering of fines and restitutions, and I believe there were jail sentences in some cases.

In March of last year our Inspector General issued an audit of our Timber Theft Program which you should have, and—

Mr. YATES. I'm not aware of it.

Secretary GLICKMAN. And the law enforcement people investigating timber thefts have implemented those recommendations. I do not know if the issue you raised was part of those recommendations or not.

But, again, it kind of relates to the relationship between our Inspector General, who is USDA-wide, and then the Forest Service which has its own law enforcement people, and the relationship between those two basic functions. But it is clear that this is a high priority for us. And perhaps the new Chief may want to comment on some of these things as well.

Mr. YATES. Is my impression correct that most of your payment is done through the scaling process rather than tree measurement?

TREE MEASUREMENT SALES

Mr. DOMBECK. What I can add to this, Congressman Yates, is that, first of all, preventing timber theft is a top priority and a real serious concern of mine and of the agency and that over time, as you mentioned, the agency has been moving toward tree measurement versus scaling.

But the other point that I think is significant is one that Jim raised—the fact that we are selling fewer and fewer sawlogs and more of the loads that are leaving, are biomass in the form of chips or other material like that, and it is actually much lower-value material.

Mr. YATES. Can you have fraud in connection with the sale of bio-chips?

Mr. DOMBECK. Well, I guess—I am assuming you can probably have fraud almost anyplace. But from the standpoint of accountability, and that is where we are headed, it is something that we have to just be increasingly vigilant about.

Mr. YATES. Well, I would think so. It's my understanding that originally when we pressed this issue, the Forest Service created a timber theft task force. Your predecessor disbanded that timber theft task force. Why, I don't know. Were they not doing anything? Or what was the purpose for disbanding it?

Mr. LYONS. Mr. Yates, part of, I think, Jack's rationale for disbanding the task force was the belief that a great deal of the work that they had done had been accomplished and now is the time to move the investigative capability that they had built up into the field—into the law enforcement organization that you helped create, the stovepipe structure that we have. So really the goal is to get people out there who can do the work that can lead to the kind of investigations and convictions, hopefully, that the Secretary has highlighted. That was the ultimate goal.

Now, there has been a lot of controversy about that from some of the members of the timber sale task force who had raised concerns about whether or not their work was completed. But rather than having one group in Portland working on these issues—Portland and northern California—we thought it was extremely important to have this capability in other places. And we have actually done training now based on the work that this task force had generated. Now others within the law enforcement organization are developing the skills to actually identify and work on timber theft.

Mr. YATES. How do you know whether you're being subjected to timber theft now? Do you have a police force supervising this at all?

Mr. LYONS. Well, it is one of the law enforcement functions.

Mr. YATES. It is? Well, do you have police at each of your timberweighing installations to supervise it? Or how do you do it?

Mr. DOMBECK. Well, we have a full-time law enforcement professional who is an expert in this area and manages the process. Now, I personally cannot tell you if we have a law enforcement officer at every scale or checkpoint. But the fact is, our staff is set up to focus on the priority areas, to focus what resources we have at the areas where we assume the major problems exist.

Mr. YATES. Well—yes, Dan?

INSPECTOR GENERAL'S ROLE

Secretary GLICKMAN. No, go ahead—I just might say that one of the issues that came to my attention actually before Mike came on-board relates, again, to the role of our Inspector General at USDA. He is our chief law enforcement officer and is involved with food stamp fraud and all those kinds of things. And our IG has come to us on several occasions saying that there needs to be much more coordination between the law enforcement functions of the Forest Service and what the IG does. That would help the Forest Service law enforcement function more effectively.

There have also been some proposals that the IG should take over that function totally. We have not decided yet; these are longer-term issues. But I think it is all being done to figure out

how to make Forest Service law enforcement operate more effectively.

Mr. YATES. I have two pedestrian questions left, Mr. Chairman.

Mr. REGULA. Okay. I'm trying to guard his time and I have two more members.

Mr. YATES. Well, I'll ask my questions after the two members, then.

Mr. REGULA. Okay. Mr. Taylor?

PERSONAL REGARDS

Secretary GLICKMAN. May I just say that I understand that Mr. Yates is leaving the Congress and he was a great mentor of mine for many years.

Mr. YATES. Well, that's very kind of you.

Secretary GLICKMAN. And——

Mr. YATES. And I'm sure the Congress will get along. [Laughter.]

Mr. REGULA. Mr. Taylor?

RESPONSE TO FOREST HEALTH PROBLEMS

Mr. TAYLOR. Mr. Glickman, Mr. Lyons, so much to cover and so little time. I recall President Lincoln, when he had sorry generals in command of the army for so long and the little Napoleon was in, he finally sent him a letter and said "General, if you're not going to use the army, may I borrow it?" And I feel that way about the area of the Forest Service. We have tried patiently to work with—this committee tried to work with and do a variety of things to bring about sensible management of the forests and forest health, and we have been thwarted.

I have drafted legislation that would remove the Forest Service from the Department of Agriculture, and set up a commission that would abolish the regional foresters. The Chief Forester would head the commission through a limited staff in Washington, then direct forest management through the supervisors in the district.

I thought, I'll introduce this bill and see if there is any interest. I can't begin to tell you the number of people that want to endorse that bill now and sign it, and want to make a definite move this time with it. And it's because they don't think—it's not just this administration; we're talking about the issues here. You talk about sustainable flow of timber, but your Department has not shown that it has a clue about the deterioration of our infrastructure, which is absolutely essential for any sort of management. You haven't included it in any study, including the Pacific study. By your own admission, you don't have a concept of the deterioration in forest health or we wouldn't be dawdling as we've done in this talking about more studies and how we can split hairs on this situation. I don't think you have a concept about the area of overcrowding and the implication that it's having on forest health or the spread of disease or insects or fire.

I don't see that you have any concern about the billions of dollars of taxpayers' money that's literally being wasted because of dying and deteriorating forests—and not just the national taxpayer, but school districts out there in the counties we've talked about that depend on these dollars because they have had part of their land base eroded when the Forest Service took over their lands, which

were to be managed under the Department of Agriculture in a scientific way. The lands were to be harvested. Not set aside in a wilderness, which you have set 80 percent of the national forest aside already, and getting ready, in pandering to the Sierra Club that wants zero cutting in the forest, to take it down to zero percent.

Mr. YATES. And some Members of Congress, may I say?

Mr. TAYLOR. And some Members of Congress, misguided though they may be, they're doing it openly and honestly, and I appreciate it. But your Department was charged to follow the mandates of Congress, and two years ago we passed a salvage amendment. Mr. Lyons says he hates to bring up the salvage rider. It's the first time this administration has started—a moment ago when he started this conversation—it's the first time this administration has stopped pandering to the politically-correct set and did something for forest health and we were making some headway in that area.

The President said in a letter which I have, that he would support that legislation after we agreed that it could stop December 31. You, Mr. Secretary, sent a letter and said you would do the same thing. And yet the record shows that throughout that period of salvage we stopped it, time and again, and we set sales aside time and again.

And, in fact, Mr. Lyons—and I assume, Mr. Secretary, yourself—and the administration, terminated it before the legislation terminated it, terminated it in early December, rather than letting it run to its end until December 31, which I think is falsifying statements to this committee, where you said you would be cooperative, and in fact went directly against the will of Congress.

Now, that's what has gotten us all so frustrated about what's happening out there. I don't know whether there is this breach—and I know, Secretary Glickman, you are not a forester. You're not out in that area. You have other areas of agriculture that you have to be aware of. But I can tell you, two minutes out in the field talking with staff that would be willing to talk with anonymity would clearly tell you what's happening. You could talk with forest scientists.

In fact, Mr. Secretary, a year ago I asked a group of eleven distinguished silviculturists from around the country to come together and put together a study on forest health. They come from our leading universities in the area of silviculture. They have completed it. They will report to a joint committee on April 9. They have said they are not there to say, "You ought to cut this tree, you ought not to do this, you ought to do that." They're trying to assess what the forest health really is.

And it's hard to remind Mr. Yates, a good friend and a man I greatly respect, of the fact that the loss of species we've had in this country, and the ones that are the most threatened now are not threatened because of over-management, over-harvest, or over-cutting. They're threatened because of the mismanagement and the lack of management because we did not control disease, insects, and fires. We lose tens of millions of acres of forests from these factors, but very little in other areas.

Thank you, Mr. Chairman.

Mr. YATES. Will the gentleman yield for a question? I wanted to ask the Secretary, with the gentleman's permission, as I under-

stand the salvage rider to which the gentleman referred, part of the criticism of it is the fact that too many greens were being cut in connection with it.

Mr. TAYLOR. While we were arguing over whether or not two green trees might have been cut, we lost tens of millions of trees to fire alone, not counting insects and disease. So if you're really concerned about the health of individual trees or as a group, the salvage rider was saving far more than it was accused of ever cutting.

Thank you, Mr. Chairman.

Mr. REGULA. Mr. Wamp?

Secretary GLICKMAN. Could I respond, if possible?

Mr. REGULA. Yes, sure.

ADMINISTRATION OF SALVAGE RIDER

Secretary GLICKMAN. First of all, I know that Mr. Taylor has got more knowledge in this area than most Members of Congress and certainly more than I do. So I accept that. I do want to make it clear for the record that there were a lot of board feet sold under the salvage rider. And, yes, a lot of those sales were controversial and there were a lot of philosophical differences on some of them. Perhaps judgment was exercised, and I am not saying in 100 percent of the cases it was necessarily the best judgement. But I think the record should reflect that in the report we sent to you there was a total of 4.6 billion board feet offered, advertised under the salvage rider and of that, 3.825 billion board feet was sold. The volume of salvage harvested was 2.773 billion board feet. The report you have got indicates more information about it.

So there were sales approved. And as you know, Mr. Taylor, many of those sales were stopped and slowed down by lawsuits and by other factors beyond our control.

Now, the second thing I would say to you is that one of the reasons I am here, Mr. Regula asked me to come today. I believe I am the first Secretary of Agriculture in maybe two generations—

Mr. YATES. That's true.

Secretary GLICKMAN [continuing]. To ever come down here. I am usually before Mr. Nethercutt's subcommittee. I am here because I believe that the Forest Service is a critical part of the Department of Agriculture. It is the largest component in terms of personnel. It has 35 percent of our people. We are the largest land management agency in government. And it is important that I be here to try to work through these problems.

Third, I do believe that a lot of these things are questions of public policy. The Congress seventy years ago may have passed something and intended something, but during the intervening period of time the Congress is the one that has designated most of the wilderness in this country. It has to. I cannot do that on my own. I voted for a lot of that when I was in the Congress myself. It may have been a good idea or a bad idea, but that is a public policy determination. There is a lot of public policy debate on what ought to be the functions and roles of our Forest Service. That is why we have the fights. People have strong differences on both sides of the issue.

And so I would like to see this issue become a little less polarized. I want to make sure that people know that we have a new Chief, that these issues, professional issues, decisions are being made professionally according to good, scientific information. And, yes, I have a role in implementing policy because that is part of administration. You have a role of appropriating based on policy, but I think that we have to go forward from here and try to manage this great institution as well as we possibly can.

Mr. YATES. Good statement.

Mr. REGULA. One reason I invited you was to get you engaged with the Forest Service and I think we've achieved that mission. [Laughter.]

Mr. REGULA. Mr. Wamp?

COUNTY OFFICER CLOSURE

Mr. WAMP. Very briefly, Mr. Secretary, as a new member of the Appropriations Committee, I want to thank you for coming today and tell you that I look forward to working with you in the coming months and years.

Just one parochial concern that I would raise, that I would ask you to be sensitive to. Both at the authorizing committee, Mr. Nethercutt's committee—particularly, Congressman Bryant from Tennessee will be approaching you about this, and has been approaching you about the closing of the FSA offices. The State of Tennessee is a strong farm State, and while a lot of that farming takes place in other congressional districts across the State other than mine, I'm the only Tennessean on this particular committee and would like to point out that we have a disproportionate number of closings in our State based on our farms, based on our revenues, our activities in the entire agriculture industry.

Particularly, there appears to be an effort to close certain offices in certain districts in certain counties. As a matter of fact, the first 23 offices out of 95 that closed in the State of Tennessee, 17 of those office closings happened to take place, 17 out of 23, in the three districts of the new House Republican freshmen of the class of 1994. Now, that might just been a happenstance. I won't make any allegations. I'll just say, let's try to make this as fair as possible. There is science behind the closings. Particularly, the plan right now that closes two-thirds of the offices in the State of Tennessee is very disproportionate to other farm States. I can assure you of that. I assume it's disproportionate to all the farm States, based on the numbers, and would remind you that the vice-president happens to be from our home State. [Laughter.]

And I would ask you to please consider looking at Tennessee in a favorable light when you close these FSA offices because some of the offices are requiring farmers to drive sixty miles one way to go to the new office. And there's supposed to be a 25-mile rule, I think, imposed in the closing of these offices.

But, I'll tell you, in my district it is a real burden for small, family farmers to travel that far to get good information. So please try to go slow, methodical, and keep Tennessee in mind as you approach the closing of these offices in your realignment.

Secretary GLICKMAN. Mr. Wamp, first of all, let me tell you I have talked with Congressman Bryant personally about this. I am

going to hand you a letter I sent to Bob Smith, chairman of the House Agriculture Committee, yesterday. The letter in part reads as follows: "I have not approved any plan to close additional offices beyond those closures and consolidations already approved in the adjusted Department's 1994 plan"—which are well known out there.

You are talking about hypothetical and speculative plans that have been developed in connection with future budget decisions. And I want to make it clear that, given the pressure on the discretionary functions of the budget, it is likely we are going to have to close considerable additional offices in the future, but that is going to be based on collaboration with the Congress and based upon what the needs are to serve our farmers and ranchers out there.

Yes, there has been some hypothetical discussion about office closings. But I have said, no, none will be closed right now. We are going to have to work with you to see what the budget numbers are, and I think that has satisfied Congressman Bryant and others, at least for the time being. But I will say we are going to have to work together because, given the budgets that we have, there is no way we can keep the present number of offices open, unless we get some additional dollars for them.

Mr. WAMP. I understand though, too, Mr. Secretary, that there will be further hearings before the Agriculture Committee——

Secretary GLICKMAN. That's correct.

Mr. WAMP [continuing]. On these office closings and at that time we'll be able to flesh out exactly what the constraints are and what your intentions are.

And if I've got a minute, I like to yield to Mr. Taylor.

GENERAL ACCOUNTING OFFICE REPORT ON TIMBER SALVAGE

Mr. TAYLOR. Mr. Chairman, I just wanted to read this one statement in the material that the Secretary has talked about. "For example, on July 2, 1996 the Secretary of Agriculture placed more restrictions on the criterion to classify sales as salvage sales under the rider, which resulted in the delay of 224 sales containing 724 million board feet that the Forest Service had planned to offer for sale." Now, that doesn't sound like the letter he sent me that he would work to maximize to meet the goal.

"In addition, on December 13 the Department of Agriculture Under Secretary, and so forth, told the Forest Service not to advertise any salvage sales after December 13 and that resulted in the loss of 27 additional sales and almost 30 million board feet," which is direct in violation of the law as I see it and breaking your word to cooperate by stopping it two, three weeks early.

Secretary GLICKMAN. If I just may make a couple of points—on the first issue, I issued that directive to make sure that the sales were emergency sales, which is what the law intended, and not a use of salvage sales as a way to get green sales out. And, as I said, we offered 4.6 billion board feet under the salvage rider. We sold 3.8 billion board feet under the salvage rider. So, in my judgment, we honored the commitment we made to Congress.

Mr. REGULA. And we have a couple questions for the record on that, Mr. Taylor.

Mr. YATES. I just want to say, Mr. Chairman——

Mr. REGULA. Mr. Yates?

URBAN FORESTRY

Mr. YATES. I don't want to hold the Secretary unduly. First, I failed to thank you for the gracious statement you made about our relationship while you were a Member of Congress. I appreciate that very much. And you were an outstanding Member of the Congress, in my opinion, just as you are an outstanding Secretary in the President's Cabinet. I think you're outstanding in all your activities.

I want to follow up on Mr. Wamp. The Midwestern and the Northeastern States have nearly half America's population and over half of the nation's urban resources. There is such a thing as urban forestry. And Mr. Taylor and I are delighted that there is such a thing as urban forestry because it's a question of trees flourishing in our cities and trying to live in spite of the smog that we create.

And the question I have in that respect is, Why are you trying to move \$1.4 million in urban forestry funding away from the Northeast and Midwest? I indicated I had a pedestrian question, Mr. Chairman, but it's very important to the people of Chicago.

Mr. LYONS. Mr. Yates, first of all, I want to say I appreciated your leadership in the whole urban forestry arena it has been significant and I think helped us establish the leadership that we have. We are going to do our best not to move money out of the Chicago environment because, not only has it been important from the standpoint of the citizens of Chicago, but it serves as a laboratory for a lot of the urban work that we have done. Chicago ideas have expanded to other regions of the country. So we are looking for ways to avoid having to do that. Of course, that is contingent on the continued support of this subcommittee, but we have been pleased and are thankful for the support that we have received thus far.

Mr. REGULA. You have one other question—

Mr. LYONS. I just want to mention to you quickly—I know an issue that you have been concerned about and that is the Director of the North Central Station. And I want you to know that we approved the advertisement for that position today, to fill that position.

Mr. YATES. Good for you. I appreciate that.

HOLOCAUST MUSEUM

I have one other question. You and I have spoken about the possibility of space in the Forest Service area of the Department of Agriculture building for the Holocaust Museum, which is becoming very crowded. I got a letter back, I think from Jim Lyons—

Secretary GLICKMAN. Probably Mike Dombeck.

Mr. YATES. Oh, maybe, yes. Sorry. From Mike Dombeck saying no way. Even though he offered to talk to me about it, there is no way they can move any of his Forest Service people. And I wondered why they can't move some out of there and into other parts of the Forest Service area in order to, I think, make available 13,000 square feet.

Secretary GLICKMAN. Well, first, let me say that we, Mike and I, have met with the—

Mr. YATES. Mr. Lerman.

Secretary GLICKMAN [continuing]. Mr. Lerman. And the fact of the matter is that I am convinced that Mike does not have any space. In fact, because of downsizing they are moving people from other offices in and around the Washington area into that building—

Mr. YATES. Oh, I see.

Secretary GLICKMAN. However, what we have said, is that as that reorganization continues on, it may be that actually we need more space around that building, not less. And the Holocaust Museum may need more space, and so we have suggested that we meet with GSA to see if there is some way to look at where we could find additional space in and around the area.

Mr. REGULA. I think the Ronald Reagan Building has some extra space. [Laughter.]

Secretary GLICKMAN. Well, it is not very far away, either. That is that new building—the Federal Triangle building.

But I would have to say that they are extremely crowded. I am convinced that Mr. Dombeck is correct.

Mr. YATES. Thank you. All right, I'll convey that information.

MANAGEMENT OF APPROPRIATIONS

Mr. REGULA. Mr. Secretary, I know you need to go. A couple quick things: we've been a little bit unhappy with reprogramming. The Department has been a little bit inclined to ignore us, and I hope that that policy will change. For example, they purchased Mount Jumbo as an emergency purchase after a reprogramming had been turned down by the committee and I think it's very important that any readjustment of numbers should be done with the reprogramming. So I want to urge that policy on you.

Secondly, there's been some concern, and I know you are aware of this, about the Department not being fiscally well-managed. And I know that you're making an effort to change that policy and we want to help you in any way possible. We think it's important that every agency of government be well managed, and that's one of the missions of this subcommittee, is to ensure that that happens.

And, thirdly, I hope that we can keep communicating. I very much appreciate your coming this morning. I think the Forest Service is a very vital part of the Department of Agriculture. I think it's going to grow in importance to the American people because it's one of the great recreation resources of this Nation, as well as a fiber resource. And it also has an enormous impact on water supply; the quality of water has an impact on the soil conservation because the forests are one of the great retention systems in our country in terms of water. And with respect to wildlife; we have the bison problem and you're involved in that.

YELLOWSTONE BISON PROBLEM

Secretary GLICKMAN. I am actually going to Yellowstone on Sunday, because, you know, our Department is involved in protecting the health and safety of livestock, as well as the Forest Service

being a neighbor of the Park there. So I want to get a bird's-eye view of what is going on.

Mr. REGULA. Well, if there's something we can do to be helpful, when you get back, let us know because it is a serious problem in Montana. It's a problem for the ranchers. It's a disease problem and how to address it—and then I think in Yellowstone you'll probably see firsthand that there's a diminution of the grazing capability because, in part, of oversupply of animals. Historic forces aren't at work, hunting, and so on.

So I look forward to working closely with you in the future in managing a valuable, valuable resource. We thank you for coming.

IMPORTANCE OF FORESTRY ISSUES

Secretary GLICKMAN. Thank you for inviting me and, again, it is my goal—recognizing the conflicts involved, which Mr. Taylor and others talked about here—it is my goal as Secretary to give the same level of attention to Forest Service issues as I give to other issues. And I am not telling you that it has not been done in the past, but it will be done in the future.

Mr. REGULA. And we thank you for that.

Mr. YATES. Good job, Dan. Good job today.

Mr. TAYLOR. Would you want to be a member of the commission, the independent commission that may be formed—[Laughter.]

Secretary GLICKMAN. I will tell you what, Mr. Taylor, I do not know if I have enough brain power to be on that commission. [Laughter.]

Mr. REGULA. Again, thank you for coming.

[The following questions and answers were submitted for the record:]

HOUSE COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON INTERIOR AND RELATED AGENCIES
HEARING ON THE FY 1998 FOREST SERVICE BUDGET REQUEST
SECRETARY OF AGRICULTURE GLICKMAN
(MARCH 20, 1997)

ADDITIONAL QUESTIONS FROM THE SUBCOMMITTEE

We have a few questions that revolve around the relative roles of the executive and legislative bodies.

We are particularly concerned that there appears to be a pattern of either ignoring Congressional direction in appropriations law, or engaging in expensive initiatives that would benefit from open discussion with the American public and the Congress.

Some of these initiatives or liabilities include:

Headwaters redwood grove:	\$250 million
New world mine/ Yellowstone	\$65 million
Tongass National Forest Ketchikan timber sale cancellation	\$140 million
Everglades enhancement, 1998	\$105 million
President's Northwest forest plan, 12 agencies, 1998 total	\$408 million
Timber contract buy-outs in Northwest potential	\$200 million
KV reforestation trust fund shortfall loaned for past wildfires	\$443 million
Wildfire management and prescribed burning, 1998 FS request	\$515 million
Wildfire, 98 request shortfall below last 10-year averaged	\$176 million
Lake Tahoe restoration, new Presidential initiative potential	\$1 Billion

01. Question. How do we pay for all of this, maintain the public lands and services that your agencies provide, and balance the budget?

Answer. The Headwaters project is still being negotiated. The Administration's original offer consisted largely of real estate which would not require a cash outlay. The Administration has proposed a budget offset for the New World Mine. The \$140 million KPC settlement will be paid from the Judgment Fund. At this point it is not clear whether Forest Service appropriations will have to reimburse the Fund. The Everglades initiative is covered in the budget and in a forthcoming legislative proposal. The President's Northwest forest plan is covered in the budget as are fire suppression and presuppression activities. While the Knutson-Vandenberg trust fund has not been fully reimbursed for past borrowing for firefighting, the balances in the fund are adequate to carry out the program of work described in the budget. At this time the cost of buying out or cancelling additional timber sales in the Northwest and any additional projects in the Lake Tahoe Basin are too speculative to comment on. In short, many of these items are adequately covered in the budget, and the Administration plans, where necessary, to offer budget offsets to cover the funding of other items.

Administration's National Forestry Policy

02. Question. Secretary Babbitt has recently made a lot of news by discussing needs for new wildfire management methods and forest thinning policies. His comments apply to national forest lands as well as DOI managed lands. Is Mr. Babbitt now speaking for the USDA?

Answer. I believe that you are referring to Secretary Babbitt's February 11, 1997, speech given at Boise, Idaho. The Secretary provided an advance draft of his speech to the Department of Agriculture for comment and used our suggestions. Secretary Babbitt and I both signed the 1995 Wildland Fire Management Policy Report and we have both had occasion to speak on fire issues. I have no problem with Secretary Babbitt's remarks.

03. Question. What are the key features of the administration's policy towards public and private forests?

Answer. The Administration's policy toward public forests is to support four strategic long-term goals:

- Protect Ecosystems
- Restore Ecosystems
- Provide Multiple Benefits
- Ensure Organizational Effectiveness

These goals are reflected in the 1998 budget proposal for programs dealing with forest and ecosystem health (including increased monitoring and watershed assessments), increased partnership work, and improved management efficiencies and accountability. We are striving to meet people's needs today without compromising the ability of the forests and grasslands to meet the needs of future generations.

The Administration's policy toward private forests recognizes the significance of private forestland, which represents 58 percent of the nation's forests and 66 percent of its commercial forestland. Private forests are critical to a number of key national interests, including clean air and water, abundant wildlife, and a sustainable wood supply.

Administration policies emphasize non-regulatory approaches and the voluntary participation of the diverse mix of private forest landowners across the nation. Policies focus on maintaining and enhancing forest health, sustainability, and productivity, with a commensurate stimulus to the economic vitality of communities.

04. Question. What steps are you taking to coordinate and consolidate a coherent and reasonable forest policy that brings concerns from the CEQ, the White House, the Department of the Interior, the states, industries, and private citizens together?

Answer. There are five efforts underway. First, I have recently appointed Mike Dombeck as Chief of the Forest Service. He has firmly and publicly made a commitment to "collaborative stewardship" for the national forests and grasslands. In a very general sense, this means "caring for the land and serving people by listening to all constituents and living within the limits of the land." As professional resource managers, educators, and communicators, Forest Service managers will not be dictating outcomes. Rather, they will be providing knowledge and expertise on issues. One of the agency's major tasks is to bring together various interest groups such as State and local governments, industries, environmental groups, and citizens. The Forest Service will seek their expertise and discuss solutions to problems with them before decisions are formulated.

Second, there is a need to establish a stronger operational Forest Service framework in order to increase organizational accountability. This is true of other USDA agencies as well. We are placing a lot of emphasis on the Government Performance and Results Act. We intend to strengthen the linkages between strategic planning, the annual budget process, and the annual performance contracts of Forest Service managers.

Third, Under Secretary Lyons and Chief Dombeck are increasing Forest Service efforts to involve all communities of interest in the forest planning process. As you know, the bulk of our national forests will need to complete revisions to their land and resource management plans over the next 6 years. The Department is also in the process of revising the regulations governing planning in order to streamline procedures, to improve coordination with the public and with other Federal agencies as well as with local and Tribal governments, and to clarify the relationship between planning and project decision making.

Fourth, in my joint February 23, 1997, letter with Secretary Babbitt to Senator Craig we commented on the Senator's draft "Public Land Management Responsibility and Accountability Restoration Act." In that letter, we highlighted our joint commitment to working with the White House Council on Environmental Quality (CEQ) to improve National Environmental Policy Act (NEPA) implementation. At the ground level, the execution of environmental policy takes place within the standards and guidelines of forest plans, and requires project-level NEPA analysis. The CEQ has identified several aspects of the NEPA process which, if properly applied, will lead to more effective and efficient implementation. The goal is to refocus NEPA compliance on improved and expeditious decision making which addresses substantive concerns, as opposed to preparation of lengthy documentation.

Finally, in that same joint letter, Secretary Babbitt and I identified another step being taken to coordinate and consolidate forest policy. In the area of endangered species consultations, an interagency team is working on more effective approaches to implement consultation requirements. The goals are to avoid unnecessary conflicts and to improve efficiencies through better procedures for programmatic and project-level consultations. Significant progress is already apparent; consultation backlogs have substantially decreased in the Pacific Northwest.

05. Question. Whom should we consider to be the administration's spokesman on forestry policy?

Answer. Ultimately, the President is the spokesman on Administration policy. President Clinton convened the forest conference in Portland, Oregon within a few months of taking office and followed up with a multiagency Presidential forest plan. He announced the agreement on the New World Mine. The President and the Vice President have made any number of statements on natural resources policy which have implications for the Forest Service and other Federal land management agencies. With the diverse responsibilities assigned to my office, to Secretary Babbitt, to EPA Administrator Browner, to Attorney General Reno, to CEQ Chair McGinty, to OMB Director Raines and to others, it is not reasonable to name one person as the sole spokesman on forest policy. What is important is that more than at any other time in recent memory, Federal agencies with diverse missions are working together to achieve forest policy goals rather than working at odds with one another. In general, Secretary Babbitt and I probably have more opportunities than other Administration officials to make remarks about forestry policy, but we would both acknowledge that others have an appropriate voice in these matters as well.

Political Intervention in Forestry

The Forest Service has become quite politicized and seems to be the pawn of individuals in the White House and the CEQ. The Secretary and assistant secretary appear to get involved in altering local, small field decisions such as individual timber sales and also pressuring senior agency civil servants into retirement.

06. Question. Do you care to let us know what the roles are of political and professional staffs in your organization now?

Answer. Political appointees like myself are charged with setting broad policy guidance based on statutory authorities for the agencies. In addition, Congress and the President hold us accountable for ensuring that policies are adhered to at all levels of the government.

Professionals in all USDA organizations are charged with implementing these policies in their respective program areas. Professionals also carry accountability requirements from the political level through to the basic program delivery level.

Finally, Congress has specifically asked me to become more involved in Forest Service policy development and implementation, and I have done my best to live up to the expectations.

07. Question. What discussions have you or the assistant Secretary had with Vice President Gore and CEQ director McGinty about making changes in Forest Service career civil servants?

Answer. Under Secretary Lyons informed me of several key personnel changes the day that those individuals announced their plans. Chief Dombeck informed Under Secretary Lyons of these changes the night before the announcements were made. Chief Dombeck did not discuss any of the specifics of his efforts to assemble his leadership team with me or Under Secretary Lyons prior to the decisions that were made. Consequently, neither I nor Under Secretary Lyons have had any conversations with the Vice President nor with the Chair of CEQ regarding the Chief's decision to exercise the authority granted to him regarding senior executive service employees. I support Chief Dombeck's decision to assemble a team in which he can place his confidence, trust, authority, and accountability.

08. Question. The recent report of the President's council of economic advisors included a section indicating that the Forest Service timber program had lost a lot of money. At the same time, the Forest Service timber sale accounting system indicates small profits. How do you reconcile these divergent pictures? Do you work with the administration to present a clear, consistent picture regarding the Forest Service programs?

Answer. The source of the Forest Service data is the Timber Sales Program Information Reporting System, which was developed by the Forest Service and the General Accounting Office several years ago at the behest of this Committee. The Economic Report adjusted the Forest Service information in two respects. First purchaser road credits were dropped. They had appeared as both a revenue and as a cost. Second, the Economic Report included receipt-sharing payments to States from timber revenues as a cost. In the past this has been a matter on which the Department and the General Accounting Office have not agreed. The Forest Service report shows the amount of receipt-sharing payments, but does not include them as a cost. This permits readers of the report to make their own judgement on the matter. The same adjustments to the Forest Service data were made by the Congressional Budget Office in its August 1996 report: "Reducing the Deficit: Spending and Revenue Options." I believe that the Administration has displayed all the relevant information.

Some degree of difference in the interpretation of financial data is inevitable depending on the question being asked. The TSPIRS data was meant to address the question of whether the multiyear costs associated with the timber harvest in a given year were greater or less than the associated revenues. The treatment of receipt-sharing payments depends on whether the user of the data considers the payments analogous to a tax imposed upon a business or whether they are considered as an entirely separate government activity whose magnitude is determined by the timber program.

09. Question. Has there been political involvement in field-level decisions natural resource decisions, such as deciding whether or not to allow individual timber sales in the Northwest to be harvested?

Answer. Congress occasionally asks me or Under Secretary Lyons to get involved in field level decisions. The most recent example is Chairman Smith's request that Under Secretary Lyons work with him to complete a management prescription for the Summit Fire on the Malheur Forest in Oregon. In these instances, both the Under Secretary and I attempt to be responsive to the request.

Our role, in general, is to ensure that the broad policy objectives set by me or by the Under Secretary are implemented. For example, if a particular timber sale violated my July 2, 1996, directive regarding the salvage rider, then accountability took place at the appropriate levels.

10. Question. We understand that morale at Forest Service field locations is very low, in large part because of the constant attacks from gladiators of all environmental and industrial persuasions, as well as the perceived attacks by the administration on civil servants within the agency. What are you planning to do to turn this undesirable situation around?

Answer. I do not accept your characterization. First, as long as I have been in government interest groups, politicians and others have criticized the professional civil service -- often unfairly in my view. I believe most federal employees take this sort of thing for granted and discount it. Second, in my own field visits, listening sessions, and correspondence I have noted a diversity of views among Forest Service employees ranging from can-do enthusiasm to individual job-related concerns about downsizing and civil rights as well as concerns about the polarization of public opinion over the agency's operations. As a general comment, I have made it clear that I respect the professionalism of the agency's employees and do not plan to micromanage their decisions. I have appointed Mike Dombeck as Chief and charged him with carrying out his idea of collaborative management which I hope will get us away from some of the strident criticism of the agency's activities. I also hope that most of the dislocations due to downsizing and funding reductions are now behind us and that this stabilization will enhance morale.

11. Question. If top level political appointees are involved in making field level decisions, should they not be the deciding officer and should they not be required to review and sign the records of decision for the NEPA documents involving the projects?

Answer. On occasion the Secretary, Under Secretary or Chief do sign the initial decision document. In most situations field level forest Service officials sign the decision documents and administrative appeals provided by law and regulation are available to higher level officers. The President, the Secretary of Agriculture and other Administration officials are often asked by Senators, Congressmen, States, tribes, citizens and interest groups to look into particular decisions. Oversight and instruction from the President and Secretary are entirely appropriate under the Constitution and statutes.

Our policy of interagency collaboration and an ecosystem approach is causing us to reexamine the existing decision making process. Adjustments may be needed to shift away from the single agency model in making Federal land use decisions.

Fiscal Accountability

12. Question. The Forest Service continues to have a poor fiscal record; this year the IG could not even conduct an audit. How are you dealing with this serious management problem?

Answer. The Forest Service, the Department's Office of the Chief Financial Officer, and the Department's Office of the Inspector General have combined

efforts to improve the agency's financial records. Working together, they have identified the actions necessary to resolve the deficiencies in Forest Service fiscal records. Those actions are being taken, but they cannot all be implemented overnight. The Forest Service is also working with Departmental staff to replace the current financial system with a commercial off-the-shelf general ledger. This should provide the means to address the most serious problems.

13. Question. When do you expect that the Forest Service will be given a clean accounting audit?

Answer. The Foundation Financial Information System will be implemented agency-wide by October 1, 1998. Therefore, fiscal year 1999 will be the first year that a "clean" audit could be anticipated.

14. Question. How important is implementing the new Forest Service computer system to establishing fiscal accountability?

Answer. It is vital to our efforts. The currently installed base of Data General minicomputers is past its useful life and does not provide the capability necessary to achieve fiscal accountability goals. The new systems provide necessary capabilities to interact with new software for tracking real property assets and the ability to integrate Forest Service accounting systems with those of the rest of the Department.

Ignoring Congressional Direction

15. Question. There have been repeated abuses of the reprogramming guidelines and game-playing to circumvent specific requirements, such as the termination of Tom Tuchmann's office last year. Please explain why you declared it an emergency to acquire the Mt. Jumbo property in Montana even though the Appropriations Committees had twice previously declined to allow the reprogramming needed to make the land purchase? Wasn't this just another case of needing to fulfill another late October campaign pledge at the expense of other programs?

Answer. The Department submitted two reprogramming requests to fulfill its share of a conservation partnership with the City of Missoula, County of Missoula, Montana, and other stakeholders. The Mount Jumbo project is supported by the Montana delegation and was originally included in the fiscal year 1996 Senate Interior Appropriations bill, but was ultimately dropped in conference with the House.

After two requests to identify funding through the normal reprogramming channels proved unsuccessful, the Department was faced with an emergency situation based on expiring options and pressure for development. Mount Jumbo is a high priority acquisition for the Forest Service because of wildlife habitat, tourism opportunities, scenic value, and watershed conservation, but most importantly for the unparalleled recreation opportunities it presents to the people of Missoula. By October 1996, the conservation of Mount Jumbo had become an emergency priority. Based on this compelling emergency situation, I asked the Forest Service to use emergency funds. I believe that this decision was within the guidelines for emergency acquisitions. In the future, however, I hope that we can come to common understanding on these kinds of issues.

16. Question. Mr. Tuchmann continues to work as an assistant to you for western affairs. How are his duties different from those he had when he was working in Portland helping coordinate the President's northwest plan, the salvage timber program, and other western forestry issues? Isn't there a substantial overlap in issues between the old office and the new western affairs office?

Answer. In the past Mr. Tuchmann's primary responsibility was coordinating the Department's work in implementing the President's forest plan. In that role he was also responsible for preparing a report to the President and to the Congress on the overall implementation of the plan as required by the Conference Report on the 1995 Interior and Related Agencies Appropriations Act, H. Rept. 103-740. The report was completed in December 1996 and the Office of Forestry and Economic Assistance was closed at the end of that month. The new position of Western Director for the Office of the Secretary will assist in the implementation of high priority projects such as bringing the Headwaters agreement to completion. I do not anticipate that Mr. Tuchmann will spend any significant amount of time on implementation of the President's forest plan and do not regard his current work as overlapping the activities he undertook in his prior appointment.

17. Question. Why is it not reasonable to consider this current western affairs office a successor to the Office of Forestry and Economic Development? If so, is this not a violation of the FY 1997 Interior and Related Agencies Appropriations act provision negotiated by the administration to eliminate after December 31, 1996 any successor offices to the Office of Forestry and Economic Development?

Answer. The restriction in the 1997 Interior Appropriation provides that no funds may be used to finance the activities of the Office of Forestry and Economic Assistance or any successor office. As I have already stated, the "activities" of the Office of Forestry and Economic Assistance were primarily related to coordinating the implementation of the President's forest plan. I do not regard activities such as coordinating the completion of the Headwaters agreement as a continuation of the duties and responsibilities of the Office of Forestry and Economic Assistance.

18. Question. The USDA budget statement for the Secretary's office indicates that \$207,000 in FY 1997 and \$273,000 in FY 1998 will be spent on Mr. Tuchmann's office from funds that are not included in the Agriculture appropriations subcommittee bill that funds the Secretary's office. Are you intending to ask for reprogramming authority to use US Forest Service funds to pay for this extra assistance to your office? What Forest Service funds would be used and what aspects of the FY 1997 program and FY 1998 request will not be completed in order to pay for this assistant to the Secretary?

Answer. As I noted in my March 7, 1997, letter to the committee on this matter, the Department will submit a 1997 reprogramming request for the portion of Mr. Tuchmann's office which will be reimbursed from Forest Service funds. The money will come from the General Administration line item in the National Forest System Account. The same source will be used in 1998 for the Forest Service portion of the reimbursement.

Politics Altering Large Planning Efforts

19. Question. The administration appears to be holding and perhaps altering, major efforts, including the Interior Columbia Basin Ecosystem management program (ICBEMP) covering much of the west, and the Tongass Land management plan. What involvement have you had in these two important planning efforts?

Answer. Senator Murkowski and Senator Stevens have asked me to become more directly involved in the Tongass Land Management Plan. I have not agreed to influence the specifics of the plan, but I have agreed to try to finish the plan in the near future. My preference is to have this planning effort take place under the direction of the Regional Forester in cooperation with his colleagues in other appropriate agencies. However, in light of recent events such as the attempt to legislate a specific Tongass Land Management Plan Alternative in the 1996 Interior Appropriation and other evidence of strong Congressional interest, I have had to become familiar with the issue. With regard to the Columbia River Basin initiative, I have had the benefit of occasional updates to ensure that broad policy principles are being met.

20. Question. When can we expect to see these plans released?

Answer. The principal documents of the ICBEMP scientific assessment have already been released (December 1996). A preferred alternative for the Eastside and Upper Columbia Basin Draft Environmental Impact Statements (DEIS's) was announced on April 23, 1997 by Forest Service and Bureau of Land Management regional executives. The DEIS's will be mailed directly from the printer in mid-May. The scientific evaluation of the alternatives is expected to be mailed within two weeks of the DEIS's. These documents are currently available upon request and payment for reproduction. The individual chapters of the Assessment of Ecosystem components will follow in June. There will be a 120-day comment period on the DEIS's. The Final Environmental Impact Statements and Records of Decision will follow approximately 1 year later.

The Draft Tongass Land Management Plan Revision was released in April 1996, and the Final was expected in January 1997. However, as a result of discussions with the Forest Service Headquarters staff, other USDA organizations, the Department of the Interior, the Council on Environmental Quality, and the Department of Justice, additional work was identified as being necessary to ensure that the Final Plan is legally defensible, scientifically credible, and will sustain the resources of the Forest. The work includes legal and substantive reviews of several elements of the Plan plus reconvening the scientific "viability risk assessment panels" to rate the effects of the alternatives on the habitat of certain species of wildlife and fish. The additional work is expected to be completed in late Spring 1997.

21. Question. We understand that about \$40 million has been spent to date on the Interior Columbia Basin study and plan. Why have these costs soared so high and why is it taking so long to complete this effort?

Answer. The effort has turned out to be considerably more complex than originally anticipated. I have asked the Forest Service to provide you with more detail.

[Additional information follows.]

By the end of Fiscal Year (FY) 1997, the project will have spent about \$35 million. The FY 1998 President's Budget includes \$5 million to complete the Final Environmental Impact Statements (EIS's) and Records of Decision in FY 1998.

There are three reasons why the project is not yet complete. First, the original project contemplated the development of a scientific assessment and an EIS for eastern Oregon and Eastern Washington. A realization that a valid ecosystem management strategy was needed for the entire Interior Columbia Basin necessitated the inclusion of those Bureau of Land Management (BLM) and Forest Service administered lands in Idaho and western Montana. Decisions were made to develop a second EIS for Idaho and western Montana and to establish an office in Boise, Idaho. This expansion of area increased the time and funding needed to complete the project.

Second, development of the scientific assessment took longer than originally projected. One reason was that there was less available resource information than anticipated, which necessitated additional efforts in data collection and modeling. Developing the EIS's had to await the foundation provided by the scientific assessment.

Third, there was a recent delay in identifying preferred alternatives for the Draft EIS's to allow the project to integrate the ecosystem management concepts with existing Federal laws and regulations. In addition, the project's executive steering committee also needed to respond to concerns raised by the States, Indian tribes, and the Eastside Ecosystem Coalition of Counties. These other governments will all be important partners in implementing decisions based on the EIS's.

The cost of the effort is a reflection of the requirement to develop credible scientific data bases and to address a very complex set of natural resource management issues over a large area. Such an effort has never been undertaken before. Other cost factors included developing two EIS's instead of one, and an intensive public involvement process. The Records of Decision for the project will amend 72 Forest Service and BLM resource management plans, covering approximately 75 million acres of public lands. On a per-acre basis, the cost of the project is low compared to having each National Forest and BLM district separately amend existing land use plans.

22. Question. We understand that late changes in the Interior Columbia Basin planning alternatives are likely to greatly reduce the ability of the affected Forest Service areas to maintain traditional programs. To what degree do you expect the Interior Columbia Basin plan will reduce commodity outputs of the national forests and grasslands?

Answer. It is too early to tell what the effects of the final decisions will be. The Department has not yet released the Draft Environmental Impact Statements. Once they are released I would anticipate a considerable amount of public comment which must be taken into consideration in making final decisions. After a final decision is made, it may take 1 to 3 years to fully implement the plan and to achieve the expected level of commodity outputs.

23. Question. Should the impacts on local communities be considered in such large planning efforts as the ICSEMP?

Answer. Yes, potential effects on local communities should be and have considered. The Scientific Assessment focused on broad-scale social and economic conditions and trends in the Interior Columbia Basin but also examined the characteristics and conditions of the 387 small rural communities in the Project area. This was accomplished, in part, through the use of 1990 U.S. Census data on all communities and, in part, with in-depth, detailed data from a survey of 198 communities in the spring of 1995. In addition, economic profiles were determined for many of the communities, both large and small, within the Basin.

The extent of the effects on local communities, as well as the methods used in determining them, have been a concern of many, including the Eastside Ecosystem Coalition of Counties. The Federal agencies involved, including the Department of Agriculture, have made a commitment to further address this issue between the release of the Draft and Final Environmental Impact Statements.

24. Question. Do you have an idea how the ICBEMP will impact the costs of managing the affected national forests and grasslands? Does your 1998 funding request provide sufficient funds to begin implementing the plan? If not, when would you submit a supplemental request to cover the new management costs?

Answer. The Draft Environmental Impact Statements (EIS's) provide cost estimates for implementing all seven alternatives. Often estimates change between the Draft and Final EIS's based on public comments and changes to the alternatives.

The FY 1998 President's Budget includes \$5 million to complete the Final EIS's and Records of Decision in FY 1998. We expect to make a final decision next fiscal year and begin implementation the following year. FY 1999 would be the first year that funds might be requested to fund implementation.

1995 Rescission Bill Timber Salvage Provision

25. Question. You issued at least two major orders limiting the application of the salvage timber provision of the 1995 rescission bill. The recent GAO report suggests that these orders reduced the quantity of timber that the Forest Service would have offered for sale by about 700 million board feet. Don't you feel that it was the intention of the Congress, with the approval of the President, to streamline salvage sales?

Answer. First, I would note that the subtitle of the GAO report is: "Forest Service Met Its Target, but More Timber Could Have been Offered for Sale." (Emphasis supplied.) The fact of the matter is that the Department has a creditable record in administering a salvage program under circumstances where we were constantly attacked for not getting out more sales on the one hand and for "logging without laws" on the other. As far as the intent of the salvage provision is concerned, let me restate my comments provided on the draft of the GAO report: "The draft report implies that my July 2, 1996, salvage directive narrowed the definition of salvage unnecessarily. I do not believe that is an appropriate characterization of my direction. My memorandum was a logical clarification of policy that was necessary to address strong and widespread public concern and to ensure compliance with the concept of 'emergency salvage.' My directive noted that the rider's definition of a

salvage sale in section 2001(a)(3) is broad and vague. My direction kept the focus on emergency timber salvage consistent with the intent of the Act."

26. Question. What was the reason for your July 2, 1996 letter which altered the definition of salvage timber and resulted in delays to 224 timber sales comprising 722 million board feet?

Answer. As noted in the response to question 25, the reason for issuing the directive was to ensure compliance with the concept of emergency salvage.

27. Question. Assistant Secretary Lyons issued a letter on December 13, 1996 with virtually no advance notice that halted new salvage sales after that date even though the rescission law salvage provision expired on December 31, 1996. This resulted in delaying 27 additional sales involving 29.7 million board feet according to the GAO. What was the basis for this letter? Why did you feel it was necessary to spring this surprising early cut-off?

Answer. As Under Secretary Lyons noted in his memorandum to the agency, the Interagency review of the salvage program had identified several flaws in the way that it was working. The Forest Service had already offered 4.1 billion board feet in salvage sales through November 30, 1996 which was well within my commitment to Congress to offer 4.5 billion board feet, plus or minus 25 percent. Given the highly controversial nature of the salvage program, as discussed in question 30, it was appropriate to begin a transition to the expiration of the salvage rider and the return of full public participation and legal review in timber salvage sales by ceasing to offer additional sales.

The Forest Service was being accused of pushing through sales without giving adequate public notice. Any sales advertised after December 13, 1996, would not have provided the public adequate time to comment and would not have given the Forest Service the opportunity to adjust the sale to take care of environmental or public concerns, and lastly, the Forest Service would not have had time to sell the timber sale before the December 31, 1996, deadline. Therefore it made not only administrative sense, but also sense from a public relations standpoint to end the rider on December 13. My office and Under Secretary Lyons' office spoke to a number of majority and Democratic staff explaining the situation and everyone agreed at the time that this decision made sense.

28. Question. How much work had been done by Forest Service and other workers on the timber sales that were delayed by these two orders? Please provide an estimate of the time and cost of preparing these timber sales.

Answer. The sales delayed by the July 2 and December 13, 1996 directives varied in terms of the amount of work invested in them at the time of the delay. The Forest Service does not keep such records on individual timber sales. However, the agency has been able to provide me with an estimate of \$24 million invested in sales preparation work based on Forest Service average timber sale preparation costs by region. The amount of time invested would vary from 2 to 24 months per sale. This does not represent a waste however. Investments in these sales resumed at the expiration of the salvage rider so that the sales can be offered in FY 1997 or 1998.

29. Question. What is the value to the economy of the timber that was delayed by these orders?

Answer. As in the response to question 28, the Forest Service has provided estimated economic effects based on Regional information reported in the Timber Sale Program Annual Report for FY 1995. The agency estimates that the delayed volume will generate approximately \$570 million in local employment related income once the volume is harvested. This includes income from direct, indirect, and induced jobs. These economic benefits have not been foregone. As noted earlier, for the most part they have just been delayed a few months.

30. Question. Why do you think the salvage timber provision became such a contentious issue?

Answer. From my perspective, there were several factors. First section 2001(k) of the salvage rider, relating to so-called Section 318 sales, had nothing to do with timber salvage. It was a successful effort to embed a provision of major environmental significance in an omnibus rescissions bill. Had the provision come up as stand-alone legislation it would have been very controversial within the Congress and would never have commanded the two-thirds majority necessary to override a certain Presidential veto. Second, the actual salvage provisions sought to "streamline" salvage sales by exempting them from a number of environmental statutes and from requirements for public participation. The exemption of these sales from environmental laws created enormous controversy. Further, this environmental "sufficiency" language was unnecessary. The Department has successfully operated extensive salvage sale programs after severe wildfire seasons in the past under existing legislation. This provision only served to provoke deep public suspicion about many timber sales which may have aroused little or no opposition under normal procedures. Finally, I believe that statements about the potential volume of salvageable timber that were made during the consideration and enactment of the rider led many citizens to believe that the Forest Service was about to undertake an enormous logging binge which would denude the public lands. At the same time such statements may have caused the timber industry to anticipate a far larger volume of timber salvage sales than could have been possible under the best of circumstances.

31. Question. Your implementation of the salvage provision featured new and unusual interagency consultation on the timber sales. What did you do differently to implement the salvage provision? Do you have any special recommendations based on that experience?

Answer. In March 1995, the Forest Service co-signed an interagency agreement with the Bureau of Land Management, the Fish and Wildlife Service, and the National Marine Fisheries Service. The purpose of the agreement was to streamline consultation on forest health and salvage projects in several Northwestern States. The key goals were to facilitate early interagency collaboration in project design and to ensure completion of consultation within the timeframe for completing the National Environmental Policy Act (NEPA) process for project planning. Previously, projects were designed without early involvement by the regulatory agencies and many projects required a lengthy consultation process, including in some instances, the need to revise the project and to do the NEPA analysis over. At locations where there is interagency commitment to the goals of the March 1995 agreement, the result has been expedited project reviews, improved project designs, and timely completion of consultation. An interagency action plan is being

developed to address recommendations in the Interagency Salvage Review Report, which called for continuing the streamlined consultation process and extending it to all Forest Service and Bureau of Land Management activities.

Headwaters Redwood Grove

32. Question. The administration has worked on trading up to 15,000 acres of national forest lands with minimal public or Congressional input. Why do you feel that it is such an important emergency that you are willing to trade hundreds of millions of dollars worth of federal assets for this redwood forest without benefit of Congressional deliberation?

Answer. In her March 4, 1997, letter to the committee the Chair of the Council on Environmental Quality dealt with this matter. She said: "The Administration intends to consult with the congress at every stage of the Headwaters land exchange negotiations. While the current proposed exchange would use existing statutory authority, the Administration recognizes the importance of Congressional oversight and plans to cooperate fully with the appropriate members and committees. In addition to many individual discussions with various senators and representatives, Administration officials had a series of briefings since December with the most recent briefing being held three weeks ago with a number of committee and personal staff members to consult on progress to date and discuss remaining issues to be resolved. Follow-on meetings will be scheduled when requested or when events warrant."

33. Question. We understand that you are working to set up a purchase unit boundary around the entire Headwaters property so that it will be legal for the Forest Service to work on a land exchange to acquire that property. What is the current status of setting up the purchase unit boundary?

Answer. Under the authority of the Weeks Act of March 1, 1911, I signed the Purchase Unit authorization on April 2, 1997.

34. Question. Has the Forest Service been working on determining national forest system lands that could be traded for the Headwaters property?

Answer. Yes. Approximately 19,000 acres of National Forest System lands are being considered for exchange, including 8,000 acres on the Stanislaus National Forest, 1,000 acres on the Tahoe National Forest, 2,600 acres on the Plumas National Forest and 7,400 acres on the Eldorado National Forest. The precise national forest acreage that would actually be exchanged would be that amount equalling approximately \$30 million in value based on actual appraisal as of the time of decision. This is anticipated to be approximately 10,000 to 12,000 acres.

35. Question. Don't you feel that the national forest lands are a special resource that should be conserved and only in rare, carefully considered cases, traded or sold off?

Answer. I feel that National Forest lands are a special resource that should be conserved and only in rare, carefully considered cases, traded or sold off. In this particular case, I believe that the values of the Headwaters Forest outweigh the potential loss of public lands associated with the proposed land exchange.

36. Question. We understand that it is inappropriate to work on land exchanges where the land to be acquired is not in a national forest or purchase unit. Why do you think that the work done to date on the Headwaters trade is appropriate?

Answer. Under the Weeks Act, the purchase of lands chiefly valuable for timber production or the protection of watersheds requires the establishment of a purchase unit. As noted in response to question 33, a purchase unit has been established. I believe that we are proceeding in an appropriate manner.

37. Question. Prior to today, how many people in the USDA and the Forest Service have been working on the Headwaters deal? How much additional work may be needed? Please provide both the number of persons and the cost.

Answer. I am informed that as of April 2, 1997, the Forest Service has had as many as 20 employees who have done some work on the Headwaters exchange to date; 6 of them have devoted substantially all of their time. The total cost incurred was about \$50,000. My special assistant and Western Director has devoted most of his time to the project as well, and the Department's Office of the General Counsel has also been involved. The number of Forest Service employees is expected to increase once the lands become accessible and field work, such as on-the-ground surveys, can be initiated. The current estimate for the remaining Forest Service work is \$1.15 million.

Yellowstone Area/ New World Mine

38. Question. What has been your involvement in the Administration's plans to compensate land owners with \$65 million in order to stop further development of the New World Mine that is within the Gallatin National Forest in Montana?

Answer. The need to stop the development of the New World Mine was discussed widely within the Administration. This included both the need to take the action itself and discussions about how to compensate the owners of the mineral interests. My staff participated in those discussions as did many Administration officials.

39. Question. How do you collaborate with the Secretary of the Interior on matters like this one that affect lands managed by both departments?

Answer. Secretary Babbitt and I discuss matters of mutual concern as the occasions present themselves. Our departments also interact at the subcabinet and agency levels and keep us informed of developments which affect both departments.

40. Question. What has been the involvement of the Executive Office of the President in the New World Mine deal?

Answer. On August 12, 1996, the President announced that an agreement had been reached with Crown Butte to terminate the project. In his remarks he noted the contributions of Vice President Gore, and Katie McGinty, Chair of the Council on Environmental Quality. Other Administration officials whose roles were recognized include Attorney General Janet Reno, EPA Administrator Carol Browner, and Interior Secretary Bruce Babbitt. The President was also

kind enough to acknowledge the roles that Forest Service Chief Jack Ward Thomas and I had played.

41. Question. It seems that pretty often the Secretary of the Interior is making important decisions that affect Forest Service lands, such as the Headwaters and New World mine deals and the recent pronouncements on prescribed burning policy. To what extent does the Interior department clear these deals and policies with you?

Answer. Secretary Babbitt and I are not engaged in some sort of turf battle. We both have departmental interests in the issues you have mentioned. For example in December 1995, we jointly signed the Federal Wildland Fire Management Policy and Program Review. This was a collaborative product of both USDA and DOI and we have both supported the guiding principles and policies of that report. Secretary Babbitt's February 11, 1997, speech in Boise, Idaho, on the role of prescribed fire is consistent with that policy and it incorporated input from the Department of Agriculture. Part of this misperception about our roles may stem from the fact that as Secretary of Agriculture, I am often called upon to speak on such diverse matters as food stamps, food safety, farm policy, rural development and natural resource management. On the other hand, Secretary Babbitt's responsibilities naturally are more specifically focused on opportunities to speak on natural resources issues.

42. Question. We have read in the news that the administration proposes to reduce by 2 million acres the amount of new land entered into the conservation reserve program (CRP) in order to offset the additional costs of the New World mine deal. What steps are required in order to complete this deal? When will you consult with the Congress?

Answer. Legislation will be necessary to complete the exchange of assets. An important component of the legislation will be to ensure the continuation of Montana's share of the royalty revenue. The Administration is committed to preserving the State's share of these mineral royalty payments and we will work closely with the Montana delegation and the appropriate House and Senate committees.

43. Question. We understand that to date over 162,000 farmers have signed up more than 13.5 million acres in the conservation reserve program and that at the current rate of sign-up, farmers could offer the USDA more than 26 million acres. Never-the-less, it appears that the Administration is considering reducing the CRP program from 19 million to 17 million acres in order to come up with an offset to cover the New World Mine campaign promise. What will you be telling these farmers who may be turned away from the CRP program? How do you set priorities regarding protecting environmentally sensitive lands? What has been the response of farm state supporters of the conservation reserve program to this reduction?

Answer. The Administration's proposal will not reduce the amount of acreage eventually eligible for the CRP. The target is to enroll 28 million acres over the next two years, of which the amount for FY 1997 will be a very ambitious 17 million acres. The Department will still enroll the same amount of total lands in the CRP where the conservation benefits exceed the costs to the nation of retiring the land from production. Also, the national goal for

the program over the next five years will continue to be the full 36.4 million acres as set in the 1996 Farm Bill.

USDA will rank all eligible offers using an Environmental Benefits Index (EBI), which will tell us what the potential environmental benefits are of enrolling the land in the CRP. The criteria used to determine the EBI rankings include erosion reduction, improvement to water quality and air quality, benefits to wildlife habitat and cost. Producer response to this proposal so far has not been great and it would be our hope to minimize any negative impacts on producers who are prospective participants in the CRP. We have not received a large number of comments from the public.

44. Question. Do you anticipate that the CRP, or other federal programs, will be selected as off-sets for other additional administration solutions to environmental quandaries in the near future?

Answer. Whether the CRP will be selected again as an off-set in future years is difficult to predict at this time. The CRP offers a reasonable solution now because of the high levels of enrollment activity that are projected for the program in fiscal years 1997 and 1998. However we deal with unforeseen environmental problems in the future, we will continue to weigh various alternatives and select the best and least disruptive one to address the concern.

Tongass Long Term Timber Sale Buy-Out

45. Question. The administration recently entered into an agreement with Louisiana Pacific Lumber company in which the government agreed to pay \$135 million to cancel the contract with the Ketchikan Pulp Company (KPC). There has been no Congressional input other than the Alaska delegation. Shouldn't the administration consult with the Congress before spending \$135 million on one settlement?

Answer. The settlement arose in the context of on-going litigation against the United States in the Court of Federal Claims arising out of the fifty-year timber sale contract held by the Ketchikan Pulp Company (KPC). Congress has granted to the Department of Justice sole statutory authority to settle claims raised in the context of litigation against the United States. After consultation with USDA officials, the appropriate officials within the Department of Justice authorized settlement of KPC's claims.

46. Question. Your staff claims that the Forest Service will not have to pay the judgment fund back. What is the legal basis for this position?

Answer. The Department of the Treasury will be reviewing the question of whether the Forest Service will have to reimburse the Judgment Fund from Forest Service appropriations for the cost of the KPC settlement.

47. Question. If the Forest Service ends up having to pay back a portion of the \$135 million, what programs do you anticipate will have to be reduced in order to off-set that appropriation?

Answer. Any offset would come from the Forestland Management line item of the National Forest System account. This would necessitate the reprogramming of funds from other National Forest System account line items to the Forestland Management line item, and possibly the interchange of funds from other

accounts. In general, we would endeavor to spread an offset of such magnitude among as many programs as possible rather than eliminate one or two activities in their entirety.

48. Question. Why was the KPC contract buy-out in the best interest of the government?

Answer. The Ketchikan Pulp Company (KPC) had pending over \$300 million in contract claims against the United States. In addition, Louisiana Pacific had announced that it would be closing the KPC pulp mill in Ketchikan and the saw mills in Ketchikan and Annette, leaving several hundred mill workers unemployed. Further, there was no assurance that KPC or Louisiana Pacific would be responsible for performing the substantial environmental clean-up necessary to restore the mill sites. The settlement agreement reached between KPC and the government was in the best interest of the government in three important ways. First, it resolved potentially years of contract litigation over KPC's pending claims, as well as over \$300 million in claims KPC had not yet filed. Second, it assured that KPC would continue to operate its saw mills and employ mill workers in Southeast Alaska for the next three years, thereby facilitating the transition to a value-added timber economy. Finally, it assured that KPC and Louisiana Pacific would assume all financial responsibility for the environmental clean-up of KPC's operations in Southeast Alaska.

49. Question. How will the KPC settlement affect your ability to implement the Tongass National Forest Land Management plan?

Answer. The Ketchikan Pulp Company settlement and mutual contract cancellation are not anticipated to affect implementation of the revised Tongass Land Management Plan. The alternatives to be addressed in the Final Environmental Impact Statement are not dependent on meeting any one timber program goal. There will be adequate flexibility to permit the forest to respond to economic and market changes.

With the settlement and mutual contract cancellation, all timber volume offered on the Tongass in the future will be available for competitive purchase. This will also increase the agency's management flexibility.

50. Question. How will your proposal to eliminate timber purchaser road credits affect your ability to fulfill timber sale agreements and the timber program anticipated in the new Tongass forest plan? Does the new Tongass forest plan take into account the elimination of purchaser road credits?

Answer. The Alaska Region has significantly larger amounts of purchaser credit tied to its sale program than other Regions. More of the roads are new construction which is relatively more expensive than the reconstructions of existing roads. In addition road construction costs tend to be higher in Alaska because of the remoteness of many areas and the general high cost situation in the State. At the same time most Alaskan forest products are sold on a world market at prevailing prices. For these reasons many timber sales in Alaska are marginal. To the degree that elimination of purchaser credits adds an element of uncertainty, there may be specific sales which will receive no bid that would have received the minimum bid with purchaser credits. In any event, we have no reason to believe that elimination of purchaser credits would have a substantial effect on the timber program in the

Alaska Region and the new Tongass Land Management Plan does not speculate on what effect the elimination of purchaser credits would have.

Timber Sale Contract Liability

51. Question. The GAO recently reported that there was a potential contract liability of several hundred million dollars for other Forest Service timber sales. How big is this contract liability?

Answer. I believe that you are referring to the October 1996 GAO report: "TIMBER MANAGEMENT Opportunities to Limit Future Liability for Suspended or Canceled Timber Sale Contracts." That report indicated that the Forest Service had 73 pending claims with damages of about \$61 million if each and every claim was decided in favor of the timber contract holder for the full level of compensation claimed. The report also indicated that additional claims of as much as \$198 million were a possibility. The Department intends to defend itself fully and believes that the actual claims awarded will be substantially lower than these estimates. This is a significant issue which will involve the Department, the Department of Justice, and the Congress over the next couple of years. I would like to note that GAO recommended that the Department ameliorate the situation by expeditiously publishing for public comment a proposed regulation for canceling timber sale contract and a proposed revision to the current standard timber sale contracts. The proposed rule for contract cancellation was published in the Federal Register on December 30, 1996. The public comment period closed on March 17, 1997, and we are now evaluating the comments received. A proposed revision to the current standard timber sale contract is nearing completion.

52. Question. In order to avoid implementing a portion of section 2001(k) of the rescission bill regarding Pacific Northwest timber, the administration signed an agreement on September 17, 1996 to provide replacement timber to timber contract holders in Oregon and Washington. A key provision of that agreement was that the Forest Service would secure the funding and work force needed to provide the replacement timber volume without impacting the regular timber sale program. How much additional funding has the Forest Service asked for or utilized in order to prepare the alternative timber sales?

Answer. The Forest Service has identified \$17 million to be allocated to the Pacific Northwest Region to fully meet this agreement. A notification letter will be sent to the Committee detailing how the funds are being used.

53. Question. How successful are you at finding alternative timber to fulfill those contracts and still provide the environmental protection that you seek?

Answer. I am informed that the Forest Service is working diligently to provide 177 million board feet of replacement timber pursuant to the September 17, 1996 court approved settlement agreement. This volume will be prepared in compliance with all environmental laws, and applicable forest plan standards and guidelines. The settlement agreement lays out a general timeframe for replacement timber preparation work. The agency is working with each individual purchaser to reach a tentative agreement identifying the replacement timber they will receive and the timing of its delivery. While weather has caused some delays, the agency is generally on track with the guidelines of the settlement agreement. At this time, the Forest Service anticipates being completely successful in providing the replacement volume.

54. Question. Does the Forest Service have sufficient funding to find and put alternative timber up to substitute for environmentally sensitive sales?

Answer. As noted in response to question 52, we are in the process of reprogramming \$17 million for this purpose. We believe that the amount will be adequate.

55. Question. Is the Forest Service utilizing funding that should go for the planned FY 1997 timber sale program in order to complete the timber sale substitutions?

Answer. The agency is planning to carry out the planned FY 1997 program and to handle the substitution volume as well.

56. Question. The administration has already entered into settlement agreements with several timber purchasers in Oregon and Washington to buy them out of old, supposedly environmentally harmful, sales. How much money is involved in these agreements? Where do you expect getting the funds to cover these agreements? What other programs will you reduce in order to off-set the costs?

Answer. In Oregon and Washington there presently are about \$16 million in damages that have been paid from the Judgment fund, which the Forest Service may have to reimburse. In addition there is ongoing litigation on other sales for which the government will owe damages. If reimbursement of the Judgment Fund is required by the Department of the Treasury, the payments would be made from the National Forest System Account. If there are excess balances in other accounts, the Department has some limited flexibility to interchange funds, and that option will be considered. While a decision has not yet been made, I would anticipate that we would probably try to spread the burden among as many programs as possible rather than severely disrupt one or two activities.

57. Question. Might we expect that there will be many other timber sale contract buy-outs in the near future? Would you be able to use the judgment fund to cover those liabilities?

Answer. Additional contract terminations are always a possibility, but will be determined on a case-by-case basis. The term "buy-out" implies administratively negotiated settlements between Forest Service contract officers and timber sale contract holders rather than the settlement of a claim filed before the Court of Federal Claims or the Department's Board of Contract Appeals. Funds paid in such administrative settlements would have to come from agency funds. The Judgment Fund would not be available for such purposes.

58. Question. Under what circumstances do you have to repay the judgment fund?

Answer. The Contract Disputes Act (CDA) requires that contract damages arising from contract s subject to the CDA be paid from the Judgment Fund. The Department or agency responsible for administering the contract is required by the CDA to reimburse the Judgment Fund from its appropriations. Other types of judgments against the government, such as those arising from tort claims and takings claims, are not reimbursed.

59. Question. If you do not have to repay the judgment fund, who ultimately is providing those funds?

Answer. In either event the taxpayers are providing the funds. The Judgment Fund is a permanent indefinite appropriation available for paying adjudicated judgments against the United States, as well as settlements reached in the context of litigation.

60. Question. We understand that the old timber sales that are under dispute in Oregon and Washington affect about 7000 acres of forest out of the approximately 20 million acres in the area. Is it reasonable to assume that these sales will seriously disrupt the balance struck in the President's forest plan for the Pacific Northwest? Since the timber sale level the past 3 years has been so far below that called for in the President's plan, how is it that the additional 7000 acres is considered so harmful?

Answer. We anticipate success in providing replacement timber for the sales in Washington and Oregon covered by the September 19, 1996 settlement referred to in question 52. This should considerably reduce the adverse effects we had originally anticipated. Many of the sales being replaced are located in marbled murrelet habitat, spotted owl habitat, or both. In addition, many of the sales would have had the potential to affect fish species listed as threatened under the Endangered Species Act if they were harvested. For those sales that did not proceed in sensitive areas, the timber sale purchasers cooperated with the Forest Service in making sale modifications to avoid substantial damage. Scientists from several agencies are studying the effects of the sales that did proceed under section 2001(k) to determine if there is a need for any associated forest plan adjustments.

President's Pacific Northwest Forest Plan

61. Question. What has been the total cost to the US government of the President's Northwest forest plan? Please include costs incurred by departments other than the USDA as well as those by agencies within the USDA.

Answer. I have asked the Forest Service to provide a response.

[Additional information follows.]

The expenditures for economic assistance are broken down by program and department in pages 165-172 of "The Northwest Forest Plan: A Report to the President and Congress" published in December 1996. In addition the Forest Service has incurred expenses in managing the national forests affected by the plan and in providing the scientific research necessary for decision making. The expenditures are broken down by program in the Forest Service Explanatory Notes. See 1995 Notes p. 3-3 for 1994 expenditures, 1996 notes p. 3-5 for 1995 expenditures, and 1997 Notes p. 15-2 for 1996 expenditures.

	(\$ Millions)		
	Economic Assistance	National Forest Management and Research	Total
1994	\$248.2	\$60.8	\$309.0
1995	268.1	67.3	335.4

1996	<u>209.5</u>	<u>66.3</u>	<u>275.8</u>
Total	\$725.8	\$194.4	\$920.2

62. Question. What have been the economic and social impacts on the Pacific Northwest?

Answer. In December 1996, the USDA Office of Forestry and Economic Assistance presented its report to the President and the Congress on the Pacific Northwest Forest Plan. That report contained several findings.

Unemployment for the entire region covered by the President's Plan is at its lowest in 2 decades. In Oregon alone, more than 58,000 jobs have been created between May 1995 and May 1996. Population growth in both metropolitan and nonmetropolitan areas throughout the region have been above the national averages. Nonetheless, changes in the timber industry resulting from Federal timber sale reductions are creating hardships for people, businesses, and rural communities that have not benefitted from regional economic growth and are far from transportation corridors. The Northwest Economic Adjustment Initiative is aimed at providing both immediate and long-term relief for those people, businesses, and communities. Partnerships with representatives from Federal agencies, States, Tribes, and local communities have created new opportunities to help people help themselves through this difficult transition in the forest products industry.

More than \$27 million has been awarded to retrain more than 4,900 workers in communities affected by changes in the timber industry; 81 percent of these workers have subsequently been placed in other jobs. Grants and loans of \$88.6 million were awarded to more than 100 rural communities to stimulate business growth and economic development in Washington, Oregon, and California in fiscal years 1994 and 1995. Grants and loans of \$162.7 million were awarded to help rural communities in Oregon, Washington, and California plan and build water systems, retool mills, update and refurbish hospitals, build new waste treatment facilities, and support other community infrastructure improvements in fiscal years 1994 and 1995.

63. Question. What have been the benefits?

Answer. After the Plan's 2 years of implementation, people are just beginning to learn about how it has affected the region. Three themes stand out: agency coordination, ecosystem-based forest management, and movement toward a new equilibrium between the economy and the environment.

Government can better serve the citizens, and meet their diverse demands, by changing the way they produce goods and services. People expect agencies to work as one instead of separately. The Northwest Plan directs the agencies to work together and set up some new organizations and processes that are allowing it to happen.

Developing and implementing an ecosystem approach toward resource management can work. The Northwest Plan represents one of the first ecosystem approaches to be applied at a large, regional scale.

In a polarized social environment, achieving a middle ground requires decision makers to achieve a new equilibrium between the mix of environmental and economic forest benefits across various ownerships. Multiple economic uses of

Federal forests can continue, through at lower rate than in the past, where sustainability is based on protecting the habitat of many rather than single species. Integrating environmental and economic objectives may require short-term tradeoffs, which often create economic and environmental gains and losses.

64. Question. What percent of the timber sale volume predicted by the President's Pacific Northwest forest plan has been sold the past 3 years?

Answer. The plan expresses timber sale volume as a decidual figure. The Forest Service has been increasing the volume offered each year as the necessary watershed analyses and other plan requirements have been met with a goal of offering one-tenth of the decidual volume in fiscal year 1997. The Forest Service has supplied the following tables which show the Probable Sale Quantity under the President's Forest Plan based on the implementation schedule discussed with the Appropriations Committees in budget testimony, and the offer and sold accomplishment for fiscal years 1994-1996. The data refer to the Forest Service portion only.

(Volumes are in Millions of Board Feet)

Fiscal Year	Planned Offer	Actual Accomplishment			
		Offer	Percent of Planned	Sold	Percent of Planned
1994	300	223	74%	226	75%
1995	458	493	108%	387	84%
1996	611	681	111%	793	103%
Total	1,369	1,397	102%	1,406	103%

Volume sold is not directly comparable to volume offered for sale on an annual basis because sales offered late in the fiscal year will not be recorded as sold until the following fiscal year. Thus, some of the FY 1994 volume sold may have been offered in prior years and a portion of the FY 1996 volume offered for sale will be sold in later years.

65. Question. The President's Northwest forest plan calls for producing on average over 1 billion board feet of timber per year, of which about 10% is to be non-sawlog material. Do you expect to meet this level in FY 1997 or in FY 1998?

Answer. The Department intends that the Forest Service will fully meet its part of the current projections of plan volume in fiscal years 1997 and 1998. In the years since the forest plan was issued, there have been a number of developments which affect the volume figure you cite. I have asked the Forest Service to provide a summary.

[Additional information follows.]

The Department's Office of Forestry and Economic Assistance recently provided information relevant to this question in the report "The Northwest Forest Plan: A Report to the President and Congress" issued in December 1996. The reference to producing on average over 1 billion board feet of timber per year refers to the original estimate of 1.1 billion board feet. The 1.1 Billion

Board Foot level includes the Probable Sale Quantity (PSQ) of 958 Million Board Feet (MBF) plus an additional 10 percent of "other wood"; i.e. cull, sub-merchantable size, or other products not normally included as part of Allowable Sale Quantity calculations. As noted in the 1994 Final Supplemental Environmental Impact Statement, page 3&4-267, "[S]ustainable sale estimates will be made using more refined data and procedures available when Draft Forest and District Plans are completed or current plans are revised." Some individual National Forest and Bureau of Land Management District Plans have been completed since implementation of the Pacific Northwest Forest Plan; the PSQ has been revised as a result. The December 1996 Report to the President and congress now sets the PSQ at 868 MBF; and total projected levels at 955 MBF with "other wood" included. See page 103. It notes that further adjustments could be made as more plans are revised in the future.

66. Question. We hear that the timber sale statistics used by the Forest Service to report their Northwest forest plan performance do not fully reflect reality. The Service is taking credit for all timber sales offered for sale even if they consist of material unsuited to mills or consist primarily of small, low value trees or non-sawlog material. What is really happening out in Oregon and Washington regarding the timber sale performance? Please provide a table of timber offered, sold, and harvested by year, size category, and quality category?

Answer. The Department has no desire to mislead the Congress or the public. However, the discussions of volume in the Forest Plan are highly technical and can be misunderstood. I have asked the Forest Service to provide an analysis.

[Additional information follows.]

The Probable Sale Quantity (PSQ) calculation in the Plan, as with Allowable Sale Quantity (ASQ) calculations in other forest plans, does not include a product definition. The PSQ volume is based upon calculated wood fiber volume obtainable from trees meeting minimum tree diameter/log top diameter as described in individual Forest Plans. Such material may be sold as several different "products" as specified in the timber sale contract. The Final Supplemental Environmental Impact Statement for the Pacific Northwest Forest Plan says that "PSQ includes only scheduled or regulated yields from the matrix and does not include 'other wood' or volume of cull and other products that are not normally part of ASQ calculation" (Glossary, p. 13). This definition does not limit PSQ to sawlogs only. The "other wood" category includes "the volume of cull (wood that is decaying or too crooked for processing), submerchantable size material, or other products not considered as merchantable and not normally part of the allowable sale quantity calculations" (FSEIS, pp. 3&4-267 through 268). The "other wood" also includes all harvest from lands not classified as suitable for timber production; e.g., harvest from Late Successional Reserves. In simple terms, "other wood" includes: (1) all harvest of material not meeting utilization standards in forest plans, (2) all harvest from lands not classified as suitable for timber management, or a combination of (1) and (2). Thus, subtracting out the 10 percent "other wood" to determine "net sawlog PSQ is incorrect because it really represents actual PSQ in sawlogs and other products. In addition, net sawlog PSQ is neither a goal nor is it tracked for accomplishment.

The following table indicates the planned (PSQ) plus 10 percent other wood) and actual Forest Service timber accomplishments since the Plan was implemented.

(Volumes are in Millions of Board Feet)

Fiscal Year	Offered	Sold	Harvested
1994	223	226	642
1995	493	387	437
1996	681	793	672

In addition, for the total volume offered over the 1994-1996 period, the breakdown by product is estimated as follows:

77	percent sawtimber
14	percent pulp and other non-sawtimber products (5 percent posts and poles)
7	percent fuelwood
2	percent cull material

67. Question. Will your proposal to eliminate the timber purchaser road credits have any impact on the Forest Service ability to meet timber sale targets mandated by the President's forest plan record of decision?

Answer. There will be little or no effect on our ability to meet timber sale targets or to meet our objectives for improving forest health because the amount of road access is not significantly affected.

Forest Health Situation

68. Question. I constantly hear of overall problems with the health of America's forests, including the National Forest System? What is the status and what are you doing?

Answer. Generally speaking, our forests are in good shape. Data from our forest health monitoring program indicate this at the national level. However, there are regional areas where we have specific forest health issues of significant concern. These include the introduction of exotic plants and animals ranging from weeds to the gypsy moth, and fuel buildups in the interior and far West. Within the Department, primary responsibility for stopping the introduction of exotic pests and diseases rests with the Animal and Plant Health Inspection Service. As far as the Forest Service is concerned, we have requested sufficient funding for the Forest Health Management Program to deal with our more significant pest concerns. As discussed in response to other questions, we are proposing to increase hazardous fuel reduction treatments, which includes prescribed burning, from 750,000 acres per year in 1997 to 3,000,000 acres in 2005. We are establishing a new effort -- the Forest Ecosystem Restoration and Maintenance Fund -- to permit the Forest Service to use a diverse array of strategies for dealing with forest health problems. We have requested \$121 million for this initiative in 1998.

69. Question. Secretary Babbitt has recently made a lot of news by discussing changing fire management and forest thinning policies that also appear to

apply to the national forest system. Is Mr. Babbitt now speaking for the USDA?

Answer. As I noted in the response to questions 2 and 41, Secretary Babbitt gave the Department of Agriculture an advance draft of his remarks on fire policy given at Boise, Idaho on February 11, 1997. We provided comments which he incorporated. Both Secretary Babbitt and I have occasion to speak on Federal wildland fire policy, and I know of no inconsistency in our views.

70. Question. How important is it to establish an aggressive program for forest thinning and fuel reduction? How do you expect to be able to pay for all of that work?

Answer. The use of mechanical treatments, in conjunction with increased use of prescribed fire will be essential in restoring and maintaining ecosystem health. It is very important to establish an aggressive thinning program because allowing fires alone to achieve forest health objectives, even on a carefully controlled basis, is simply infeasible in many situations. Mechanical treatments such as thinning can reduce total treatment costs and have a multiplicity of benefits ranging from reducing the risk of escaped fires to helping to support local economies. Funding for thinning will come from resources appropriated timber stand improvement and fire operations. In addition thinning will be financed through the Knutson-Vandenberg Trust Fund and the Reforestation Trust Fund. Finally, the new Forest Ecosystem Restoration and Maintenance Fund will provide resources for dealing with forest health problems using a number of strategies including thinning. Altogether, the 1998 budget proposes to double the acres of precommercial thinning from the 1997 level.

71. Question. What is the role of commercial timber harvesting to help improve the stocking and health of the national forests?

Answer. Commercial timber harvesting plays an important role in improving the health of the National Forests. However, forest management practices, such as commercial timber harvesting designed to restore and maintain forest health will be different from sales used to produce timber as a primary objective. With an emphasis on forest health, smaller material will be removed, and there will be more commercial thinnings, salvage, and other treatments that involve only a portion of the trees on a site. Wood product values will be lower and logging costs will be higher. Following the fuels reduction that can be achieved during a commercial timber sale activity, fire can be reintroduced into many stands where it is needed to further the goal of ecosystem health.

KV Reforestation Fund Viability and Wildfire Suppression Costs

72. Question. The KV reforestation fund provides needed tree planting and habitat enhancement and is supported by timber purchaser receipts. The KV fund is now \$443 million in the hole because it has been used as the bank to fund emergency firefighting needs. There remains \$250 million from the FY 1997 appropriations act that is still unallocated. Why do you not request that those emergency contingency funds be released so the KV fund will not be in danger of being depleted?

Answer. The Knutson-Vandenberg Trust Fund (KV) has more than adequate balances to carry out the program of work scheduled for fiscal year 1997 and

we have no idea how severe the wildfire season will be this year. For fiscal year 1998, the Administration is proposing a governmentwide emergency contingency fund which would be available to finance wildfire suppression should annual appropriations be insufficient. Since 1997 is a bridge year, it seems reasonable to keep our options open and to hold the \$250 million for possible use in wildfire suppression. Should none or only a portion of the money be needed for that purpose, the remainder will be used to repay funds advanced from KV for fire suppression in earlier years.

73. Question. Weren't those emergency situations when the KV fund was used for wildfire support? What would have happened to the Forest Service ability to fight wildfires if the KV fund had not been used?

Answer. Clearly the severe wildfire seasons when the Knutson-Vandenberg funds were advanced for fire suppression represented emergencies. However, the trust fund still had adequate balances to carry out scheduled work, and repaying the advances in some of those years was not considered an emergency by the Administration or by the Congress. I do not like doing business that way, and that is why I worked within the Administration to develop a more rational method for financing fire suppression in the 1998 budget. Had the KV fund not been available, the Department would have had to use other funds available to the Forest Service or it would have had to request supplemental appropriations.

74. Question. Do you feel that it is vital that the KV supported projects are completed in order to mitigate the timber harvests that have already occurred?

Answer. I believe that carrying out the Knutson-Vandenberg (KV) program of work is vital. Not only do we have a general obligation to the public to complete the work for which the KV funds were collected, but we also are required by the National Forest Management Act as implemented through Forest Service regulations to be able to adequately restock areas within five years of final harvest when trees are cut for timber production objectives.

Lake Tahoe Presidential Summit

75. Question. We understand that President Clinton may convene a summit meeting to deal with development and pollution problems at Lake Tahoe. The Lake Tahoe regional planning authority has developed a long-range plan that includes \$700 million worth of projects and the U.S. Forest Service is a critical partner, managing 80% of the Lake Tahoe basin. Are you involved in discussions to use the federal government to solve Lake Tahoe problems?

Answer. The Department is involved in discussions with State and local governments and with other Federal agencies concerning a long-range plan. In addition, implementation of ongoing programs in the area involves continual dialogue among the many participants and stakeholders.

76. Question. When will the Lake Tahoe summit occur? Who will be involved?

Answer. The tentative schedule calls for the Lake Tahoe summit to occur in the spring or summer of 1997. We expect that all interested stakeholders will have an opportunity to be involved.

77. Question. Why is there a major federal role in the Lake Tahoe restoration when both states involved are well-to-do and the impacts are largely due to inadequately controlled urban and suburban growth?

Answer. The Forest Service is the manager for approximately 76 percent of the land in the Lake Tahoe Basin and is the primary outdoor recreation provider. The agency has a shared responsibility for Lake Tahoe region problems, particularly those which result from activities on national forest lands.

ADDITIONAL QUESTION FROM CHAIRMAN RALPH REGULA

Power Line

Question. Mr. Secretary as you know American Electric Power has a proposed 765KV transmission line from Wyoming, West Virginia to Cloverdale, Virginia and the potential for crossing the George Washington and Jefferson National Forest. It is my understanding that there has been some progress in clarifying for the states of Virginia and West Virginia that there has been no final decision in regard to crossing the forest land and that it is the forest Service's policy to rely on the states to determine the need for a project like this one. Is this correct?

Answer. That is correct. The Department has sent a letter to the Virginia State corporation Commission and to the West Virginia Public Service Commission reiterating the fact that no final Federal decision on the American Electric Power proposal has been made. The Commissions have been advised that the Forest Service will consider their assessment of need and route before completing the environmental analysis of the transmission line proposal, and before the Forest Service makes its final decision on whether to authorize American Electric Power to use and Occupy National Forest System land for transmission line purposes.

ADDITIONAL QUESTIONS FROM CONGRESSMAN JOE SKEEN

Global Climate Change

78. Question. Please provide information regarding the potential effects of climate change on U.S. agriculture and livestock production?

Answer. At the request of the Vice President, the Administration is now in the process of assessing the impacts of climate change on U.S. agriculture. The report should be available within several weeks. Climate is a major determinant of agricultural productivity, defining to a large extent the range of both crops and livestock. Climate impacts may be expected to include: weather variability, changes in pest distributions, and adjustment costs. There would also be changes in temperature, precipitation, and evaporative demand. A number of studies have been done on the potential effects of climate change on the U.S. These studies suggest that the net economic impacts of climate change on U.S. agriculture could be positive or negative. Regional effects will vary. I have asked the Department's Global Change Program Office to prepare a list of references.

[Additional information follows.]

References on the Impacts of Global Change on U.S. Agriculture:

D. Schimmelpfennig, J. Lewandrowski, J. Reilly, M. Tsigas and I. Parry. 1996. "Agricultural adaptation to climate change: Issues of long run sustainability." American Economic Review 740, Economic Research Service, USDA, Washington, DC.

R. Darwin, M. Tsigas, J. Lewandrowski, and A. Ranases. 1995. "World agriculture and climate change: Economic adaptations." American Economic Review 703, Economic Research Service, USDA, Washington, DC.

J. Reilly, 1995. "Climate change and global agriculture: Recent findings and issues." American Journal of Agricultural Economics 77:727-733.

R. Mendelsohn, W.D. Nordhaus, and D. Shaw. "The impacts of global warming on agriculture: A Ricardian analysis." American Economic Review 84:753-771.

Council for Agricultural Science and Technology. 1992. "Preparing U.S. agriculture for global climate change." Task force report; No. 119. CAST, Ames, IA. 96 pp.

79. Question. Provide similar information regarding the impact of these international treaties and agreements on global warming and climate change?

Answer. I have asked the State Department to provide this information.

[Additional information follows.]

The only existing international treaty with respect to climate change is the United Nations Framework Convention on Climate Change. This treaty was negotiated over an 18-month period beginning in February 1991, signed at the Earth Summit in Rio de Janeiro in June of 1992, and ratified by the United States, following advice and consent by the Senate, in October 1992. It entered into force in December of 1994 after ratification by 50 countries. The agreement now has 166 Parties. The Convention calls for developed country Parties to aim to return their emissions of greenhouse gases to their 1990 levels by the year 2000, and calls upon all Parties to formulate and implement policies and measures to address climate change. Historically, developed country emissions have been responsible for the vast majority of the increase in global concentrations of greenhouse gases; in the future, the bulk of the increase will come from emissions of developing countries.

If all developed country Parties adhered to their commitments, and reduced greenhouse gas emissions to their 1990 levels, the long-term trend of increasing global concentrations of greenhouse gases (which lead to climate change) would be reduced only slightly. However, few Parties (including the United States) have met the aim of the agreement, and developed country Parties emissions (as well as global concentrations) continue to rise. Noting that the hortatory language of the agreement was proving inadequate to satisfactorily address the climate change problem, and that no guidance on emissions reductions was provided for the post-2000 period, the Parties to the Convention decided at their first session to negotiate a new agreement. This agreement is to be concluded by the third session of the Parties (scheduled for Kyoto, Japan in December 1997). The mandate for the negotiations of this next step calls for setting quantified emission limitation and reduction objectives for developed country Parties, and while prohibiting setting new commitments for developing countries, reaffirms and calls for continuing to advance the implementation of existing commitments for these countries.

Negotiations on this next step are still underway. As targets and/or policies and measures for Parties have yet to be set, it is premature to say how the Kyoto agreement will influence global concentrations of greenhouse gases, and thus, climate change. Proposals for greenhouse gas emissions reductions offered to date, which seek to balance the environmental need to act with potentially very high costs from too abrupt reductions, have focused on relatively modest steps. Experts in the scientific and policy community believe that the long-term nature of the problem will require additional steps in the future--both to widen the group of countries working to reduce emissions, and to develop a regime strong enough to halt the rapid increase in atmospheric concentrations of greenhouse gases.

The Administration has been actively working to develop its own recommendation for an appropriate level for the next step in the international effort to combat the threat of climate change. To this end, it is analyzing (through an interagency process lead by Under Secretary of Commerce for Economic Affairs Everett Ehrlich) the consequences to the United States of various targets. Impacts on the agricultural sector both of climate change itself, and of mitigation strategies to address climate change are being considered in this analysis.

80. Question. Provide information on the estimated greenhouse gas emissions resulting from the production of crops and livestock in the U.S.

Answer. The primary concern is with carbon dioxide, methane and nitrous oxide. I have asked the Department's Global Change Program Office to provide some detail.

[Additional information follows.]

Both the Environmental Protection Agency and the Department of Energy's Energy Information Administration publish inventories of U.S. greenhouse gas emissions and sinks. Copies of the latest inventories are attached. In 1994, agricultural activities were responsible for 80 million metric tons of carbon equivalents (MMTCE), or approximately 5 percent of total U.S. greenhouse gas emissions.

Carbon dioxide is by far the largest contributor to global warming potential. Agribusinesses and forest products concerns contribute directly to CO2 emissions from their share of fossil fuel consumption and industrial processes. In addition, changes in land use (deforestation) and forestry activities both emit CO2 and have the potential to act as a sink for emissions. Agricultural practices such as tillage may contribute to greenhouse gas emissions, however, due to uncertainty surrounding the impact of these practices, emissions from these sources are not estimated.

Methane is second to CO2 as an anthropogenic source of the greenhouse effect. The contribution is large because it is 11 to 22 times (depending on the calculation) more effective at trapping heat in the atmosphere. Agriculture contributes a third of total U.S. CH4 emissions (61 MMTCE), with livestock and manure management accounting for 93%. Other sources include emissions from rice cultivation and agricultural waste burning.

Nitrous oxide is another minor greenhouse gas in the atmosphere, but is about 270 times more powerful at trapping heat than CO2. The primary source of anthropogenic N2O in the U.S. comes from fertilizer use and soil management activities. N2O emissions due to the consumption of synthetic and organic fertilizers were 45% of total U.S. emissions (18 MMTCE).

81. Question. Provide information on the net contribution of the U.S. forests and crops in the sequestration of greenhouse gases?

Answer. I am advised that the net carbon dioxide stored annually in U.S. forest land was estimated in 1992 at 123 million metric tons of carbon equivalents. This estimate includes aboveground forest carbon, wood products, and landfills. This estimate does not include soil organic carbon due to large uncertainty in the estimate. Forest land in the U.S. includes all land that is at least 10% stocked by forest trees of any size. This carbon uptake represents an offset of about 9 percent of the average annual CO2 emissions from U.S. energy-related activities during this period.

The net annual contribution of crops to the sequestration of greenhouse gases would be to soil organic carbon. Due to uncertainty in our estimates of this flux, this is not currently reported. The Department of Agriculture is doing research in this area.

82. Question. Outline the steps that agriculture may have to take in order to meet obligations that may arise under the treaty. If you could, provide the cost of what taking those steps would be.

Answer. At present, there are no specific steps that agriculture would have to take under the U.S. proposal. The U.S. has opposed harmonized policies and measures proposed by other Parties in the Berlin Mandate negotiations.

I am advised that several studies have proposed mitigation strategies for the agricultural sector.

[Additional information follows.]

IPCC. 1996. "Technologies, policies and measures for mitigating climate change." R.T. Watson, M.C. Zinyowera, and R.H. Moss (ed.). IPCC, Geneva. 85 pp.

Hedger, M.M. 1996. "Agriculture and forestry: Identification of options for net GHG reduction." Organization for Economic Cooperation and Development Annex I Expert Group on the UNFCCC. "Policies and Measures for Common Action" Working Paper 7. OECD/IEA, Paris.

EPA. 1995. "Climate change mitigation strategies in the forest and agriculture sectors." U.S. EPA. EPA 230-R-95-002, Washington, DC.

83. Question. What would these actions do to the competitiveness of American agriculture when it would have to compete with nations with either no controls or as the least less lower standards than the U.S.?

Answer. The Administration is engaged in a comprehensive analysis and assessment of the economic, trade, competitiveness and jobs impacts of various emission targets that could be the subject of negotiations. Under Secretary of Commerce for Economic Affairs, Dr. Everett Ehrlich, is leading the effort with involvement from the Departments of Energy, Commerce, EPA, and Treasury, among others. The Department of Agriculture's Chief Economist will lead the analysis of the impact of any new agreement on America's agricultural sector and our farmers, ranchers, and consumers. The analysis will be provided when the results become available.

84. Question. Please indicate what has been the USDA presence in these international discussions, the level of participation in terms of rank and the extent of USDA suggestions for changes in the agreement that would protect agriculture.

Answer. Deputy Secretary of Agriculture Richard Rominger represents the Department of Agriculture in policy discussions regarding the U.S. position in the climate change negotiations.

ADDITIONAL QUESTIONS FROM CONGRESSMAN DAN MILLER

Sugar Program

85. Question. At the request of Senator Bob Dole, in 1995 the USDA updated their study, Equity Analysis of Farm Legislation Since 1985. Big Sugar's political power is starkly apparent when one considers that the federal government subsidizes corn at \$34 per acre, wheat at \$23 an acre, while sugar growers are lavished with a \$472 acre subsidy. Now that Congress has passed the FAIR farm bill, could the USDA reanalyze commodity support levels?

Answer. While we have no immediate plans to update the equity analysis completed in 1995, we anticipate that such an analysis would be part of a broader analytical review of the farm bill and policy options for the future to be conducted in conjunction with the Commission on 21st Century Production Agriculture. The Commission, established by the farm bill, is charged with evaluating the impacts of the farm bill and recommending the appropriate future relationship of government with production agriculture. The members of the Commission are to be appointed by October 1, 1997, and the initial report is due to Congress by June 1, 1998.

Official Time

86. Question. Do you have any means by which to monitor the amount of official time in your Department -- what about the individual agencies?

Answer. It is my understanding that USDA employees record official time spent performing union-management activities by using specific transaction codes to identify such activity on their time and attendance reports which are entered into USDA's National Finance Center (NFC) automated payroll/personnel system. The data is available from the NFC for the past 26 pay periods or one year. However, the data is not compiled on a yearly basis by the Department.

In terms of the individual agencies, the Department has 89 different bargaining units, with 72 collective bargaining agreements. All of the units and agreements are at the agency or lower level. Specific procedures on the use, control, and monitoring of official time are contained in each of the 72 collective bargaining agreements.

87. Question. Have you noticed a significant increase or decrease in the use of official time over the last few years?

Answer. As I indicated previously, the Department does not maintain data by year on the amount of official time used by employees, so we are unable to determine if there has been a significant increase or decrease.

88. Question. Can you provide for the record a list of allowable official time duties under the agency-union agreements and an estimate of the amounts of official time utilized by employees?

Answer. The kinds of representational functions for which official time may be granted have been negotiated by local management and unions in the 72 different collective bargaining agreements in USDA. What may be granted in one agency may not be allowable in another. Some examples of such activities include representing employees in grievances, negotiating agreements,

representing employees in formal discussions, and partnership activities. The last 12 month period for which data was checked by the Department on the use of official time was for the period from September 17, 1995, to September 14, 1996. For this period 907 employees spent 132,227 hours performing union-related representational work on official time.

Political Fund Raising

89. Question. Mr. Glickman -- just to check, did you during the last election cycle make any phone calls from your office for donations to either the Democratic or Republican party?

Answer. No, I did not solicit donations for either party using the phone in my office.

Methyl Bromide

90. Question. What steps is the USDA taking to find an alternative to methyl bromide? Will we have an alternative by 2001? Will you, as Secretary of Agriculture, work within this Administration and with House Members like Vic Fazio and Thomas Bliley to make certain that our farmers have a level playing field in 2001?

Answer. The Department has placed a very high priority on finding an alternative to methyl bromide. The Agricultural Research Service and the Forest Service are devoting about \$15.4 million and nearly 50 scientist years to this effort in 1997 and we have proposed to continue the effort at the same level in 1998. A number of promising developments have occurred, but it is too early to predict that we will have alternatives for all methyl bromide uses by 2001. I am committed to working both within the Administration and with the Congress on this matter.

ADDITIONAL QUESTIONS FROM CONGRESSMAN DAVID SKAGGS

I am concerned about imbalances in the funding for Forest Service activities among the various regions into which the National Forests are grouped. For example, I understand that in fiscal year 1997, regions 1 through 4 -- that is, the Intermountain West -- received only about 15 percent of the Forest Service's research funds, although those regions include more than 50 percent of the total land area in the National Forest System. Further, I believe that in the current fiscal year funding for all Forest Service activities in the four Intermountain regions amounts to about \$5.98 per acre, while those activities in regions 5 and 6 are funded at about \$12.89 per acre. There is a similar imbalance in funding for management of recreation, where the 1997 funding level for the Intermountain regions comes to about \$4.29 per acre, compared with about \$9.54 per acre in regions 5 and 6.

91. Question. Are these comparisons accurate? If so, will you direct that the Forest Service review the allocation of funds among regions, and take steps to redress this evident imbalance?

Answer. The comparisons are probably accurate, but their relevance is questionable. The Forest Service is continually working to refine the factors or criteria that are used as the basis for allocating funds to field units. The agency began using a criteria-based approach about three years ago in response to the need for better program justifications that can link funded activities to program goals and objectives. This should also improve equity in allocations. Criteria establish a rational basis for allocating resources and assist in communicating the reasons individual units get funded at a specific level. The agency focused on identifying differences among units in resource conditions, workload, production capabilities, complexity and other factors. The agency has made significant progress in identifying the relevant factors to guide allocation decisions for each program. For some programs, the complexity of the job is related to the size of the land base being managed. In these instances the appropriate land base measure is included in the program's allocation criteria. It is never the only criteria for a program and for some programs it is not even relevant.

U.S. DEPARTMENT OF AGRICULTURE

U.S. Forest Service

THURSDAY, MARCH 20, 1997.

U.S. DEPARTMENT OF AGRICULTURE

U.S. FOREST SERVICE

WITNESSES

MIKE DOMBECK, CHIEF, FOREST SERVICE

DAVE UNGER, ASSOCIATE CHIEF

JANICE McDOUGLE, ACTING DEPUTY CHIEF, NATIONAL FOREST SYSTEM

BARBARA WEBER, ACTING DEPUTY CHIEF, RESEARCH

JOAN COMANOR, DEPUTY CHIEF, STATE AND PRIVATE FORESTRY

CLYDE THOMPSON, ACTING DEPUTY CHIEF, ADMINISTRATION

RON STEWART, ACTING DEPUTY CHIEF, PROGRAMS AND LEGISLATION

STEVEN SATTERFIELD, DIRECTOR, PROGRAM DEVELOPMENT AND BUDGET STAFF

Michael P. Dombeck
Biographical Information

Dr. Michael P. Dombeck, 48, became the 14th Chief of the Forest Service on January 6, 1997.

He was born on September 21, 1948 in Stevens Point, Wisconsin. It was here in northern Wisconsin's lake country that his appreciation for natural resources was cultivated. Dombeck worked as a fishing guide in the region for 11 summers. He earned undergraduate and graduate degrees in biological sciences and education from the University of Wisconsin-Stevens Point and the University of Minnesota. He earned his doctorate in fisheries biology from Iowa State University and is noted for research contributions on muskies and lake habitat management. In addition, Dr. Dombeck has authored numerous scholarly publications and made frequent national as well as International scientific presentations.

Dr. Dombeck taught biology, chemistry, science, zoology, and fisheries management at public schools and universities. He spent 12 years with the Forest Service primarily in the Midwest and West. In his last Forest Service post as National Fisheries Program Manager in Washington, DC, he was recognized for outstanding leadership in developing and implementing fisheries programs and forging partnerships. He also spent a year as a Legislative Fellow working in the United States Senate with responsibility for natural resource and Interior appropriations issues.

Dr. Dombeck was named Acting Director of the Bureau of Land Management (BLM) in February 1994. He has focused on two major objectives: creating a long-term BLM vision to improve the health of the land and reinventing the agency to reduce red tape, streamline functions and improve customer service.

As Acting Director, Dr. Dombeck has overseen BLM's management of 270 million acres of surface land and over 570 million acres of mineral estate. He also has managed a budget of more than \$1 billion and a work force of about 10,000.

He resides with his wife and daughter in Northern Virginia.

Career Summary:

2/3/94 to present - Acting Director, Bureau of Land Management

9/93-2/94 Chief of Staff to Assistant Secretary for Land and Minerals Management, Department of Interior, Washington, DC

1/93-9/93 Acting Asst. Sec./Dep. Asst. Sec., Land and Minerals Mgmt., DOI, Washington, DC

1989-1992 Science Advisor and Special Assistant to Director, Bureau of Land Management, Washington, DC

1987-1989 National Fisheries Program Manager, Forest Service, Washington, DC

1985-1987 Regional Fisheries Program Mgr., Pacific Southwest Region, USDA Forest Service, CA

1978-1985 Fisheries Biologist, USDA Forest Service, Michigan and Wisconsin

1971-1973 Instructor of Zoology, University of Wisconsin - Stevens Point

1966-1977 Fishing guide, Hayward, Wisconsin

Professional Affiliations:

American Fisheries Society -(Certified Fisheries Scientist) - Society of American Foresters - American Institute of Fishery Research Biologists - Gamma Sigma Delta, Honorary Society (Agriculture) Sigma Xi, Scientific Research Society Board of Governors - Freshwater Fishing Hall of Fame

Education:

Ph.D., Fisheries Biology, Iowa State University

M.S., Zoology, University of Minnesota

M.S.T., Biology & Education; B.S., Biology & General Science
University of WI-Stevens Point

Personal Interests:

Born and raised 25 miles from a town of 1,500 people, he remains a very active outdoorsman. He regularly spends time hunting, fishing, boating, and camping.

Mr. REGULA [presiding]. Thank you for coming, and we've had an interesting discussion this far. The statement of each of you will be made a part of the record, and, Mr. Dombeck, if you'll summarize, we'll just move ahead.

OPENING REMARKS

Mr. DOMBECK. Well, thank you, Mr. Chairman, Mr. Yates, and committee members. This is my first time appearing before this subcommittee in this job, and I just want to thank you and the members for the very cordial relationship that we had in my previous life as Acting Director of the Bureau of Land Management. I guess, as you said earlier, my friends probably thought I did not have a big enough challenge, so they thought they would give me a bigger challenge with the Forest Service.

But what I want to say is—and I think Mr. Taylor made the point—that we are an organization full of the best natural resource managers in the world from the standpoint of silviculturists to hydrologists, to engineers, to biologists, to interpreters and wildland firefighters. I think I am very, very proud—in fact, humble—to be Chief of the organization of so many people that know so much more than I do about their various specialties. We as a nation I think need to be proud of that.

But I also recognize the ongoing debate that we have over natural resource management in this country and the future of the National Forests and Grasslands, and in fact all public lands. I think the fact is that the debate is healthy, and as our society gets more complex, the way to move forward will be to embrace people and to educate more. In fact, I have got to say that, of all of the people that I have talked to in the, say, about three months or so since I came into the job, what I continually hear is three themes: working with people, knowledge, and of course the land. That is what it is all about.

And one of the themes that you will hear from me time and time again is “collaborative stewardship” and the need to work with people. The fact is that we are not here to be the dictators of what will happen on the land. We are here to be the facilitators, the educators, the coordinators, the professional experts, the individuals that come to the table with the expertise to help not only this committee, but the American people, the Congress, and the administration make decisions on how we will move forward with public land management.

And I have got to say I know there is a debate out there. I would hope that we can spend as much time as we can talking about the positives and our capability to move the ball forward, knowing that a lot of that debate is going to be there just because of the polarization that we have in society.

And I just want to mention some of the successes that we have had in forest management in this country. In Forest Service Research, on the Wayne National Forest, we are working with Meed Paper Corporation to better understand how mixed forest communities in southern Ohio have responded to prescribed burning. This knowledge is not only benefitting the Meed Paper Corporation to make better business decisions, it is also benefitting the Forest Service to make better land management decisions.

In North Carolina, in fact, Mr. Taylor, I have been to the Cradle of Forestry in America. I am very proud that that project is being completed because I think part of what we need to do in forestry and all land management is education, and building a support base so we can move forward in a collaborative, cooperative manner. It is, I think, one of the key challenges that I have; I recognize that challenge and want to work with you to do that.

I was very proud of the fact that the Forest Service was maybe the only agency to ever get an Olympic Gold Medal for the cooperation of the Cherokee National Forest and the Olympic Whitewater Forest, and I hope that I am in this job long enough to enjoy it—since I like to get out as much as I can and see that.

Of course, in northern Illinois we have the Midewin National Tallgrass Prairie, the newest unit in the National Forest System that I think is highly valued there. Much work going on in Illinois concerning rehabilitation of wetlands and working with the Natural Resource Conservation Service and American Land Conservancy. I think in every State there are amazing things going on that I certainly am proud of.

And I want to close by saying that this year the President's budget is focused on three things: to restore and protect ecosystems; to provide multiple benefits within the capabilities of ecosystems; and to ensure the organizational effectiveness of the agency by continuing to move forward, to streamline, and to become more efficient.

I would be happy to answer any questions. I have the experts with me, realizing that I am not the ultimate expert. Dave Unger is the Associate Chief of the Forest Service. Steve Satterfield knows all the numbers, and the Deputy Chiefs for State and Private Forestry, Research, and the other National Forest System are also in the room to assist, to provide you with the best information that we can here this year.

[The prepared statement of Mike Dombeck follows:]

Statement of
MIKE DOMBECK
CHIEF
FOREST SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

House Committee on Appropriations
Subcommittee on Interior and Related Agencies
March 20, 1997

Mr. Chairman, Representative Yates and Members of the Committee:

I am pleased to appear before this committee for the first time as Chief of the Forest Service. As some of you may know, I am no stranger to the Forest Service, having grown up 25 miles from a town of 1,500 people in northern Wisconsin's beautiful lake country, in the Chequamegon National Forest.

I have worked at various levels of the Forest Service in the Midwest, West, and Washington, D.C., before going to the Department of the Interior. I am glad to be back.

I would like to begin by acknowledging the ongoing debate in this nation over how national forests and rangelands should be managed. This debate is fine. In fact, I believe it is healthy. Debate and information are the essence of democracy. The people we serve, all of the people, are now more fully engaged in defining how to move from point A to point B. The task of the Forest Service is not to dictate the course or the outcome. Rather, we need to be the facilitators, the suppliers of knowledge and expertise; the professional resource managers, the educators and communicators who help people search for solutions.

Today, faced with more competing demands, new pressures on the land and greater challenges than ever before, resource management has become contentious. We in this room can help to change that. I believe that if we work together, we can usher in a new era of resource stewardship and a deeper commitment to conservation. A commitment marked by a willingness to hear all sides of the debate. A commitment to remain open and responsive to new ideas, new values, and new information. A commitment to leave our lands healthier and our waters cleaner.

I am not so naive to think that people will not sometimes disagree. Our task as public servants and resource professionals is to focus on, and build from, the many more areas of agreement. To regain the trust of the American people. To demonstrate to the rest of the world that yes, people of good will can come together and find a way to live sustainably on the land.

I call this commitment to working with people to maintain and restore the health of the land, collaborative stewardship. Collaborative stewardship rests on one very basic premise: we simply cannot meet the needs of people, if we do not first secure the health of the land.

To get a better sense for how people feel the Forest Service should pursue collaborative partnerships, I have recently talked with many in the Administration, members of Congress and their staff, former Forest Service Chiefs, employees, retirees, and conservation and industry leaders. In all of my conversations, three themes are repeated: people, knowledge and land. It strikes me that that's what the Forest Service is all about -- using knowledge to conserve and restore the health of the land for the benefit of the nation's people.

I'd like to share with you some examples of how Forest Service Research and management are meeting the needs of people through better land management decisions and more effective use of knowledge. For instance:

- Forest Service Research and the Wayne National Forest are working with the Mead Paper Corporation to better understand how mixed-oak communities in southern Ohio respond to prescribed burning. This knowledge enables Mead Paper Corporation to make better business decisions and the Forest Service to make better decisions on the land.

- To help meet the growing recreation demands in Ohio, extensive trail work has been accomplished on the Wayne National Forest -- 105 miles of Off-Road Vehicle (ORV) trails and 64 miles of horse trails have recently been completed.

- On Pennsylvania's Allegheny National Forest, an Adaptive Management Study will help us develop new technologies to regenerate northern and upland hardwood stands in this region. Again, this helps to provide wood fiber for the market and restores a historic species to the region for the enjoyment of all.

- In Arizona and New Mexico, good progress is being made with the tribes to implement the Native American Graves Protection/Repatriation Act. Already, over 5,000 remains and 15,000 artifacts have been identified. This type of cooperation with the many tribes of the southwest demonstrates Forest Service's respect for the traditional cultures of American Indians.

- In New Mexico, we are working with the Malpai Borderlands Group -- a coalition of state and Federal agencies, conservationists and local ranchers -- to protect and restore rangelands through joint planning, controlled burns and selective "grass-bankings".

- In North Carolina, exhibits at the "Cradle of Forestry in America" complex are nearing completion. These exhibits are expected to be ready in time for the regular opening this spring and should greatly enhance the visitor experience at this location.

- Also in North Carolina, implementation of the new Recreation Fee Demonstration Project will enable us to invest a portion of these receipts to repair and maintain various recreation facilities of the National Forests of North Carolina. Again, this will help enhance our ability to meet the recreation demands in this state.

- The Pacific Northwest Region of the Forest Service is aggressively pursuing the reduction of fuels from the National Forests in Washington state. Not only does this improve resource protection against catastrophic wildfires, but it improves ecosystem health as well. In addition, implementing the Northwest Economic Adjustment Initiative through close cooperation with state and local governments is helping many of this region's timber-dependent communities move towards more diverse and sustainable economies.

- The National Forests of Florida have the largest prescribed fire program in the National Forest System. Last year, 154,000 acres were burned without incident and provided a significant contribution to the health of these NFS lands.

- On the Cherokee National Forest in Tennessee, the Olympic Whitewater initiative was, and continues to be, a successful contribution for the Forest Service and surrounding communities. As a result of this type of

project, commercial rafting will continue to be one of the leading sources of jobs in this region.

-- In northern Illinois, almost \$600,000 in contributions from private investors, along with the recent transfer of 15,000 acres from the US Army, has made the Midewin National Tallgrass Prairie the newest unit to the National Forest System.

-- Elsewhere in Illinois, the Forest Service acquired either conservation easements or title to 5,000 acres of marginal farmlands along the Mississippi river floodplain. In cooperation with the American Land Conservancy and the Natural Resources and Conservation Service, these lands will be converted to wetlands which will help buffer the effects of flooding and provide crucial wildlife habitat.

-- In Colorado, the Boulder Community Volunteers have won the Chief's National Volunteer's Award four times. These volunteers are a shining example of how local people can come together to help the Forest Service achieve its mission of caring for the land and serving people. Elsewhere in Colorado, we are working with Dow Chemical and the counties to develop alternative methods of controlling noxious weeds.

-- In Virginia, the Guest River Rails-to-Trails project on the Jefferson/George Washington National Forest represents a good example of partnerships at work. The abandoned railroad grade that runs the length of the Guest River Gorge was donated to the Forest Service by the Norfolk Southern Railroad. Through subsequent Forest Service land acquisitions and additional grants and local investments, a beautiful hiking and biking trail, easily accessible within 2 hours to over 700,000 residents, is now available.

The rest of my testimony outlines the key funding priorities for fiscal year 1998 and re-emphasizes many of the points the Secretary has already made.

Accountability

Our first priority is to the land and the people who use and care for it. Our responsibility is to deliver the goods, services, and values for which public lands are cherished. To deliver healthy lands and waters. To deliver a sustainable supply of timber and forage. To deliver environmentally benign energy and minerals development. To deliver better hunting and fishing. To deliver quality recreation experiences, and to do all of the above through an efficient, and accountable organization.

Every forest supervisor, on every forest, must be held accountable for conserving and restoring the health of the land. Clearly, we must deliver sustainable supplies of wood fiber for American homes; forage for livestock; and minerals and energy that help support healthy economies. But as I said earlier, the health of the land must be our first priority. Failing this nothing else we do really matters.

THE FY 1998 PRESIDENT'S BUDGET:

This year's budget proposal reflects the Forest Service's priorities and programs within the agency's mission "CARING FOR THE LAND AND SERVING PEOPLE". It focuses on implementing the Forest Service's strategic long term goals:

- * Restore and Protect Ecosystems
- * Provide Multiple Benefits within the capabilities of ecosystems
- * Ensure Organizational Effectiveness

Within this framework, in FY 1998 we will make a major effort to improve financial and ecological accountability. Three significant initiatives -- the road building program, fire fighting funding and the salvage fund -- illustrate this.

Many people question the logic in trading roads for National Forest trees, especially given the current expansive network of roads on the National Forest System and the cost of maintaining many of these roads once they are built. The time has come to address our transportation needs in a different way. Our Budget proposes to discontinue the use of Purchaser Credit which will make the road a direct cost of the timber sale. Bid prices for timber sales are expected to decline commensurably. Forest Service engineers will continue to work with private contractors to ensure Forest Service roads meet our standards.

Funding mechanisms for our fire programs need to change. Discretionary spending levels cannot accommodate the escalating costs of fire suppression, which have increasingly been met through emergency spending outside the budget planning caps. We have proposed two main changes: First, we want to ensure that funds to fight fire are available to our fire fighters when wildfires begin. Second, we want to better ensure that we capitalize on opportunities to use management techniques that reduce catastrophic wildfires. Under our proposal, between \$30 and \$50 million is recommended for hazardous fuels reduction -- a 25 to 100 percent increase over 1997. The cost of reducing much of the fuels buildup before a wildfire occurs, pales when measured against the costs of putting out intense, fuel-driven wildfires. These are two significant improvements that address our financial and ecosystem needs, and I hope you will support us in this effort, as you have in the past.

We are proposing a change in the current salvage sale fund so that funding we receive more closely reflects the type of work that we are doing in the field. We learned several lessons from the emergency salvage rider. We learned that active management is necessary to restore ecosystem health. We also learned that the current system can create financial disincentives to maintain the health of the land.

Our budget proposal retains the existing Salvage Sale fund account and its primary function -- funding the removal of dead or dying timber on National Forest System lands. A separate, distinct account is proposed to fund ecosystem health and restoration projects. This fund would be called the "Forest Ecosystem Restoration and Maintenance" fund -- or FERF. This is an important first step to provide funding for necessary watershed restoration work that is not directly tied to the timber receipts of each separate forest. I hope you can agree with our motivations and objectives. We must accelerate the restoration of our publicly owned lands and waters. This new fund draws from several existing sources and would begin fiscal year 1998 with 121 million dollars for restoration efforts. As I testified to Congressman Chenoweth's Committee, we must look at these restoration efforts as investments -- investments that will not pay dividends for many years. However, the cost of not investing grows exponentially every year.

There are also two more emphasis items within the President's FY 1998 Budget:

The President's Forest Plan for the Pacific Northwest:

Continuing to implement provisions of the President's Plan is a priority in FY 1998. The budget includes \$107.4 million to carry out critical work for watershed protection, monitoring, timber harvest, adaptive management and development of rural communities' long-term economic strength.

Hazardous Waste:

Funding for the FY 1998 Forest Service hazardous waste work is provided within the USDA central fund for this purpose. For FY 1998 \$14.25 million is identified for the Forest Service. Efforts will be targeted on cleaning up hazardous waste sites identified on national forest lands, especially identifying responsible parties under CERCLA so that they, not the taxpayers, pay the cost of cleanups.

ADDITIONAL APPROPRIATIONS HIGHLIGHTS:

This year's budget reflects continuation of our research program at last year's level. Science is critical to our program as a nation. As I said before, we are about knowledge and our research program produces much of the knowledge necessary to address contemporary issues. We will continue to adjust our efforts to meet changing and emerging national and regional issues and maintain a broad based scientific capability.

Our overall State and Private Forestry program is also at last year's level. However we are proposing to place a greater emphasis on our Stewardship Incentive Program (+\$5.7 million). In addition, State and Private Forestry, the National Forest System, and Forest and Rangeland Research would jointly expand the scope of forest health monitoring to cover 60% of the forest land in the lower 48 States. This program is built on a strong partnership among the Forest Service, the National Association of State Foresters, and the Bureau of Land Management. The program includes all forest ownerships; Federal, State, and private.

Under the National Forest System appropriation, we are requesting an increase of \$50 million. This increase is targeted for Recreation Use, Wildlife and Fish Management, Rangeland Management, Forestland Management and our Soil, Water and Air Program.

Our efforts in the Reconstruction and Construction area will be targeted at extensive reconstruction needs with emphasis on health and safety items such as contaminated water systems.

Conclusion

Finally, I believe the Forest Service mission -- caring for the land and serving people -- is more important than ever. Within the overall plan to balance the nation's budget by the year 2002, these proposals will help us to meet our highest priorities and ever increasing public demands.

That concludes my testimony, Mr. Chairman. I would be happy to answer any questions you or members of the Subcommittee may have.

FOREST HEALTH

Mr. REGULA. Well, I have a number of questions for the record. I might ask, in general, what is the overall status of forest health, and what do you prospectively contemplate doing to ensure that it's even better in the future?

Mr. DOMBECK. I spent last week traveling in northern California and Oregon looking at specific forest health issues with our field managers. What I have got to say is we have a tremendous job on our hands. But our ability to move forward is not hampered by lack of technical knowledge.

I also want to say that we need to continue to invest in science and technology because that is the foundation as we move forward. We are really sort of in a social debate. The people on the Deschutes National Forest and the resource managers there indicated that they can move forward as long as the forests look like forests when they are done. And I notice that every gas station in town, and every place, has sort of got the scenery in the background. I think in any part of the country those qualities are appreciated. I grew up around the National Forests in northern Wisconsin and worked in the woods as a guide. The people that I grew up with, friends and relatives, made a living in that country. And it seems like, Mr. Yates, I know somebody from every suburb of your metropolitan area that came on vacation there, but—

Mr. YATES. I want to know whether you were successful in guiding them to muskie fishing. [Laughter.]

Mr. DOMBECK. As a matter of fact, yes.

Mr. YATES. You were?

Mr. DOMBECK. Yes.

Mr. YATES. You've got muskies?

Mr. DOMBECK. Yes. And the next time I come—

Mr. YATES. I went up there looking for muskies and I never found them. I don't think you've got any up there. [Laughter.]

Mr. DOMBECK. I will bring pictures the next time I come to your office.

At any rate, I do not want to underestimate the challenges that we have from the standpoint of forest health. We recognize that we have got to make investments in land and investments in watershed. We have got to be as aggressive as we can from the standpoint of using every possible tool—from timber sales to thinnings, to prescribed fire, to every technology that we have. We have stands that might have had 100 stems per acre under natural conditions that in many cases now, because of wildfire suppression over several decades, might have 2,000 to 3,000 stems per acre. The encroachment of fir in Ponderosa pine stands not only have lower economic value, but the fact is that fir are competing with the larger trees for water, for nutrients, and the dense crowding allows for bug infestations. As a forester and a silviculturist, I think Congressman Taylor knows all of the details. Of course, when a fire gets in there, when we have an incredibly dry year, it is no different from the disastrous effects of a hurricane, an earthquake. It is a tremendous challenge we have, and it is real, and we need to get on with it.

RECREATION

Mr. REGULA. Since recreation is such a big part of the Forest Service—the last number I heard was triple the visitor days of the Park Service—do you feel that you're adequately financed to meet security, safety needs of the forest visitor?

Mr. DOMBECK. Well, managing recreation is, in a sense, a tremendous opportunity, but it is also a tremendous challenge because recreation visits are skyrocketing in the National Forest System. As you said, we have more visitors than the National Park System.

The thing about having grown up near a National Forest that I think is unique is not only are National Forests in many cases a destination vacation location for more people, we are also the place where local people come to hunt and fish and play and recreate. We do not have to worry about no-trespassing signs.

But from the other standpoint, recreation is like any activity on the forest: it needs to be managed to prevent damage to resources. People demand services. Our recreation program, being able to bolster that in a balanced way, is going to be a challenge both, I think, for the committee as well as for those of us in the Forest Service.

FEE IMPLEMENTATION

Mr. REGULA. Are you implementing the fees wherever it's appropriate?

Mr. DOMBECK. Yes, we have implemented the demonstration fee project in, I think, 15 locations. We have another 47 ready to go online before the end of the fiscal year. We look forward to the success of that program.

Mr. REGULA. Mr. Yates.

Mr. YATES. I'll pass. I want to hear other questions first.

Mr. REGULA. All right, Mr. Nethercutt.

Mr. NETHERCUTT. Thank you, Mr. Chairman.

Welcome, Mr. Dombeck. I appreciated your coming to my office yesterday. We had a nice discussion. I wish you well in your new assignment, and it has been a pleasure to have you here previously as the Director of BLM. Again, I look forward to working with you.

EAST SIDE ECOSYSTEM STUDY

You were in the room when I was talking with Secretary Glickman about the East Side Ecosystem study and my concern about implementation. My sense is, hearing Mr. Lyons' testimony, that there is no money that is requested for implementation. That causes me some concern. I look at the delays attendant to this study and I do recognize it will probably be another year before we get a final EIS. Then we would be looking at more time for implementation.

Based on the East Side Ecosystem validation reviews by the various forests, it appears to me that we're not going to have any real harvest coming out of the forest in any great volume. In other words, less than there has been in the past. I would appreciate having your comment on the implementation. I am not trying to argue with the study itself here, but I'm trying to get some really clear sense of whether you all are thinking about the implementa-

tion phase. It is nice to study and get a lot of science, but if it's going to take two years to implement an alternative, and who knows where the money's going to come from, we're going to have some very serious problems on the ground for people who make their living on the forest. Could you comment for the record, please?

Mr. DOMBECK. Yes. First of all, let me say that in my job I am fully committed to multiple use. I think we need to recognize the importance of silviculture, watershed management, wildlife management, recreation management, as we move forward. What we have is sort of building on some of the previous dialog on this issue. We have an interaction of social values we are dealing with. The interests of more and more local people are involved in everything that we do.

I was a little kid at the very, very tail-end of sort of the lumber-jack era in northern Wisconsin. At that time the demographics of those communities were far, far different than they are today. In fact, I have got to tell you that I lived on a lake that had muskies in it, and grew up on that lake in a house with a picture window that faced the road.

Mr. YATES. It wasn't Lake Minakwa, was it?

Mr. DOMBECK. No, it was not, no. [Laughter.]

It was one of the many moose lakes.

But the fact is, about 1965 to 1970 the values began to change: the picture windows now face the lake. We have experts and people in various communities—from the Bend, Oregon to the Aspens to the Tellurides, to those kinds of communities that are very diverse. Somehow, as we get through this debate, we have got to be as inclusive as possible to build the support we need to move forward because I am one that believes that natural resource management is good stuff. It is about healthy forests and hunting and fishing. I am perplexed by the level of debate associated with the way I spend my time and my staff spends time. We need to move forward as quickly as we can. It needs to be based on science.

I see us in a transition now: rather than individual, isolated timber sales that we would offer, society is now demanding that we look at things in the bigger picture. People are now wondering about the spatial and temporal effects of what we do as we see shots of the globe from 30 years ago. I think the amount of litigation that we have been faced with, and so on, is all attendant to this now.

To your specific question—"Are we going to sell more timber or less?"—I have not looked in detail at all the preferred alternatives. What I can say is, I think that will largely be dictated by social as well as the technical things. The course that I intend to steer in this agency while I am here is that what we do has got to be based on science, using the best techniques, and what I am paid to do is work within and implement the laws that we have.

Mr. NETHERCUTT. Well, let me just follow up and just say to you: I hear what you're saying and I understand that, but implementation is a very important part of the process, judgments about how the forests are used for the multiple uses that you've identified, and I support those multiple uses, but if there's no money to implement the science, then you're going to have a problem.

Mr. DOMBECK. That would be a problem.

Mr. NETHERCUTT. And if you spend all your time on science and no money on management and implementation, or try to find some money somewhere else, you're going to have problems.

ROADS

The President's budget is knocking \$12 million out of the Forest Service road program. Now how are you going to get into the forests to manage them, to reduce fuel loads, to thin overstocked areas, to do your prescribed burning? The purchaser credit road program is eliminated. This is a very important program for small timber companies trying to implement the programs that you all are scientifically studying and coming to some judgments about.

I'm very concerned about the reality of life in terms of doing that which you want to do. It sounds very nice, but there seems to be no planning. I've asked every single agency that's affected by this East Side study, "What have you got in the way of implementation money?"

They have responded, "What? Implementation? Well, we'll have to figure that one out."

I think we're headed down the road, with no pun intended, to some very serious problems, and I just say that to you advisedly with the hope that we can work with you. I look for the answer to the question that given your goals and desires to implement a multi-use concept, Why are you cutting back roads and the timber purchaser road credit program? This doesn't square, in my judgment. Now maybe there's some justification for it.

Mr. DOMBECK. Well, I certainly will be the first to say that we have got some tremendous challenges in front of us as we move forward. From the standpoint of your concerns about the roads, I am hopeful that—is it purchaser election?—

Mr. SATTERFIELD. Yes, sir.

Mr. DOMBECK [continuing]. That we will have the capability to lessen the impacts on the small operators. We will be working with you closely, and the committee here closely, as we move forward. We have got to do the high-priority things. We have got to manage forests in such a way that we manage them before they start to unravel. We have got to increase the time horizon available to us to look at issues, so we can go in there and deal with them. Because the thing that is perplexing to me is the fact that I do not know how much money we spend on wildland firefighting in this Nation. It is a lot, nearly a billion dollars. Just think, if we could invest portions of that into fixing things and managing—

Mr. TAYLOR. Timber salvage—

Mr. DOMBECK [continuing]. The appropriate things, rather than making that investment when we hit the emergency room.

Mr. NETHERCUTT. You and I have talked about the EPA and Department of Ecology constraints in the State of Washington relative to burning and particulate matter in the air. We're going from PM 10 down to PM 2.5, but, yet, you want to have prescribed burns. Again, it seems that one hand doesn't know what the other hand is doing. I won't make that judgment, but all evidence sure seems to look that way. There's a lot of science going on and experimentation going on, and I realize the need for some of that, but I think

there has to be a practical application of that science at some point, and sooner rather than later.

Thank you, sir.

Mr. REGULA. Mr. Dicks.

TIMBER COMMITMENT IN NORTHWEST

Mr. DICKS. Well, I want to welcome our new Chief, Mike Dombek, and I appreciate very much the opportunities that I've had to talk to you about your program. I think you were here when I asked a question of the Secretary and Mr. Lyons about meeting the 1 billion board foot commitment, that that obviously still is a crucial element, I think to the credibility of our effort. As I understand it, the administration is committed to that. Is that correct?

Mr. DOMBECK. That is correct. I have asked my staff. I am now two-and-a-half months into the job and they tell me, the Secretary, and Under Secretary and staff that we are going to do it.

Mr. DICKS. Good. Now, obviously, we had some difficulties last year, and we've substituted some sales for 318 sales. How is that effort going? As I understand it, a number of these sales now—in other words, I know in the swap, the companies are now going to go out and look at the substitute timber. How is that effort going?

Mr. DOMBECK. Well, let me just ask Steve if he has the specific numbers on the sales, and if we do not have that, I can get that to you for the record.

Mr. DICKS. I'm not—I'm just kind of generally speaking now, the effort.

Mr. SATTERFIELD. It is going well, it is my understanding. We are making additional dollars available to the Regions to carry out the replacement.

Mr. DICKS. And I understand that we've identified more than enough substitute volume so that we don't have to reduce the timber plan in order to accomplish this, so we can do both; is that correct or is that the intention?

Mr. SATTERFIELD. Yes, sir.

Mr. DOMBECK. What I see here is that we are working on providing about 177 million board feet of replacement, and that, I think, is going well.

MONITORING AND ASSESSMENT

Mr. DICKS. Yes. I think the only other area of concern—and I want to say that the help for the communities, the watershed analysis, the watershed restoration work, and I certainly am pleased to see your firm effort to create this new fund for watershed restoration—all those things have helped tremendously the communities that have really been affected in Washington, Oregon, and northern California. That piece has been very good, and doing the restoration of these ecosystems solves something. I also think a positive aspect of this are the large number of private companies, and now the State of Washington, who are doing multi-species habitat conservation plans. I think that, along with option nine, is going to give us a real good program in the Northwest where we're going to be able to not only do timber harvesting on State and private lands, as well as on Federal lands, but we're going to have a good conservation program over the longer term. I think we can really

keep these ecosystems functioning out there, and I think that's a high priority.

But one area I'm worried about—Jack Ward Thomas and Norm Johnson, and a number of other people, talked to us several years ago about this, and I just want to make this point. They said, you know, you can do all this work, but if you don't do monitoring and assessment—you know, we just go out there and do all these various things and nobody goes out and really says, "Now did it make any difference? Did watershed analysis and watershed restoration really lead to something?" And I would hope that, as the leader of the Forest Service, that one thing you will really insist on is making sure that on some periodic basis—and I think under the law you have to do it anyway—you really do assess whether all this money and all this effort has really helped us.

Give me your view on that.

Mr. DOMBECK. Well, there are two key points that I want to make along those lines. The first one is that, in my experience as a resource manager for many years, if you look at what's needed for a program and know what kind of condition the resource is in, the further in advance or the earlier you know that, the better. It is like keeping tabs on your blood pressure and cholesterol.

Mr. DICKS. Right.

Mr. DOMBECK. You identify things that need to be done which become your management program. Then, you implement the program, and lastly, you need to know if it works.

It has always been easiest for resource managers in any area to get dollars for projects, and it is always easier to defer the monitoring or the initial inventory—

Mr. REGULA. It's not as glamorous.

Mr. DOMBECK. It is not as glamorous. It seems like in many cases we wait to treat the patient. That has been a problem. It is something from the standpoint of presenting a program. We are hopeful that the efforts coming out of the Columbia Basin study, the President's Forest Plan—where we are taking a look at a broader scale over time and space based upon the best science available—will get us there.

Now the other plan I want to mention—conceptually, that is where I'm going to push us—is: Keep on pushing the research to make sure that we are using the best professional expertise available. We have got to prove to ourselves, as well as to the people we are accountable to, that the money is being utilized most efficiently.

STATE FORESTERS' CONCERNS

I have spent a reasonable amount of time with some of the State Foresters since I have been in this job. One of the things that they were saying is that they want us to invest more in monitoring technologies. They want us to work more with the State and Private Forestry program because this has implications well beyond the National Forest System. It has implications for private landowners, these technologies that are applied across the board.

And as you mentioned with the habitat conservation plan, I think there is a lot more to the forests of the United States than

191 million acres of National Forests. We need to be part of that as well.

Mr. DICKS. Mr. Chairman, please, just give me one last question here.

Mr. REGULA. Yes.

ADMINISTRATION'S ROADS POLICY

Mr. DICKS. Let me just say one thing. I think one of the areas of attack recently has been on the question of roads, and the administration has changed its policy on roads. But I'd like to read into the record just a paragraph from a Forest Service background paper, for the edification of everyone, and then have you comment.

Roads in the national forests serve many purposes. Each year they allow 76 million Americans to visit the 191-million-acre national forest system and allow them access to over 121,000 miles of hiking trails, 96 wild and scenic rivers, 120 national scenic byways, 397 designated wilderness areas, and over 18,000 recreational facilities, including campgrounds, boat ramps, and picnic areas. Roads provide access for recreation, for wildlife and fisheries projects, for fire protection, for monitoring water quality, for many other aspects of ecosystem management and for timber harvesting. In short, roads are a necessary tool for environmental management in the national forests.

And what I worry about, Chief, is that there's been this—every year we have this assault on roads, and last year a one-vote majority on the floor of the House. Now give me your assessment. I mean, don't we need to be able to maintain this system and keep these roads in place, to do the multi-purpose benefit of having these things? And as the chairman always says, both chairmen, you know, the Forest Service provides a lot of recreational opportunities for American people. I just worry that this assault on the roads program is really unwarranted and misunderstood.

Mr. DOMBECK. From the data that you read, I think the numbers are very telling. The fact is that we do a lot of roads work, and roads are expensive. In this year's program, we have budgeted for about 2,300 miles of road work, and of that, about 300 miles are new roads. About 2,000 miles of that is for maintenance to bring roads up to par with what they should be from the standpoint of sedimentation problems, roads maintenance, all of these kinds of things.

I just read this morning—and I cannot remember the exact figure—about the number of bridges we have in bad shape that we need to fix. It is a problem. I have been here in this town about 10 years now, and every year I have heard the roads debate. What I hope that we evolve to is to look at this as part of a transportation system that provides a variety of things. We have tended to tie roads to timber in people's minds.

Mr. DICKS. And the point is that they're used for a lot of other things.

If you want to know what your number was, by the way, I have it here in this statement. It says, "At the beginning of Fiscal Year 1996, the Forest Service reported a maintenance backlog for roads and bridges totaling \$440 million."

And I would say one thing that I've learned about the road thing is, if you don't maintain these roads and make sure that they're secure, then you get the big rainstorms and you have the blowout, and the blowout takes dirt, trees, and everything right into your

rivers. What we found out in our State is where we have done the watershed restoration work and fixed the roads and repaired them, that doesn't occur. And that has a major positive impact on our salmon and steelhead.

Thank you, Mr. Chairman.

SILVICULTURE MYTH

Mr. TAYLOR. What is your title, sir? What is your title?

Mr. DOMBECK. Chief of the Forest Service.

Mr. TAYLOR. I'd like to talk to you about the qualifications, and so forth, of that, but I won't take up the time at the moment.

What I would like to do is remind you that the Marines have a saying: "Lead, follow, or get out of the way." Now let me tell you what we're coming around to. You say that society demands all of this; the public demands all this. What I've found in the seven years that I've been in Congress and talking to many people in public, there's a very vocal group of people who—the three or four same folks show up at every demonstration, and that sort of thing. They raise hundreds of millions of dollars lying to people here in Washington, which is—you know, I can understand their wanting to do that—and planting myths, but that is not what is modern silviculture.

We have dozens of quality universities from Yale all the way through our country that teach modern silviculture, that fly right in the face of what these organizations are preaching, and, frankly, what the U.S. Department of Agriculture is doing to our forests today. And, yet, we ignore that wealth of information, and we listen to this very small minority.

SALVAGE SALES MYTH

Now let's talk about some of the myths. We talked about green trees being cut. I mean, I heard that in the salvage situation. GAO finished its report, and here's what it said:

We reviewed 14 salvage sales for which the Forest Service had received complaints from environmental organizations that the sales contained excessive volumes of green timber, live and healthy trees, and, thus, did not comply with the definition of salvage sale under the salvage rider. Our analysis of the contract files for all 14 salvage sales showed that they contained sufficient documentation to support the Forest Service conclusions that these sales met the salvage rider's definition of salvage sale and the Forest Service guidelines for implementing the rider. However, six of the sales were set aside anyway because of action by the Secretary.

A myth, clearly proved a myth, and yet we erred with the other side.

We go in this area that my good friend was talking about a moment ago, let the buyers do the scaling. Now he had picked this up or heard it, and perhaps with downed timber—with dead timber, they sold it in such a way, its value not being able to be scaled, in a lump sum. But you know, I'm sure, and certainly the Department knows, that the United States Government, through its Forest Service, puts each sale on the market. You use your Department to scale those salvage sales, to find comparable sales. You even set a floor on the bidding, and then you make them available to the public, and only the Government's in total control; the buyer has to follow what's out there. If he does not believe that you are

adequate in your scaling methods, then he has the option of not buying the timber, but he can't come back and get you to change those scaling methods.

ROADS MYTH

The third point is the myth of roads, and it was just brought out very well, I think, with the gentleman from Oregon——

Mr. DICKS. Washington.

Mr. TAYLOR [continuing]. Or Washington, excuse me.

Mr. DICKS. We used to be part of the Oregon territory. [Laughter.]

Mr. TAYLOR. I know.

The situation with roads about being corporate welfare, it's kind of like this: suppose that television camera is being put up for bid, and all of us here in the audience get to bid on it. Well, there's going to be two prices. First of all, do I have to go over and get it? That gentleman's a lot bigger than me, and I've got to calculate my hospital cost for bringing it back. [Laughter.]

Or, are you going to bring it to me and give it to me? Now if I've got to go get it, I will figure one price, and I will put that in my cost of getting it. If you bring it to me, I can give you a greater bid because you're covering that cost. Now in a road situation, when you're selling timber, you say you want the buyer to build that road to your specification, and so he concludes what that cost is, and then he takes that off his bid, and he bids the amount. If you build the road and then put the timber up for sale, he would give a higher bid because that part of the cost would be covered.

So to say that you are supplementing in corporate welfare that bid, is ludicrous. If you want to cover it, the taxpayer wants to cover the cost of the access for the timber, they'll get higher bids in that direction.

I would say that your Department, though, given what we've just been talking about, has an ethical duty to put forth the case for modern silviculture, and also to fight these truly ludicrous myths. I mean, they're like Elvis being seen down at the drive-in among reasonable people, among scientists, or anyone that has any knowledge in the area, but they show up on the front page of papers, and they wind up being public policy.

SILVICULTURISTS

Now I would also ask, sir, there is a perception in your leadership that you may be forcing out those with silviculture knowledge and bringing in "other-ologists" who will pander to the politically-correct set.

Mr. YATES. That's a myth. [Laughter.]

Mr. TAYLOR. I'm not saying that it is true because I do not know. I am getting sufficient enough reports that I am concerned, and I'd like to talk with you about it later when we have the opportunity. I would also like for you to speak at some point on fees that you're requesting, what you're requesting. We talked about the accessibility of the Forest Service, and yet there seems to be this great desire for fees at the moment.

And I'd like to see what your goal is for salvage harvest and overall harvest for the forest. You do not need the salvage rider to

be able to do what is right for forest health in cutting forest timber. But the Service never did it before, did not meet its deadline this time, or its goals this time. In fact, not through your area, but through others, it was circumvented several different times. I'd like to know what the thought is because it's essential for forest health.

I assume the chairman wants to cut the time because we have votes.

Mr. REGULA. Well, we have the two votes tonight, and Mr. Yates has a question; then I think we can wrap up.

Mr. TAYLOR. All right, I'll yield.

Mr. REGULA. But I think you ought to probably have some additional conversations with Mr. Dombeck.

Mr. TAYLOR. Well those things I mentioned I'd like to have answered.

Mr. REGULA. Well, you can submit them. The record is going to remain open for questions.

Mr. DOMBECK. And I would be happy to drop by and visit at your convenience.

Mr. TAYLOR. And these can come in writing for the record; I'd be glad to talk with you about them.

Mr. REGULA. Mr. Yates.

SCALING VERSUS TREE MEASUREMENT

Mr. YATES. I had the impression that under the scaling method, the Forest Service permits the purchaser of the timber to select the weigher of the timber. Now is that a correct impression?

Mr. DOMBECK. Let me—

Mr. TAYLOR. Never in any forest Government sale that I've ever seen, Mr. Yates, in our area, but I would like that now.

Mr. YATES. I'm trying to find out—

Mr. DOMBECK. Let me ask Dave, here, to respond.

Mr. UNGER. Let me just say a word about this. We are moving, at the direction of Congress, to greater use of tree measurement sales. I do not have the figures with me, but we understand the concern of this committee and the Congress in that regard.

Mr. YATES. What's the answer to our question—

Mr. TAYLOR. Yes—

Mr. YATES [continuing]. As to whether or not you have the private contractors select the—

Mr. TAYLOR. In the Pisgah or Nantahala district, have you ever had a sale where the buyer has been able to go in and scale it?

Mr. UNGER. No, in the East we have used tree measurement sales—

Mr. YATES. No, no; I'm talking about the buyer selecting an independent person to do the scaling.

Mr. TAYLOR. Or the buyer—in our region—the buyer's agent doing it.

Mr. UNGER. The problem out here, I think, is that we have in some parts of the country, in the East, traditionally used tree measurement sales as our standard process. In the West they—

Mr. DICKS. But you do the measurement—the Forest Service?

Mr. UNGER. That is right.

Mr. TAYLOR. Absolutely.

Mr. UNGER. And that's the process that—

Mr. YATES. Well, that's fine. You're talking about tree measurements there, but I'm talking about the scaling method.

Mr. DICKS. That's the same thing.

Mr. UNGER. No, no. In the West and in other parts of the country, there have been scaling processes where independent associations, although they have been funded with timber industry funding, have measured the logs after they have been cut. There has not been this initial tree measurement of the kind that you are familiar with.

Mr. TAYLOR. But you have them assessing, and that's where—

Mr. YATES. Could you expand on that answer please? We have to go vote.

Mr. UNGER. We are moving toward what Congressman Taylor is speaking for, what you believe is appropriate, and away from the scaling system.

Mr. YATES. Well, I'm glad to find myself in agreement with Congressman Taylor on something. [Laughter.]

Mr. REGULA. On that happy note—

Mr. TAYLOR. You will feel much better for it. [Laughter.]

Mr. REGULA [continuing]. We will have many questions for the record, and you don't have a great history of getting responses back quickly, and we hope that that will change under your leadership.

Mr. DOMBECK. We will work on that.

Mr. REGULA. Right. And we may want to have an oversight hearing on prior problems and costs because that's a major problem along with the Department of Interior.

Mr. DICKS. Mr. Chairman?

Mr. REGULA. We have a lot of questions for the record.

ADAPTIVE MANAGEMENT AREAS

Mr. DICKS. Just one quick thing. Please help us on these adaptive management areas. In the Northwest—and this is a point I forgot to make—this has been one area where we have fallen down.

I think we're doing well on the green sales and on taking care of the communities' watershed analyses, restoration, and all of those things, but I think it's the adaptive management areas where we need to look, and use some of this new science and see if it works or not, which we were promised that would be done. And some of us think that there are ways to, with thinning and pruning, to actually help improve the condition of the forest on the west side. And we just hope that you will help us get that done.

Mr. REGULA. And I'm pleased that you're focusing on management. I think you have a big challenge there, and I know you've brought in some people for that express purpose, and that's one of the missions of our subcommittee, to get a good management handle on all of the functions that we're responsible for.

Mr. DOMBECK. Well, thank you, Mr. Chairman.

Mr. REGULA. Thank you for coming. The committee is adjourned.

[The following questions and answers were submitted for the record:]

INTERIOR APPROPRIATIONS SUBCOMMITTEE
HEARINGS QUESTIONS

MARCH 20, 1997

USDA-FOREST SERVICE

FOREST HEALTH SITUATION

001. Question: I constantly hear of overall problems with the health of America's forests including the National Forest System....What is the overall status of forest health and what are the key things you are doing to treat problems?

Answer: Generally speaking our forests are in good shape. Our surveys indicate this at the national level. Data from the Forest Health Monitoring program indicates tree crowns, for example, for the 14 eastern states where the program is fully implemented, are in good or better shape 90% of the time for the trees that are sampled. However, there are regional hot spots and issues that concern us and make for a downward health trend. It took decades to get to this point and restoring health will take decades. In the short term we will continue to see some declining trends. The top issues are:

the invasion of exotic plants and animals (including insects) in all parts of the country; especially exotic plants on rangelands and in Hawaii; insects like gypsy moth and hemlock wooly adelgid in the east; pitch canker in California, etc.;

the rural-wildland-urban interface in many areas, especially the Sierra Nevadas and the Front Range of the Rocky Mountains; and,

the fuel build-ups in the interior and far west (including Alaska).

We are stepping up our prevention activities by increasing the availability of good resource information through the Forest Health Monitoring Program, which seeks to provide the best scientific information available to establish long-term trendlines and as input to key policy decisions. We are also working, in cooperation with APHIS, to prevent pests from entering our nation. In addition, we plan to increase hazardous fuel reduction treatments, which include prescribed burning, from 750,000 acres/year in 1997 to 3,000,000 acres in 2005. We also will increase our thinning levels of overly crowded forests. There is a backlog of about 90 million National Forest System acres that need hazardous fuels reduction treatment and thinning. We are establishing a new effort--Forest Ecosystem Restoration and Maintenance fund (FERM) which will use funds from salvage logging operations receipts for restoration projects that promote forest health. In 1998 the fund will have \$128 million dollars at its disposal.

002. Question: How important is it to establish an aggressive program for forest thinning and fuel reduction? How do you expect to be able to pay for all of that work?

Answer: The use of mechanical treatments, in conjunction with increased use of prescribed fire, will be essential in restoring and maintaining ecosystem health. Unfortunately, there remains no social consensus on the need for such active management to address this problem. It is very important to establish an aggressive thinning program because, allowing fires alone to achieve forest health objectives, even on a carefully controlled basis, is simply not feasible in many situations. Mechanical treatments such as thinning can reduce total treatment costs, reduce the risk of escaped fires, support local community economies, reduce the intensity of heat and fire (thus protecting soil and watershed values), increase dry season streamflow rates, and reduce the amount of smoke that would be released if these areas were to burn in a wildfire in their existing conditions. These treatments, if done in precommercial size stands, could become the priority treatment areas for existing precommercial thinning programs funded by appropriated and KV dollars. In commercial size stands, the product value removed could pay for all or at least part of the cost of these treatments. Funds for hazardous fuels reduction work will come from the proposed Fire Operations budget line item. The budget includes an estimated \$30 - \$50 million for hazardous fuels reduction which will fund an increase of 100,000 to 500,000 acres over FY 1997 planned work. The FY 1998 President's budget also proposes a new Forest Ecosystem Restoration and Maintenance fund which would be used to finance a broad range of ecosystem enhancements including such activities as thinning and prescribed burning.

003. Question: You have praised the Oregon Governor's program for treating the forest health crisis in eastern Oregon. What are some of the most promising aspects of the plan? Why can't you in the Forest Service begin to implement such solutions?

Answer: Governor Kitzhaber's program recognizes the importance of active management to improve the health of our forested ecosystems. The Kitzhaber Plan emphasizes that active management includes thinning, stream rehabilitation, road obliteration, reforestation, salvage and many other tools. Collaboration among Federal, State, Tribal, and community representatives on planning and implementation of projects in less controversial areas will help ensure success and build trust between agencies and people.

The Forest Service is actively pursuing many of the solutions identified in Kitzhaber's plan. The Chief of the Forest Service met on February 18, 1997, with Directors, or their representatives, of USDI Fish and Wildlife Service, USDI Bureau of Land Management, EPA, and the National Marine Fisheries Service. The agencies have agreed to work together with Governor Kitzhaber to restore the forests of eastern Oregon.

004. **Question:** What will it cost to conduct demonstration programs to show how overstocked and dangerous forests can be successfully treated? Where are you considering conducting some demonstrations?

Answer: The 1994 and 1996 wildfires in the West showed what the results can be if overstocked stands with heavy fuel loadings burn. We will have that scenario repeated in the future on areas that are not treated or managed to restore forest health. Our present and future management activities will be our principal demonstration programs. The cost will be whatever funding is allocated through our normal budget process for vegetation management, ecosystem health and other national forest management activities. We will be able to contrast areas that have been managed to improve forest health through biomass reductions through thinnings, salvage, regeneration harvests, and prescribed burning. We have already seen this demonstrated in areas such as the Boise National Forest where they have addressed forest health problems in the ponderosa pine ecosystems. Restoration of the longleaf pine ecosystem in the South is another excellent demonstration project tied to our ongoing management activities. Adaptive management is being studied in several locations in joint efforts between research and National Forest managers.

005. **Question:** When do you anticipate having a nation-wide handle on priority treatment areas so we in the Congress can be assured that we are funding the most important and urgent work?

Answer: Establishing priorities for restoration projects requires a clear understanding of forest ecosystem conditions and trends. Programs such as Forest Inventory Analysis and Forest Health Monitoring provide information to assess national conditions and trends. These data assist us in the development of regional assessments such as the Interior Columbia River Basin Assessment, the Sierra Nevada Ecosystem Project, and the Southern Appalachian Assessment. At this regional scale all the critical issues are described, alternative solutions proposed, and implementation considerations identified as background material for potential land management decisions. This information is then incorporated into more specific forest-level land and resource management plans, and project-level plans.

At this point we have not quantified the number of areas needing specific treatments. We are working to establish clear agency-wide strategic forest health objectives, which will result in the identification of specifics after they are incorporated into the previously mentioned forest and project-level plans. In the meantime, the Forest Service has identified a series of priority management actions to address the critical issues of forest health, which follow:

- Increasing the role of prescribed fire and fuels treatment;
- In partnership with the Animal and Plant Health Inspection Service, reducing the introduction, spread, and impacts of exotic pests as well as increasing control of exotic pests--both plant and animal;

- Accelerating restoration of riparian functions;
- Increasing thinning in dense forests;
- Increasing monitoring of forested and rangeland ecosystems;
- Increasing the use of science in resource-decision making;
- Increasing technical and financial assistance to non-industrial private forest (NIPF) landowners.

Although we have not yet developed specific implementation plans for all of these priority actions, we have prepared our FY 1998 budget submission to address the most urgent work within the funding available. This includes, for example, a commitment to accomplish 750,000 acres of prescribed fire and mechanical fuels treatment in FY 1998, with annual increases of 20-30 percent per year thereafter.

006. Question: How will we measure the success of your forest health efforts?

Answer: The long-term success of our forest health efforts at a national and regional level will be tracked by our Forest Health Monitoring Program. The Program, once fully implemented in all forest areas, will serve as an early warning system for the broader impacts of insects and diseases, atmospheric deposition, meteorological events, human activities and climate change. Additional measurement efforts will be tracked through the Government Performance and Results Act (GPRA) Reporting.

007. Question: Will you be able to make a dent on these problems while at the same time proposing to reduce road construction funding and eliminate the timber purchaser road credit program?

Answer: The forest health situation on the National Forests has many different aspects. Many of the problems have solutions for which treatments such as prescribed burning and other fuel treatments, thinning, and timber sales would be appropriate. To the extent that timber sales are designed to incorporate broader objectives affecting forest health such as insect and disease control, wildlife habitat, and fuels treatment, there would be some proportionate increase in accomplishments in forest health. Reducing road construction funding and eliminating the purchaser road credit program should not affect our ability to use such treatments. Elimination of timber purchaser road credits should have minimal impact on forest health activities.

008. Question: When will you have a full and complete inventory of national forest system roads so we all can understand where new work is needed, where maintenance is lacking, and where excess roads can be obliterated?

Answer: The existing inventory of national forest system roads is managed by various regional and multi-regional transportation inventory systems. The data format may be different between regions, but the data provides adequate information for field units to make road management decisions for maintenance, new construction, and obliteration. At present, we are developing a Travel Routes module for the new IBM platform. The intent of Travel Routes is to provide an integrated information management environment for managing the inventory database of national forest system roads and trails. The pilot of Travel Routes is planned to be released in March 1998. The Travel Routes module should be complete in 1999. We expect a national inventory database for National Forest System roads to be available by the end of 1999.

009. **Question:** What is the role of commercial timber harvesting to help improve the stocking and health of the national forests?

Answer: Commercial timber harvesting plays an important role in improving the health of the national forests. However, forest management practices, such as commercial timber harvesting that is designed to restore and maintain forest health, will typically be different than those used to produce timber as a primary objective. With an emphasis on forest health, smaller material will be removed, and there will be more commercial thinnings, salvage, and other treatments that involve only a portion of the trees on a site. Wood product values will usually be lower and logging costs will be higher. Following the fuels reduction that can be achieved with a commercial timber sale activity, fire can be reintroduced in many stands where it is needed to further reduce hazardous fuels and help achieve the goal of ecosystem health.

010. **Question:** When you were directing the BLM you were a key architect of the Interior Columbia River Basin ecosystem management program. Why has that effort taken so long and why has it been so expensive? Will that effort provide a schedule and a blueprint to guide forest health activities in that huge area?

Answer: Three reasons. First, the original Project contemplated the development of a scientific assessment and an environmental impact statement (EIS) for eastern Oregon and eastern Washington. A realization that a valid ecosystem management strategy was needed for the entire Interior Columbia Basin necessitated the inclusion of those BLM and FS administered lands in Idaho and western Montana, and a decision was made to develop a second EIS for Idaho and western Montana and establish an office in Boise, Idaho. This expansion of area increased the time needed to complete the Project.

Second, the development of the scientific assessment took longer than originally projected. One reason was that there was less available resource information than anticipated, which necessitated additional efforts in data collection and modeling. The writing of the EISs had to await the foundation provided by the scientific assessment.

Third, there was a recent delay in identifying a preferred alternative for the draft EISs to allow the Project to integrate the ecosystem management concepts with existing federal laws and regulations. In addition, the Project's Executive Steering Committee also needed to respond to concerns raised by states, Indian tribes, and the Eastside Ecosystem Coalition of Counties. These other governments will all be important partners in implementing decisions from the EISs.

Answer to "why has the effort been so expensive?":

A major cost factor has been the development of credible scientific data bases to address a very complex set of natural resource management issues. Other cost factors included developing two EISS instead of one, and an intensive public involvement process. The record(s) of decision for the project will amend 72 FS and BLM resource management plans, covering approximately 75,000,000 acres of public lands. On a per acre basis, the cost of the Project is very low compared to having each National Forest and BLM District separately amend the existing land use plans.

Answer to "will that effort provide a schedule and a blueprint to guide forest health activities in that huge area?":

The project will establish a comprehensive "blueprint" which will guide not only the development of forest health activities, but also rangeland and aquatic health management for many years to come. The draft EISS will display alternatives with varying levels of activities such as timber harvest, thinning, prescribed fire, watershed and riparian restoration, and weed management. Specific schedules will be developed on a local basis, based on local resource conditions and collaboration with local resource users. As a broad-scale ecosystem management effort addressing issues at a large scale, this Project does not make precise estimates of the types and amounts of future resource output which will result from activities in specific locations to improve forest health, range health and aquatic and riparian health.

011. Question: What is the role of past fire prevention in causing the proliferation of dense, overstocked, and unhealthy forests, especially in the west?

Answer: The prevention program goal is to reduce the number of unwanted, human caused fires. These are fires that were not part of the historic fire occurrence and were not part of the ecological balance. The public attitude, developed in association with the fire prevention program, that "all fire is bad" contributed to the intolerance for any type of fire in the forests, including prescribed fires and low intensity lightning fires. This has contributed to the build-up of dense, overstocked, and unhealthy forest.

The administration has initiated action to further elevate public awareness regarding the value and utility of prescribed fire, to reduce risk of catastrophic fire. Efforts include public speeches by Secretaries Babbitt and Glickman which address the role of fire in healthy ecosystems, Congressional testimony by Chief Dornbeck emphasizing the same messages, and the Forest Service communication activity on the "Faces of Fire", to stress the complementary values of prevention, suppression, and prescribed fire for internal and external audiences.

012. Question: How much will it cost to tackle this huge problem of overstocked trees? How did you ever let it get to this bad situation? Was this a failure of management, policy or science?

Answer: Part of the reason for the overstocking of trees results from the substantial reduction in the use of fire that occurred over much of the West by the late 1880's, before the national forests were created. It coincided with the disintegration of the cultures of native peoples, many of whom actively used fire as a major land management tool. When aggressive fire suppression efforts were initiated by the Forest Service it was primarily to protect the lives and property of people living in and near the national forests. Prior to aggressive fire suppression, major wildfires were killing hundreds of people and destroying many more acres of forest. The acres burned then were greater than what burned in 1994 and 1996. The vegetative changes related to fire reduction and timber harvesting, where they removed large fire-tolerant trees in the overstory, allowed species that were more fire intolerant to grow up in the understory. This vegetative transition can be most clearly seen in our national parks and wilderness areas that have never been logged. Many forests in these "protected" areas are now being replaced by dense stands of fire and insect-susceptible fir and mixed conifer species.

With regards to how much it will cost to tackle this problem, we do not yet know. One of the reasons is that we do not yet know the specifics of all the work that needs to be done. What we do know, however, is that we need to reduce fuels in our forests to improve forest health. And, we plan to treat 3 million acres annually by the year 2005 using prescribed burning and mechanical fuel treatment. This is a cost-efficient approach because it costs about \$20 to \$50 an acre for prescribed burning compared to \$400 to \$4,000 an acre to suppress wildfires. Changing this situation will not be quick--it took a long time to get to this point. And, in addition, the controversies surrounding the reintroduction of fire do not allow us to proceed very quickly. We need an enhanced and sustained ability to modify vegetation and forest fuels if we are going to be successful in enhancing forest productivity, health and diversity over the long term.

013. **Question:** What are some of the key insect and disease problems around the nation? Do you have the capability to detect, monitor, and control outbreaks that could cause tremendous economic impacts?

Answer: Some of the key forest insect and disease problems are: gypsy moth and hemlock woolly adelgid in the East, southern pine beetle and fusiform rust in the South, and bark beetles, dwarf mistletoes and root diseases in the West.

We have the capability to detect and follow the course of these insect and disease outbreaks. Control techniques are routine for some of these problems (e.g. gypsy moth and dwarf mistletoes) while controls for others (e.g. hemlock woolly adelgid) are under development. Silvicultural techniques to help improve the overall health of the forest and resilience to attack by insects and diseases can also help reduce damages from many of these major pests.

014. Question: What are the economic losses caused, or potentially caused, by insects and disease outbreaks?

Answer: On average, insect and disease outbreaks result in losses of \$1.5 billion annually (in 1995 dollars) in timber related products alone. Losses in other resource values, such as wildlife habitat, scenic beauty, and watersheds, may also be substantial, but are difficult to quantify.

015. Question: What is the cost effectiveness of your insect and disease control efforts? How does this compare with the efforts of cooperative programs that are funded through the Forest Service?

Answer: Our insect and disease control efforts are routinely subject to biological, environmental, and economic analyses to ensure projects are needed and beneficial. On the average, suppression expenditures yield a benefit/cost ratio of about 5.8 to 1. When economic analyses are conducted, all costs (federal and cooperative) are accounted for when determining the total cost of a project. There is no significant difference in the benefit/cost ratios for projects on federal lands compared to those on non-federal lands.

016. Question: Are there other forest health problems of considerable economic impact? For instance, how bad is the noxious and invasive plant problem? What are the economic losses caused by weeds?

Answer: The presence and increase of noxious weeds on National Forests and Grasslands is of great concern because weeds have a considerable impact on the health of many different ecosystems.

On National Forest System (NFS) lands, surveys show at least 4.3 million acres are infested by noxious weeds. However, surveys have not been completed on all NFS lands. It is estimated 5-6 million acres are currently infested and increasing at a rate of spread between 8-12 percent per year.

In FY 1996, the Forest Service spent approximately \$4 million on the management and control of noxious weeds. In FY 1997, the amount could approach \$6 million. The FY 1998 President's Budget continues emphasis in this area with \$4 million budgeted to accomplish 55,000 acres of noxious weed control.

The economic losses are hard to estimate, since the value of lost production may not be apparent for many of the infested areas at this time, or there may be no present method to calculate the loss. However, efforts are underway to accurately identify the magnitude of the infestations and estimate the economic loss.

017. Question: Have budget trends and downsizing affected the Forest Service's ability to provide pest management technical assistance to resource managers?

Answer: To this point we have been able to maintain a sufficiently effective level of assistance, while meeting the most critical insect and disease suppression needs.

018. **Question:** How does the FY 1998 request for pest prevention and suppression relate to the 5-year average for Federal and non-federal lands?

Answer: The FY 1998 budget funds approximately 70% of the 1992-1996 5-year average suppression expenditures on Federal lands and cooperative non-federal (coop) lands. The 1992-96 5-year average for Federal and coop lands is \$26,763,000. This reflects funds which were available through the Emergency Pest Suppression Fund, in addition to annual appropriations for Forest Health Management.

Public Confidence:

019. **Question:** The Forest Service has gone through major changes the past 4 years. The public expects and demands more and more services but there seems to be no consensus on how the national forests and grasslands should be managed. Public confidence seems to be waning. How do you perceive the public image of the Forest Service and how do you expect to turn things around?

Answer: The demands for use and management of public lands continues to grow and become more diverse. However, we believe that we are in fact carrying out the will of the majority of people in the most balanced way possible. The Forest Service does this by managing national forest and grasslands based on forest plans developed with full public involvement; by providing assistance to states, local communities, private landowners, and international cooperators; and by conducting "world class" research and sharing the results.

Media accounts of public land activities are often portrayed as controversial. But, most stories describe concerns or conflicts based on special interest points of view, rather than from the general public's perspective.

A 1994 "Nationwide Survey on Forest Management" prepared for American Forests stated "The public strongly trusts federal forest agencies, ..., to manage federal forest, and believe agencies like the Forest Service should have the flexibility to manage forests in response to changing conditions."

The Forest Service will continue to work with local communities, other agencies, organizations, and individuals to build relationships and support which will foster the sustainable management of our nation's natural resources to meet the needs of all people.

020. **Question:** As the new Chief your initial message to employees included a commitment to healthy ecosystems and working with people through "collaborative stewardship". One of the ways specifically identified for implementing collaborative stewardship was "insisting on personal accountability." What progress has the Forest Service made in

developing accountable performance measures for regional foresters and line officers to ensure the wise use of appropriated funds to address critical issues such as restoration of riparian areas, water quality, timber harvest, wildlife and fish habitat and meeting fishing, hunting and nature watch opportunities, meeting recreational demands, and reducing wildfire danger?

Answer: The Forest Service is moving to tie personal performance standards to GPRA goals and objectives. We are currently in the process of revising Senior Executive Service (SES) and line manager performance standards to enhance accountability. SES and line manager performance will have a specific element which holds them accountable for implementation of the draft GPRA strategic goals. For FY 1997, success will be measured through a set of existing measures selected from the agency's measures currently reported in our Management Attainment Report. Prior to FY 1998, GPRA goals and objectives will be finalized and appropriate measures/indicators developed and a subset selected for inclusion in performance standards for FY 1998. FY 1998 will be the first year that personal performance will be fully tied to implementation of the agency's strategic plan and performance plan.

021. **Question:** Will you share with the Committee the new performance standards and the means by which you will monitor their application when this is available?

Answer: We would be pleased to share the new performance standards and the means by which we will monitor their application when we have completed them.

Agency Morale:

022. **Question:** We understand that morale in the Forest Service is at an all time low point. There are many reasons for this, including drawn-out environmental feuds on logging and grazing, reduced budgets, politics, and changing expectations by the American public concerning the role of the national forests and grasslands in the fabric of American life. How would you rate the current morale of the agency and what steps are you taking to improve this situation?

Answer: Yes, we also believe that morale of many employees is low and in response the agency is taking many actions to sustain and improve morale. Basically, we are asking our employees to both determine the concerns and develop the solutions. We believe it is the employees that can best determine the problems and it is the employees that must be involved in the development and implementation of solutions if improvements will occur. These efforts include:

We conducted a Service-wide Continuous Improvement Process (CIP) survey for all employees. We require management study the results, meet with their employees, and make constructive changes to improve morale, service to the public, and productivity. We will administer this survey a second time later this year to continue this effort. We look forward to the results of the CIP to determine if our efforts are successful in improving morale. We plan to administer the survey a third time 18 months after the second survey.

The Chief is having Service-wide "family meetings" to share information and answer employee questions. Local line officers also are having face-to-face meetings with their employees, where possible.

We are commissioning work groups to study organization structure, work processes, workload, and many other areas to make recommendations on how to best accomplish our mission.

We will continue to share information with all employees explaining the agency mission, Chief's direction, downsizing, early retirement, budget, and other items of interest affecting employees.

We are working with the unions in partnerships to develop solutions.

We are conducting other efforts to improve morale such as:

We reduced employment in the Washington Office and Regional Offices a greater percentage than the field to minimize the impact at the field level. For example, employment has been reduced 27 percent in the DC Metro area since 1993 while Service-wide employment has been reduced about 17 percent.

We conduct civil right impact analyses for all reorganizations to determine impacts on employees and develop mitigating alternatives and measures to lessen or eliminate any impact.

We operate an Employee Placement System to find jobs for surplus employees. As a result, we have had very few reduction-in-force actions even though we abolished over 5,000 permanent positions since 1993.

We support several telephone hotlines so employees can get answers to their questions. For example, we currently support a sexual harassment hotline and a civil rights hotline. We publicize the Waste, Fraud, and Abuse Hotline, and in the past, we have supported a buyout and early retirement hotline.

We are strengthening our training program, offering courses on stress reduction, automating processes, and supporting efforts to balance career and family needs.

Commitment to Communities:

023. **Question:** In the past, many communities, especially in rural areas, formed close partnerships and a dependency on the resources contained on the national forests. There has been a drastic reduction in the economic viability of many of these communities. The timber harvest has dramatically dropped in just 6 years, going from over 10 billion board feet in 1990 to under 4 billion in 1996. What has been the effect on resource dependent communities?

Answer: While no current data exists on the effect nationwide, previous work conducted by the USDA Economic Research Service and Forest Service indicate that communities with exclusive dependence upon wood production have suffered economic decline when harvest levels are reduced. This is of great concern to the Forest Service and the agency has invested considerable resources through the

Cooperative Forestry staff area to help diversify economies to other non-commodity uses, and improve conditions for those rural areas which are affected by decisions made on the management of National Forest System lands.

A key part of the President's Northwest Forest Plan is designed to help forest-dependent communities make the changes necessary to adjust to a different future. In December 1996, the Office of Forestry and Economic Assistance of the USDA presented its report to the President and the Congress on the Pacific Northwest Forest Plan which contained several findings.

According to this report, unemployment for the entire region covered by the President's plan is at its lowest in two decades. In Oregon alone, more than 58,000 jobs have been created between May 1995 and May 1996, and population growth in both metropolitan and nonmetropolitan areas throughout the region have been above national averages. But, changes in the timber industry resulting from federal sale reductions are creating hardships for people, businesses and rural communities that have not benefitted from the regional economic growth and are far from the transportation corridors. These are the people the President's Economic Adjustment Initiative is designed to assist.

Since the recession in the forest industry hit in 1991, 17.9 thousand jobs have been eliminated. However, the total job creation in the region increased by 520 thousand so it can be assumed that these losses were absorbed into the economy.

More than \$27 million has been awarded to retrain more than 4,900 workers in communities affected by changes in the timber industry; 81 percent of these workers have subsequently been placed in other jobs. Grants and loans of \$88.6 million were awarded to stimulate business growth and economic development to more than 100 rural communities in Washington, Oregon and California in fiscal years 1994 and 1995. Grants and loans of \$162.7 million were awarded to help rural communities in Oregon, Washington and California plan and build water systems, retool mills, update and refurbish hospitals, build new waste treatment facilities, and support other community infrastructure improvements in fiscal years 1994 and 1995.

024. **Question:** Is there any reason to believe that the downward trend in resource production from the national forest system will stabilize or reverse?

Answer: The Forest Service has been and is committed to providing a sustainable supply of timber and other commodity resources. However, there are limits to what can be provided and sustained. Some resources such as minerals are not renewable. Other resources are renewable but require careful management to provide a sustainable supply over time. Where resource production must be reduced to attain a sustainable level, the Forest Service tries to minimize the adverse economic and social impacts on local communities.

025. **Question:** What is the commitment of the Forest Service to community stability and how does your funding request help you fulfill that involvement?

Answer: Since the establishment of the agency in 1905, the Forest Service has considered the needs and interests of local communities in its management of the National Forest System (NFS). While there is no general statutory requirement for the Forest Service to ensure community stability, several laws governing management of the NFS allow the Secretary to consider economic factors, including the needs and interests of communities, in making natural resource decisions.

In the context of timber management planning, Forest Service regulations state that plans shall "provide, so far as feasible, an even flow of national forest timber in order to facilitate the stabilization of communities and opportunities for employment."

The Organic Act of 1897 provides that a principal purpose of National Forests is providing "a continuous supply of timber for the use and necessities of the citizens of the United States." The Multiple Use Sustained Yield Act of 1960 defines multiple use as "management of all the various renewable surface resources of the National Forests so that they are utilized in the combination that best meets the needs of the American people." The National Forest Management Act (NFMA) also includes economic factors among the factors to be considered during development, amendment, and revision of land management plans.

The Forest Service tries to provide a sustainable flow of resources to help keep communities stable and the Forest Service provides economic assistance to help communities cope with changes in forest management.

026. **Question:** Payments to counties from national forest system receipts have dramatically reduced as well. How do you expect the counties that contain public land, and which in many cases have little private land base, to rebound from this adverse impact.

Answer: The Forest Service tries to provide a sustainable flow of resources and help communities cope with changes in forest management through direct assistance or economic diversification programs. Many activities occur on national forests. In some cases, receipts will increase as these activities increase. Payment in Lieu of Taxes (PILT), administered by the Department of Interior, will continue to be paid to counties where public lands are present. PILT payments may increase where 25 percent payments based on

national forests receipts, fall below the minimums provided by PILT.

027. **Question:** Can you give examples of national forests where there has been a successful transition from the natural resource-based economy dependent on timber or other commodities to a service or recreational economy?

Answer: Perhaps the best examples to illustrate adaptation in changing resource demands are the Colorado forests whose focus, when designated, was to accommodate the railroads and the mining industry. Small mining towns within National Forests such as Aspen, Vail, and Telluride now concentrate mainly on recreation. However, all of the National Forests have been since their inception, and will continue to be, effected by changing resource demands.

Decreasing budget, please prioritize needs

028. **Question:** It is unlikely that the allocation for this subcommittee will be any larger than last year yet the agencies seem keep wanting increases. You have asked for funding increases in several programs. What are your most urgent increases?

Answer: Overall, the Forest Service budget request for FY 1998 in appropriated funds, excluding Wildland Fire Management, totals \$1.83 billion or 1% increase over FY 1997 appropriations enacted to date. The dollar changes within this total reflect the best mix of funds to meet the Forest Service priorities and programs within the agency's mission.

029. **Question:** Your budget does not appear to have eliminated any programs. Are there any programs which you would rather eliminate instead of see continued erosion and diminution of your core mission and programs?

Answer: As stated in the answer to the above question, the Forest Service budget puts forth the balance in programs, within limited funds, necessary to best meet the agency's overall mission. No single program is exclusive or dominant.

030. **Question:** How imperative is it that you maintain a state and private cooperative forestry program? Isn't this a state function? Are there other cooperative USDA programs which could fulfill many of these needs?

Answer: The need for forest stewardship, to maintain and improve forest health and productivity, on the 58% of the nation's forests which are owned by non-industrial private forest landowners, is enormous. Less than 20% of these Non-Industrial Private Forest (NIPF) lands are professionally managed. National interests related to clean air and water, abundant wildlife, and a sustainable wood supply are linked to the management of these lands. The State and Private Forestry programs help landowners achieve their private land

management objectives while achieving broader national objectives such as clean air and water, reduced risk of insect and disease outbreaks, lower risk of wildfire outbreak, and sustainable economic development. Investments in State and Private Forestry programs return significant benefits, both through the additional resources leveraged as well as through the prevention of potential future costs of forest deterioration.

The State and Private Forestry cooperative programs perform an over-arching national policy role which is broader than the role of any individual state. Federal policies are best developed and implemented through a coordinated mechanism. In addition, the role for development and dissemination of technical expertise and emerging technologies is also managed most cost-effectively through a national conduit. This does not detract from the important State role as implementer of national policies and programs at the field level.

Within USDA, the Forest Service remains the only agency with technical expertise in forestry. The Forest Service works closely with several other USDA agencies to ensure cost-effective, streamlined delivery of conservation programs and services to USDA clients.

Proposed budget reductions and shortfall

031. Question: It appears that the only substantive reductions you have suggested are for GA (down \$9 million), recreation reconstruction and construction (down \$27 million), and road construction (down \$7 million). What will you be losing with each of these reductions?

Answer: The GA reduction will not impair our focus on improving financial management and addressing major weaknesses identified by the Office of Inspector General and the General Accounting Office. We will also proceed with reengineering business processes, but at a slower pace. We will provide less administrative support programs, impacting resource use and management. We will slow efforts to automate personnel administration processes; to implement Project 615, an effort to provide a modern open systems computing environment; to expedite payments to vendors, which will result in higher interest payments; to improve projects that promote employment of individuals in underrepresented groups, and to improve services to the public and to our partners.

The \$7 million reduction from the FY 1997 appropriation for road reconstruction and construction is related to support of the regular (green) timber program. FY 1998 funds are adequate to administer road work on existing sales and to prepare surveys and designs for FY 1998 green sale program of 2.505 MMBF.

The reduction to recreation facility re/construction will allow only highest priority projects and will slow the Agency's ability to keep pace with reconstruction items which directly affect customer health and safety such as drinking water, sewage and sanitation, and basic ecosystem protection. The reduction significantly impacts the Agency's resources to leverage partnership funds, maintain financial credibility with potential partners, and carry out prior partnership commitments.

032. Question: To what extent do you use other program funds to fulfill shortfalls in needs for GA activities?

Answer: Programs may have to pay a larger proportion of fixed costs, since fixed costs are paid proportional to actual use. For example, if general administrative personnel used 13 percent of the telephones, GA paid 13 percent of telephone use. If general administrative personnel now use a lower proportion of the total FS telephones, then GA will fund a lower portion of the telephone charges, resulting in resource and research programs using and paying for a higher percentage.

033. Question: What is the backlog maintenance of your recreation facilities?

Answer: The estimate of backlog is based on the report "Forest Service Infrastructure in Support of Resources" published in March 1994. This information has not been updated since we are concentrating our resources on the continued development of the integrated information system for Agency facilities, INFRASTRUCTURE.

Funding for the physical infrastructure is not keeping pace with customer needs, and the condition of our facilities has been declining for several decades. For example, about 27% of the recreation facilities are over 40 years old. Many are functionally obsolete, have worn out, are approaching or have reached the end of their designed life, and do not meet today's program needs, customer expectations, or public health and safety, and accessibility standards. In many cases, facilities can no longer be maintained, and must be restored or replaced through reconstruction.

<u>Infrastructure item</u>	<u>FY 1994 Backlog (\$ in Millions)</u>
Recreation Facilities	818
Trails	267

Recreation Facilities and Trails - National priorities are to repair and rehabilitate facilities to eliminate health and safety problems, protect soil and water resources, meet new standards (accessibility as an example), and improve economic efficiency. However, each Region determines the specific projects that will be put forth in the annual budget.

034. Question: How will your huge reduction in recreation re/construction affect your ability to fulfill your recreation mission and overcome the backlog?

Answer: The vast majority of the Agency's recreation infrastructure is 20 to 40 years old, has outlived its designed life, and simply based on age, adds nearly \$65 million to the backlog each year reconstruction is delayed. This significant reduction in recreation re/construction funding will mean that low quality facilities will continue to provide lower quality service at a higher cost of operation and repair, or closure. The Agency will address only the

highest priority facility needs in FY 1998, resulting in continued operation of facilities in poor condition (which accelerates deterioration) and below standard quality (such as broken and uneven camping pads or poorly maintained picnic tables). More facilities will be closed.

035. **Question:** What aspects of your recreation, timber, and general programs will not be served by the reduction in road construction?

Answer: Funds for timber roads are adequate to administer road work on existing sales and to prepare surveys and designs for FY 1998 green sale program of 2.505 MMBF. An additional \$11 million will be necessary to complete transportation planning, design, ROW's, and critical construction for out year sales. Critical construction for out year sales includes such needs as the jobs in the woods program portion of the President's Northwest plan and bridge reconstruction and construction for multiple sales planned to concurrently use a common road.

Funding for the recreation and general roads programs is adequate to serve the immediate needs for these programs. However, a large backlog of road and bridge reconstruction needs exists in these areas. This backlog is expected to increase in FY 1998.

Included in the backlog is about 1,500 bridges that are structurally deficient or obsolete and must be replaced, closed or restricted in use. To just hold the backlog at current levels, we should be replacing about 160 bridges a year. The planned FY 1998 program will replace 7 bridges from appropriated road funds and 15 by purchasers of national forest timber.

036. **Question:** You have asked for a total of \$211,000,000 for wildland fire operations which includes somewhere between \$30 and \$50 million for fuels treatments. Assuming the larger fuel treatment program, this leaves you still \$176 million below the 10 year average wildfire suppression need. I thought it was the policy of the joint USDA and Interior Department fire management efforts to request the 10 year average need. Why have you requested funding that is so far below the expected need?

Answer: Joint efforts between the Departments of Agriculture and the Interior have focused on:

- o appropriate collaboration among the two Departments;
- o establishment of desirable objectives and procedures;
- o assurance of adequate funding; and,
- o aggressive reduction of hazardous fuels.

The Forest Service budget level balances fire suppression needs and other high priority agency programs which would be reduced if the 10 year average is fully funded. This level would be expected to cover all costs in years with favorable conditions.

Within the Wildland Fire Management account, an immediate priority is the expansion of the hazardous fuel reduction program to reduce the

risk of catastrophic wildfire outbreak. In addition, the proposed government-wide emergency contingency fund provides resources for additional fire suppression expenditures.

The President's Budget also proposes continuation of appropriation language which authorizes advancing appropriations or funds available to the Forest Service to the Wildland Fire Management appropriation for use in firefighting and emergency rehabilitation of burned-over lands.

Downsizing and rightsizing operations and work force

037. **Question:** What has the Forest Service done this past year to downsize its workforce commensurate with its funding level?

Answer: During the past year, the Forest Service continued a multi-part downsizing effort utilizing hiring restrictions, aggressive priority placement of surplus employees into continuing positions, early retirement, and minor reductions in force (12 employees). The number of permanent employees was reduced by approximately 450 during FY 1996, with Washington, DC-area employment dropping by 9.3 percent compared to 1.5 percent for the agency as a whole.

038. **Question:** How much of the funding for the Forest Service comes from trust funds and permanent appropriations?

Answer: In FY 1997, addition to the congressional appropriations, the Forest Service estimates utilizing approximately \$550 million from trust and permanent funds. Trust funds are provided as authorized through trust agreements to protect and improve resources on National Forest System lands. Permanent appropriations, principally from timber sale receipts, are utilized to accomplish activities such as removal of logging slash, preparation and administration of timber salvage sales, reforestation of cut over timber sale areas, and increased productivity of timber stands.

039. **Question:** How many offices did you close last year? Do you plan on closing any offices this year, either by eliminating programs or consolidating services?

Answer: Fourteen offices were closed in FY 1996, and there are plans to close two offices in FY 1997. The tables below identify these offices.

FY 1996: (Closures)

OFFICE/FUNCTION	CITY	STATE
Fisher Ranger District	Libby	MT
Glacier View Ranger District	Columbia Falls	MT
Moose Creek Ranger District	Grangerville	ID
Deerlodge National Forest	Butte	MT

Milford Ranger District	Milford	CA
Inst. of Northern Forestry	Fairbanks	AK
Bend Silviculture Lab.	Bend	OR
For.Science Lab., NC-4151	Carbondale	IL
For.Science Lab., NE-4151	Orono	ME
Southern For.Fire Lab.	Macon	GA
Forestry Science Lab.	Gulfport	MS
Forestry Science Lab.	Gainsville	GA
San Jacinto Ranger District	Cleveland	TX
Tenaha Ranger District	San Augustine	TX

FY 1997: (Proposed closures)

<u>OFFICE/FUNCTION</u>	<u>CITY</u>	<u>STATE</u>
North Fork Ranger District	Orofino	ID
Mancos Ranger District	Mancos	CO

040. Question: What are you doing to protect the operations at the field level? How successful have you been at reducing your Washington and regional office staffing?

Answer: We have reduced the size of our Washington Office and Regional Offices a greater percentage than field units and are delegating additional authorities to field units. As a result, since 1993 employment in the Metro Area of the Washington Office has been reduced 27 percent and regional office employment has declined 17 percent.

In the past year, we reorganized 8 of our 9 Regional Offices to make them more efficient. In addition, we have consolidated over 25 field offices since 1993 to reduce administrative overhead.

041. Question: How many offices have you collocated this past year with other agencies such as the BLM or the NRCS? Where?

Answer: Eighteen offices have collocated with other agencies this past year. The following list identifies these offices by location.

Northern Region

Bitterroot National Forest, Hamilton, MT - with State Fish, Wildlife, and Parks Department

Nez Perce National Forest, Grangeville, ID - with National Park Service until January 1, 1997. Now Nez Perce National Forest is located in Grangeville Post Office.

Beaverhead-Deerlodge National Forest:

Butte Ranger District, Butte, MT - with State Fish, Wildlife and Parks Department

Deerlodge Ranger District, Deer Lodge, MT - with NRCS and Farm Services Agency

Flathead National Forest, Kalispell, MT - with State Fish, Wildlife, and Parks Department

Rocky Mountain Region

Pike and San Isabel National Forest:

San Carlos Ranger District, Canyon City, CO - with BLM

Bighorn National Forest:

Buffalo Ranger District, Buffalo, WY - with BLM

Routt National Forest:

Parks Ranger District, Walden, CO - with NRCS

Southwestern Region

Santa Fe National Forest, Santa Fe, NM - with BLM

Intermountain Region

Boise National Forest, Boise, ID - with BLM

Challis National Forest, Challis, ID - with BLM

Pacific Northwest

Fremont National Forest, Lakeview, OR - with BLM

Malheur National Forest, John Day, OR - with BLM and APHIS

Mt. Baker-Snoqualmie National Forest:

White River Ranger District, Enumclaw, WA - with Federal Highway Administration

Mt. Baker Ranger District, Sedro Woolley, WA - with National Park Service

Eastern Region

Regional Office, Milwaukee, WI - with Park Service and BLM.

Southern Research Station

National Forests in North Carolina, Asheville, NC - with US Fish and Wildlife Services

Forest Products Laboratory - Madison, WI - with APHIS

042. **Question:** How much have you spent, by year and major appropriation account, to prepare for the Region 5 move to Mare Island, California?

Answer: Approval was given by the House and Senate in 1996 to reprogram funds allocated to the Pacific Southwest Region to support relocation of the Regional Office from San Francisco to Mare Island Naval Shipyards in Vallejo, California. The Region spent approximately \$374,000 in 1996 and has spent \$66,000 through February of this fiscal year. These expenditures by appropriation are as follows:

FY 1996*

FY 1997*

State and Private Forestry	\$1,036.02	\$ -0-
National Forest System	23,631.93	-0-
Construction	1,295.55	-0-
Wildland Fire Management	<u>348,012.15</u>	<u>66,293.00</u>
TOTAL	\$373,975.65	\$66,293.00

* The 1996 reprogramming request included a \$6 million budget line item breakdown of planned expenditures. We expect the final expenditure of 1996 funds to be consistent with the numbers shown in our reprogramming request. Forest Service policy, however, allows limited exceptions for carrying over fire dollars. The basic rule is that funds remaining in fire presuppression be offset against fire suppression expenditures. Therefore, fire funds are being spent first, to ensure that fire pays for its fair share of the total cost of the move.

Progress regarding the move includes the following:

- * An agreement in principle has been reached between the Department of the Navy and the Forest Service for an MOU regarding environmental liabilities. We expect the MOU to be signed shortly.
- * The Region and the local Naval Authorities will soon have a Use Agreement which will allow the FS to work on the property and move toward construction contracting while waiting for OMB approval of the transfer request.
- * Interior Space Planning is nearly completed.
- * Negotiations to complete General Construction Design to 80% is in process.
- * A Telecommunication task order award for designs is in process.

Advertising and award of the renovation contract is planned for later this fiscal year. Anticipated occupancy at Mare Island is late summer, 1998.

As reported in our reprogramming requests, the Region plans to spend approximately \$5 million of FY 1997 funds and \$5 million of FY 1998 funds to complete the move. This includes retrofitting the Mare Island building, moving the San Francisco and Pleasant Hill offices, and employee transfer-of-station. The planned budget line item distribution of these funds is as follows:

<u>EBLI</u>	<u>FY 1997</u> <u>(M\$)</u>	<u>FY 1998</u> <u>(M\$)</u>
State and Private Forestry Funds (S&PF)		
Fire Management Coop Lands	48.0	48.0
Forest Health Management - Federal	144.0	144.0
Economic Action Programs	15.0	15.0
Forest Legacy Program	10.0	10.0
PNW Assistance Program	61.0	61.0
Forest Stewardship	14.0	14.0
Urban and Community Forestry	45.0	45.0

National Forest System Funds (NFS)

Land Mgmt. Planning, Inventory, Monitoring	586.0	586.0
Recreation Management	190.0	190.0
Wilderness Management	20.0	20.0
Heritage Resources	20.0	20.0
Wildlife Habitat Management	42.0	42.0
Inland Fish Habitat Management	17.0	17.0
Anadromous Fish Habitat Management	17.0	17.0
TE&S Species Habitat Management	95.0	95.0
Rangeland Vegetation Management	37.0	37.0
Grazing Management	36.0	36.0
Timber Sales Management	280.0	280.0
Forestland Vegetation Management	80.0	80.0
Soil/Water/Air Operations	92.0	92.0
Watershed Improvements	3.0	3.0
Minerals and Geology Management	61.0	61.0
Real Estate Management	165.0	165.0
Landline Location	61.0	61.0
Road Maintenance	76.0	76.0
Facility Maintenance	44.0	44.0
Law Enforcement	7.0	7.0
General Administration	1,978.0	1,978.0
 Construction Funds (CNOX):		
Const. General Purpose Roads	2.0	2.0
Const. Recreation Roads	17.0	17.0
Const. Timber Roads	51.0	51.0
Const. Fire, Admin, & Other Facilities	5.0	5.0
Const. Recreation Facilities	7.0	7.0
Trail Construction	7.0	7.0
 Wildland Fire Presuppression	 360.0	 360.0
 Other Funds		
Land Acquisition Management	54.0	54.0
Hazardous Materials	10.0	10.0
Knutson-Vanderburg	39.0	39.0
Salvage Sale Funds	190.0	190.0
Brush Disposal	10.0	10.0
Reforestation Trust Funds	2.0	2.0
Working Capital Funds	2.0	2.0
 Total	 5,000.0	 5,000.0

Question: How much is included in the 1998 request for this move?

Answer: The Forest Service anticipates making \$5 million available from within Region 5's allocation to pay transfer-of-station costs for employees who move their residences (see table under previous answer). The Region 5 budget will not be increased to make up the increased cost for the Mare Island Relocation.

Question: When do you expect the move to occur?

Answer: The move is planned for late summer, 1998.

Question: How many people will make the move?

Answer: A total of 335 full-time equivalents (FTEs) are targeted to move to Mare Island. The Forest Service consists of 316 FTEs and the Office of General Counsel, which is co-locating, has 19 FTEs.

Question: How many do you expect will decide to leave the Service or fail to make the move?

Answer: Based on R-5's survey (61 percent of employees responded) 20-30 percent (62-93 employees) of the employees physically located in Pleasant Hill and San Francisco may not go to Mare Island. NOTE: OGC is not included in the survey.

Question: Has the Region 5 allocation been increased to make-up for this increased cost to the region?

Answer: No.

Question: Do you anticipate that there will continue to be costs associated with the move in FY 1999 and beyond?

Answer: No.

Question: How many years will it take to make up for the cost of the move with the new, reduced rents?

Answer: It will take 6 years to make up for the cost of the move.

Presidential Initiatives/Headwaters

043. Question: What has been the Forest Service role in the Headwaters land exchange deal?

Answer: After the Administration entered into an agreement with the State of California, Maxxam Inc., and the Pacific Lumber Company on September 28, 1996, the Forest Service role has been to identify national forest lands to be considered for exchange for timberlands to the north of the Headwaters Forest from Elk River Timber Company. This has been done. Our role was also to define an area that identified all lands which might be involved in land acquisitions of the Headwaters Forest and surrounding environmentally sensitive lands and to prepare an order creating a purchase unit encompassing these lands for Secretary of Agriculture to sign. This has been done and the Secretary signed the order on April 2, 1997. Now our role is to complete a land exchange with the Elk River Timber Company to acquire a portion of the 9,600 acre Elk River property, and work with the F&WLS contractor, Foster Wheeler Corporation, in the preparation of that portion of the EIS/EIR pertaining to the Forest Service exchange. Also, in cooperation with the State of California and Elk River Timber Company, the property is being cruised and appraised in order to determine it's fair market value. We are currently working with other federal and State parties to define our role in managing those lands that we would acquire.

044. Question: How many acres, and on which national forests, have been identified as potential trading stock for the Headwaters property?

Answer: Approximately 19,000 acres of NFS lands are being considered for exchange, including 8,000 acres on the Stanislaus National Forest (NF), 1,000 acres on the Tahoe NF, 2,600 acres on the Plumas NF and 7,400 acres on the Eldorado NF. The precise NF acreage that would actually be exchanged would be an amount equalling approximately \$30 million in value based on actual appraisal, current at the time of the exchange. This is anticipated to ultimately require that approximately 10,000 TO 12,000 acres of the 19,000 acres of national forest lands be transferred from the public domain to the private sector.

045. **Question:** What is the economic, ecological and social values of each of these properties?

Answer: The U.S. Fish and Wildlife Service has the lead for developing an Environmental Impact Statement/Environmental Impact Report (EIS/EIR) to identify the environmental consequences of the Headwaters agreement. In December 1996, they issued a notice of intent in the Federal Register regarding public meetings to comment on the proposed acquisition of the Headwaters Forest-Elk Head Spring Forest. They have held public hearings to listen to public concerns and comments about the agreement in Oakland, Bakersfield, Redding, Sacramento, Eureka and Los Angeles.

All ecological and social values will be dealt with in the EIS/EIR. NEPA analysis work, such as surveys for threatened or endangered plant and animal species, cultural resources surveys, searches for mining claims, and identification of wetlands and flood plains, is scheduled to be initiated in May 1997. NEPA analysis work will be required on both the National Forest and the Elk River Timber lands, as the Elk River properties must have reserved public domain status once they have been exchanged for National Forest System lands. The majority of the identified federal lands contain highly productive timber sites and are well stocked with second growth and possible residual old growth timber. It will be necessary to remove some of the federal lands from the exchange once on-the-ground surveys have been completed, but it is anticipated that enough acres have been identified to equal the \$30 million value for the Forest Service portion of the exchange.

The economical value (fair market value) of the Elk River Timber Company and National Forest System lands will be determined through a narrative appraisal by a State of California licensed appraiser.

046. **Question:** Do you favor selling or trading of the national forests and grasslands as capital assets to fund various initiatives elsewhere in government?

Answer: The Administration is opposed to selling national forests and grasslands as capital assets to fund various initiatives elsewhere in government. Nor do we have or support authority to sell National Forest System lands. We feel that national forest lands are a special resource that should be conserved, and only in rare carefully considered cases, traded in on equal value exchange. In this

particular case the Administration has determined that the values of the old growth Headwaters Forest are worthy of exchanging primarily second growth forests.

047. Question: Please list the last 4 instances in which the Weeks Act authority was used to consummate trades in excess of 3000 acres.

Answer: If consummate is = to closed
 Trades is = to exchange, and
 3,000 acres = to non-federal land received, then:

FY94	Non-Federal Received	Federal Land Exchanged

Ottawa NF, MI	3,898.40	1,904.00

FY93	Non-Federal Received	Federal Land Exchanged

Clearwater NF ID	3,547.08	635.23
Oconee NF, GA	3,437.87	1,361.76
Daniel Boone NF, KY	3,263.66	450.93
Superior NF, MN	3,662.28	3,018.08

048. Question: You have indicated that it will cost about \$1.15 million for the Forest Service work in support of the Headwaters exchange. What budget activities does this funding come from and what work will not be done that was originally programmed for these funds?

Answer: The source of funding for the Headwaters exchange has not yet been identified. We are currently working to identify possible sources of funding and if it is called for we will be submitting a reprogramming request for Committee approval.

049. Question: When do you expect to establish a purchase unit boundary around the Headwaters and adjacent properties?

Answer: The Secretary of Agriculture signed the order creating the purchase unit on April 2, 1997.

050. Question: What formal NEPA procedure will you go through before establishing the purchase unit boundary?

Answer: There is no case law directly interpreting the application of NEPA compliance to the establishment of a purchase unit. The last major establishment of a purchase unit boundary outside of existing national forest areas was the Redbird Purchase Unit, which was designated in February, 1965. The Redbird Purchase Unit thus predated the enactment of NEPA by over four years.

We generally would not consider the establishment of a purchase unit as constituting a major Federal action significantly affecting the quality of the human environment, which is the standard in NEPA for the preparation of an environmental impact statement. The purchase unit is but an administrative precursor to acquisition of land. Case law has clearly established that Federal land acquisition does not, in itself, trigger the requirement to prepare an EIS. See: Sabine River Authority v. U.S. Department of Interior, 745 F. Supp. 388, 393 (S.D. Tex. 1990). Thus, the decision to designate a purchase unit would also not trigger the need to prepare an EIS.

Other actions associated with the Headwaters transaction may trigger NEPA requirements. For example, the conveyance of existing national forest lands through exchanges may trigger NEPA requirements to prepare an EIS. See National Forest Preservation Group v. Butz, 485 F. 2d 408 (9th Cir. , 1073); Lockhart v. Kanops, 927 F. 2d 1028 (8th Cir. , 1991). Indeed, an EIS is being prepared on the Headwaters transaction.

Finally, if the lands acquired at the Headwaters and Elk River properties are eventually to be managed as national forest lands, then NEPA would be fully complied with on all land and resource management planning associated with these properties.

The Secretary of Agriculture signed the Headwaters Forest--Elk Head Spring Forest Purchase Unit order on April 2, 1997 using the Weeks Act as the authority. Purchase units are the commonly used method to make adjustments to existing national forests. This action was coordinated with the Office of General Counsel.

051. Question: What interaction does the Forest Service have with the Fish and Wildlife Service in their deliberations regarding a habitat conservation plan for the Pacific Lumber Company?

Answer: The Forest Service has not been part of the habitat conservation plan deliberations with Pacific Lumber Company.

052. Question: How would permission for increased logging on the Pacific Lumber Company properties affect the ability of the FS to harvest timber on the Six rivers NF?

Answer: Under the current situation, the new Forest area boundary is approximately 10 miles away and is not adjacent to or connected with the Six Rivers National Forest as it is a stand alone unit.

053. Question: FS funds have been transferred to the Department of Interior in order to fund portions of the environmental documents in support of the Headwaters Exchange? What oversight and coordination has the FS had with the Fish and Wildlife Service, the lead agency, on the EIS being prepared for the Headwaters Exchange?

Answer: No funds have been transferred to USDI from our Agency.

On March 21, 1997, representatives from USFS, OGC, BLM, USFWS, California Department of Forestry and the Environmental Impact Statement/Environmental Impact Report (EIS/EIR) contractor met to coordinate and discuss status of the project. USFS representatives were from Fish and Wildlife team, Lands Boundary and Land Acquisition/Title team, Planning and Socioeconomics team, Botany and Vegetation team, and Public Affairs. Foster Wheeler, contractor, plans to publish the draft EIS/EIR June 20, 1997 and therefore, advised us that all survey information for Threatened and Endangered Species and Cultural Resources is needed by May 22, 1997. We do have personnel identified to begin the coordination/consultation with the forests, USFWS, and Foster Wheeler and contract for services. Since, the purchase unit was established on April 2, 1997 we now have the authority to spend U.S. Forest Service funds on this project. If a reprogramming request is necessary, we will be formally communicating our intentions to the Committees.

054. **Question:** What public access will be available to the Headwaters property once acquired by the federal government? What will be the cost of this access? Do you anticipate that there will be limitations and permits required for public access? Do you anticipate developing any visitor services on this property or will visitors continue to use the property in a primitive fashion?

Answer: Public access issues were not addressed in the September 28, 1996 agreement. They need to be dealt with during the EIS/EIR process, in clearing title on the Elk River timber company lands, and discussed and negotiated with Elk River. Cost associated with access have not been determined. Ultimate management and use of the Headwaters properties has not been established.

055. **Question:** What has been the FS role in the New World Mine land exchange deal in Montana near Yellowstone National Park?

Answer: The FS provides technical and staff support to the Administration in complying with the terms of the August 12, 1996 agreement. Specifically the FS worked with other agencies including BLM and EPA to provide resource information, environmental analyses, reclamation recommendations, and technical reviews.

056. **Question:** How many acres, and on which national forests, have been identified as potential trading stock for the New World mine property?

Answer: There are no NF lands currently being considered as "trading stock". This option was evaluated as part of the "Montana Initiative". It was dropped because of the Agreement requirements to provide readily liquidable assets to Crown Butte by March 12, 1997. The particular details of the Montana Initiative including public analysis and comment could not be developed by March 12, 1997. The March 12, 1997 offer to Crown Butte identified federal oil, gas, and coal royalty and rental revenues as the assets to be used in fulfillment of the Agreement.

057. **Question:** What is the economic, ecological and social values of each of these potential exchange properties?

Answer: There are no NF lands being considered for exchange.

058. **Question:** What environmental problems to national forests are caused by the current condition of the New World mine site?

What would be the potential impacts to the national forest system if the mine were to be fully developed?

Answer: The primary environmental problems of the current mine site and area are related to water quality and visual impacts. Naturally occurring acidic drainage was exacerbated by late 19th and early 20th century mining activities. The acidic drainage results from exposure of sulphur bearing minerals in tunnels, adits, and waste dumps. Also toxic metals are leached from the minerals along with the acidic materials. The disturbance from the mine workings and the abandoned buildings, equipment, and roads have impacted the visual quality.

If the mine were developed there would be surface and visual impacts during operations resulting from roads, power line, mill site, and tailings pond. The total acres disturbed would range from approximately 100 - 300 acres depending on the final mine plan permitted. Final closure under any option would have included removal and/or permanent reclamation of disturbance. Full bonding would have been required. Water quality impacts were also considered as possible either in the short or long-term. The water quality impact risk has not been fully resolved and was in large part the concern that resulted in the Agreement.

Tongass National Forest Ketchikan timber sale cancellation

059. **Question:** Please describe the recent cancellation of the Louisiana Pacific Company long term timber contract that involved the Ketchikan Pulp Company (KPC).

Answer: The United States, Ketchikan Pulp Company (KPC) and Louisiana-Pacific Corporation (LP) (parent company to KPC) have negotiated a global resolution of many issues relating to the long-term timber sale contract with KPC. Under this agreement, the long-term contract has been modified to terminate on December 31, 1999, with the possibility of a term adjustment to October 31, 2000. The Forest Service has made available approximately 300 million board feet of timber to KPC in order to continue KPC's sawmill operations in Ketchikan and Metlakatla for an additional three years. This volume has been cleared through the NEPA (National Environmental Policy Act) process and represents an extensive investment of federal funds in the form of planning and layout. LP has also received under the agreement approximately \$135 million and all claims relating to this long term contract have been resolved under this agreement.

060. **Question:** Why is it so important that the government pay this company \$135 million to settle this dispute?

Answer: The federal government has determined that this amount is a fair settlement in order to resolve all existing and anticipated claims resulting from the modifications to the long-term contract in the Tongass Timber Reform Act of 1990, and from other actions. Not only is the settlement fair, but the government also believes that this settlement will preclude a potentially long and expensive court battle between the parties. It also assures that the Ketchikan Pulp Company (KPC) will continue to operate its saw mills and employ mill workers in Southeast Alaska for the next three years, and that KPC and Louisiana-Pacific Corporation (LP) will assume all financial responsibility for the environmental cleanup of KPC's operations in Southeast Alaska.

061. Question: When do you anticipate paying the company the \$135 million?

Answer: Louisiana Pacific Corporation has been paid by the federal government from a judgement fund administered by the Department of the Treasury.

062. Question: How will this agreement affect the future management of the Tongass National Forest?

Answer: This agreement will allow the management of the Tongass National Forest to ensure the protection and use of all resources. The agreement will allow more flexibility of the timber sale program on a year to year basis.

063. Question: Will this agreement affect the work done to date on the Tongass land management plan and further delay that plan from being issued.?

Answer: This agreement should not affect work done to date on the Forest plan or upon the time frame when the plan will be issued.

064. Question: How will the proposed elimination of timber purchaser road credits affect the Tongass national forest's ability to provide the timber in the KPC agreement, and how [will] it affect the ability to offer other timber that will be part of the Tongass land management plan?

Answer: There will be no effect on the Tongass National Forest's ability to provide timber in the KPC agreement as a result of any elimination of timber purchaser road credits since the remaining volume under the long term contract (300MBF) has been released. While the elimination of purchaser road credits will not affect our ability to offer timber, it may result in sales not being sold. Until we know the specifics of this proposal to eliminate purchaser road credit, and what specific mechanisms we may have to allow small purchasers to either obtain financing or choose to have the government construct roads, we will not be able to estimate whether or not our sales will be attractive to bidders.

065. **Question:** If the Forest Service ends up having to use program funds to cover all or a part of the \$135 million settlement for the KPC deal, what program funds will you propose to reduce to cover that obligation?

Answer: Generally speaking, the benefitting functions pay for claims such as this. In this instance, many of the "offerings" which would have made up the contract volume have not been made or even located on the ground. The source of funds has not been determined. Incurring a liability of this magnitude would have severe impacts on all programs affected. The Forest Service would likely need to seek approval for reprogramming and/or transfer authority of funds to pay the claims.

President's Northwest Forest Plan

066. **Question:** How much money has the Forest Service spent to date on the President's forest plan for the Northwest? Please indicate by year, and by appropriation, the amounts as well as what is included in the FY 1998 request.

Answer: The following summarizes the amounts, by appropriation mainhead, of the funding targeted for the President's forest plan for the Northwest. Fiscal year 1994 was the first full year of implementation and, accordingly, is the first year shown here:

President's Northwest Plan Funding: FY94 to FY98 President's Budget

(Dollars in millions)

Appropriation	FY1994	FY1995	FY1996	FY1997 (est.)	FY1998 a/
Research	\$2.3	\$6.1	\$6.3	\$6.7	\$7.6
S&PF	\$15.0	\$13.7	\$16.5	\$19.1	\$18.4
NFS	\$32.5	\$57.6	\$56.9	\$59.7	\$59.7
Construction	\$20.0	\$7.1	\$6.9	\$9.4	\$12.1
Salvage Sales	\$26.0	\$9.8	\$9.2	\$9.6	\$9.6
Total	\$95.8	\$94.3	\$95.8	\$104.5	\$107.4

a/ Per President's FY 1998 Budget proposal.

067. **Question:** How much longer will there need to be special treatment for this area?

Answer: The Forest Service is into its fourth full year of implementing the President's plan for the Northwest. Implementation efforts include all major program areas of the Forest Service, including National Forest Systems, Research, and State and Private Forestry.

For the National Forests of Washington, Oregon and California subject to the requirements of the Plan, the standards and guides set forth in

the Northwest Plan's (NWP) Record of Decision (ROD) are now standard operating procedure. The key point here is: The standards, guides and management requirements of the NWP will be adhered to, regardless of the funding provided. Standards and guides cannot be compromised.

The Rural Community Assistance portion of the Presidents Forest Plan helps to mitigate economic transition by supporting the economic diversification efforts occurring in Northwest communities. The program is filling a significant gap in other federal and state community and economic development programs. Initial emphasis was on developing community capacity to complete community economic development plans to identify economic issues and opportunities for communities and tribes. Emphasis has slowly shifted to support for completion of feasibility studies, market studies and business plans relating to Natural resource utilization and management. In addition, Forest Service is providing technical assistance and financial resources for community development staff to access these programs. Currently, the Interagency MOU for Economic Adjustment and Community Assistance commits Federal agency participation through FY 1998.

068. Question: How much money have the states in the area of the northwest plan contributed to this effort?

Answer: To date, we conservatively estimate the states of Washington, Oregon and California have contributed almost \$57 million to the efforts under the Pacific Northwest Plan. These include funds for State Community Economic Revitalization Team (SCERT) related activities, contributions from the California Governor's Discretionary Funds to support displaced workers within the affected areas of the NWP, as well as matching contributions from Tribal and local governments for various community development projects.

069. Question: What percent of the timber sale volume predicted by the President's Pacific Northwest forest plan has been sold the past 3 years? What has been the timber sale performance for the President's forest plan?

Answer: The following tables shows the predicted (PSQ plus 10% other wood) PNW Plan timber sale volume and the offer and sold accomplishment for fiscal years 1994 - 1996. It shows the Forest Service portion only.

Fiscal Year	Planned Offer--MMBF	Actual Accomplishment MMBF			
		Offer	Percent	Sold	Percent
1994	300	224	75%	226	75%
1995	458	493	108%	387	84%
1996	611	683	112%	793	130%
Total	1,369	1,400	102%	1,406	103%

Volume sold is not directly comparable to volume offered for sale on an annual basis, as sales offered late in the fiscal year will not be recorded as sold until the following fiscal year. Thus, some of the

1994 volume sold may have been offered in prior years and a portion of the 1996 volume offered for sale will be sold in later years.

070. Question: The President's Northwest forest plan calls for producing on average over 1 billion board feet of timber per year, of which about 10% is to be non-sawlog material. Do you expect to meet this level in FY 1997 or in FY 1998?

Answer: The USDA Office of Forestry and Economic Assistance recently provided information relevant to this question in the report "The Northwest Forest Plan: A Report to the President and Congress" (issued December, 1996). We assume your reference to producing on average over 1 billion board feet of timber per year refers to the original estimate of 1.1 billion board feet. The 1.1 billion board foot level includes the probable sale quantity (PSQ) of 958 million board feet plus an additional 10 percent of "other wood" (cull, sub-merchantable size, or other products not normally included as part of allowable sale quantity calculations). As noted in the 1994 Final Supplemental Environmental Impact Statement, "[s]ustainable sale estimates will be made using more refined data and procedures available when Draft Forest and District Plans are completed or current plans are revised." (FSEIS, page 3&4-267). Some individual national forest and BLM district plans have been completed since implementation of the Pacific Northwest Forest Plan and the PSQ has been revised as a result. The December 1996 Report to the President and Congress now sets the PSQ at 868 mmbf, and total projected levels at 955 mmbf if you include "other wood" (page 103). It notes that further adjustments could be made as more plans are revised in the future. The Forest Service intends to fully meet its part of the current PSQ projections in fiscal years 1997 and 1998.

The question implies that about 10% is to be non-sawlog material this is not correct. The PSQ calculation in the Plan, as with allowable sale quantity (ASQ) calculations in other forest plans, does not include a product definition. PSQ volume is based upon calculated wood fiber volume obtainable from trees meeting minimum tree diameter/log top diameter as described in individual Forest Plans. Such material may be sold as several different "products" as specified in the timber sale contract. The Final Supplemental Environmental Impact Statement (FSEIS) for the Pacific Northwest Forest Plan indicates that "PSQ includes only scheduled or regulated yields from the matrix and does not include 'other wood', or volume of cull and other products that are not normally part of ASQ calculation" (Glossary, p. 13). This definition does not limit PSQ to saw logs only. The "other wood" category includes "the volume of cull (wood that is decaying or too crooked for processing), submerchantable size material, or other products not considered as merchantable and not normally part of the allowable sale quantity calculations" (FSEIS, pp. 3&4-267 through 3&4-268). The "other wood" also includes all harvest from lands not classified as suitable for timber production, for example, harvest from Late Successional Reserves (LSRs). In simple terms, "other wood" includes; 1. all harvest of material not meeting utilization standards in forest plans, and/or 2. all harvest from lands not classified as suitable for timber management. Thus, there is no requirement to produce a set amount of sawlog or non-sawlog material.

071. Question: Please provide a table which shows for the period from 1992 to 1997, by year and by national forest, the number of employees, the total national forest budget, the timber sold, and the number of recreational visitors for each of the national forests in the President's Northwest plan.

Answer:

1. The number of employees.

Region 5

The following is the number of Full-Time Equivalents (2,087 hours worked = 1 FTE) for Region 5's President's Northwest plan forests. The FTE count excludes Emergency Fire (EFTS/WFSU).

	<u>1997</u>	<u>1996</u>	<u>1995</u>	<u>1994</u>	<u>1993</u>	<u>1992</u>
	(Estimate)					
Klamath	430	434	452	402	501	546
Mendocino	195	197	240	186	225	259
Six Rivers	240	235	260	226	285	314
Shasta-Trinity	490	468	534	471	535	563

Region 6

	<u>1997</u>	<u>1996</u>	<u>1995</u>	<u>1994</u>	<u>1993</u>	<u>1992</u>
Deschutes	496	497	483	498	537	541
Gifford Pin.	415	416	470	535	626	753
Mt. Baker-S	271	271	289	341	390	425
Mt. Hood	524	524	561	639	662	718
Okanogan	250	250	233	259	283	283
Olympic	177	177	204	241	267	299
Rogue River	333	333	332	366	413	452
Siskiyou	276	276	278	326	412	495
Siuslaw	240	240	254	324	364	460
Umpqua	349	349	360	449	512	562
Wenatchee	471	473	507	473	488	537
Willamette	518	518	521	592	722	874
Winema	347	347	350	379	366	350

Number of employees is per final FY 113-G.

For FY 1997 the number of employees is estimated per 113-G as of February 15, 1997.

2. The total national forest budget.

Region 5

The following is the "Grand Total All Funds" as allocated to our forests based on our Final Allocation packages.

MS's

	<u>1997</u>	<u>1996</u>	<u>1995</u>	<u>1994</u>	<u>1993</u>	<u>1992</u>
Klamath	\$25,710	\$25,933	\$25,793	\$24,255	\$28,748	\$37,387
Mendocino	14,372	14,277	17,015	15,735	15,433	17,095
Six Rivers	17,172	16,700	18,475	16,670	20,961	22,148
Shasta-Trinity	34,177	30,995	29,948	32,336	37,091	44,007

Additionally, for FY 1997, \$1.4 million emergency supplemental construction funds (CNES), and \$1.9 million PNW assistance funds (SPNW) has been set aside and will be allocated to the President's Plan forests, as soon as the review of project and grant proposals, respectively, are completed.

Region 6

	<u>1997</u>	<u>1996</u>	<u>1995</u>	<u>1994</u>	<u>1993</u>	<u>1992</u>
	M\$'s					
Deschutes	\$33,963	\$41,396	\$33,060	\$31,820	\$32,833	\$33,600
Gifford Pin.	27,541	34,833	32,611	42,404	35,377	48,542
Mt. Baker-S.	22,223	23,488	26,263	26,925	27,868	39,621
Mt. Hood	33,757	33,907	32,593	41,108	44,428	47,759
Okanogan	15,461	16,246	16,012	17,014	17,741	19,006
Olympic	13,095	19,113	16,766	20,087	18,886	20,936
Rogue River	15,463	21,596	23,403	20,666	20,603	25,137
Siskiyou	17,748	21,695	21,827	24,472	29,699	38,298
Siuslaw	16,280	19,260	19,980	31,130	32,660	36,893
Umpqua	22,504	24,397	25,195	30,977	35,915	41,213
Wenatchee	29,834	32,483	41,513	36,596	31,073	38,760
Willamette	35,479	37,122	36,471	38,706	44,344	58,913
Winema	21,429	23,928	24,909	25,958	25,306	24,027

Total National Forest Budget includes all funds allocated as of 9/30 for each FY including other agency funds.

For FY 1997 total NF budget is all allocations through March, 1997

3. The Timber Sold.

This information is taken from the Automated Timber Sale Accounting System.

Region 5

	Thousand Board Feet					
	<u>1997 *</u>	<u>1996</u>	<u>1995</u>	<u>1994</u>	<u>1993</u>	<u>1992</u>
Klamath	9,882	39,605	25,686	23,818	32,479	27,935
Mendocino	10,833	7,212	3,725	1,084	4,842	3,033
Six Rivers	13,345	9,996	4,292	3,491	5,403	11,084
Shasta-Trinity	14,674	52,677	29,872	19,897	65,608	52,939

* First Quarter Only

Region 6

Thousand Board Feet

	<u>1997 *</u>	<u>1996</u>	<u>1995</u>	<u>1994</u>	<u>1993</u>	<u>1992</u>
Deschutes	55,960	90,003	65,865	80,207	95,692	107,625
Gifford Pin.	37,657	48,795	11,589	5,789	22,729	24,788
Mt. Baker-S.	1,520	27,816	6,439	8,079	20,372	18,809
Mt. Hood	80,733	48,409	22,440	48,946	74,754	43,445
Okanogan	1,908	18,703	17,383	15,459	10,127	15,501
Olympic	521	18,089	3,240	14,222	14,189	9,122
Rogue River	8,490	22,158	20,270	14,677	10,501	7,286
Siskiyou	16,591	46,374	18,300	11,501	3,463	2,054
Siuslaw	6,542	26,370	927	5,666	5,331	6,494
Umpqua	39,136	58,403	12,800	20,924	6,591	15,154
Wenatchee	14,231	80,457	54,478	16,052	20,232	19,970
Willamette	41,628	124,458	11,178	39,365	54,186	103,660
Winema	13,943	73,017	31,508	15,587	156,542	46,283

* First Quarter Only

4. The number of recreational visitors.

Region 5

The Region only had recreational visitor information available for FY 1994 through FY 1996. It was obtained from Management Attainment Reporting number 63.2 Recreation Use.

	Thousand Visits					
	<u>1997</u>	<u>1996</u>	<u>1995</u>	<u>1994</u>	<u>1993</u>	<u>1992</u>
Klamath		2,590	2,591	2,577		
Mendocino		3,581	3,357	3,357		
Six Rivers		4,476	4,926	4,926		
Shasta-Trinity		18,900	9,065	9,065		

Region 6

Recreation use numbers are Recreation Visitor Days (RVDs). One RVD is measured as participation in any activity lasting less than twelve hours. Data for FY 1996 and FY 1997 was not available. FY 1995 numbers are the same as FY 1994 because the FY 1995 data was not felt to be accurate.

	RVDs					
	<u>1997</u>	<u>1996</u>	<u>1995</u>	<u>1994</u>	<u>1993</u>	<u>1992</u>
Deschutes			3,268	3,268	3,646	11,176
Gifford Pin.			7,690	7,690	19,611	24,788
Mt. Baker-S.			5,845	5,845	6,522	6,136
Mt. Hood			1,784	1,784	1,388	1,714
Okanogan			1,210	1,210	1,250	1,234
Olympic			1,819	1,819	1,785	2,236
Rogue River			1,345	1,345	1,382	1,317
Siskiyou			547	547	495	488
Siuslaw			2,500	2,500	2,408	2,408

Umpqua	2,172	2,172	1,412	1,885
Wenatchee	5,914	5,914	5,514	8,656
Willamette	1,901	1,901	2,206	2,365
Winema	1,374	1,374	380	463

Sierra Nevada ecosystem project and California Spotted Owl EIS

072. **Question:** How much money, from what sources, and in what years, has the Forest Service spent on the Sierra Nevada Ecosystem Project (SNEP) and on the Environmental statement for the California spotted owl (Cal Owl EIS)?

Answer: The SNEP was requested by Congress in the Conference Report for PL 103-66 Interior and Related Agencies 1993 Appropriations Act which authorized funds (FS) for the project. The final report to Congress was submitted in June 1996. The amount spent for SNEP was \$6.8 million.

SNEP EXPENDITURES FISCAL YEAR

Fiscal Year	USFS Research Funds	USFS NFS Funds	Total USFS
93	\$239,000	\$ 861,000	\$1,100,000
94	\$788,000	\$2,338,000	\$3,126,000
95	\$788,000	\$1,612,000	\$2,400,000
96	\$175,000	\$ 0	\$ 175,000
Totals	\$1,990,000	\$4,811,000	\$6,801,000

The Cal Owl EIS started in April 1993 and is ongoing. A Draft EIS was prepared and distributed for public review in February, 1995. A Revised Draft EIS was prepared in August, 1996, but not released. Controversy about the Revised DEIS and its relationship to SNEP led to a decision to have a FACA committee review before release.

CAL OWL EIS EXPENDITURES BY FISCAL YEAR

Fiscal Year	Total NFS Funds
93	\$389,000
94	\$870,000
95	\$708,000
96	\$631,000
Total	\$2,598,000

073. **Question:** The courts have found the SNEP to be in violation of the Federal Advisory Committee Act. What can the Forest Service do to rectify this problem? How does this problem affect the use of the entire SNEP effort?

Answer: On December 31, 1996, The Court of Appeals for the District of Columbia remanded the case to the District Court to determine whether injunctive relief is appropriate. The Appeals Court opined that there

had already been a great deal of public involvement and that an injunction may not be warranted. Ultimately, the ability of the Forest Service SNEP is predicated upon the District Court decision. The District Court has not issued a decision to date.

074. Question: Do you anticipate there will be similar or other legal problems to the Cal Owl EIS?

Answer: No. We do not anticipate any problems. The Administration is establishing a Federal Advisory Committee to review the preliminary revised draft EIS and make recommendations relative to integration of Sierra Nevada Ecosystem Project (SNEP) report findings. The EIS would receive additional public comment.

075. Question: Last year the regional forester for region 5 recommended that the revised Cal Owl EIS be released for a second public comment period. We understand that that release was stopped by either the Washington office of the Forest Service or the USDA political leadership. Who was involved, and when, in holding back the Cal Owl EIS?

Answer: Under memorandum of September 4, 1996, from Undersecretary Lyons to Jack Ward Thomas, the Administration wanted to ensure that all available science relative to the Sierra Nevada had been considered and integrated into the revised DEIS prior to a decision being made.

076. Question: The Cal Owl was held back at the last minute in favor of forming a time consuming federal advisory committee to evaluate the adequacy of the incorporation of the SNEP information. What is going on with this effort? When do you expect the Cal Owl EIS will be released?

Answer: The Secretary of Agriculture is going to select a 11 member panel of scientists to review the California owl preliminary draft EIS. The advisory committee has been provided \$250,000 for its operations. The committee will work through the Spring and Summer to prepare a report for the Secretary. The committee charter expires September 30, 1997. The release is dependant upon results of committee review.

077. Question: The existing interim guidelines for the Cal Owl management are getting to be out of date. Is it appropriate to continue managing using guidelines that were intended to be only used for two years?

A major rationale for allowing an environmental assessment (EA) rather than an EIS for the Cal Owl guidelines previously was that they were to be used only for a short time and therefore did not constitute a significant federal action setting off the EIS trigger. Does the continued delay of the Cal Owl EIS put existing management direction at jeopardy?

Answer: The California spotted owl interim guidelines are in force on the forests in the Sierra Nevada. It is the best strategy at this time pending adoption of the final Cal owl plan. We recognize that since the adoption of the interim guidelines there is new information relevant to resource management in the Sierra Nevada that should be incorporated into the long-term strategy. For example, aquatic resources need a conservation strategy and fuels reduction has become increasingly important to the overall health of the forest. We believe the interim guidelines are scientifically sound and legally defensible at this time. We do not believe that the existing management direction is in jeopardy. Adoption of the final EIS will replace the interim guidelines with a long-term strategy for protection and management of the national forests in the Sierra Nevada. We are moving forward to complete the EIS.

078. **Question:** Who will be the deciding officer on the Cal Owl EIS once it is finally released?

Answer: The Regional Forester in Region 5 located in San Francisco will be the deciding officer.

079. **Question:** To what extent were the Secretary of Agriculture, the Assistant Secretary, and the President's chief of staff involved in making the decision to hold back the Cal Owl EIS last July?

Answer: The Forest Service, with the concurrence of the Department, decided to delay releasing the EIS to ensure that the preliminary draft EIS had considered the information from the Sierra Nevada Ecosystem Report (SNEP). Congress authorized the SNEP team to conduct a "scientific review of the remaining old growth in the national forests of the Sierra Nevada in California, and for a study of the entire Sierra Nevada ecosystem by an independent panel of scientists, with expertise in diverse areas related to the issue." The SNEP report includes findings and recommendations that are important to the management of the national forests in the Sierra Nevada. The report reviewed historical trends and conditions of the Sierra Nevada ecosystem. For example, SNEP report includes information relating to fire and fuels which is of paramount concern in this ecosystem. It is essential for us to have a thorough review and understanding of the SNEP report and its implications for the management strategy for the Sierra Nevada.

080. **Question:** What was the basis for the political leadership to decide that the effort was not based on the best forest science?

Answer: The Forest Service, with the concurrence of the Department, decided to take some additional time to ensure that the wealth of information compiled and presented in the SNEP report was considered in the preliminary draft EIS prior to issuing a decision on the EIS.

081. **Question:** What are the credentials and experience of the staff who were involved in writing and consulting on the Cal Owl EIS and the SNEP report?

Answer: The EIS team was composed of Forest Service professionals with a broad range of natural resource and social science knowledge, education, and experience. Members of the SNEP science team were academicians, Forest Service scientists, and National Biological Service scientists. Consultants to the team included Forest Service scientists and resource specialists, members of academia, and resource specialists from the State and private sector. All of the science team, consultants, and associates were appointed with approval or consultation of the steering Committee.

Members of the SNEP Science Team and Consultants were first submitted to Congress with the May 1994 Progress Report on the Sierra Nevada Ecosystem Project, pages 37 and 38. Additionally, all personnel associated with SNEP are listed in Appendix 2, pages 183-186 of Status of the Sierra Nevada: Volume 1, Assessment Summaries and Management Strategies of the Final Report to Congress. Appendix 1 (pages 177-181 of SNEP) lists the author or co-authors of each report in Volume II, III, and the addendum.

082. **Question:** This example (Cal Owl EIS and SNEP), and others including the Columbia basin ecosystem management plan, the Tongass land management plan, the Forest Service planning regulations, suggest that it is getting to be nearly impossible for the Forest Service to complete major work without it being held up by decision makers.

What specific steps is the Forest Service taking to rectify this situation?

Answer: We have a process underway to revise the planning regulations that will streamline forest planning within current law and regulations. The Forest Service is also working with other natural resource agencies to identify opportunities to coordinate planning and management, as well as streamlining project level decisionmaking processes.

Fundamentally, however, it is policy-level officials who bear the ultimate responsibility for making decisions on issues of national policy. These officials are accountable to the President and through him to the public in a way civil service managers cannot be. For this reason, their concurrence with major decisions is appropriate and necessary.

083. **Question:** Is there a danger that the major efforts mentioned above will get stale, necessitating further changes to the documents, and causing additional costs to the government and delays in implementing programs?

Answer: The major efforts referred to above involve different purposes. SNEP was requested by Congress for the purpose of

conducting a scientific review of the remaining old growth in the national forests of the Sierra Nevada in California, and for a study of the entire Sierra Nevada ecosystem by an independent panel of scientists, with expertise in diverse areas related to this issue. SNEP concluded with a report to Congress. This information is being utilized in planning efforts.

The Columbia River Basin Assessment was initiated to address forest, rangeland, and aquatic ecosystem health issues in eastern Oregon and eastern Washington. The project was expanded to include Idaho and western Montana and small portions of Nevada, Utah, and Wyoming. The CRB effort includes a broad scale ecosystem assessment, and two environmental impact statements utilizing information from the assessment. Future decisions associated with these two EISs will amend up to 74 Forest Service and BLM land management plans.

The Tongass effort evolved from the need to revise the forest plan in order to comply with NFMA plan revision timelines.

Ecosystem assessments are science documents which are used in planning efforts. Science documents are not decision documents, but do reflect the best available current information.

The Tongass plan is currently anticipated to be released in late spring of this year. The two CRB draft EISs are scheduled for release in mid-May of this year, with final documents expected one year later.

KV reforestation trust fund shortfall loaned for past wildfires.

084. **Question:** How much money is currently owed to the Knutsen-Vandenburg reforestation trust fund and what is the history of how the fund got to its current status?

Answer: Roughly \$443 million is still owed the Knutsen-Vandenburg (K-V) fund for amounts advanced for emergency firefighting in prior years. The history of advances and repayments to the K-V are shown in table below:

(\$ in millions)

<u>Fiscal</u> <u>Year</u>	<u>Prior Year</u> <u>Carryover</u>	<u>Transfers</u> <u>from K-V</u>	<u>K-V</u> <u>Repayment</u>	<u>Net Balance</u> <u>Owed K-V</u>
1987				\$128.0
1988	\$128.0	\$380.0	\$ 0	580.0
1989	508.0	215.0	- 250.0	473.0
1990	473.0	220.0	- 473.0	220.0
1991	220.0	0	0	220.0
1992	220.0	75.0	0	295.0
1993	295.0	0	0	295.0
1994	295.0	350.0	0	645.0
1995	645.0	125.0	- 350.0	420.0

1996	420.0	225.0	0	645.0
1997 (to date)	645.0		- 202.0	443.0

085. Question: Are there scheduled reforestation, watershed improvement and habitat improvement projects for all of the funds that should be in the KV fund?

Answer: Yes. Our estimate of the cash balance needed in the K-V fund is tied back to work needs arising from K-V funded projects on Sale Area Improvement (SAI) Plans on each national forest. The cost estimate for each K-V funded project listed on the SAI Plan is predicated on a scheduled year of completion. Each K-V funded project listed on the SAI Plan must be completed within five years of sale closure, unless an extension to exceed five years is approved in advance by the Regional Forester due to special circumstances. Only a handful of these projects are approved for an extension beyond the five-year limit specified in national direction.

086. Question: What types of projects are funded by the KV fund?

Answer: The K-V Act authorizes the following types of renewable resource projects: (1) planting (including the production or purchase of young trees); (2) sowing with tree seeds (including the collection or purchase of such seeds); (3) cutting, destroying, or otherwise removing undesirable trees or other growth, on the National Forest land cut over by the purchaser; in order to improve the future stand of timber; and (4) protecting and improving the future productivity of the renewable resources of the forest land on the sale area.

The projects currently funded by the K-V fund include a wide variety of renewable resource projects. About 40% of these projects are reforestation projects involving tree planting, seeding, or work to prepare sites for regeneration within specific timber sale areas. Roughly 20% of these projects are timber stand improvement activities involving tree release, weeding, precommercial thinning, pruning, or fertilization to improve the future stand of timber on specific timber sale areas. The remainder of these projects support resource needs identified for wildlife and fish populations, range resources, soil and water resources, as well as recreation resources within specific timber sale areas. Typical projects for these other resource needs include building nest boxes, planting or fertilizing to enhance wildlife or range forage; removing barriers to fish passage, clearing or relocating trails within the sale area when this is not a responsibility of the timber sale purchaser, or treatments to incorporate organic matter into the soil to maintain fertility.

087. Question: Is there a danger that the scheduled projects will not be completed if the KV fund is not reimbursed for the funds that were advanced for emergency wildfire suppression activities in previous years?

Answer: Yes. What is most critical is that the K-V cash balance be sufficient to cover the anticipated K-V program of work for the fiscal year. At this time it appears, barring the necessity of major borrowing from the K-V account for unforeseen emergencies, that we have sufficient cash on deposit in K-V accounts to complete the work scheduled for FY 1997. Each advance of K-V funds for emergency wildfire suppression removes cash from the K-V fund that was collected to complete specific renewable resource projects. If these funds are not eventually restored, it will require that scheduled projects be dropped from Sale Area Improvement Plans to make up for the shortfall created by the advance.

088. **Question:** How much of the scheduled KV work was included in the timber sale packages as part of the mitigation that was associated with the record of decision for the NEPA documents allowing the projects? Please provide a table by region and national forest which indicates what the KV obligation is and what type of projects are involved.

Answer: Current national policy for K-V prohibits the use of K-V funds to mitigate the effects of the timber sale. These mitigation activities are the responsibility of the timber purchaser or permittee under the terms of the contract.

K-V funds may be used to mitigate resource problems that existed in a sale area prior to a proposed timber sale. Current national policy specifies that the use of K-V funds for this purpose be reserved for problems that can be corrected at reasonable funding levels considering the value of the stumpage on the sale. While we do not have a specific listing of the K-V obligations associated with this work, this use of K-V funds constitutes a minor portion of the K-V work currently scheduled on SAI Plans. The types of projects involved in mitigating prior resource problems are largely related to soil and water protection measures. This would include tilling or ripping compacted soils or obliterating old road beds from prior timber sales that are no longer part of the transportation network.

089. **Question:** Is there a risk to the environment and an undo (sic) legal exposure if mitigation projects promised in timber sale decisions are not completed because of a shortfall in the KV fund?

Answer: With respect to legal exposure from uncompleted mitigation work arising from the timber sale, there is no risk. Mitigation work arising from the timber sale is the responsibility of the Purchaser or permittee under the terms of the contract. Other renewable resource opportunities identified in records of decision or decision notices will only go forward as K-V projects if the selling price for the sale is sufficient to cover this work. Since there is no guarantee that this will occur, national policy requires that renewable resource opportunities identified in NEPA documents be silent as to the source of funding. If K-V funds are unavailable, resource managers must seek

alternate funding sources to implement the renewable resource opportunities identified in these decision-making documents.

Aside from the mitigation issue, there is potential legal exposure and substantial harm to the environment if the funded K-V projects, jeopardized by the advances from the K-V fund for emergency wildfire suppression, are not completed within the planned timeframes due to a lack of funding. Much of this work is related to reforestation. The National Forest Management Act mandates that all forested lands be maintained with appropriate forest cover and that National Forest System lands be promptly reforested following regeneration harvest. Our ability to reforest these lands is greatly diminished if the K-V funds collected for this purpose are unavailable to complete this work. This sets the stage for potential legal challenges and could cause harm to the environment by delaying resource recovery on lands cutover by the Purchaser. We view all of the K-V funded projects listed on Sale Area Improvement (SAI) Plans as necessary renewable resource projects. From this standpoint, eliminating any of these projects as a result of prior emergency wildfire suppression advances would be harmful to the resource values we are managing.

090. Question: What is the Forest Service doing to encourage the administration to release the \$250 million that was appropriated by the Congress last year to repay the KV fund?

Answer: The Forest Service has requested the release of the \$250 million. This request for a Presidential emergency declaration to repay KV's fund balance is currently under review by the Department of Agriculture.

091. Question: When the KV fund was used as the bank to support wildfire activities, was this done during emergencies that affected life and property?

Answer: Appropriation Act language authorizes the advancement of any funds available to the Forest Service to the Wildland Fire Management appropriation to be used for forest firefighting and emergency rehabilitation of burned-over lands, when emergency firefighting funds are exhausted. The emergency firefighting account is managed nationally as a whole and not fire by fire. When projections indicate the emergency firefighting funds will be exhausted before the end of the fiscal year, an appropriate amount of funds are advanced from the KV account for forest firefighting purposes. All activity to suppress wildfires, i.e. forest firefighting, is considered an emergency involving potential loss of life and property.

092. Question: What controls do you have to be sure that funds advanced from the KV fund for wildfire suppression activities are used only for essential fire management activities?

Answer: The use of fire management funds for anything other than fire management activities is a violation of appropriation use law which states that funds appropriated by Congress may only be applied to the

objects for which the appropriations were made. The validation of the proper use of funds as appropriated is an inherent part of every Fiscal and Accounting review conducted of each Region every three to four years. This includes the validation of the proper use of wildfire suppression funds. Improving fund controls and oversight is also an essential goal of our financial systems upgrade plans.

093. Question: What steps are needed to release the \$250 million appropriated last year?

Answer: The normal process is for the Forest Service to request the Secretary to request that the President declare the \$250 million an emergency requirement in accordance with provisions of the Balanced Budget and Deficit Control Act of 1985 and so notify the Congress.

094. Question: Why is it difficult for the President to issue an emergency declaration; the funds were advanced from the KV fund during the emergency situations?

Answer: There is currently no emergency situation. The KV fund has adequate balances to cover the planned FY 1997 and FY 1998 program.

095. Question: Does the President's office and the CEQ have a full understanding of the adverse harm to the environment which could be caused if the projects which were promised to be completed with the KV funds are not funded and are not completed?

Answer: We believe so.

096. Question: Has the Forest Service had any discussions with Office of Management and Budget and/or the White House regarding the December 9, 1996 letter from Mr. Regula, Mr. Yates, Mr. Gorton and Mr. Byrd to OMB Director Raines asking the administration to release the \$250 million in KV repayment funds that was included in the 1997 Interior and Related Appropriations Act but is not being released because the administration has failed to issue an emergency letter?

Answer: Yes, Chief Dombeck has met with OMB officials to discuss this issue. OMB has responded to the letter indicating that a Presidential emergency declaration to release the contingency will only be considered under emergency situations.

WILDFIRE MANAGEMENT

097. Question: We have had some severe wildfire years recently. You have stated that fire management is one of your priorities. It certainly is to the American public. If this a priority, why are you not asking for increased funding as the BLM did this year? What is different about your funding situation from the BLM?

Answer: The FY 1998 request reflects a \$13 million increase in preparedness and a \$20 million increase in fuels reduction.

The total level proposed represents a reasonable balance between the Wildland Fire Management needs and other high priority agency programs which would be reduced if the 10-year average is fully funded.

098. **Question:** Following the extremely costly 1994 fire season, several reports were published with recommendations that could result in reducing fire suppression expenditures. Can implementation of these recommendations make up for the shortfall in the suppression account?

Answer: Many of the recommendations will reduce the cost of individual large fires and total expenditures. In the long term, our strategy to increase hazardous fuels reduction is critical to a reduction in fire suppression expenditures. If the severity of the fire season leads to a shortfall in suppression funding the Forest Service will request funds from the government wide emergency contingency fund.

099. **Question:** What is the joint Interior Department and USDA policy for wildfire management regarding requesting funds sufficient to cover the 10-year average in wildfire suppression needs?

Answer: USDA and DOI have agreed to use a standard technique for determining the 10 year average suppression costs. Each agency proposes funding based on total agency priorities, considering the impacts on non-emergency programs. There is no formal policy for determining budget requests.

100. **Question:** The BLM budget request for 1998 is requesting about 89% of the 10-year average suppression cost. The Forest Service request is 47% of the 10-year average. Why does the Forest Service request fall so far short of what is a reasonable level that probably will be needed to fight fires?

Answer: The budget proposal for the Forest Service represents a high reliance on the government-wide contingency fund. Other high priority agency programs would be reduced if the 10-year average was fully funded.

The President's Budget also proposes continuation of appropriation language which authorizes advancing funds from any appropriations or funds available to the Forest Service to Wildland Fire Management for use in firefighting and emergency rehabilitation of burned-over lands.

101. Question: What has been the fire fighting cost for the past 10 years? Why is your suppression request so far below the 10-year average?

Answer: The ten year average for emergency suppression is \$337.1 million. The request reflects the uncertainty of predicting actual fire activity and consideration of the impacts on non-emergency programs.

102. Question: Your new fire operations activity now includes your fuel management program and your prescribed burning program. What is the rationale for allowing emergency contingency funds from the new government wide fund you are proposing to be used for fuels treatments?

Answer: A significant underlying cause of increasing suppression costs is the increasing severe fire activity, which results from large accumulations of fuel. We will not begin seeing a downturn in fire suppression costs and catastrophic losses until we make substantial progress in reducing the severe hazardous fuels buildup. The treatments for fuels will vary from prescribed burning to mechanical. Prescribed burning is the most cost effective technique, but requires a combination of suitable weather, smoke dispersion conditions, prerequisite mechanical treatments in many cases and resource availability. Given the uncertainty and largely unpredictable nature of these factors coinciding, the funding mechanism proposed will allow for significant gains in fuels treatments when such events do occur. Without the flexibility to respond when conditions are favorable, the problem of severe fire activity will continue to grow. It should be understood that we do not expect to go directly to the contingency fund. Rather, we will plan for the maximum feasible program and allocate those funds. These funds will come from the Operations Component and will increase the probability that we will utilize the Contingency mechanism for fire suppression activities.

103. Question: What is your programmed work load for fuels treatments? Please provide a table which indicates, by region and national forest, the amount of area that should receive various major kinds of treatments and the priority of the work? If you do not have a schedule and a plan to conduct such treatments, how do you base your budget request?

Answer: We are still completing the site specific assessments of actual treatment needs in each ecosystem. This is based on land management plan goals and some areas have not completed needed updates or revisions. The budget requests are based on actual planning data received from each National Forest. The long term estimates are based on large scale ecosystem analysis for those areas where fire plays a key role in the health of the forests. These estimates, combined with historical natural fire frequency, have been used to generate long term, annual workloads. We are confident that at least \$50 million of high priority projects can be identified and that we will be able to come close to that level of accomplishment if the budget proposal is

approved. The actual level of accomplishment will depend on weather conditions, availability of trained crews, and completion of site-specific assessments.

The following displays the distribution of the initial \$30 million hazardous fuels reduction funding allocated to the field in the Initial FY 1998 Planning and Budget Advice:

<u>Region</u>	<u>Funds</u> <u>(Dollars)</u>	<u>Acres</u>
Region 1	3,531,000	59,561
Region 2	2,372,000	33,794
Region 3	3,807,000	79,456
Region 4	2,493,000	48,082
Region 5	6,192,000	45,878
Region 6	4,534,000	62,541
Region 8	6,503,000	511,360
Region 9	485,000	9,104
Region 10	83,000	224

104. **Question:** Please explain why you have renamed your wildfire suppression activity?

Answer: The proposed budget structure more correctly addresses the inclusion of hazardous fuels reduction under "operations" and clarifies the emergency/non-emergency components of the budget line item. Operations includes emergency suppression, emergency rehabilitation, severity funding, and hazardous fuels reduction.

105. **Question:** At the level of your fuels operation request, how long will it take to treat all of the areas in the national forest system that are in need of treatment?

Answer: At projected levels, it may take 20 to 30 years to treat those areas that are most at risk. Many areas will require multiple treatments during this timeframe.

106. **Question:** What controls and incentives do you have in place to keep costs down for fuels treatments?

Answer: Specific levels of fuels treatment are identified in the final appropriation. Money is allocated to field units based on a target number of acres to be treated. Cost effective utilization of fuels treatment money is a key factor in determining the field unit's allocation. Field units are required to report accomplishments at the end of each fiscal year. Periodic program and project reviews are conducted throughout the National Forest System.

107. **Question:** How do you integrate various fuel treatments, such as non-commercial or commercial thinning into your program.

Answer: Treatment integration occurs during project analysis which is performed at the local level. During the NEPA analysis, all

treatments which are consistent with Forest Plan standards and guidelines receive consideration as appropriate treatments.

108. **Question:** How do you prioritize areas for fuel treatment?

Answer: Priority treatment areas are determined using many evaluation criteria including firefighter and public safety, resource values, the anticipated cost of treatment, and the contributions a treated area will make both in the larger protection plan and toward restoration of forest health.

109. **Question:** Do you use wildfire management funds just for areas that have a high wildfire danger or do other resource values get equal consideration when you are prioritizing fuels treatments?

Answer: Priorities for hazard fuel reduction are intended to provide for firefighter and public safety, reduce subsequent suppression costs, and increase forest health. Other resources obtain benefits and are considered but not on an equal basis.

110. **Question:** Do you use wildfire management funds to devise national forest fire plans? How much does the wildfire appropriation request include for fire planning?

Answer: Yes, wildfire management funds are used to devise fire plans, but accounting for Presuppression funds does not distinguish fire planning from a number of activities charged to the appropriation. Regional requests are not split to show planning versus other activities.

111. **Question:** What aspects, and for how much money, does the land management planning activity within NFS provide for fire planning?

Answer: Nothing directly unless fire planners are part of an interdisciplinary team preparing a Forest Plan revision. This would depend on the individual National Forest. Fire planning is not identified as an activity within the Land Management Planning, Inventory and Monitoring (LMPIM) Budget Line Item.

The Ecosystem Management Coordination Staff worked closely with forest planners and fire planners agency-wide during 1996 to better incorporate fire planning into the next round of Forest Plan revisions. In October and December 1996, drafts of a Desk Guide were circulated for peer review on this subject. In February 1997 comments were analyzed by a Steering Committee and are being incorporated into a final desk guide for integrating wildland fire management considerations into the land management planning process. The LMPIM BLI would only be associated with planning-related work such as estimates of effects of alternatives, and modeling, all above the project level.

112. **Question:** How much, by activity, is included in the budget request for NFS program areas, such as recreation, wilderness, range,

wildlife, watershed, timber, and infrastructure management, to support fire planning or implementation?

Answer: The National Forest System program area budget does not include any support request for purely fuels reduction projects. Support for planning and implementing projects is paid for by the benefitting function. Often a project will have multiple benefits. In the case of projects that reduce fuels, there often can be multiple benefitting functions. For example, a project that reduces fuels might also benefit winter game range. In this case, wildlife and fuels would share costs proportionate with the benefits. Likewise, if a project includes commercial thinning to reduce ladder fuels and stand density prior to burning, then timber will pay a proportionate share. These benefits and costs are determined on a project-by-project basis.

113. **Question:** To what degree does your 1998 budget request depend on the forest ecosystem restoration fund (FERM) that the administration has talked about but to date has not provided the Congress?

Answer: The FY 98 budget does not depend on FERM, baseline and program accomplishments were prepared based on current law. FERM is still under consideration.

114. **Question:** If the FERM fund does not get authorized this year, will you need to submit an amended budget request to account for the changed budget circumstances.

Answer: No amended budget request would need to be made if the FERM fund is not authorized.

115. **Question:** What projects will you complete in 1998 if the FERM fund is authorized? Please provide a summary table by region.

Answer: We are still in the process of developing procedures to identify and fund projects. There are major ecosystem restoration and maintenance needs across the National Forest System. If the FERM fund is authorized, it will extend the Forest Service ability to accomplish this work.

116. **Question:** If the FERM fund is not authorized this year, which of these projects will never-the-less be completed using other program funds?

Answer: FERM fund projects would be based on the intent and purpose of the FERM fund. Since a FERM fund proposal has not been completed or authorized there is no list of projects. However, our activities in this area would be limited to the appropriated funds available.

117. **Question:** If the FERM fund is authorized and projects are begun in 1998 using new funds, how will it affect your FTE's and how will it affect your other program goals and accomplishments?

Answer: It is our expectation that accomplishments will increase for those programs supported by the FERM fund. FTEs would not be affected although we would probably need to reallocate the current ceiling and increase work contracted.

118. **Question:** The FERM fund that you will propose is another working fund that will lack Congressional appropriations oversight. How do you expect to establish better controls for this fund than exist for the existing salvage, KV, reforestation and brush disposal funds?

Answer: We expect to have adequate controls for the FERM fund. The specific provisions are still being developed.

119. **Question:** What would be the impact of a phase-out of the KV fund over the next 5 years?

Answer: The primary purpose of the K-V Act, both when originally passed into law in 1930 and following the 1976 amendment, was to facilitate reforestation. The primary impact of a phase-out would be felt on our reforestation programs. Currently, we rely upon the K-V fund to provide roughly two-thirds of the annual funding needed to accomplish reforestation work. If additional appropriated funds could not be secured, we estimate a reduction in reforestation treatments of 150 to 200 thousand acres annually over the next 3-5 years.

The National Forest Management Act of 1976 places added importance on promptly reforesting National Forest System lands where the objectives of land management plans indicate the need to reforest those areas where significant tree cover has been purposefully removed or killed due to natural causes. Where we can design a timber sale to accomplish desired vegetative changes and recover some of the product value, utilizing K-V deposits collected from the sale area provides a readily available source of funding to complete reforestation work within the sale area in a timely fashion.

On suitable lands, regulatory requirements under 36 CFR 219.27(c) (3) specify that when trees are cut for timber production purposes, the cuttings be made in such a way as to assure that the area can be reforested within five years of final harvest. The K-V fund provides a mechanism for completing reforestation activities in a timely means to satisfy this requirement.

Impacts would also be felt on timber stand improvement (TSI) activities. In FY 1996, approximately one-half of the 260 thousand acres of TSI work was accomplished using K-V funds (129 thousand acres). About two-thirds of this work involved thinning small trees to improve forest health and promote stand growth. If K-V funds were eliminated and additional appropriated funds could not be secured, we estimate a reduction in TSI treatments of 100-150 thousand acres annually over the next 3-5 years.

Additional impacts would be felt on wildlife and fisheries, range, soil and water, and recreation resources where certain protection or

improvement activities are called for using K-V funds that could no longer be funded.

120. **Question:** What would be the impact of eliminating the salvage fund?

Answer: Eliminating the salvage sale fund would cause a decrease in the timber sale program of approximately 1.3 billion board feet for FY 1998. The National Forest Management Act created this program to provide the Agency the flexibility to react to the desire to salvage timber after fires, insect epidemics, windstorms, etc. without having to wait for Congress to pass special supplemental appropriations for salvaging timber. The supplemental appropriations approach in the past prevented the quick harvest of timber and resulted in lost value. Overtime, the work now accomplished through the salvage fund would have to be incorporated into the regular program which is funded through annual appropriations. This would displace important work in other resource areas. In addition, eliminating the salvage sale fund would eliminate the special salvage sale program designed for small businesses with less than 25 employees. This program provides employment for small local businesses..

121. **Question:** What would be the impact of eliminating the reforestation trust fund?

Answer: The Reforestation Trust Fund (RTF) provides an important source of funding for accomplishing needed reforestation and timber stand improvement work.

In FY 1996, roughly \$14 million in RTF was allocated to reforest areas where disturbance events such as wildfire have resulted in the loss of forest cover. This funding was used because either there were no opportunities for a salvage sale to generate deposits to the K-V fund to cover needed reforestation work or there were insufficient values from the recovery of salvage material to cover the full cost of the reforestation work. Approximately 50 thousand acres were reforested in FY 1996 using these funds.

In FY 1996, approximately \$15 million in RTF was allocated in support of release and precommercial thinning treatments in young stands. About 89 thousand acres were treated using RTF funds in FY 1996.

If the RTF was eliminated, all reforestation and stand improvement work, except that authorized with Knutson-Vandenberg (KV) funds, would have to be accomplished through annual appropriations. This would result in a smaller total program than at present, while displacing important work in other resource areas.

122. **Question:** What would be the impact of eliminating the brush disposal fund?

Answer: Eliminating the brush disposal fund and not replacing, with other approaches would not allow the Forest Service to reduce fuels that result from timber sale operations. This would therefore increase the risk of large fires by increasing fire hazards in harvest

areas. If the work was to be performed solely by the timber sale purchaser, the purchaser would have to obtain the skills needed to broadcast burn and prescribe burn large areas. This would shift the liability risk to the purchaser, and therefore increase the cost of fuel reduction while at the same time reducing receipts to the government. Accomplishing the work as a direct cost of the timber sale or as a deposit as is currently done would achieve the same goal but likely at a higher cost.

Lake Tahoe Situation:

123. **Question:** Your testimony indicates that there is a substantial cost involved in not investing in the FERM fund. What will the costs be? Please provide a table indicating what you think the costs per year will be of not doing this work. What is the basis for your estimate for higher future costs?

Answer: It is anticipated that the FERM fund would support a variety of resource activities targeted to specific land areas and conditions where ecological conditions need to be improved. Currently there is not enough money to complete all the ecosystem restoration and maintenance work that needs to be done.

The FERM fund can be thought of as an investment in the future health of lands in the national forest system. Investments now can help us avoid increased costs in the future. Although we cannot provide a table showing cost savings, the following examples illustrate potential savings in terms of funds and resources. Where the water quality is declining or soil erosion is occurring, delays in treatment are likely to result in greater costs in the future in terms of funding needed for restoration and also in terms of potential permanent losses in the productivity of the land. In areas with high fire hazard, various types of projects have the potential to substantially reduce future fire suppression costs and attendant resource damage and loss of private property. Projects to restore wildlife and fish habitat could result reducing the costs associated with species listed under the Endangered Species Act. We expect that many projects will have multiple benefits and produce both fiscal and resource savings.

124. **Question:** We understand that President Clinton may convene a summit meeting to deal with development and pollution problems at Lake Tahoe. The Lake Tahoe regional planning authority has developed a long-range plan that includes \$700 million worth of projects and the U.S. Forest Service is a critical partner, managing 80% of the Lake Tahoe basin. Are you involved in discussions to use the federal government to solve Lake Tahoe problems?

Answer: The Forest Service is involved in discussions with local, State, and other Federal agencies regarding the long-range plan. In addition, implementation of ongoing programs in the area involves continual dialogue among the many participants and stakeholders.

125. **Question:** What is the Forest Service's responsibility with regard to Lake Tahoe region problems?

Answer: As the land manager for approximately 76% of the land and the primary outdoor recreation provider in the Lake Tahoe Basin, the Forest Service has a shared responsibility for Lake Tahoe region

problems, primarily those resulting from actions on National Forest lands.

The Environmental Threshold Carrying Capacities ("thresholds") for the Lake Tahoe region are the standards against which all projects and activities are measured, for the achievement of the goals of the Bi-State Compact (P.L. 96-551) that created the Tahoe Regional Planning Agency (TRPA). Other laws require the Forest Service to comply with the thresholds set for water, air, and noise. However, the LTRMU Land and Resource Management Plan (Forest Plan) expands that requirement and actually incorporates the environmental thresholds as part of that document. A specific management practice in that document directs the Forest Service to "support the attainment of the Environmental Thresholds" and to "operate...toward the achievement of the thresholds regardless of the status of regional government in the area." In fact, Forest Service programs and activities are directed to be "guided by both this forest plan and and by the TRPA Regional Plan." With this direction, the Forest Service ensures that its projects work to correct problems within the Lake Tahoe region.

For example, the 1996 Heavenly Ski Resort Master Plan, includes requirements (as a condition to expansion) for that major recreation site to be a positive contributor to the Coordinated Transit System being developed on the south shore. In addition, the development of a gondola linking the ski resort with the redevelopment area in city of South Lake Tahoe will in essence bring the ski area to the population center, enabling visitors to reduce their reliance on their cars. These actions by the largest Forest Service permittee in the region were developed to further the environmental thresholds' goal of reducing winter traffic volumes and vehicle miles travelled to improve air quality.

In addition, a 1981 Management Agreement resulted in formal designation of the Forest Service as the water quality management agency for lands it administers in California. The TRPA Regional Plan extended this authority to National Forest lands in Nevada at Lake Tahoe. Thus, the Forest Service has the responsibility for compliance with Section 208 of the Federal Clean Water Act (PL 92-500, as amended), as well as the water quality elements of the environmental thresholds. With the large amount of National Forest land in the Lake Tahoe watershed, clearly Forest Service actions will be a strong factor in maintaining and improving the lake's water quality.

What is the Forest Service's responsibility with regard to Lake Tahoe region problems?

To examine this issue from another angle, consider the physical location of the National Forest in relation to the Basin's population base. Urban and residential areas tend to ring the lake; National Forest land surrounds this development. Consequently, the National Forest is more than just the scenic backdrop for the lake. It is also the backyard of many of the housing developments. The dramatic increase in the number of dead trees in the general forest and the resulting outcry from some of the public for action to prevent catastrophic wildfire has placed the Forest Service in the center of the "forest health" problem. The Forest Service is taking actions to address the forest health issue and also address the management of National Forest lands in the urban areas of Lake Tahoe acquired under the Santini-Burton Act authority. All management actions must be performed in accord with the standards and guides in the Forest Plan.

126. **Question:** How much of the 1998 budget request is aimed at Lake Tahoe management and problems? Please provide a table with the request by activity.

Answer: Excluding special program funding, the FY 1997 allocation of appropriated funds for the Lake Tahoe Basin Management Unit (LTBMU) was \$5,138,000. The region expects that level will be maintained in FY 1998.

Regarding special program funding for the LTBMU, the funding situation is the following:

<u>Regional/Congressional Special Program Funding</u>	<u>FY 1997</u>	<u>FY 1998</u>
	<u>Enacted</u>	<u>Pres. Budget</u>
Urban Lot Management	\$ 300,000*	\$300,000*
Erosion-Control Grants	\$ 500,000	0
Burton-Santini Purchase Prgm	\$1,000,000	0
Tahoe Re-Green	0	0

* Regional special program funding

Funding Activities for Tahoe Re-Green

Funding mix has not been worked out, but it would be multi-financed, most likely with a combination of fire/fuels, watershed operations, watershed improvements, thinning, S&PF Forest Health, real estate management, etc.

127. **Question:** How much non-federal money is brought into the management of the Lake Tahoe Basin area through the challenge cost share or other means?

Answer: In addition to the Forest Service role of managing some 76% of the Lake Tahoe land base, there are significant investments and land management activities undertaken by both the California and Nevada State Parks and State Forestry Departments, the California Tahoe Conservancy, the Nevada State Lands Commission, Departments of Transportation for both California and Nevada as well as the City of South Lake Tahoe, the 5 counties in the region, and the numerous Public Utility Districts. The University of California Davis and the University of Nevada Reno both have research programs or projects at Lake Tahoe. The Forest Service has an important coordination role with all of these entities to coordinate their programs with those of the National Forest.

Although the actual budgets/expenditures of all of these entities are not available in the time for this report, they are substantial. For example; Through 1994, local and state governments have invested \$79 million for erosion control/wetland restoration and runoff control, while the federal government had invested some \$24.8 million for a total of \$103.8 million.

Another example of investment lies in the area of sensitive lands acquisition. Through 1995, local and state governments have invested some \$92.0 million while the Forest Service has invested some \$81 million.

It is noteworthy that in the 1996 elections both California (\$10 million) and Nevada (\$20 million) passed legislation for funding environmental improvements at Lake Tahoe.

The Forest is quite active in seeking non-federal monies to supplement federal dollars in support of programs with multiple benefits. Our successes are primarily in the areas of recreation and watershed. In FY 96, the Forest expended about \$380,000 of cooperative funds. In FY 97, the Forest has requested a cooperative funding ceiling of \$315,000. These funds support programs including Off Highway Vehicle Management, Visitor Center Restoration, Historic Site Restoration, Fish and Wildlife Habitat Improvement, and Water Quality Monitoring. In addition to monies, the Forest has several success stories with long-standing volunteer efforts such as the Tallac Association (Historic Site Restoration and Management) and the Tahoe Rim Trail Association (Trail Construction and Maintenance of the 150 mile Tahoe Rim Trail loop trail around the high mountain ridges of Lake Tahoe - approximately 18 miles remain to be constructed). In FY 96, some 25,250 volunteer hours (over twelve person years) were contributed in support of national forest projects and programs.

128. Question: What funding outside of the NFS is used for Lake Tahoe management, research, or cost sharing?

Answer: This question is partially answered in the response to Question No. 127.

Forest Service funding outside of NFS includes \$548,500 in State and Private Forestry funds which support management around Lake Tahoe. \$35,000 of these funds are forest health management funds to help deal with forest health issues in the Basin. The remaining \$513,500 (including \$500,000 for erosion control) are all cooperative S&PF funds that leverage at least a 1:1 match in funds from non-federal sources.

The Tahoe Regional Planning Agency estimates the combined inter-agency monitoring programs at about a million dollars annually. This effort includes almost 30 permanent water quality monitoring sites and 5 air quality monitoring sites. The Forest cooperates and coordinates Forest Service monitoring efforts and results with interested parties.

As mentioned in Question No. 127, the University of California Davis operates the Tahoe Research Group, which does basic research on Lake Tahoe Water Quality and closely related resources such as fisheries. This program has been ongoing for many years and provides the scientific monitoring of lake clarity and eutrofication. The University of Nevada at Reno also conducts research at Lake Tahoe, perhaps most noteworthy is current research investigating the flow of groundwater into Lake Tahoe and the question of groundwater pollution from urbanization and landscape fertilizer use. The Lahontan Regional Water Quality Control Board (California Water Quality protection agency) has conducted studies such as an investigation into the water quality effects of lake dredging.

It would take considerable time to query the various agencies and universities as to their financial investments and commitment to Lake Tahoe.

129. Question: What are the unique and special attributes of the Lake Tahoe area that would make it qualify for featured budgetary treatment

so funds from other Forest Service programs should be allocated to the Lake Tahoe area?

Answer: The Lake Tahoe area has been recognized by Congress as a unique and special place deserving of special protection and recognition through a variety of actions. These actions include the creation of the Tahoe Regional Planning Agency (P.L. 96-551), designation of Lake Tahoe as an Outstanding Natural Water Resource in the 1987 Clean Water Act (only other lakes to have this highest designation are Crater Lake, in Oregon, and Mono Lake, in California) and recognition of the unique character of Lake Tahoe deserving protection and management in the passage of the Santini-Burton Act (P.L. 96-586) in 1980.

Lake Tahoe is recognized both nationally and internationally as a symbol of clean water. With the current trend of declining clarity (1.5 feet per year) time is running out for Lake Tahoe. The people of the United States own and the Forest Service manages approximately 76% of the land area within the Lake Tahoe Basin. Of note is that the majority federal ownership of these watersheds has occurred within the last 40 years, only after being severely degraded through past private use. There are agreements in place with the Tahoe Regional Planning Agency, the Congressionally Chartered Land Use Regulatory Agency at Lake Tahoe, and the California Lahontan Regional Water Quality Control Board to restore the federal watersheds. While some work is being completed, due to budgetary constraints, it is not occurring at the rate necessary to reverse the decline in water quality of the Lake.

Through the Santini-Burton Act, Congress recognized the need to prevent development and degradation of environmentally sensitive lands through federal acquisition, to provide grants to local government for water quality improvements and to prevent, control, or mitigate water pollution and manage the lands acquired.

Recently the Santini-Burton Acquisition Program and the Water Quality Grants Program have sustained severe budget cuts. The Management Program has not received a direct congressional appropriation, but funding is provided within the Agency's budget allocation. We do not believe that funds from other Forest Service programs should be allocated to the Lake Tahoe area. Through the use of national budget allocation criteria, the Forest Service is working to meet the needs of all lands for which the Agency has responsibilities.

130. **Question:** When will the Lake Tahoe summit occur? Who will be involved?

Answer: The tentative schedule calls for the Lake Tahoe summit to occur in Spring or Summer of 1997. It is anticipated that all interested local, State, and Federal stakeholders will be involved.

131. **Question:** Why is there a major federal role in the Lake Tahoe restoration when both states involved are well-to-do and the impacts are largely due to inadequately controlled urban and suburban growth?

Answer: Together, both states currently greatly outspend the Federal government on an actual and per acre basis. Their expenditures include the California Tahoe Conservancy acquisitions and erosion control projects, expenditures by private land owners to retrofit their properties to current TRPA erosion prevention standards,

expenditures by the Nevada Department of Transportation and the California Department of Transportation on highway improvement projects and individual county expenditures for erosion control and drainage control work. The states are working to implement runoff controls within the Basin. The Basin has some of the most stringent land use controls in the U.S.

However, recently acquired federal lands are interspersed within these urban areas, and the Forest Service is the largest land owner in the Basin. We have a responsibility to do our part to solve the problem with water quality here. Much of the Forest Service land was acquired from private landowners and significant problems continue from the impacts of prior logging, mining, roading and other activities. A Dominate part of the Forest Service program in the area is to restore these lands to eliminate erosion and sediment into Lake Tahoe. This will help reduce the level of nitrogen and phosphorous that results from sediment from federal and non-federal lands.

132. **Question:** How much will the forest health and fuels treatment in the Lake Tahoe Basin area cost and how long will they take? What will be the proper maintenance funding needed?

Answer: The forest health and fuels treatment costs are broken into two distinct areas of operations/concerns; General Forest and urban/urban interface lands (ie: those lands acquired through the Santini-Burton Act Land Acquisition Program and within 200 feet of developed subdivisions).

Initial treatment costs for the General Forest Zone are estimated to be \$23.5 million dollars over the next 5 years. The annual environmental planning costs to conduct the initial treatment is \$1.5 million annually for 5 years. An additional \$1.3 million will be required annually for long term monitoring and maintenance of the projects.

The urban/urban interface lands have been addressed in the Urban Lot Management Plan Environmental Assessment (May 1995). The program has been partially implemented. However, to complete the initial management on the approximately 3,500 urban lots and interface would require a total of \$9.0 million (\$900,000 per year) over the next 10 years. Long term maintenance needs are \$300,000 annually.

133. **Question:** How is the management of the national forest lands in the Lake Tahoe area made more complicated by the urban/interface nature of the landscape?

Answer: The management of the National Forest System lands within and adjacent to the urban areas of Lake Tahoe are complicated by a variety of factors such as the general mix of Federal and private ownership, regulation by the Tahoe Regional Planning Agency, and the Lahontan Water Quality Board, overall forest health, demands by the local governments and fire districts to comply with fire prevention strategies, high valued private lands, public pressures for management, etc.

The urban/interface ownership pattern at Lake Tahoe is very complex. With the acquisition of private lands as authorized by the Santini-Burton Act, the Forest Service has purchased approximately 3,500 environmentally sensitive parcels within or directly adjacent to the developed subdivisions. The majority of these parcels are

0.25-0.50 acre subdivision lots interspersed amongst developed private lots. This "checkerboard" ownership complicates management through unauthorized uses, non-traditional management activities and methods, and boundary management issues.

The Forest Service management of the national forest is regulated by the Tahoe Regional Planning Agency (TRPA). The Bi-State Compact, which created the TRPA, directs the Forest Service to cooperate with the TRPA. Forest Service management activities must comply not only with the Forest Plan but also the TRPA Code of Ordinances, adding a layer of complexity to all project work. This unique layer of regulation to Forest Service management adds significantly to the complexity and costs of each project.

The overall forest health of the Lake Tahoe area is very poor as addressed in the Sierra Nevada Ecosystem Project Report. The forest at Lake Tahoe has a tree mortality rate averaging 25-30% of the stands. This coupled with a tree density of 4-6 times that which occurred naturally prior to man's intrusion into the ecosystem, successful suppression of fire for the last 100 years, leading to a significant amount of natural fuels in and around the urban areas have led to major concerns over fire. Keeping in mind the "checkerboard" ownership pattern within the urban area, the environmental sensitivity of those properties, the proximity to private homes and development, and the regulations regarding operation on those properties, the Forest Service can only manage the urban/interface national forest lands in a non-traditional manner with higher than normal costs.

Further complicating the situation are the requests by local government and the local fire districts for the Forest Service to manage the urban/interface lands as a fire prevention measure. Currently, rural landowners, in California, are required by State statute to maintain "defensible space" around their homes and improvements. Because of the ownership pattern and the condition of the forest, the fire districts are almost demanding management of the national forest lands to reduce the total risk of fire. In addition to the high danger from fire due to the high fuel loading there is the issue of the values at risk. Not only is there the private property values, estimated in the billions of dollars, but also the resource values, including the clarity of Lake Tahoe.

134. **Question:** How has this management complexity and cost increased in the past 10 years as the population of the Lake Tahoe area has expanded?

Answer: Population increases -- both within and outside the Lake Tahoe Basin -- have affected the complexity and cost of National Forest management. In the 1950's the Lake Tahoe Basin had only 2,500 permanent residents year-round; now about 60,000 call the area home. In his 1986 book entitled "The New California: Facing the 21st Century," famed political columnist Dan Walters notes eleven mountain/foothill communities are experiencing a population boom, growing more than twice as quickly as the state as a whole. Placer and El Dorado counties are two of these eleven counties.

To use Placer County, California, as an example for population trends, county census data from 1994 reported a population of 187,149. In 1960, the county's entire population was only 57,500, growing to 78,000 in 1970. In 1980, the population was 117,247, jumping to 172,796 in 1990 -- a 59.6 percent change. In that same year, Nevada

was the nation's fastest growing state. Thus, not only has the local population increased, but the nearby population that uses Lake Tahoe for day use and short-term visitation has grown greatly.

The letters to the editor in the local newspaper evidence that an urban influence is entering the permanent population base at Lake Tahoe, with increasing demands for urban recreation facilities and increasing concern about wild elements -- from wildlife to wildfire -- threatening personal security. Since National Forest land constitutes the majority of the open space next to developments, there is a tendency for local service providers to view it as the potential land base for meeting local, urban demands. Issues have divided the community, including proposals to develop an urban park on the National Forest and the shooting of coyotes and bears that have crossed from the wildlands into residential areas. Letters to the editor banter back and forth between those who have more urban desires for recreation and self protection, and those who believe that neighbors must learn to coexist with the wildlife (since they were here first) and enjoy the undeveloped wildlands for their recreation. The Forest Service must balance competing local desires while remembering its responsibility to the greater national public.

On a broader scale, the Tahoe region's \$1.5 billion economy continues to have a tourism/recreation base, serving over 11 million visitors annually. The quality of the visitor's recreation experience drives continued demand. Economic Research Associates (ERA), which has prepared economic reports within the Basin, found that even back in 1975, almost 40% of Northern California visitors had decreased their trips to Lake Tahoe because of increased development and congestion. ERA's reports emphasize improving "the long term health and quality of the recreation resource" and acknowledge that "simply increasing the quantity of development in Tahoe could turn off as many potential visitors as it attracts." The Forest Service plays a central role in the economic health of the region in terms of the quality outdoor recreation opportunities it provides, whether directly or through special use permittees.

The bottom line is that people are an integral element in Lake Tahoe's environment. Land management activities on the National Forest are often, by their nature, controversial and quality land management is costly. Involving the public in Forest Service planning processes adds to the complexity and cost of doing business, but it is a step that ultimately benefits the public, the resources, and agency credibility.

135. Question: Is the Forest Service involved in or planning to participate in any human transit systems for the Lake Tahoe area?

Answer: Yes. Primary responsibility for transportation resides with the California and Nevada Departments of Transportation and local transportation agencies. The U.S. Department of Transportation, through the Federal Highway Administration, is the lead federal agency. Projects the Forest Service is currently participating in are:

State Route 28 Shuttle Program - In response to a Recreation Traffic Management study completed in 1995, the Tahoe Transportation District (TTD) is beginning a demonstration project along Lake Tahoe's east shore. Preserving environmental quality, protecting the very high quality of the recreational experience and improving public safety are

the primary goals. The shuttle will replace much of the shoulder parking along Hwy 28 and eliminate a myriad of unmanaged paths from the highway across very erosive and relatively steep National Forest land to the remote but popular beaches along the east shore. Specific shuttle drop-off points along the highway will coincide with designated beach access trails. The Forest Service is currently working with the Tahoe Transportation District to locate these points so that new trails can be designed and constructed.

Heavenly Ski Resort - A recently approved master plan for development of this resort, which is managed under a special use permit from the Forest Service, will result in the construction of a high-capacity gondola (3000 persons per hour). The gondola would originate near the California/Nevada Stateline and transport skiers onto National Forest land to a top terminal at an elevation of 9000 feet. The gondola will result in a significant reduction of skier vehicle traffic from lodging to ski lift parking lots.

Lake of the Sky Interpretive Center - A project currently in the planning stage will incorporate an interpretive center, public transit terminal and parking area at the same location on National Forest land. The site is located at one of the main entrances to the Lake Tahoe Basin and the most traffic congested area on the Lake's north shore.

Others - The FS continues to work with our public and private partners in the Lake Tahoe Basin to resolve transportation issues and reduce vehicle miles travelled (VMTs). Many of the solutions involve providing public transit as an option to the automobile.

136. Question: If so [to #135], what would it cost? Why would this be a federal responsibility.

Answer: The costs to date have been in terms of staff time. An additional cost would be in NF land allocated to support transit projects.

Some 76% of the lands in the Lake Tahoe Basin are under federal ownership. Recreation activities on these federal lands generate over 2.9 million visitor days per year. Today, very few of the recreational opportunities and public lands managed by the Forest Service are served by public transit. Yet these Federal National Forest Recreation Lands generate a significant percentage of the vehicle miles travelled and are in close proximity to private commercial lodgings, resorts, primary and secondary residences and other visitor accommodations.

Public-private partnerships in support of transportation solutions in the Lake Tahoe area have expanded significantly over the past several years. Two community based transportation management associations (TMAs) have been established, one in the Truckee-North Tahoe "Resort Triangle" and the other covering Lake Tahoe's South Shore.

Together with the Tahoe Transportation Coalition, a regional forum for transportation leadership, the TMAs have become effective grass roots organizations spearheading local implementation of transit improvements and transportation demand management programs. These community organizations work closely with the Tahoe Regional Planning Agency, the Tahoe Transportation District, local, state and federal

government and transportation agencies coordinating support for transit operations, and a variety of vital transportation projects.

The U.S. Department of Transportation, represented by the Federal Highway Administration, is the federal entity that works with the States on these major transit issues. Through the ISTEA efforts, transportation issues like those at Lake Tahoe are being addressed.

Recreation Fee Demonstration

137. **Question:** What is the current status of the recreation fee demonstration program? How many sites are currently underway? How many are in final planning stages? How many do you expect to have in operation by the end June?

Answer: The Forest Service is implementing an innovative set of recreation fee demonstration projects in 22 States and Puerto Rico. Many of the projects involve charging fees for the first time at a wide variety of locations, for a wide variety of recreation uses. Public involvement and acceptance are key focus points of our extensive communication effort. We are also using a business plan approach to help ensure good business practices are followed in setting up and implementing these test projects.

Currently 23 Forest Service Fee Demonstration projects are approved for fee collection. Approval means that they have developed effective Communication and Business plans and can begin to collect fees. The 23 approved projects are collecting fees currently or plan to begin by May or early June of this field season. Six of the 23 have been collecting fees since 1996.

Seventeen additional Fee Demo projects are expected to be on line by late June. Nine projects are planned to start later in FY 1997 or early in FY 1998. Two of the original projects have been dropped - mainly due to concerns related to the increased liability exposure that may come from charging fees.

We are working with field units to identify the next 50 projects. These projects will move the Agency to the full 100 projects as authorized by law and most will likely be initiated in FY 98.

138. **Question:** How has the public responded to the imposition of fees where there have never been fees before?

Answer: Effective communication efforts pay off. Most people are reacting favorably to fee demo proposals once the Agency has explained the purpose of the test and use of the fees generated. Many positive editorials and media stories (including numerous TV reports) have been presented. Of course, some folks don't like to pay additional fees. Several areas have had to delay implementation and modify their initial concepts to address public concerns. Projects do not proceed until local support indicates enough positive acceptance to make the test feasible.

139. **Question:** Please explain the Southern California enterprise forest concept and the recreation fee demonstration there which charges use fees for the four national forests surrounding Los Angeles?

Answer: The objective of the Enterprise Forest is to develop new ways to manage and operate the four southern California National Forests (Angeles, Cleveland, Los Padres and San Bernardino) to make them more effective and efficient in providing public goods and services to improve customer satisfaction and a future for the Forests.

The Fee Demonstration Project is one of three projects being developed which will implement a regional management strategy. These regional strategies explore ways to expand the forest's ability to provide recreation opportunities by providing financial resources to include dollars, people and partner investors. The other Enterprise projects provide exceptional customer service to the film/entertainment industry "FilmForest" and develop a new business and management model for the Forest Visitor Centers. This model provides recreational and educational experiences through a business partnership among the private sector, non-profit sector, and the Forest Service.

The Southern California Fee Demonstration Project starts with the premise that all National Forest recreation experiences have a basic value. The project tests whether an investment by the public will truly result in improvements on the ground and improved customer satisfaction. The project involves the sale of daily and annual passes for recreation use of the four southern California Forests. The pass allows recreation use of dispersed areas and specific developed sites (recreation sites where fees are charged under Land and Water Conservation Fund (L&WCF) authority or operated by concessionaire are not included in the project). Although this is a use fee, the method of managing compliance will be to require the display of a pass on vehicles parked on the National Forest, while the occupants are recreating on the forest. One pass per vehicle provides for dispersed/general forest recreation opportunities for all occupants of the vehicle. The pass will be available at many locations through a system of private vendors and Forest Service Offices.

The pass will be available in three versions, a Daily Pass at \$5.00, an Annual Pass at \$30.00 and an Annual Pass Sticker. The Annual Pass Sticker will be offered with the Annual Pass. The first is complimentary and each additional available for an additional \$5.00. (These stickers are to meet the needs of visitors who have open vehicles, motorcycles and who travel with and use several types of vehicles when recreating). The passes will be transferable between the purchaser's own vehicles.

140. **Question:** How much money do you expect the Southern California experiment will collect the first year? The second?

Answer: The estimated collections for the first year (5 month period) will be approximately \$2.4 million; the second year (a full 12 months) will be approximately \$3.8 million; and the third year

approximately \$2.4 million (the test ends in second quarter of the third year)

141. **Question:** What projects are you planning to complete with the funds gathered in the southern California experiment?

Answer: Examples of the types of investment projects include improved facilities, more frequent restroom cleaning and trash removal; additional portable toilets, information and interpretive signs, and longer visitor office hours. The specific projects invested in will be dependent on the actual revenue collected.

142. **Question:** Do you expect that the recreation fee demonstration will actually make a dent in the backlog of needed maintenance to recreational facilities?

Answer: At Fee Demo sites, yes. However, the Agency wide backlog needs of over \$818 million in recreation facilities will not be significantly reduced by a 100 project test.

143. **Question:** How much of the recreation fee demo funds will go for operational activities, for maintenance, for user services, for construction?

Answer: It is too soon to tell how many dollars will be spent for each of the above categories. It is the intent of the effort to spend the majority of the funds on local efforts that most directly enhance recreation services and facilities for the fee paying public. Improvement of existing facilities and services will take priority over new construction.

144. **Question:** Do you have any suggestions on how to make the recreation fee demo work better for the customer so that they have a seamless experience when dealing with public lands managed by different agencies funded by the Interior bill?

Answer: During the testing period customers that travel from place to place will encounter different fee demo projects. We are not designing a seamless, permanent, National fee system. We are testing innovative fee concepts, of various scales, to see what works. Some of the larger fee demo projects - So. Calif, Oreg/Wash Trail Park, for instance, will give some insights into what it will take to develop large scale fee concepts. If permanent legislation is passed after the testing period, it would be our intent to take what we learn and develop a consistent, convenient and effective interagency national fee system.

145. **Question:** How are you coordinating with the Interior Department agencies that are also covered by the recreation fee demonstration?

Answer: We participate in Interagency Fee Demo team meetings and are working to develop additional Interagency fee demo projects - we have 6 currently. Our recent request for input on the next 50 projects encourage more efforts to develop interagency projects. We are also

working with an interagency group to develop consistent survey questions for each Agency to ask fee paying customers. This effort is intended to facilitate interagency comparisons of public input on the various fee demo projects.

146. Question: Why have the four agencies not submitted a joint report to the Congress as required summarizing initial experience with the demonstration?

Answer: The Forest Service did report on FY 1996 activities in the 1998 Explanatory Notes as requested by Congress. The Interior Agencies did not have any Fee Demo projects implemented until early in FY 1997.

147. Question: What is the current status of the new Midewin National Tallgrass Prairie (NTP) ?

Answer: The initial transfer of 15,085 acres from the Department of the Army to the USDA Forest Service occurred on March 10, 1997 through the publication of Notice in the Federal Register. The Midewin National Tallgrass Prairie is a separate administrative unit similar to a National Forest and will be administered by a Prairie Supervisor who reports directly to the Regional Forester, Eastern Region. There are currently 6 Forest Service employees on site. Vacancies will be filled for three others.

148. Question: What is the operational funding for the Midewin NTP for FY 1997? What is included in the FY 1998 budget request? How much is needed?

Answer: The operational funding for Midewin NTP for FY 1997 is \$1,600,000. For FY 1998, the President's Budget contains \$ 1,300,000 for the Midewin NTP. The budget need is reduced from FY 1997 because of the completion of several single-year costs associated with start-up. In FY 1997, approximately \$300,000 will be expended to move employees to the Unit. These costs will not exist in FY 1998.

149. Question: What progress has the Midewin NTP made at constructing or reconstructing administrative and service facilities?

Answer: \$1,600,000 was earmarked in the FY 1997 budget for construction activities at Midewin NTP. Two construction projects are planned for these funds, an administrative site and a recreation site. The administrative site will contain an office building and two service buildings. Designs for the site work and the two service buildings have been completed. A request for proposals to construct the service buildings will be advertised immediately and we anticipate awarding a contract within 60-90 days. Design work for the office building was started in March 1997. We will have a better idea of the office construction schedule after the design is completed. Design for the recreation site will begin by June 1997. We expect to award the contract for construction of the recreation site before September 30, 1997.

150. Question: What amount of funding or value of services has been contributed during 1996 and to date in FY 1997 to the Midewin NTP from the State of Illinois and from other non-federal partners?

Answer: Midewin is currently receiving staffing assistance from the State of Illinois, Will County, and nonprofit organizations. Since 1993, funding from sources other than the Forest Service has amounted to over \$1,500,000 and has included other Federal agencies, State and county governments, private foundations, corporations, conservation and environmental groups. The Illinois Department of Natural Resources currently has 9 employees working on the site.

151. Question: How many volunteers have worked on the Midewin NTP?

Answer: Volunteers spent 576 hours leading 72 tours for 1,284 people. Volunteers also constructed 3,500 linear feet of seed beds, planting and nurturing 20 species of root stock whose seed will be used for future onsite restoration. In total, 139 individuals donated more than 850 hours to complete this project.

152. Question: What is the future outlook for having the Midewin NTP provide educational and recreational experiences to the American public?

Answer: One primary purpose of the establishment of the Midewin NTP is to provide opportunities for scientific, environmental, and land use education and research. Another purpose is to provide a variety of recreational opportunities that are not inconsistent with the primary purpose of conserving and enhancing the native populations and habitats of fish, wildlife, and plants.

The educational and recreation opportunities are tremendous. Midewin NTP is only 30 miles from Chicago, or 45 minutes away from 8.5 million people. Chicago commuter rail service called Marta is considering extending one of its rail lines to the Midewin NTP with a possible Park-and-Ride lot on site which could serve as a parking area for a future Visitor Center. Already many educational institutions have toured the site, such as the Joliet Junior College, the ABC Youth Group, Decatur Classical School, Joliet/Downer's Grove Teachers and the Joliet Alternative School.

153. Question: What additional costs to the region 9 office have been incurred by transferring oversight of the NTP from the Shawnee national forest? What savings does the Shawnee national forest expect to enjoy in FY 1998 now that they do not have to provide administrative support to the Midewin NTP?

Answer: Additional costs to the Regional Office would be small to non-existent. There would be some time needed by Regional managers to perform oversight duties, but these would be similar to that provided to the other 17 national forests in the region.

Although the Shawnee NF provided administrative support services to the Midewin NTP, there will be little if any dollar savings to the Shawnee NF in FY 1998. Administrative support provided to Midewin NTP during its early development was accomplished within the Shawnee's existing workforce and organization. There are indirect cost savings in the form of the Shawnee's reduced staff time dedicated to the support of Midewin NTP.

The Midewin's Prairie Supervisor plans to provide administrative services to the unit by the most cost effective means. This would be on a part-time basis due to Midewin's small size because it would not be prudent to provide a complete administrative staff whose services would not be fully needed all the time.

Land Management Planning, inventory and monitoring

154. Question: In fiscal year 1995, at the recommendation of the Forest Service, the Congress simplified the agency's budget structure by reducing the number of extended budget line items from 71 to 43 and increased its fiscal flexibility by increasing the amount of funds that could be reprogrammed between items without congressional approval. As a part of this restructuring, a new line item was established for ecosystem planning, inventory and monitoring (EPIM) by reallocating funds from other program activities and a "benefiting functions" approach was adopted whereby the program requiring support pays for that support rather than taking it from other programs. An additional purpose of these changes was to minimize duplication of effort and enhance efficiency. During the consideration of these changes, GAO reported that such steps to increase flexibility should be accompanied by a corresponding increase in accountability through the annual appropriations process -- a position with which the agency agreed and the Congress endorsed. However, in February of this year GAO reported that the agency's insufficient attention to improving accountability for expenditures and performance has resulted in failures to deal with long-standing deficiencies in monitoring and inventory data on which efficient and effective planning and decision-making depends.

How did expenditures for different specific activities funded under the EPIM line item change, by year, over the period from fiscal year 1994 through 1996?

Answer: The approximate distribution of expenditures funded under the BLI was nearly identical in FY1995 and FY1996. The final enacted budget in FY95 was \$149.7 million. The specific activities funded were Planning (which received 40%), Inventory and Assessment (which received 52%) and Monitoring (which received 8%).

The final enacted budget in FY96 was \$130.1 million. The specific activities funded were Planning (which received 39%), Inventory and Assessment (which received 53%) and Monitoring (which received 8%).

This Budget Line Item, originally called "Ecosystem Planning, Inventory and Monitoring" (EPIM), and renamed "Land Management Planning, Inventory and Monitoring" (LMPIM) in FY97, did not exist in FY94, although these activities were accomplished with assessments on various line items and within line items. It has never had any associated Expanded Budget Line Items which further disaggregate expenditures.

The pre-FY95 budget structure contained numerous BLIs aligned with highly functional resource management programs. It did not take into account the fact that natural resource management had become more integrated and holistic due to increased competition for resource use, changing social values, requirements of laws and regulations, and the need to focus on ecosystems (rather than individual ecosystem components) in making resource decisions. The complexity of separate trackable accounts at that time, made it very difficult to achieve integrated resource management. The structural detail resulted in extremely functional and costly accounting and reporting systems that hampered the agency's ability to implement the integrated resource approach. The reform of the agency's budget structure, including establishment of this LMPIM BLI, was part of a more comprehensive package in response to budgetary recommendations of the National Performance Review. In that review, the FS was cited as an example of an agency whose budget structure impeded productive management and efficient use of tax-payer dollars.

155. Question: How has the allocation for land management planning, inventory and monitoring (LMPIM) been completed for FY97?

Answer: The agency as a whole has undergone a major effort to develop and refine criteria by which funds are allocated to the Regions. For the LMPIM Budget Line Item, the FY97 allocation criteria were:

RESOURCES	(TOTAL 70%)
Acres	28%
Number of Forest Plans	42%
COMPLEXITY	(TOTAL 30%)
Mile/Acre Index	09%
Urban Influence	09%
Ecosubregions	12%

So as to minimize distortions to no greater than + or - 10% of the previous year allocation percentage, a "bridge" was made to the FY96 base year. Each Region was rated according to the above factors and allocations were made accordingly.

Based on distribution expenditures experience from only two years of this relatively new BLI, as well as Congressional direction with the FY97 Enacted Budget, allocation distributions were recommended for the Regions. This BLI has no Expanded Budget Line Items. The FY97 Conference Agreement language provided \$35.6 million for Land Management Planning (27% of total). The bulk of the remainder,

including the earmark for "watershed analysis and related activities" associated with the Northwest Forest Plan, was provided for inventory, assessments and monitoring. In keeping with the Conference language in the FY97 appropriations, Regional distribution of the allocations was recommended in the Program Budget Advice to approximate:

Planning	27%
Inventory and Assessment	61%
Monitoring	12%

156. Question: Were any additional funds to perform these activities obtained during this period from other sources directly (such as trust funds), or transferred from them to EPIM and LMPIM and, if so, how much from what sources for each activity in each year?

Answer: No additional monies were obtained to perform these activities from Trust Funds or other sources.

157. Question: What advice or direction has the agency developed for use as criteria in setting priorities for funding different activities under EPIM and LMPIM?

Answer: Program direction for the LMPIM BLI is articulated in the Explanatory Notes for the respective fiscal year. The Explanatory Notes provide Regional Foresters, employees, and the general public with program objectives, descriptions of key components, and priorities for the year. These are all linked to strategic agency objectives outlined in the FS "Program for Forest and Rangeland Resources" (RPA) and tied to tactical goals associated with the Government Performance and Results Act (GPRA).

Once the budget has been approved by Congress, the Program Budget Advice informs the Regions of their share for the year and of any adjustments from the President's budget based on the enacted appropriation. Regional LMPIM allocations are based on criteria associated with the actual resource responsibilities (70% of total) in each Region (acres managed, # of forest plans), and complexity issues (30% of total) in each Region (ecosubregions, mile/acre index, urban influence based on census data). With the LMPIM BLI, further direction has been minimized to allow the Regions to meet their geographically-specific needs within the overall sideboards established in the Explanatory Notes. This may also include a suggested split between program components of planning, inventory and assessment, and monitoring.

Expected accomplishments are identified through the Management Attainment Reporting (MAR) process, which in turn, feeds into the annual report of the Forest Service. The MAR requirements, generated by the Washington Office workgroup associated with the LMPIM BLI, and amply vetted with field personnel, define the various components associated with planning, inventory and monitoring. The MAR definitions also define when accomplishments can legitimately be counted. For example, integrated resource inventories have recently been categorized by scale and type (Physical, Biological, and Human

Dimensions), to clarify those inventories which can be funded legitimately under LMPIM. Likewise, more rigorous definitions than in previous years have been provided for the required "Forest Plan Monitoring and Evaluation Reports" and the "State of Region Evaluations".

This constitutes advice, direction and priorities, within the context of LMPIM Program (as described in the Explanatory Notes) and the Program Budget Advice for funding different activities.

158. **Question:** What goals did the agency establish over this period to be accomplished by the 1995 budget changes and were they (or other benefits) realized?

Answer: The agency, in a comprehensive reformulation of its budget structure for FY95, established the LMPIM BLI. This was just one part of a larger package in response to recommendations of the National Performance Review. In that review the Forest Service was cited as an example of an agency whose budget structure impeded productive management and efficient use of tax-payer dollars. Some of the goals associated with the establishment of the LMPIM BLI included:

- more productive management and use of tax dollars
- decrease the numerous separate trackable accounts associated with functional resource management programs
- increase integrated and holistic approach to resource decisions.

In general, these goals are increasingly being achieved. The agency has focused on collecting the "right" information in inventory and monitoring which can be used in the forest planning process. LMPIM funds are used only for work above the project level. This has led to increased efforts in information management and establishment of a national-level Interregional Ecosystem Management Coordination Group (IREMCG) to guide a holistic and integrated approach to resource management. The Charter of the IREMCG has been endorsed by nearly all Regional Foresters and Station Directors. Within the Washington Office, an Ecosystem Management Corporate Team (EMCT) meets regularly to further reinforce an integrated approach among Staffs. The various issues addressed by these groups, all produce benefits attributable to the 1995 budget changes.

159. **Question:** What internal control directives or procedures have been developed or used to ensure that EPIM and LMPIM funds were properly applied and accounted for?

Answer: Accountability is handled through the Management Attainment Reporting (MAR) System and considerable work has been done internally to enhance the MAR items associated with the LMPIM BLI. Significant revisions were made to the MAR items for LMPIM during FY96 and are being implemented for the first time in FY97 and additional changes are planned for FY 1998. Agency-wide, a total of 15 new MAR items were added when the FY97 MAR was distributed January 10, 1997. Of

these, 70% were associated with LMPIM and two were formally added as elements to Regional Forester Performance Evaluations.

As experience is gained in the relatively new LMPIM BLI, the FS is continuously improving the way it holds itself accountable for funds spent. The need for this comes from both observations by field units and from the Congress (e.g., FY97 Conference Report). The MAR revisions for FY97 were based upon lessons learned during the first two years of the BLI, and address frequently voiced issues. They attempt to clarify LMPIM accountability relative to scale, credit important work underway but not yet completed, and redefine "integrated resource inventories".

These LMPIM performance indicators also reflect important work that is an integral part of FS strategic goals in the Draft Program prepared under the Forest and Rangeland Resources Renewable Resources Planning Act of 1974 (RPA) and in tactical goals or objectives in the agency's Government Performance and Results Act (GPRA) Strategic Plan. The outcome-oriented GPRA objectives related to "Generating Science-Based Information and Knowledge" include indicators for Forest Plan revisions, multi-scale assessments and monitoring reports. Agency, unit and individual performance will be assessed based on achievement of established quantifiable goals for these and other indicators.

The proposed FY97 MAR revisions underwent initial reviews in the Washington Office (WO) by the Ecosystem Management Coordination (EMC) Staff. They then were shared with the "EPIM BLI Workgroup" which includes 36 individuals WO-wide who represent their respective Staffs in periodic work sessions associated with the BLI. This Workgroup, which met about 6 times in 1996, is cochaired by representatives from the EMC and Program Development & Budget (PD&B) Staffs.

Final input on the proposed MAR revisions was obtained from the "EM Budget Contacts", 31 additional individuals agency-wide, who work directly with the LMPIM BLI in the Regional Offices. Several, in turn shared the drafts with others in their Regions. Final decisions on the new FY97 MAR items were made by the NFS Deputy Chief.

Coordination among Washington Office Staffs, and with the Regions, also helps ensure that the LMPIM funds are properly applied and accounted for. This coordination is further carried out through both the WO Ecosystem Management Corporate Team (EMCT) and the Interregional Ecosystem Management Coordination Group (IREMCG). The EMCT includes WO Staff Directors and the IREMCG is made up of Deputy Regional Foresters and Assistant Station Directors. The former meets monthly and the IREMCG meets 4-6 times per year.

160. Question: The budget restructuring shifted considerable funds out of certain programs, such as range and wildlife. What has the Forest Service done to track whether the program objectives of the reduced programs are being met within this new budget structure? How does the funding of the various NFS activities at the EBLI level compare in 1997 and in the 1998 request to that before the budget reform?

Answer: The Forest Service tracks the achievement of program objectives through a series of performance indicators. An expected or planned level of agency accomplishment for each indicator is established based on field unit information for each funding level requested in the agency's annual budget proposal. These planned accomplishment levels are adjusted to reflect changing funding levels as the agency's budget moves through the Department, OMB and the Congress. The targeted level of accomplishments are disaggregated to agency field units along with final appropriations received from the Congress. Accomplishments related to these performance indicators are reported through the agency's Management Attainment Reporting system. Actual accomplishment is compared to planned accomplishment in the evaluation of agency and field unit performance.

The FY 95 budget format changes shifted funds among programs to address the benefiting function concept and fund the Ecosystem Planning, Inventory and Monitoring Budget Line Item (BLI). While program objectives generally did not change as a result of these funding shifts, the agency has developed objectives for the Ecosystem Planning, Inventory and Monitoring BLI. As a result, the agency is now tracking accomplishment for a number of resource inventory performance indicators as well as indicators for planning, monitoring and assessments. These indicators reflect work done with some of the funding that was shifted out of the functional programs.

A table has been provided to the Subcommittee which shows program funding shares for the period FY93 through FY98. These percentage shares of total funding reflect not only the implementation of the benefiting function concept but also changing priorities of the agency, the Administration and the Congress. There may be additional changes in the future as we assess the need for further budget structure changes and GPRA implementation.

161. **Question:** What internal analyses have been performed identifying problems, needs or opportunities to improve the application or distribution of EPIM and LMPIM funds?

Answer: As experience is gained in the relatively new LMPIM BLI, various mechanisms have been put in place to both improve the distribution of funds, and to identify problems/needs/opportunities.

Distribution of all NFS funds has been the topic of a "Criteria Team's" comprehensive efforts starting early in 1996. The Team developed allocation criteria based upon the actual resources found in each Region as well as complexity factors characteristic of those regions. This information was shared with Deputy Regional Foresters and after several iterations, and was adopted as the basis for distribution of NFS funds. Within this context the criteria used for distribution of LMPIM funds included as "resource factors" the number of NFS managed acres (28%) within each Region, and the number of Forest Plans (42%). The LMPIM "complexity factors" included a

Comparison of the FY 93 - FY98 NFS Budgets and Discretionary Totals (excluding Fire and Emergency Funds)
with the totals for FY93, FY94, and FY95 Converted to the Revised Budget Structure

	FY 93			FY 94			FY95			FY96			FY97			FY98		
	Agency Request	Pres Budget	Final App'n	Agency Request	Pres Budget	Final App'n	Agency Request	Pres Budget	Final App'n	Agency Request	Pres Budget	Final App'n	Agency Request	Pres Budget	Final App'n	Agency Request	Pres Budget	Final App'n
Ecosystem Planning Inv. & Monitoring	180,512	155,689	148,550	180,322	162,106	143,686	168,823	149,186	146,618	150,413	132,433	124,022	163,503	145,000	130,088	144,703	133,997	171,082
Recreation Management	200,482	172,886	164,569	211,346	168,908	159,762	197,472	165,665	162,814	198,916	175,138	164,015	202,743	164,000	164,314	171,082	168,318	171,082
Wilderness Management	54,117	46,876	44,038	57,068	45,601	43,138	50,613	44,726	43,966	40,266	35,444	33,093	46,921	33,000	33,267	46,921	33,000	33,267
Wildlife Resources Management	18,014	15,537	14,623	18,994	15,180	14,350	18,648	14,888	14,632	16,459	14,490	13,570	19,517	14,000	13,570	19,508	13,905	19,508
Subtotal - Recreation Use	277,583	235,066	224,319	287,298	229,689	217,280	284,933	226,279	221,402	285,630	225,072	210,778	285,181	211,000	211,151	231,190	216,293	231,190
Wildlife Habitat Management	36,965	31,881	30,420	38,974	31,145	29,465	34,571	30,550	30,024	34,270	30,173	28,257	31,864	30,100	28,263	36,957	29,988	36,957
Inland Fisheries Habitat Management	19,702	16,903	16,214	20,773	16,602	15,705	18,427	16,283	15,003	17,559	15,460	14,478	18,031	14,500	14,758	17,157	17,157	17,157
Anad Fisheries Habitat Management	29,006	23,018	22,970	30,563	24,442	23,121	27,126	22,973	22,684	25,456	22,413	20,960	28,987	24,650	21,029	28,037	22,921	28,037
T&E Species Habitat Management	30,493	25,222	25,018	32,055	25,518	24,234	28,634	25,126	24,694	26,285	23,143	21,673	37,060	21,750	21,753	37,091	27,218	37,091
Subtotal - Wildlife & Fisheries Mgmt	116,076	100,114	95,520	122,385	97,810	92,525	108,660	96,902	94,261	103,570	91,189	85,398	115,922	91,000	86,811	110,857	96,894	110,857
Grazing Management	27,618	23,820	22,726	28,119	23,272	22,014	25,929	22,825	22,432	30,794	27,113	25,391	23,792	20,000	22,506	31,817	28,981	31,817
Excelsior Vegetation Management	8,818	7,804	7,263	9,256	7,429	7,028	8,248	7,286	7,151	13,483	11,821	11,117	24,321	11,000	15,506	17,417	15,807	17,417
Subtotal - Rangeland Management	36,436	31,624	29,989	37,375	30,701	29,042	34,078	30,111	29,583	44,277	38,984	36,508	48,113	31,000	38,012	49,234	45,388	49,234
Timber Sales Management	221,436	180,984	182,276	223,469	184,669	176,009	207,065	183,007	178,857	229,126	199,976	187,276	191,173	190,000	196,000	193,356	208,000	193,356
Extended Vegetation Management	73,287	63,209	60,310	77,268	61,754	58,418	88,411	69,568	59,536	82,332	64,899	61,412	93,826	52,000	55,768	68,109	61,765	68,109
Subtotal - Forestland Management	294,722	244,193	242,586	310,738	246,343	234,426	275,637	243,575	239,393	311,478	254,875	238,688	284,999	242,000	251,768	261,464	269,765	261,464
Soil, Water & Air Operations	30,912	26,661	26,409	32,980	26,048	24,540	28,911	25,548	25,108	26,573	23,397	21,911	37,597	22,000	22,111	33,720	24,645	33,720
Watershed Improvement	27,981	24,133	23,026	29,501	23,378	22,304	26,169	23,125	22,727	24,149	21,257	19,907	24,133	26,000	20,003	24,164	26,084	24,164
Subtotal - Soil, Water, & Air Mgmt	58,893	50,794	49,435	62,080	49,426	46,844	55,080	48,673	47,835	50,716	44,654	41,818	61,730	48,000	42,114	57,884	49,729	57,884
Minerals and Geology Management	46,701	40,279	38,433	49,239	39,352	37,225	43,677	38,596	37,932	42,334	37,273	34,906	40,292	35,000	35,767	38,790	35,335	38,790
Real Estate Management	55,416	47,796	45,604	58,428	46,696	44,173	51,528	45,789	45,011	52,134	45,902	42,967	42,961	43,000	43,047	47,092	44,047	47,092
Landfill Location	20,067	17,273	16,481	21,116	16,876	15,964	18,731	16,552	15,267	16,923	14,900	13,964	17,260	14,000	14,006	18,260	15,006	18,260
Subtotal - Landownership Mgmt	76,483	65,069	62,085	79,544	63,572	60,137	70,359	62,351	61,278	69,057	60,802	56,941	60,211	57,000	57,053	66,372	59,053	66,372
Road Maintenance	103,079	88,904	84,827	106,680	86,855	82,165	96,004	85,190	83,724	98,012	86,296	80,916	105,634	84,000	81,019	90,778	82,974	90,778
Facility Maintenance	32,385	27,931	26,651	34,145	27,289	25,814	30,288	26,765	26,304	27,875	24,543	22,984	30,974	23,000	23,008	31,016	24,272	31,016
Subtotal - Infrastructure Mgmt	135,464	116,835	111,478	140,825	114,147	107,979	126,892	111,965	110,028	125,887	110,839	103,799	136,608	107,000	104,027	121,794	107,251	121,794
General Administration	354,830	305,035	292,002	374,113	298,892	282,839	391,854	282,252	268,205	319,090	287,679	263,172	305,497	264,553	269,353	266,894	250,000	266,894
Law Enforcement	18,611	15,322	15,479	20,169	15,590	15,130	19,639	16,657	16,516	27,300	20,991	19,837	27,347	20,000	19,837	27,347	20,000	19,837
NFS Totals	1,590,309	1,370,832	1,309,832	1,677,241	1,339,028	1,307,915	1,498,528	1,362,587	1,240,071	1,519,792	1,343,391	1,235,667	1,549,403	1,291,533	1,274,781	1,447,149	1,325,972	1,447,149
Discretionary Totals	2,801,918	2,194,131	2,102,723	2,937,931	2,068,515	2,110,920	2,310,794	2,016,920	1,972,026	2,266,925	2,013,260	1,871,834	2,256,969	1,951,580	1,930,943	2,066,424	1,894,184	2,066,424

A) Includes Reappropriations in FY 1995 and FY 1996 to reflect further budget reform implementation.
B) The totals for FY 1993 and FY 1994 were calculated by prorating the percent share of the affected programs to the NFS totals based on FY 1993 Final Appropriations.

mile/acre index (9%), urban influence (9%), and the number of ecosubregions (12%).

Problems, needs and opportunities are identified through the ongoing work of the Washington Office Ecosystem Management Coordination Staff, the "EPIM BLI Workgroup" (36 individuals WO-wide who represent their respective Staffs), the WO Ecosystem Management Corporate Team (EMCT which is made up of WO Staff Directors), the "EM Budget Contacts" (31 additional individuals agency-wide who work directly with the LMPIM BLI in the Regional Offices), and the Interregional Ecosystem Management Coordination Group (IREMCG which is made up of Deputy Regional Foresters and Assistant Station Directors).

All of these groups meet or otherwise interact regularly to address problems, needs and opportunities associated with the LMPIM BLI, as well as to improve the application and distribution of LMPIM funds.

162. **Question:** What amounts of EPIM and LMPIM funds were spent in headquarters, different regional offices, and forests over this period and what criteria were developed for these allocations?

Answer: The field distribution, by Region, for the LMPIM funds, is shown below. The EPIM/LMPIM BLI was established in FY95. Distribution for FY97 was based on the NFS-wide allocation criteria developed during 1996, and "bridged" to the FY96 final distribution so as not to distort any Region's percentage of the net available funds beyond a + or - 10%. The FY96 final distribution shares already included adjustments for differences between the "eastside" forests and those associated with the Northwest Forest Plan. The "bridge" assured a smooth transition to the new allocation criteria.

OVERALL DISTRIBUTION BY FISCAL YEAR
(Dollars in thousands)

	FY95 BA	FY95 AA	FY96	FY97
WO	3704	3724	4195	4790
WO Nt'l Comt	884	884	671	1117
WO External	1481	1481	1365	1689
Field	143663	140612	123982	122492
	-----	-----	-----	-----
Total	149732	146701	130213	130088

NOTES:

1. WO = Funds retained and used in the Washington Office.
2. WO Nt'l Comt = National Commitments retained in the Washington Office but all benefit Field Units.
3. WO External = Funds retained in the Washington Office but benefitting Field Units.
4. BA and AA = Before Adjustment and After Adjustments of \$3114M in FY95 to more accurately reflect field funding needs during initial year.

5. The notable decrease in the BLI between FY95 and FY96 primarily reflects reprogramming adjustments made to more accurately reflect implementation of the FY 1995 approved Forest Service budget reform for the Range program.
6. The Final Enacted FY96 budget was 130088. However, \$125M was reprogrammed into NFEM to cover the CRB Assessment.

REGIONAL DISTRIBUTION BY FISCAL YEAR

FY95	Total to Field (Including Congressional earmarks)
R1	15540
R2	13300
R3	11202
R4	18968
R5	17035
R6	31213
R8	14534
R9	8306
R10	7952
RM	908
PSW	1612
SE	42

	140612

NOTES

1. Figures reflect rescission.

FY96	Total to Field (Including Congressional earmarks)
R1	13461
R2	11518
R3	10158
R4	15674
R5	15982
R6	28164
R8	12415
R9	7355
R10	7231
RM	1024
SE	114
INT	34
NC	19
PNW	833

	123982

NOTES

1. Figures reflect additional \$88M to R6 for Colocation with BLM-P.L.104-208

FY97 Total to Field (Including Congressional earmarks)

R1	12807
R2	12180
R3	10884
R4	15583
R5	15906
R6	25207
R8	12915
R9	8120
R10	6855
RM	1045
PSW	20
SRS	90
NA	102
IITF	90
INT	28
NC	6
Unallocated	654

	122492

The Regional funds were, in turn, allocated to the individual National Forests according to Region-specific needs. The Regional shares will continue to evolve as the allocation criteria become fully implemented in FY99.

The Washington Office, during these years, typically utilized only a small percentage of the total funds to support its Ecosystem Management Coordination Staff and related activities. The general policy with the LMPIM BLI has been to maximize the amount of funds that are allocated to the Regions for use at the field level, rather than hold funds in the Washington Office to manage programs.

163. Question: How did cost allocations by region and forests for different activities change over the period due to adopting the benefiting functions approach, what guidance was provided to the field for this change, and how was its implementation monitored?

Answer: The benefiting function concept was part of a larger proposal on budget reform that was submitted to Congress as an initiative in the FY 1995 Explanatory Notes. In this proposal, the agency provided a new funding mix for the President's Budget which contained adjustments for budget structure changes and implementation of the benefiting function concept. A new budget structure was approved by Congress along with funding levels that represented a shift to the benefiting function concept. In FY 1995, funds were allocated to regions based on program budget information and adjustments to historical allocations. For FY 1996, however, the agency began shifting to a criteria-based approach for allocating funds. Various combinations of workload, production capability, resource condition and complexity criteria for all National Forest System and some State & Private Forestry programs have been developed and continue to be refined. These criteria have been applied to planning constraints as well as initial and final allocations beginning with the FY96 Final Appropriations. Changing priorities of the Administration and the

Congress have also resulted in different national funding mixes which have then been allocated to field units using program criteria.

The primary reason for going to the benefiting function concept was to ensure that all of the funds needed to complete a project were available in the same budget category. Intended results include simplified budget and accounting functions although more coordination and integration at the project level is needed to ensure that appropriate skills are available and the work gets done. To ensure that these benefits were realized, the agency did not expand its accounting codes to keep track of all the benefiting function pieces of the national funding mixes resulting from the budget reform effort. All of these factors and changes make it impossible to go back and isolate the allocation cost differences among regions associated with implementation of the benefiting function concept. The agency's Regional Offices would also not be able to isolate the effects on Forest allocations.

Implementation direction for the benefiting function concept was included in the agency's FY 1995 Final Program Budget Advice to field units. This document provides the allocations, performance goals, personnel ceilings and other information needed by field units to operate during a fiscal year. The direction for implementing the benefiting function concept has been repeated or referred to in all subsequent advice to the field. Implementation of the benefiting function concept is monitored through analysis of field unit responses to the Program Budget Advice, both in terms of potential accomplishment levels and the rationale for proposed funding adjustments.

TIMBER AND FORESTRY

164. Question: Why has the timber program shrunk so much during the past 5 years?

Answer: There are many factors responsible for the decline in timber volume offered over the past five years. Issues and litigation tied to the Endangered Species Act has played a significant role in this reduction, eg. protection required for the Northern and Mexican Spotted owls, the red cockaded woodpecker, Pacific salmon, and bull trout. Another factor is evolving scientific knowledge that has resulted in changing standards designed to protect and restore ecosystems. Also, the need to protect other resource values coupled with public concern over some timber harvesting has increased the workload for both planning and administering timber sales. All of these factors have contributed to increasing unit costs and lower volumes offered.

165. Question: How have your costs changed during the past 5 years with regard to being able to offer and harvest timber?

Answer: From FY94 to the FY 98 President's Budget, the unit cost of delivering the timber sale program has increased from \$ 62.75 per thousand board feet (MBF) to \$ 83.03/MBF. These figures include the total appropriated funding for the regular (green) timber sale

program, including sale administration, compared to the final accomplishment in regular timber volume offered.

Costs have risen because of increased costs associated with managing national forest system lands to comply with environmental regulations.

166. **Question:** We understand that, through the benefiting function concept, the timber program budget request includes all of the funding needed to obtain environmental clearances and studies from other resource program areas that are directly related to the NEPA timber sale process. How is this benefiting function concept working?

Answer: The benefiting function process is working well. By having all functions charge all of their work in support of timber to the timber sale program instead of their own resource programs, our ability to track and report the full costs of the timber sales program is greatly facilitated. There has been some difficulty in adjusting to this approach, which has been expressed on the part of some personnel as losing some control over their particular resource specialties because they must now charge their time to timber instead. This is being worked out as project priorities in the field are adjusted to reflect the funding being received.

167. **Question:** What are the definitions and operational guidelines which help determine the costs associated with a given program area when projects, such as timber sales, are suggested?

Answer: Timber funds are generally used to bear the costs for timber sales. Where more than one benefitting function is determined, each benefitting function pays a proportionate share of the cost. For example, a commercial thinning project designed to reduce fuels and benefit big game winter range, may be paid for using timber, fuels, and wildlife funds. The proportionate share is determined on a project specific basis. The cost of planning and implementing projects depends on site specific conditions found in the aquatic and terrestrial environment where the project is to be implemented.

168. **Question:** Does the 1998 request provide the funding needed for timber support from other disciplines or does some of the other program funding go towards timber support?

Answer: The funding level for timber sales in the FY 1998 President's Budget is sufficient to cover the required support from all disciplines to produce the planned 2.5 billion board feet of green volume. Under the concept of benefiting function, no other program funding is used for timber program support.

169. **Question:** What cost control and accounting methods do you have in place that demonstrate this fiscal accountability?

Answer: We have manual direction issued on methods of financing program support. The accounting system provides for tracking costs at the work activity level, which identifies the type of cost being

charged to the timber funding. We monitor the correctness of charges during program and activity reviews which occur at forest, regional and national office levels. Forest Service manuals provide a schedule for reviews at different organizational levels. The Forest Service Washington Office Reviews two of the nine regions each year.

170. Question: In the budget request you propose to offer about 3.8 billion board feet of timber. Will you be able to fulfill this program? Does the road construction funding request and the lack of purchaser road credits make it possible that the timber target will not be met due to road funding shortfalls?

Answer: With the timber funds proposed in the President's Budget, the Forest Service proposes to produce 2.50 billion board feet of green and 1.28 billion board feet of salvage timber volume. Absent court injunctions, and assuming our ability to adequately protect the environment, we will be able to offer this amount of timber volume.

171. Question: Several public witnesses have testified that a much more appropriate timber sale level would be 6.5 billion board feet nationally, including green and salvage. Is this a reasonable harvest level? Why or why not? This is considerably less than the total level of the current forest plans.

Answer: A timber sale offer level of 6.5 billion board feet is not reasonable even though it is considerably less than the current level forest plans. The allowable sale quantity (ASQ) in currently approved forest and resource management plans is about 7.56 billion board feet. The current forest and resource plans were based on a set of assumptions valid at the time the plans were approved. There is considerable uncertainty with ASQs and in projecting volumes until forest plans are revised. Since the time forest plans were developed major changes have occurred that result in limiting many forests' ability to achieve their ASQ. Some of the more significant changes include: the listing of the Mexican Spotted owl (-0.3 BBF); lack of wilderness legislation (inability to implement plans that called for entering roadless areas for timber harvest) in Idaho and Montana and threatened and endangered species (-0.5 BBF); implementation of interim guidelines for the California Spotted Owl (these are currently being revised) (-0.5 BBF); and managing for the Red-cockaded woodpecker (-0.2 BBF). These changes alone have the effect of reducing the current ASQ to about 6.0 BBF. There have also been other localized changes that affect the ASQ. Forest plans have not been revised to reflect all of these changes. Based on these changes, forests are estimating (based on the uncertainty of continued changes) that timber program levels will likely be around 4.5 BBF (billion board feet), assuming a salvage sale program of 1.2 BBF. The 4.5 BBF level assumes a regular offer program of 3.3 BBF, which is almost 45% greater than the level proposed in the FY 1998 budget request. Given the current lack of timber sales prepared in advance makes it unreasonable to achieve the 4.5 BBF level in the immediate future without a planned and funded program to establish a timber sale pipeline. In addition to funding and personnel, other factors would

need to be considered before increasing the timber sale program, including the economics of a higher sale program and the offset reductions to other resource programs.

172. **Question:** What funding level and staffing changes would be needed to achieve this 6.5 BBF? What funding would be needed to achieve a 4.5 billion board feet program if the increased volume above the request was to all be sawtimber?

Answer: As outlined in the question 171 the 6.5 BBF level is not achievable. Neither is it possible to achieve 4.5 BBF with the increment all to be sawtimber.

The volume offered for sale is determined by the treatments needed on-the-ground. Many of these treatments include those other than sawtimber sales, such as fuels reductions or stocking control for forest health. In addition, allowable sale quantities are not sawtimber only. In particular, Regions 8 and 9, east of the Mississippi River, have historically offered about 50% of their timber program in products other than sawtimber.

173. **Question:** What portion of the timber sale program output was offered for sale but was not sold? Please provide a table for the past 3 years.

Answer: About 13 percent of the volume offered over the last three fiscal years was not sold. The following table shows each fiscal year.

	FY 1994	FY 1995	FY 1996
	(Volume in billion board feet)		
Volume Offered	3.41	4.01	4.02
Volume Sold in Year of Offer	2.56	2.49	2.45
Volume Sold Following Fiscal Year	.40	.81	.73 ^{1/}
Long-term Contract Volume Released ^{2/}	<u>.18</u>	<u>.14</u>	<u>.19</u>
Volume Not Sold	.27	.57	.65
Percent of Offer Not Sold	8%	14%	16%

^{1/} Through March 28, 1997.

^{2/} Volume released from long-term contracts in Region 10 is not counted toward sold volume since this volume was previously recorded as sold in the 1950's when the contracts were initiated.

174. **Question:** What are the major reasons timber sales are not purchased? Does this differ in different regions?

Answer: As required by the National Forest Management Act, Forest Service timber sales are appraised at fair market value and sold under a competitive bid process. The contract has certain requirements, including environmental protection measures that the purchaser must meet. The appraisal can be either a residual value appraisal, which is based upon the market value of products less milling and logging costs, or upon transaction evidence appraisal, which compares the

proposed sale with similar previous sales in the general marketing area. The bidding process can be either a sealed bid basis or a qualifying bid followed by an oral auction. In either case, the minimum bid must be for at least the appraised value. The reasons that no bids are received on these sales are varied. One situation is when the appraised value of the timber does not reflect the value that the purchaser feels he or she can obtain from the material being proposed for sale. This can occur when one is in a declining market. Another instance is when there has been a delay in advertising salvage material and the timber being offered for sale has incurred increased decay. Markets for small material that is used for either chips or for co-generation fluctuate considerably, and delays can make this material uneconomical to harvest. In some instances industry feels that the Forest Service volume estimate is not accurate and that bidding is too much of a business risk. Generally, there are more no-bid situations in the western regions because there are more variables involved. The Forests and Regions do analyze the reasons for no bids so that the efforts and costs of laying out timber sales can be minimized and so that future no bids are limited.

175. **Question:** What is the total timber allowable sale quantity (ASQ) as listed in the current Forest and Resource Management Plans? What changes to this level are expected as the new forest plan revisions come on line?

Answer: The allowable sale quantity (ASQ) in currently approved forest and resource management plans, as of June 15, 1995, is about 7.56 billion board feet. The current forest and resource plans were based on a set of assumptions valid at the time the plans were approved. Since the time forest plans were developed major changes have occurred that result in limiting many forests' ability to achieve their ASQ. Some of the more significant changes include: the listing of the Mexican Spotted owl (-0.3 BBF); lack of wilderness legislation (inability to implement plans that called for entering roadless areas for timber harvest) in Idaho and Montana and threatened and endangered species (-0.5 BBF); implementation of interim guidelines for the California Spotted Owl (these are currently being revised) (-0.5 BBF); and management of the Red-cockaded woodpecker (-0.2 BBF). These large-scale changes have the effect of reducing the current ASQ to about 6.0 BBF. There have also been other localized changes that affect the ASQ. Individual forest plan revisions will incorporate the large-scale changed conditions as well as any local situations.

176. **Question:** How does the funding level for timber sale preparation and related accounts compare with the funding levels recommended by the forest plans? Please provide a table which shows the forest plan funding levels and the appropriated funding levels in timber sale preparation and timber road construction for the past 3 years; include national and regional entries.

Answer: The majority of forest plans were completed about a decade ago. Forests are just starting the required revisions of the forest plans. Numerous changes have occurred since forest plans were approved, which have affected both the cost of preparing timber sales

and the amount of timber available for harvest. These factors make it impossible to reasonably compare funding levels in the forest plans to current funding requests." The fiscal year 1993 forest plan implementation level for appropriated timber sales management and administration funding was \$380 million (adjusted to 1998 dollars and for the change in budget structure) for an offer volume of 6.8 BBF (billion board feet). This is comparable to the fiscal year 1998 request of \$208 million to produce 2.5 BBF. The fiscal year 1993 forest plan level for salvage sales was about \$110 million to produce 1.26 BBF, compared to \$155 million to produce 1.28 BBF in the fiscal year 1998 request.

177. Question: What is the annual timber volume growth on the commercial timberlands available for harvest within the national forest system?

Answer: Net annual timber volume growth on commercial timberlands available for harvest within the national forests is approximately 2 billion cubic feet (approximately 10 billion board feet). This data comes from our "Forest Resources of the United States, 1992" publication, and is based on 1991 data.

178. Question: What would be the impact, as some have suggested, to mandate that the timber harvest be equal to the timber growth on commercial timberlands?

Answer: Using the 1991 forest inventory data for the net annual growth on suitable timberlands we are currently harvesting approximately one fourth of the net annual growth on the national forests. However, it is important to note that this growth is primarily in young trees unsuitable for harvest. It is difficult to assess the impacts of this level of harvest without knowing what areas it would come from specifically. Generally speaking, however, this level of harvest would exceed the Allowable Sale Quantity (ASQ) of most existing forest plans. It also would not conform to the principles of non-declining flow and long term sustained yield capacity. Other potential impacts would be impacts from increased roading to access this volume of timber assuming it couldn't all come from already roaded areas. Impacts to resources other than timber could be either positive or negative depending on the specific areas harvested. However, it is very likely that the overall impact of this increased harvest would result in significant negative impacts to wildlife, fisheries, water quality, and aesthetics. It is probable that there would be a positive impact from the forest health standpoint if unhealthy forest areas were harvested. One could also assume a positive economic impact in the localities where this level of harvest would take place. There would be increased revenue to the treasury as well as to States and Counties where this level of harvest would take place. There would also probably be increased work due to appeals and litigation in response to this level of harvest.

179. Question: How much revenue was provided to the U.S. treasury from the sale of national forest system timber the past 3 years? What is the net to the treasury after the payments to states is made? What do you

expect the levels for these two categories will be for the 1998 program?

Answer: The chart below shows the timber receipts for the three years, the prorated payments to States and other authorized uses of receipts, and the remainder of timber receipts to the Treasury.

(In thousands of dollars)

	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1998</u> <u>Est.</u>
NFF Timber receipts	420,854	294,222	186,776	210,000
Timber-related portion of total moneys received	93%	91%	90%	90%
Payments to States from timber receipts	287,521	248,946	108,628 <u>1/</u>	135,000 <u>1/</u>
Timber receipts to 10% Road and Trail Fund	42,085	29,422	18,678	21,000
Special Land Acquisition	1,164	1,198	962	900
Purchaser Election Roads	5,945	5,945	5,945 <u>2/</u>	-- <u>3/</u>
Timber Sales pipeline	--	--	1,418 <u>2/</u>	3,400 <u>2/</u>
Remainder to Treasury	84,139	8,711	51,145	49,700

1/ Payment to States from receipts is lower because funds were appropriated from the general fund of the Treasury to pay the spotted owl guarantee portion of the payment.

2/ Funded 100% from timber.

3/ No purchaser Election Program is anticipated for 1998.

180. **Question:** How much of the timber receipts were paid out to the States the past 3 years? How will this be affected by the proposed elimination of the timber purchaser road credits?

Answer: The following computation is a proration of the total payments to States for the past 3 years showing the portion that can be attributed to timber.

The effect of eliminating purchaser road credits would be a reduction of the payments to States by 25 percent of the purchaser credits shown. There would also be a potential reduction in receipts and corresponding payment to States to reflect the reduction in the bid by at least the purchaser credit amount and an amount which reflects the cost to the purchaser to borrow the monies to build the road.

COMPUTATION OF TIMBER RECEIPTS PAID TO STATES

Timber Related Receipts: (Accrual Basis)	1994	1995	1996
NFF Timber	420,854,362	294,221,922	186,776,450
KV Receipts	214,660,226	175,503,010	153,404,869
Purchaser Credit	68,274,757	47,895,540	41,290,899
Salvage Sale Receipts	<u>171,555,304</u>	<u>132,982,860</u>	<u>194,769,709</u>
Total Timber Related	875,344,649	650,603,332	576,241,927
Total monies Received	941,373,756	713,797,026	638,338,742
Timber as % of Total	93%	91%	90%
Payments to States	309,162,416	273,567,382	255,719,766
Less Owl Guarantee Payment			<u>-135,021,547</u>
Net Payment from Receipts	<u>309,162,416</u>	<u>273,567,382</u>	<u>120,698,219</u>
Apply Timber Related percent	X 93%	X 91%	X 90%
Paid from Timber Receipts	287,521,049	248,946,318	108,628,397

181. **Question:** To what extent do rural counties and schools depend on timber receipts for their programs since they lack a tax base because so much of their land is federally owned?

Answer: Legislation mandates the Forest Service to make the 25 percent National Forest Fund payment directly to the States, not counties. The payment is sent directly to the States along with a report providing the agency's recommendation based on receipts collected and acres per county. It's up to the State's discretion as to how much each county will receive. It would be difficult to determine exactly how much the counties received or their reliance on the 25 percent payment from the Forest Service, other than to show any reduction in timber receipts would have a negative impact on the counties.

182. **Question:** Partly because of legal and supply problems, we have stressed the importance of having a full pipeline for timber sales. How much effort are you putting into building up the pipeline volume?

Answer: Each region is working on maintaining the volume they are currently offering for sale as well as maintaining or building their pipeline volume. In addition, the fiscal year 1997 appropriations contained additional funding for pipeline volume. This funding, and the associated pipeline volume expectation, was allocated to those regions with the greatest likelihood of producing additional pipeline.

Annual appropriations for timber sales management are used for administering the harvest of existing timber sale contracts, awarding new timber sale contracts, preparing current year timber sales, preparing future timber sales, and providing and administering

personal use permits. Each unit with a timber program is working on timber sales for several different years. Pipeline problems result when units need to replace current year timber sales with timber sales prepared for future years because of changed conditions resulting from court actions, changes in standards and guidelines, or listing of threatened and endangered species. These same events may also affect the pipeline sales, in which case they must be reworked to incorporate any necessary changes.

183. **Question:** What is the current pipeline volume right now? Will that volume be ready and available to help out in many regions if another one of your legal difficulties pops up? Give some indications of how pipeline volume varies by region.

Answer: As of January 14, 1997, there was approximately .98 billion board feet of volume through the NEPA process for fiscal years 1998 through 2002. Of this amount less than .1 billion board feet has the field layout completed. All of this volume is not available to replace current sales because some of volume will likely have timing restrictions, which include scheduling harvests for such considerations as grizzly bears or watershed constraints. In addition, often times the events that delay current sales often affect future sales and require the same amount of rework. For example, a change requiring a two year protocol to identify habitat for a wildlife species will delay both the current program and any pipeline volume also affected by the protocol. This rework of completed timber sales to meet new standards or to provide additional analysis has been one of the major problems causing the loss of pipeline. It draws both people and funding from preparing new sales to reworking and updating completed sales to a new standard.

Advanced Sale Preparation for Fiscal Years 1998 through 2002
As of January 14, 1997

Region	Gate 2	Gate 3
	NEPA Complete	Field Layout
	(Volume in million board feet)	
1	145.2	5.2
2	20.0	0.0
3	19.3	7.1
4	69.1	18.3
5	17.5	1.5
6	96.6	7.8
8	238.3	13.9
9	288.4	9.4
10	90.4	0.0
Total	984.8	63.2

184. **Question:** What were the major recommendations of the interagency salvage timber review team? What progress are you making in implementing some of these recommendations? Which of the recommendations do you feel are not appropriate for the Forest Service?

Answer: Primary findings of the report related to the following:

improving and expanding collaborative interagency processes to enhance efficiency and effectiveness of programs that affect multi-agency goals;

reviewing and modifying the definition of salvage as appropriate to reduce public confusion, achieve consistency between the Forest Service and Bureau of Land Management, and provide additional opportunities to carry out forest health improvement activities;

ensuring appropriate levels of public involvement in projects;

ensuring monitoring activities are well planned and executed; and,

improving NEPA processes and project design.

The interagency team has provided the agencies with a draft action plan and the agencies currently have efforts underway to address several of the recommendations in the report. Other recommendations are still being studied to determine the most effective means of achieving the objectives identified during the review. Generally, all of the recommendations are applicable to the Forest Service and we intend to address them to the extent possible.

185. **Question:** The administration instituted a new endangered species consultation process for salvage timber sales with a letter dated March 8, 1995 that directed that consultation to occur simultaneously with timber sale preparation. The process was expanded to the nation by an interagency memorandum of understanding agreement related to the salvage timber law included in the 1995 rescission bill. The total time for salvage sales preparation from concept to sale award is expected to be 5 to 11 months. How has that process worked? Have you indeed expanded the process to a nationwide application? Do you plan to continue the process? Has the process reduced Forest Service costs? Can the process be expanded to include green sales or at least thinning?

Answer: The streamlined consultation process has been an outstanding success. The Interagency Salvage Review Report found that where the interagency teams of biologists focused on early involvement in project planning, cooperated fully and were supported by decision-makers in their efforts, timeframes were greatly reduced and the resulting projects were better designed. The use of the streamlined process eliminated the backlog of consultations that had previously delayed project planning timelines and decisions.

As a result of a regional-level interagency agreement adopted on May 31, 1995, all Forest Service projects requiring consultation in Oregon, Washington, northern California, and Idaho were subject to the streamlined process. An interagency summary for this effort shows that between September 1, 1995 and September 1, 1996, interagency streamlined consultation teams reviewed 1,600 individual actions

administered by the Forest Service or the Bureau of Land Management. These included 286 green timber sales, 279 salvage sales, 111 silvicultural actions, 195 right-of-ways actions, 178 recreation projects, 164 grazing projects, 80 maintenance actions, and 213 other projects of various types. Additional green sales, salvage sales, and other actions were covered through 29 programmatic consultations covering multiple projects. Informal consultations were completed between one and 30 days with the an average of just 17 days. Formal consultations were completed between one and 71 days, with an average of only 46.5 days.

The streamlined process in place in many locations throughout the northwest is being continued and interagency workshops are being held to expand and improve its use. Elsewhere in the nation, other processes are being explored to achieve the key goals of the March 8, 1995, letter.

Costs associated with the streamlined process have not been tracked. However, because of the savings of time and effort associated with the process, we are highly confident that a tremendous cost savings has occurred at the same time that resource management has improved.

186. Question: A February 24, 1997 letter from GAO to Senator Murkowski stated "eliminating administrative appeals process, expediting judicial review, combining environmental documents, and hiring retired employees and contractors had little effect on either expediting the preparation and award of salvage sales or increasing the volume of the salvage timber offered for sale for the four forests we visited." What factors did have an effect on the expediting and award of salvage timber sales?

Answer: The GAO report also indicated that three of the four forests hired a total of seven private contractors and that on two of the forests the use of these contractors helped to expedite the sale of salvage timber under the emergency salvage program. Interagency collaboration with regulatory agencies where Endangered or Threatened species are a concern also expedited preparation and award.

TIMBER THEFT

187. Question: You seem to get pretty regular press about timber theft being a big problem. What is going on here? How does the problem compare now with how it has been in the past?

Answer: Investigation of timber theft allegations is a top investigative priority of the Forest Service and the Law Enforcement and Investigations Staff (LE&I). There are no indicators that more or less timber is being stolen today than in past years. The "bad press" is primarily the result of disgruntled employees who do not like the Forest Service's decision to eliminate the Timber Theft Task Force.

During FY 94, LE&I investigated a total of 166 cases of which 69 were completed. During FY 95, LE&I investigated a total of 222 cases of which 76 cases were completed. During FY 96, 122 cases were investigated and 50 of these brought to final conclusion. (Completed or final involves many steps such as prosecution, civil settlements, or other dispositions.)

188. **Question:** What about these allegations that you have obstructed investigations and prosecution of timber theft? What has happened to the timber theft task force? Given the size of the problem, why isn't this task force still needed?

Answer: Charges that the Forest Service obstructed timber theft investigations were investigated by the USDA Office of the Inspector General (OIG). The investigation concluded that there were no cases of obstruction or interference.

The Timber Theft Task Force was established in 1991 to operate independently from local line management in the states of California, Oregon, Washington, and Alaska. This group was established with a three year tenure. Since timber theft investigation was already a part of the regular law enforcement program, it was determined that the continuation of a special task force was no longer needed after the establishment of the independent law enforcement program.

The Law Enforcement and Investigation organization has an excellent record in investigating timber theft. As indicated in the answer to question 187, there are no indicators that more or less timber is being stolen today than in past years. With consideration to the downsizing of government and the financial aspects, there is no need to continue the existence of the task force. The investigations of timber theft is being carried out service-wide by trained investigators through the regular law enforcement program.

REFORESTATION

189. **Question:** How is your reforestation program doing? Why do you still have an 800,000 acre backlog of areas to reforest? Why do 300,000 additional acres per year need reforestation? How much of this area would be suitably restocked with natural regeneration? How much of this reforestation will soon need to be subject to thinning to avoid further overstocking and deteriorated forest health conditions? What new cost-saving methods have you employed?

Answer: In FY 1996 we reforested about 363 thousand acres. This level of accomplishment represented a decline of about 8 percent from FY 1995. Reforestation treatments have been declining steadily since FY 1991, when more than 500 thousand acres were reforested. This decline results from reductions in the timber sale program and recent shifts emphasizing thinning and salvage removals rather than regeneration cutting.

Each year, as required under the National Forest Management Act of 1976, we estimate our reforestation needs. We do not regard this estimate as a backlog. Rather, it is an estimate of the total number of acres which are scheduled for reforestation treatment. Since it takes 2-3 years of lead time to prepare sites for planting, grow seedlings in the nursery that are adapted to specific sites, and make arrangements to get the seedlings planted, the estimate for reforestation needs will always exceed the level of reforestation treatment scheduled in any given fiscal year. As of the end of FY

1996, a total of 804 thousand acres were in need of reforestation treatment. This represents a little more than two years of work at FY 1996 reforestation treatment levels, and the lowest the ratio of reforestation needs to annual reforestation treatments has been since FY 1976.

Reforestation needs include any area in need of reforestation treatment. These needs arise from harvest activities, from insect and disease attacks; and from disturbance events such as wildfire. In FY 1996, over 80 thousand acres of reforestation need arose as a result of wildfire. We anticipate fire-related needs will continue to occur, particularly in the West where prolonged droughts have resulted in the build-up of fuels and elevated the risk of losses to wildfire.

Reforestation treatments fall into four categories: planting, seeding, site preparation for natural regeneration, and natural regeneration without site preparation. In FY 1996, about one-third of the areas reported as treated were naturally regenerated without site preparation. Treatments on these naturally regenerated areas consisted of surveys to assess the adequacy of stocking and animal damage control work to protect the young seedlings. The number of acres of reforestation work being reported in this category has risen steadily since FY 1991 and we expect to see natural regeneration without site preparation to continue to represent about one-third of our reforestation treatments over the next 3 to 5 years.

As these young stands develop, many will need to be precommercially thinned. We estimate our needs for these timber stand improvement (TSI) treatments each year, just as we do for reforestation needs. As of the end of FY 1996, nearly 1.7 million acres were in need of TSI treatment. TSI needs have been growing steadily since FY 1990 when they were estimated at 1.2 million acres. They continue to grow because we simply have not had sufficient funding for forest vegetation management activities to treat all the areas in need of treatment. As TSI needs continue to increase, we run the risk of carrying areas that are overstocked and will likely contribute to deteriorating forest health conditions.

In FY 1996, the average costs for both reforestation and TSI treatments declined from the unit costs incurred in the prior year. Nationally, reforestation costs averaged about \$265 per acre, down by about \$28 dollars per acre from the costs reported in FY 1995. We attribute these savings to the rise in the number of acres of natural regeneration reported in FY 1996. We are trying to cut our reforestation costs in various ways. One of these is to close Forest Service nurseries. With recent sharp declines in seedling orders, the Chief examined our nursery needs and called for the closure of 3 of our 10 Forest Service nursery facilities. TSI costs in FY 1996 averaged about \$173 per acre, down by about \$15 per acre from the costs reported in FY 1995. We attribute these reductions to an increase in the number of less costly precommercial thinning treatments in selected regions and fewer acres of release work. We are trying to cut costs in the TSI area by encouraging the use of

cost-effective tools to accomplish release, including the judicious use of herbicides where conditions permit.

190. **Question:** What have been the benefits of your tree breeding and selection program? What has this genetics program cost the past 5 years? What is included in the 1998 request for the forest genetics program?

Answer: Our tree breeding and selection programs have benefitted all aspects of vegetation management on the national forests. Before we had this program, reforestation failures were common. Many times this was because the seedlings or seed that was being used to reforest cutover areas or areas denuded by fires or other catastrophic disturbances was not suited to the site where it was being used. We have now established seed zones that prevent that problem from occurring. Today all seedlings planted on national forest lands come from known seed sources. We have developed seed orchards where genetically improved seed is produced, which in turn is used to grow seedlings to plant on areas needing reforestation.

We have had great success in the area of breeding for resistance to various disease problems. A good example of this is our work with white pine blister rust. White pine blister rust all but wiped out the white pine in this country, but through selective breeding efforts selectively bred populations that are as much as 65 percent resistant have been established in areas in which less than 5 percent of the native trees would have survived blister rust. Exotic pests from other parts of the world have caused many species of trees and plants serious problems in this country in the past and will continue to do so in the future. A strong selective breeding program can help prevent the loss of species through the development of a disease resistant strain of plant or tree. In addition to selectively breeding for disease resistance we have also developed trees with desirable traits for growth, form, and other characteristics.

From FY 1992-96 we spent approximately 56 million dollars on our overall genetic tree improvement program. Most, but not all of these funds went into our tree breeding and selection programs.

Since the FY 1995 approved budget restructure, funds for our genetic resource programs have been combined with the forestland vegetation management expanded budget line item and allocated to the regions. The decisions on how much of that funding is spent on the genetic resource program, including tree breeding and selection, is made at the regional level. Historically the genetic resource program funding has been approximately 10 percent of the total funding allocation.

ROADS AND CONSTRUCTION

191. **Question:** Please explain why the Forest Service continues to need more funds for road construction when you are also requesting so much money for road destruction and obliteration?

Answer: About 80% of FY 1998 road construction funds are planned for reconstruction of existing roads. Much of this is used for ecosystem restoration, such as road stabilization and sediment control. Some examples are:

- o Placing rock or asphalt on travelway to reduce sediment,
- o Moving a road from near a creek to a location out of the riparian zone,
- o Revegetating road cut and fill slopes,
- o Replacing a bridge or culvert to improve fish passage,
- o Replacing a bridge or culvert to handle runoff from a 100 year storm (a storm of magnitude that would be expected to recur on the average of once in every 100 years).

The few new roads will provide needed access for the public and for protection and management of significant forest areas usually ranging in 1,000 to 4,000 acres in size.

Reconstruction for improved user safety is also a high priority. For example hundreds of bridges have exceeded their design life or are inadequate for current loads, and must be replaced soon. Thousands of additional bridges have guardrails that do not meet current safety standards. Without an aggressive replacement program increasingly large areas of National Forest land will be closed to access in the coming years. The planned FY 1998 program will allow us to construct one new bridge and rehabilitate or replace only 7 bridges with appropriated road construction funds.

The roads being obliterated are unengineered roads causing serious environmental damage due to poor location, steep grades and lack of proper drainage. They are mostly old skid trails, off road vehicle tracks, and timber or mining roads constructed without benefit of design. They are not needed for management of National Forest lands and are being obliterated to reduce erosion, and enhance ecosystem management.

192. **Question:** Do you have sufficient funding in the roads construction budget to meet the 1998 timber target?

Answer: Yes, funds are adequate to administer road work on existing sales and to prepare surveys and designs for FY 1998 green sale program of 2,505 MMBF.

193. **Question:** What will be the impact of your proposal to eliminate timber purchaser road credits? How might it be possible that small companies will be adversely affected? What impacts on timber purchaser competition might this proposal cause?

Answer: Discontinuing the use of Purchaser Credit eliminates the appearance of a subsidy to timber purchasers. Roads will continue to be built to appropriate standards by timber purchasers as a condition of the timber sale. The timber sale program and required roads will operate under this proposal very much like the current program. We intend to retain the purchaser election program to encourage small businesses to remain in competition.

Revenue is likely to decrease slightly due to the increased cost to purchasers to finance roads for a longer period of time that they would with the purchaser credit approach.

Where needed for long term forest access, road standards for timber sale access will not change. The Forest Service will provide a road package that includes the specifications and design for the construction and improvement of permanent roads. Road costs will be an appraisal item in the Timber Sale Contract.

194. Question: What are the impacts to roadless area management, such as in Alaska and Idaho, of the proposal to eliminate purchaser road credits?

Answer: The elimination of purchaser road credit should have no effect on our management of roadless areas.

195. Question: If the timber sale account is increased and the resulting timber harvest is adjusted up 10%, what additional road funding would be required?

Answer: If, in the President's Budget for FY 1998, the expanded budget line item for timber sales management is increased by 10%, this would increase this line item from \$208 million to \$228.8 million. The additional \$20.8 million in timber sales management funding would enable us to provide as much as 200 million board feet (MMBF) in additional green timber volume. An additional \$4.7 million in Forest Roads Program funding for engineering support for the 200 MMBF increase in timber harvest would also be needed.

196. Question: If we increase the need to build timber roads and do not provide substitute funding, what would be the impact on other roads, such as recreational roads?

Answer: Funds withdrawn from the recreation and general purpose roads program would negatively impact those programs. The impacts would be a further reduction in our ability to provide adequate access for our customers using recreation and general purpose roads and for national forest administration and protection. Some loss of use of national forests and grasslands might result because of increased road closures and rougher roads. Motorists would have to drive slower in order to drive safely and wear and tear on their vehicles would increase.

The backlog in road rehabilitation would continue to grow. The recreation facilities and roads reconstruction & construction funding mix proposed in FY 1998 provides matching funds for interior roads, parking lots and spurs for most recreation facility projects. However, funding for needed access is still not at the level needed to provide adequate access that matches the standards of many reconstructed recreation sites.

Deterioration of the national forests major road system would accelerate and needed bridge replacement will be delayed, further

reducing sustainable service to forest users. For example, about 1,500 bridges are structurally deficient or obsolete and must be replaced, closed, or restricted in use. To keep our rehabilitation backlog from growing we should be replacing about 160 bridges a year. The planned FY 1998 program will replace 7 bridges from appropriated road funds and 15 by purchasers of national forest timber.

197. Question: If we reduce the road funding by 10% below the requested level, what would be the impact on (a) the timber program, and (b) the use and access by the public of the national forests and grasslands?

Answer: It is difficult to specify the impacts of a reduction of this magnitude on timber sales without a close examination of the individual sales, the associated roads, and opportunities to shift sales. We do not maintain that information in the National office. The budget estimates are based on average needs per Region per unit of volume. There would be impacts in 1998 and subsequent years given that timber sales and associated roads typically take 2-3 years to plan and prepare.

The impacts of a substantial budget reduction are greater in the short run than in the longer run if the program is stabilized at a lower level. This is because many aspects of the organization are fixed in the short run and variable over time. For example, the least costly way to reduce the size of an organization is through voluntary attrition. A reduction-in-force almost always costs more in the first year than retaining the employee until needed attrition occurs.

The bulk of road construction is achieved by timber purchasers but the engineering work to design and assure compliance with requirements is accomplished by the Forest Service directly and through contracts. It is not possible to provide precise impacts but the bulk of any reduction will be accommodated through attrition and reduction in work contracted. This will be spread over 156 National Forests. Each Region and Forest will solve the problem to the maximum extent possible.

A reduction in any given program also has impacts on funding other programs. This is because there are common costs--like space, communications, computers, utilities, and so forth--that are paid based on the relative size of each program area. These costs are essentially fixed in the short run so when one program is reduced, the others must make up the difference.

There will be some effects on construction and reconstruction of roads which are primarily used for recreation. A determination will be made as to the lowest priority projects using criteria such as the severity of current condition of existing roads for public use and environmental impacts and the amount of use.

198. Question: What funding level is called for in the current in-force forest and land resource management plans for road construction, reconstruction, and maintenance? How much do you anticipate this will change as the plans are updated during the next few years.

Answer: Funding levels for road construction, reconstruction, and maintenance are not included in forest and land resource management plans in the WO. However, the 1995 draft strategic plan prepared to meet the requirements of the Forest and Rangeland Renewable Resources Act of 1974 (RPA) has projections pertaining to Forest Service road construction and road maintenance. The RPA deals, however, with ideal budgets and is not based on the reality of needing to obtain offsets when funding is increased. The draft 1995 RPA strategic plan shows the need for annual capital investments for road reconstruction and construction gradually decreasing from \$208.2 million in FY 1993 to \$188.9 million in FY 2000. The RPA deals, thought, with ideal budgets and is not based on the reality of needing to obtain offsets when funding is increased. Total road reconstruction and construction appropriations and limitations for FY 1997 is \$148.1 million. Fewer new roads are anticipated with road reconstruction efforts focussed on arterial and collector roads.

Annual road maintenance costs are shown to increase from \$82.2 million in FY 1993 to \$126 million by FY 2000 and then level off. The FY 1997 appropriation for road maintenance is \$81.0 million. Maintenance efforts will also focus on arterial and collector roads.

199. Question: Critics suggest that you build roads to standards that are either much too costly or that are insufficient to allow commercial activity. Please explain your road standards and suggest what efforts you are taking to save money on your construction program.

Answer: Road standards are selected after a careful engineering study to determine the most cost effective and environmentally sound standard needed to serve the area and resources being accessed. For major roads such as arterials and collectors, resource protection is balanced with efficiency of travel, safety, and user comfort. For local roads, configuration of the vehicles that will be using the road, along with resource protection, plays a much more important role

in standard selection than does travel speed. User comfort is not usually a consideration.

For all roads, emphasis is on providing the minimum facility needed to provide access to an area while giving special consideration to environmental protection. Since the early 1980's the Forest Service has undergone a series of initiatives to reduce the costs on reconstructing and constructing roads. As a result of those efforts road reconstruction/construction standards have been reduced and costs per mile are less than half of what they were in 1977 when expressed in terms of FY 1997 dollars.

200. Question: What does it cost the Forest Service to build a mile of road? How does this compare with timber industry programs and that of the States? What are you doing to develop technology to reduce these costs?

Answer: There is no one specific cost that fits all situations. The average cost of Timber Purchaser Construction in FY 1995 was \$52,700 per mile and the average for reconstruction was \$15,800 per mile. The cost depends on a number of variables such as ground slope, soil conditions, climate, and amount of traffic during the life of the road, just to mention a few.

In general, the cost to construct a mile of permanent access road with a Forest Service Timber Sale Contract is comparable to the cost to construct a mile of permanent timber access road with a typical state or private contract. The Forest Service also uses temporary roads as a means of access, as do states and private timber companies, and our costs are comparable. The cost of temporary roads are not reflected in our request for appropriated road construction. They are a part of the purchasers operating costs and are reflected in the timber bid price.

Federal land management agencies like the Forest Service and BLM, States, and the timber industry have developed their own road construction standards that are similar for the same planned use or utility of the road. However, there are no national industry standards.

The Forest Service has continued to explore ways to reduce road costs. This includes evaluating road standards to assure the minimum cost requirements and better planning and design to assure only the minimum standards are specified for the intended traffic during the life of the timber sale. This also includes investing in a significant program of innovation in road construction technology at our San Dimas and Missoula Technology Development centers.

201. **Question:** We keep hearing about some real problems regarding maintenance of your road system, and especially your bridge system. What is the status of your infrastructure? How many bridges are in bad shape? How many need immediate repairs and how many are currently closed due to maintenance or safety problems?

Answer: Funding for infrastructure is not keeping pace with needs. As a consequence, the infrastructure is continuing to deteriorate and the backlog is increasing.

There are over 9,700 bridges and major culverts in the Forest Service inventory. Of 7,600 bridges, 1,000 (13%) are rated deficient as defined by the Federal Highway Administration (FHWA). 162 bridges (2%) are currently closed. 500 bridges and major culverts need immediate repairs to remain open or carry minimum legal loads. The agency needs to replace about 160 bridges per year to maintain a 50 year replacement cycle. Additionally, over half of the bridges in the inventory have guard rails which do not meet current standards. This will increase to 75% or more when new regulations are set the near future.

202. **Question:** The summary of your budget states that the maintenance funds provide sufficient money to fully operate and maintain only 40% of the roads. What about the other 60%? Are we going to lose them to erosion? What loss of federal investment is happening here? Are we not only losing our past infrastructure investment but also causing water quality and erosion problems by failing to keep up with our maintenance?

Answer: The requested funding is sufficient to fully maintain approximately 40% of roads and associated structures at a level consistent with current use. By Forest Service definition, a road will be considered fully maintained (or 100% maintained) when the completed maintenance activities maintain the road in a condition that meets the maintenance criteria established by the road management objectives.

Most roads have established criteria that, as first priority, require maintenance activities for safety and protection of the resource activity to be accomplished. Lower in priority would be items such as user comfort and preservation of the capital investment.

Some loss of past infrastructure investment will occur on the remaining 60% of FS roads that are not fully maintained. While most open roads will receive some maintenance, it will be at a reduced level. Priority is given to drainage and surface maintenance but even so, water quality is degraded due to increased erosion when we are not able to fully maintain our road system.

There will be a loss of native and imported surfacing material, and increased ditch erosion. Some slumps and slides will not be removed. Some drainage structures will not be maintained as they should. Roadside vegetation will not be removed resulting in drainage problems

and reduced visibility. All of these will contribute to the loss of past investment in the road system, increased sedimentation, and decreased user comfort and safety.

Rutted, ungraded road surfaces will cause an unpleasant driving experience for many and will increase wear and tear on the users' vehicles. Continued deterioration of information and destination road signs will make traveling the national forests a less enjoyable experience for many users. Deferred maintenance of road prism and warning signs may increase tort liability. Hundreds of bridges are experiencing accelerated deterioration due to insufficient maintenance funding. This will eventually lead to closure of the roads.

Examples of work that is being deferred include roadside brushing, signing, bridge painting, surface rock replacement, grading, drainage work, and traffic control.

203. Question: What is the cost of the Forest Service mapping function? Where are the major geometronics centers located, and who do they serve? How much work do they do for other clients on a reimbursable basis?

Answer: The Geometronics Service Center (GSC), located in Salt Lake City, Utah, is the national mapping and base geographic data center for the Forest Service. GSC, with a budget of \$9,033,000 for fiscal year 1997, has 112 full time equivalent positions.

GSC produces and disseminates base geographic data in both digital and hardcopy formats including such products as: Primary Base Series maps, Cartographic Feature Files, Secondary Base Series maps, Digital Elevation Models, and Digital Orthophoto Quadrangles. GSC also provides support services for transferring knowledge of geospatial technologies, activities, and product applications.

GSC works in conjunction with the nine Regional Geometronics Groups to provide geospatial information to field personnel in support of land management activities of the Forest Service. Some Region Geometronic Groups also provide project mapping. It is essential for a land management organization such as the Forest Service to obtain quality geospatial data in a timely manner as required for land management activities. These data are also sent to the respective national databases which are managed by the U.S. Geological Survey. Benefitting function dollars are used to produce maps and digital data to support the mission of the Forest Service.

In fiscal year 1996, GSC had reimbursable expenditures of \$743,171. These dollars supported the following functions:

- 56.5% were direct costs to existing task contracts to produce requested products.
- 18% were dollars sent to GSC to be applied to national contracts which GSC manages as the national center.

- 18% were dollars sent to GSC for shared services in procurement and contracting. GSC has the lead for this activity for the Forest Service Region 4 Northern Utah Ecological Group.
- 7% were dollars applied to internal overhead costs relating to contract administration costs.
- 0.5% were dollars for purchase of supplies to produce requested products.

Currently, the National Academy of Public Administration (NAPA) is conducting a comprehensive examination of current U.S. geographic information functions and how these functions can be most effectively structured and performed. The Forest Service is one of the major agencies being studied. In response to a NAPA data request, the Forest Service is in the process of compiling a comprehensive accounting of cost and personnel information on mapping, surveying, geographic information, and remote sensing activities service-wide. NAPA is scheduled to publish a report summarizing study results by October 1997.

204. Question: What collaboration with the US Geological Survey does your geometronics center have? Through the joint federal mapping initiative, what cost savings would result if Forest Service mapping functions were provided by another agency? What services would be lost?

Answer: The Geometronics Service Center (GSC) collaborates with the U.S. Geological Survey (USGS) to coordinate programs, avoid duplication, reduce costs, and ensure the availability of nationally consistent geographic information products. The most significant activities follow:

- o Single Edition Map -- The Forest Service and USGS collaborate on the production and maintenance of a single 7.5 minute quadrangle topographic map series over National Forest System lands that meets the needs of both agencies. This activity eliminates duplication of effort between the USGS topographic map series and the Forest Service Primary Base Series programs. Under an agreement reached in 1993, the Forest Service is responsible for maintaining Single Edition Maps to a common, national specification. In turn, the USGS prints these maps in color and distributes them to the Forest Service and established public sales outlets. Single Edition Maps produced through the agreement replace existing stocks of Forest Service Primary Base Series maps and USGS topographic maps. Forest Service participation in the U.S. 7.5 minute quadrangles include 20% of the U.S. coverage.
- o Digital Elevation Models -- The Forest Service collaborates with the USGS to produce Digital Elevation Models (DEMs) over National Forest System lands. DEMs produced at GSC meet nationally recognized standards and are entered into the national DEM

database administered by the USGS. Under an agreement with the USGS, GSC-produced DEMs are exchanged for USGS DEMs on a one-for-one basis.

- o Digital Orthophoto Quads -- As a full partner in the National Digital Orthophoto Program (NDOP), the Forest Service coordinates the production of Digital Orthophoto Quads (DOQs) over National Forest System lands with NDOP members. NDOP members include the Forest Service, USGS, the Farm Service Agency, the Natural Resources Conservation Service, and the National States Geographic Information Council. DOQs produced at GSC meet nationally recognized standards and are entered into the USGS national DOQ database. Under an agreement with the USGS, GSC-produced DOQs are exchanged for USGS DOQs on a one-for-one basis.
- o Earth Science Information Center -- The Salt Lake City USGS Earth Science Information Center (ESIC) is co-located with GSC. The Salt Lake City ESIC provides USGS and Forest Service earth science information and related product sales service to the greater Salt Lake City - Intermountain Region.
- o USGS Advanced System Center -- Two GSC employees are stationed at the USGS Advanced System Center in Reston, Virginia. In the course of their duties, these employees often assist USGS personnel in developing and testing advanced mapping methods using National Technical Means.

The Forest Service and USGS meet semi-annually on a formal basis to coordinate programs and share technical information. Joint working groups and subcommittees meet to address a variety of program and technical issues. The USGS maintains a full time USGS Liaison position on-site at GSC. The USGS Liaison facilitates the exchange of program and technical information between the two agencies.

Managing sensitive, land-based resources for the American public requires the Forest Service to perform its mission in an effective, responsible manner. As such, Forest Service managers and scientists need current, accurate geographic information and related technical support. GSC provides base geographic information products and technical support through a mix of in-house and contracted resources and partnerships with other agencies. Other Forest Service units use these data and products to derive a variety of map products for internal Forest Service and public use.

As a Forest Service unit, GSC maintains close, responsive ties to its Forest Service customers in the field. With this relationship, GSC understands the requirements of its customers and provides its products and services in a timely fashion. If the functions of the GSC were shifted to another agency, it is likely that 1) costs to the Forest Service for products and services would rise, and 2) delivery timelines would lengthen. If Forest Service funding levels for base geographic information and related services remain unchanged and costs through another provider agency increase, the Forest Service would

receive fewer products and less service. The Forest Service would then be faced with performing its mission with reduced levels of geographic information products and services and longer delivery timelines. The alternative would be to increase funding to maintain a level of performance already achieved by GSC.

One of the primary reasons for the establishment of GSC in 1975 was that the USGS did not have the funding and staff available to provide needed maps, data products, and technical services on the schedules needed by the Forest Service. This reason remains valid today.

205. **Question:** We understand that there may be a large workload for the Forest Service regarding FERC and hydropower relicensing. What is the work load during the next 3 years by region? What programs would benefit through relicensing efforts? How would this improve aquatic conservation? Does your FY 1998 request cover the needed work? How would active Forest Service participation facilitate the process for the various hydropower permittees?

Answer: Over the next 3 years, the Forest Service expects to be working on 78 hydropower projects. Table 1 shows the distribution by region, State, Megawatt (MW) produced, number of projects, and MW capacity of largest project.

Table 1.. Distribution of FS relicensing workload by region (1997 - 2000)*

<u>Region</u>	<u>State</u>	<u>MW's</u>	<u>Number of Projects</u>	<u>Largest Project (MW)</u>
1	ID	233	8	212
	MT	500	9	466
2	CO	22	1	22
	WY	2	2	1.5
3	AZ	3	1	3
4	UT	14	2	4.2
5	CA	2700	23	190
6	OR/WA	2848	12	738
8	AR	65	1	65
	GA	71	1	45
	SC	133	2	133
	VA	7.5	1	7.5
9	MI	2	1	2
	MN	4	1	4
	WI	1	1	1
10	AK	67	12	15
Totals:		6672	78	

*Projects include those that we should be working on now plus those whose Notice's of Intent will be filed or initial consultation will commence in the next three years. The list does not show projects tributary to National Forest System land which may come under Section 7 authority (Wild and Scenic Rivers Act). Also, the list displays projects likely to be active given the present trend of starting consultation before the Notice of Intent for new license is due (5 years before license expires). The Forest Service is still in the process of tallying project starts in FY 99 and 2000 but does know presently that workload will peak in FY 2001 when more than 92 projects will be in the relicensing process nation-wide.

Forest Service participation in FERC relicensing has the potential to benefit multiple National Forest resources. These include fisheries, wildlife, riparian vegetation, recreation, cultural resources, water quality, aesthetics and geological and soil resources. Of particular importance is the tremendous benefits that could be realized for aquatic conservation and recreation. Relicensing provides the only window of opportunity for the Forest Service to prescribe mandatory streamflows and habitat restoration measures necessary to protect aquatic resources, including Threatened and Endangered species. Through our mandatory conditioning authority under section 4(e) of the Federal Power Act, the Forest Service can ensure that aquatic conservation strategies are effectively employed and that projects assume responsibility for maintenance and replacement of recreation facilities built in the past by the Forest Service to accommodate project-induced recreation, and for construction of new facilities where demand exceeds supply at the very popular flatwater sites created by project reservoirs.

Funding for hydropower relicensing, as a land use activity is included in the National Forest System Real Estate Management budget line item. The FY 1998 budget request for National Forest Real Estate Management will permit the Agency to spend \$1 million for the hydropower program, which is the same level as the past few years. To deal with the increased workload, the Forest Service will limit FERC relicensing work to the most critical needs.

206. Question: What is at stake if the Forest Service does not adequately participate in the relicensing effort?

Answer: Without adequate participation in the relicensing process, the Forest Service would, in some cases, lose the opportunity to (1) mitigate ongoing impacts from projects that were licensed 50 years ago and which did not address resource concerns at issue today and (2) ensure the future protection of National Forest resources from the operation and maintenance of these projects over the term of the new license (usually 30 to 50 years).

Through more active participation, the Forest Service can also ensure that it meets FERC deadlines for providing 4(e) conditions necessary for the protection and utilization of NFS resources. If the FS is

unable to meet this deadline, FERC deems the 4(e) conditions as recommendations only without any guarantee that they will be incorporated into the FERC license. Therefore, National Forest resources could be at stake.

207. **Question:** We understand that the lands program (NFLA) in the past has funded this work. How much funding has been earmarked for hydropower relicensing in 1998? If this is not enough funding, is there any way you can use cost recovery through FERC or other means to enhance your ability to do needed environmental work?

Answer: No money has been earmarked specifically for the hydropower program since it is not an expanded line item in the NFLA budget. The FY 1998 budget request for National Forest Real Estate Management will permit the agency to spend about \$1 million for the hydropower program, which is the same level as past years.

Section 10(a) of the Federal Power Act allows resource agencies, like the Forest Service, to recover costs for their hydropower work. We are examining the possibility of obtaining additional funding under this authority.

208. **Question:** What are the options for funding this work through various cost recovery methods? What are the current barriers to successful cost recovery? How much funding during 1996 and 1997 has been generated through such cost recovery?

Answer: We are currently exploring options for cost recovery under section 10(e) of the Federal Power Act.

209. **Question:** We understand that there is an issue concerning fair market value of improvements on national forest system lands, such as hydropower facilities and private recreational homes. How is fair market value of such structures determined? How does this impact your ability to secure funding from the persons or institutions occupying the national forest lands?

Answer: Section 10(e) of the Federal Power Act authorizes FERC to collect fees "for the use, occupancy and enjoyment" of lands of the United States. Presently, FERC collects \$6.6 million in fees from licensees each year for the use of all federal land under the Federal Power Act. Half of these fees go to the Department of Interior's Reclamation fund, 37.5 percent to the States, and 12.5 percent to the U.S. Treasury. While FLPMA also authorizes the Forest Service to collect fair market value for the use of its land, the agency has deferred when such fees are being collected under another statute; in this case by FERC under the Federal Power Act.

FERC fees for use of national forest system lands, however, do not reflect fair market value because they are based on the Forest Service linear right-of-way fee schedule, which is based on an outdated market survey. Further, because hydropower projects utilize topographically and hydrologically unique sites (similar in many respects to ski areas) it is difficult to accurately determine their value based

strictly on a linear use schedule. The Forest Service is preparing a proposal for a cooperative market survey with FERC, the BLM and other Federal land management agencies to determine what is a fair market value fee for hydroelectric projects sited on federal lands. We anticipate that FERC will adopt new procedures established to determine fair market value for hydropower use.

Assuming fair market value is about 2 to 3 percent of gross power sales from a project (a conservative estimate based on a 1983 market survey and taking into account the effects of deregulation of the hydropower industry), the government would collect \$250-300 million a year for projects sited on National Forest System lands alone. This would generate returns to the states of between \$93 and \$112 million per year.

210. **Question:** What are the barriers to improving your ability to determine fair market value for occupancy on national forest system lands? How could you improve this system? Does existing fair market value methodology capture the full benefits of hydropower relicensing? If not, how would you improve it?

Answer: The Forest Service needs to conduct a new market survey to determine what the private sector is receiving for the occupancy and use of its lands by hydropower operators. The present system of determining fair market value for hydropower use is outdated and not sufficiently applicable to hydropower projects. Therefore, it does not capture the full benefits that could be derived from the relicensing of projects on National Forest System lands. We believe a more realistic approach would be to base fair market value on a percentage of the gross power revenues generated each year. This method has been used by the private sector. A market survey would determine the validity of this approach as well as a realistic percentage of gross power sales to use in calculating the land use fees.

211. **Question:** What is the recreational use of the national forests and grasslands? Please provide a summary table of use by national forest and grassland.

Answer: The Agency records use by Region and State. This information has been provided to the Subcommittee.

212. **Question:** What steps are you taking to improve your ability to count visitation to the National Forests as requested by Congress?

Answer: A National Recreation Use Task Force has been commissioned by the Forest Service to examine the accuracy of national forest recreation use numbers and to implement actions to improve the accuracy of those numbers. The Task Force was established to accomplish two major objectives in fiscal years 1997-1998. First, to provide independent, statistically valid estimates of recreation use on national forests at the national level. Second, to estimate how much time, effort, and money would be needed to continue estimating recreation use at the national, regional, and State level. The Task

1996 RECREATION USE REPORT BY STATE
(THOUSANDS RECREATION VISITOR-DAYS)

	Camping, Picknicking, & Swimming	Mechanized Travel & Hiking, Horseback & Water Travel	Winter Sports	Resorts, Cabins, & Organiza- tion Camps	Hunting	Fishing	Non Con- sumptive Fish/Life Use	Other Recreation Activities	Total	Percentage of Total States	Wilderness	Visits *
Alabama	175.0	47.0	0.0	0.0	152.0	510.0	7.0	86.0	6,690.0	0.205	32.0	1,006.0
Alaska	7,911.0	15,731.0	89.0	181.0	1,052.0	1,031.0	458.0	4,433.0	35,000.0	10.268	726.0	17,981.0
Arizona	619.0	555.0	0.0	42.0	510.0	106.0	28.0	135.0	2,210.0	0.653	43.0	5,309.0
Arkansas	18,824.0	25,492.0	5,915.0	4,264.0	1,742.0	3,356.0	416.0	3,478.0	71,165.0	20.868	2,892.0	195,680.0
California	6,080.0	10,212.0	2,727.0	6,525.0	1,756.0	1,697.0	176.0	1,030.0	30,969.0	9.086	1,276.0	68,596.0
Colorado	1,336.0	459.0	0.0	21.0	315.0	365.0	37.0	96.0	2,925.0	0.868	110.0	8,332.0
Connecticut	2,251.0	1,868.0	0.0	0.0	1,082.0	189.0	201.0	1,109.0	15,365.0	4.508	1,049.0	23,201.0
Delaware	4,472.0	4,506.0	1,421.0	610.0	1,154.0	1,071.0	44.0	81.0	11,888.0	0.358	154.0	1,034.0
Florida	262.0	443.0	0.0	9.0	140.0	55.0	19.0	36.0	684.0	0.208	5.0	525.0
Georgia	262.0	443.0	0.0	9.0	140.0	55.0	19.0	36.0	684.0	0.208	5.0	525.0
Idaho	17.0	27.0	3.0	1.0	9.0	14.0	3.0	12.0	86.0	0.033	4.0	57.0
Illinois	685.0	755.0	4.0	26.0	217.0	239.0	15.0	30.0	2,359.0	0.185	6.0	1,748.0
Indiana	186.0	151.0	6.0	4.0	9.0	16.0	2.0	6.0	158.0	0.053	12.0	1,000.0
Iowa	31.0	65.0	0.0	6.0	16.0	16.0	2.0	6.0	158.0	0.053	12.0	1,000.0
Kansas	1,537.0	1,676.0	302.0	76.0	538.0	433.0	26.0	163.0	4,866.0	1.438	130.0	9,997.0
Kentucky	1,983.0	1,116.0	112.0	441.0	366.0	897.0	35.0	146.0	5,982.0	1.758	1,415.0	12,833.0
Louisiana	318.0	562.0	153.0	0.0	487.0	110.0	16.0	155.0	1,828.0	0.542	55.0	3,567.0
Maine	983.0	616.0	356.0	0.0	111.0	276.0	72.0	125.0	2,788.0	0.848	15.0	1,541.0
Massachusetts	2,315.0	4,982.0	776.0	1,111.0	1,726.0	888.0	172.0	1,250.0	13,093.0	3.968	883.0	31,536.0
Michigan	1,090.0	1,175.0	447.0	350.0	199.0	92.0	78.0	272.0	3,857.0	1.138	340.0	21,423.0
Minnesota	656.0	1,310.0	473.0	548.0	43.0	30.0	186.0	1,346.0	3,354.0	0.988	118.0	5,900.0
Mississippi	2,979.0	2,202.0	724.0	751.0	541.0	341.0	186.0	1,346.0	9,328.0	2.738	598.0	12,419.0
Missouri	1,717.0	2,448.0	2.0	100.0	793.0	342.0	42.0	307.0	6,579.0	2.058	271.0	20,353.0
Montana	50.0	93.0	23.0	0.0	233.0	56.0	5.0	5.0	133.0	0.042	0.0	387.0
Nebraska	56.0	179.0	56.0	0.0	66.0	15.0	10.0	11.0	393.0	0.152	0.0	900.0
Nevada	11,290.0	11,719.0	3,890.0	1,584.0	2,028.0	1,977.0	595.0	1,925.0	37,035.0	10.858	1,004.0	97,395.0
New Hampshire	866.0	1,521.0	348.0	10.0	178.0	164.0	42.0	17.0	3,421.0	0.538	4.0	1,530.0
New Jersey	272.0	241.0	163.0	0.0	211.0	60.0	15.0	68.0	1,011.0	0.308	13.0	2,332.0
New Mexico	282.0	2,580.0	206.0	18.0	118.0	91.0	147.0	13.0	3,171.0	1.058	34.0	6,173.0
New York	1,251.0	1,023.0	336.0	6.0	102.0	265.0	31.0	89.0	3,309.0	0.972	64.0	9,911.0
North Carolina	6,404.0	6,414.0	1,111.0	0.0	30.0	223.0	27.0	115.0	2,302.0	0.672	6.0	3,712.0
North Dakota	6,334.0	6,611.0	1,294.0	922.0	853.0	1,102.0	69.0	84.0	19,306.0	5.818	572.0	42,461.0
Ohio	1,371.0	1,442.0	489.0	31.0	878.0	370.0	76.0	253.0	4,927.0	1.448	88.0	18,753.0
Oklahoma	5,165.0	11,491.0	3,384.0	1,120.0	853.0	420.0	121.0	1,152.0	24,797.0	7.272	891.0	97,454.0
Oregon	556.0	306.0	159.0	8.0	235.0	132.0	10.0	65.0	1,499.0	0.448	54.0	4,284.0
Pennsylvania	615.0	807.0	125.0	29.0	258.0	503.0	9.0	161.0	2,527.0	0.743	18.0	9,981.0
Rhode Island	2,069.0	2,688.0	1,399.0	805.0	688.0	396.0	100.0	457.0	9,114.0	2.678	736.0	14,286.0
South Carolina	87,082.0	122,141.0	33,999.0	19,708.0	19,386.0	18,160.0	3,300.0	20,626.0	341,204.0	100%	14,512.0	859,210.0
South Dakota	25.528	35.808	9.708	5.788	5.688	5.328	0.978	6.058	100.008	4.258	4.77	4.77
Tennessee	25.528	35.808	9.708	5.788	5.688	5.328	0.978	6.058	100.008	4.258	4.77	4.77
Texas	25.528	35.808	9.708	5.788	5.688	5.328	0.978	6.058	100.008	4.258	4.77	4.77
Utah	25.528	35.808	9.708	5.788	5.688	5.328	0.978	6.058	100.008	4.258	4.77	4.77
Vermont	25.528	35.808	9.708	5.788	5.688	5.328	0.978	6.058	100.008	4.258	4.77	4.77
Virginia	25.528	35.808	9.708	5.788	5.688	5.328	0.978	6.058	100.008	4.258	4.77	4.77
Washington	25.528	35.808	9.708	5.788	5.688	5.328	0.978	6.058	100.008	4.258	4.77	4.77
West Virginia	25.528	35.808	9.708	5.788	5.688	5.328	0.978	6.058	100.008	4.258	4.77	4.77
Wisconsin	25.528	35.808	9.708	5.788	5.688	5.328	0.978	6.058	100.008	4.258	4.77	4.77
Wyoming	25.528	35.808	9.708	5.788	5.688	5.328	0.978	6.058	100.008	4.258	4.77	4.77
Total	87,082.0	122,141.0	33,999.0	19,708.0	19,386.0	18,160.0	3,300.0	20,626.0	341,204.0	100%	14,512.0	859,210.0

Percentage 25.528 35.808 9.708 5.788 5.688 5.328 0.978 6.058 100.008 4.258 4.77

A recreation visitor-day (RVD) is a statistical reporting unit consisting of 12 visitor hours. A visitor hour is the presence of a person on an area of land or water for the purpose of engaging in one or more recreation activities during a period of time aggregating 60 minutes.

* Visits = an entry of one person upon a National Forest for the purpose of participating in one or more recreation activities for an unspecified period of time. Only the "primary" activity of the recreation visitor is recorded.

** Numbers for Region 2 (COLORADO) are from 1995. Numbers for Region 6 (OREGON, WASHINGTON, IDAHO, CALIFORNIA) are from 1994.

*** Ratio of Visits to Total RVDs.

1996 RECREATION USE REPORT BY REGION
(THOUSANDS RECREATION VISITOR-DAYS)

	Camping, Picknicking, & Swimming	Mechanized Travel & Viewing Scenery	Hiking, Horseback, & Water Travel	Winter Sports	Resorts, Cabins, & Organiza- tion Camps	Hunting	Fishing	Non Con- sumptive Fish/Wild Life Use	Other Recreation Activities	Total	Percentage of Total	States	Wilderness	Visits *
Region 1	3,888.0	6,538.0	1,903.0	941.0	625.0	1,772.0	1,117.0	228.0	1,701.0	18,713.0	5.48%		1,087.0	41,853.0
Region 2 **	7,618.0	14,484.0	3,381.0	6,700.0	1,375.0	2,246.0	2,097.0	257.0	1,470.0	39,628.0	11.61%		1,627.0	77,818.0
Region 3	10,897.0	17,936.0	3,833.0	920.0	1,262.0	1,595.0	1,374.0	744.0	5,780.0	44,341.0	13.00%		1,405.0	84,727.0
Region 4	11,588.0	11,752.0	3,618.0	2,534.0	1,867.0	2,021.0	2,242.0	296.0	1,954.0	37,872.0	11.10%		2,171.0	106,070.0
Region 5	18,532.0	25,342.0	5,877.0	4,420.0	7,671.0	1,730.0	3,142.0	413.0	3,463.0	70,590.0	20.69%		2,766.0	172,249.0
Region 6 **	16,711.0	23,336.0	7,351.0	2,669.0	3,144.0	2,902.0	2,520.0	760.0	3,089.0	62,482.0	18.31%		2,011.0	195,330.0
Region 8	9,643.0	9,718.0	3,692.0	63.0	590.0	4,643.0	2,681.0	382.0	1,644.0	33,056.0	9.69%		732.0	95,960.0
Region 9	7,837.0	8,258.0	3,076.0	1,372.0	987.0	2,332.0	2,477.0	175.0	1,046.0	27,560.0	8.08%		1,987.0	68,022.0
Region 10	368.0	4,777.0	368.0	89.0	181.0	145.0	510.0	45.0	479.0	6,962.0	2.04%		726.0	17,181.0
Total	87,082.0	122,141.0	33,099.0	19,708.0	17,702	19,386.0	18,160.0	3,300.0	20,626.0	341,204.0	100%		14,512.0	859,210.0
Percentage	25.52%	35.80%	9.70%	5.78%	5.19%	5.68%	5.32%	0.97%	6.05%	100.00%			4.25%	4.77 ***

A recreation visitor-day (RVD) is a statistical reporting unit consisting of 12 visitor hours. A visitor hour is the presence of a person on an area of land or water for the purpose of engaging in one or more recreation activities during a period of time aggregating 60 minutes.

* Visits = an entry of one person upon a National Forest for the purpose of participating in one or more recreation activities for an unspecified period of time. Only the "primary" activity of the recreation visitor is recorded.

** Numbers for Region 2 (COLORADO) are from 1995. Numbers for Region 6 (OREGON, WASHINGTON, IDAHO, CALIFORNIA) are from 1994.

*** Ratio of Visits to Total RVDs.

Force is developing an improved sampling strategy to address efficiency and quality of data collection at the national level. Information gained from the Pilot Study will also provide recommendations for future sampling methodology.

The Task Force is composed of Forest Service field level, Washington Office, and Research employees, as well as Bureau of Land Management employees and several university professors. As part of the Pilot Study, 32 ranger districts across the country have been randomly selected, sampling plans are being developed and data collection on each of these ranger districts is scheduled to begin between March and June 1997. The sample period will be 1 full year on each district to capture recreation use over four seasons.

213. **Question:** How many private sector workers rely on the recreational industry that results from national forest system programs?

Answer: According to the economic analysis in the "Forest Service Program For Forest and Rangeland Resources: A Long-Term Strategic Plan - Draft 1995 RPA Program - Oct. 1995" National Forest recreation accounts for over 2 million jobs in the United States.

214. **Question:** What backlog of maintenance do you have in your recreation facilities?

Answer: The estimate of backlog is based on the report "Forest Service Infrastructure in Support of Resources" published in March 1994. This information has not been updated since we are concentrating our resources on the continued development of the integrated information system for Agency facilities, INFRASTRUCTURE.

Funding for the physical infrastructure is not keeping pace with customer needs, and the condition of our facilities has been declining for several decades. For example, about 27% of the recreation facilities are over 40 years old. Many are functionally obsolete, have worn out, are approaching or have reached the end of their designed life, and do not meet today's program needs, customer expectations, or public health and safety, and accessibility standards. In many cases, facilities can no longer be maintained, and must be restored or replaced through reconstruction.

FY 1994 Backlog	
<u>Infrastructure item</u>	<u>(\$ in Millions)</u>
Recreation Facilities	818
Trails	267

Recreation Facilities and Trails - National priorities are to repair and rehabilitate facilities to eliminate health and safety problems, protect soil and water resources, meet new standards (accessibility as an example), and improve economic efficiency. However, each Region determines the specific projects that will be put forth in the annual budget.

215. Question: How do you think we will ever make progress in making up this backlog? What are the impacts of deferring this maintenance?

Answer: The Agency has an opportunity to use the Fee Demo Pilot to address backlog on those areas that are under the pilot. However, these 100 sites represents a very small portion of the total recreation backlog. We will continue to explore opportunities to use the Public/Private Venture, and the use of concessionaires. Continuing to defer maintenance accelerates deterioration and increases the eventual costs of repair or eventually requires closure.

The Administration is proposing permanent authority to retain increased recreation fees for use on site. We believe this initiative would eventually allow us to reduce or eliminate the backlog.

216. Question: (A) How have you changed your recreational partnerships the past few years? (B) What is the result of this increased partnership? (C) How much non-federal money are you bringing in to help with your programs? (D) How is service to the public affected?

Answer: With advent of the Challenge Cost-Share program and other enabling authorities in the 1980's, opportunities for establishing partnerships have increased. The Forest Service has embraced the concept of forming partnerships to provide better customer service and expand recreational opportunities on the National Forests. It is a cornerstone of "America's Great Outdoors", the agency's National Recreation Strategy. The recent creation of the National Forest Foundation, a congressionally designated not-for-profit organization, created to support the Forest Service mission will expand Forest Service capability through partnerships.

B. In recent years, as budgets have declined, the amount of agency resources available to initiate and manage partnerships have also declined. In 1994, the last time an assessment was made, the Forest Service had 12,000 agreements with 6,400 partners.

C. The estimated total commitment to collaborative projects in 1994 was over \$780 million with partners providing a 58% share. There are no current statistics because of the dispersed nature of the partnership program.

D. The Recreation Partnership Program is a key factor in the delivery system for quality recreation products and services. Without it, quality and number of opportunities would decline.

217. Question: The challenge cost-share program has brought a lot of non-federal money to bear on NFS program. To date, how much federal and non-federal money has been involved? Please provide a table showing the major attributes of the program in the 1998 request.

Answer: In general, challenge cost-share programs require at least a 1:1 ratio of non-federal money matched to federal funds. Any leverage beyond that is usually "in-kind". A table displaying Challenge Cost Share Funding has been provided to the Subcommittee.

218. Question: Some public partner groups have testified to the Committee that they are concerned that the Forest Service is reducing its challenge cost share activities in the wildlife and fish area. How has the ability to use cost shares been affected by reductions in biologists in some areas of the nation?

Answer: The Challenge Cost-Share Program is a unique venture in which the State and private sectors share in both the management and cost of Federal wildlife and fish habitat improvement programs. Between 1986 and 1995, total partnership contributions of labor, materials, expertise and cash have approached \$132 million, more than matching Forest Service monetary contributions of more than \$95 million. The program has been steadily increasing over its history, however, between FY95 and FY96 there was a slip in both partner contributions (from \$26.4 million to \$23.4 million) and Forest Service expenditures (from \$17.9 million to \$16.6 million). In addition, the number of projects declined for the first time, from 3,122 in FY95 to 2,100 in FY96. Partner groups have expressed concern over the slip in the program and the Agency is actively addressing their concerns.

In FY 1997, \$15.5 million were appropriated for the Challenge Cost-Share Program for wildlife and fish habitat improvements. The FY 1998 President's budget shows \$17.2 million in appropriated funds for this program. The success of the program is measured by the support and receipt of matching contributions from conservation groups, private enterprises, individuals, and other public agencies.

219. Question: Does the federal contribution to challenge cost-share consist of agency overhead and routine labor costs or is it primarily focused on contributions to specific, partner co-financed projects on the ground (or in the water)?

Answer: Forest Service contributions to challenge cost-share programs are targeted to specific, partner co-financed projects on the ground (or in the water).

220. Question: Are there additional opportunities to establish challenge cost-share in other programs or increase the commitment in the 1998 request?

Answer: Lands and Range Staff Units are looking for opportunities to get involved in the Challenge Cost-Share Program. The budget request does not provide for any increase in challenge cost-share activities.

221. Question: What is the current status of your visitor center program? How many are there? Are these facilities given much use? How much does it cost to staff these facilities?

CHALLENGE COST-SHARE PROGRAM

Challenge Cost - Share Funding Display
FY 1996 - FY 1998
(\$ in thousands)

ACTIVITY	FY 1996		FY 1997		FY 1998	
	FS	COOP.	FS	COOP.	FS	COOP.
NFS						
RECREATION:						
Recreation	\$ 7,882	15,554	7,900	15,600	7,900	15,660
Wilderness	\$ 1,448	3,429	1,400	3,400	1,400	3,400
Heritage Resources	\$ 1,075	2,278	1,100	2,280	1,100	2,280
Subtotal - Recreation	\$ 10,405	21,261	10,400	21,280	10,400	21,340
No. of Partnerships	1/	2,190		2,132		2,132
WILDLIFE & FISH						
Wildlife Habitat	\$ 5,169	7,900	5,269	8,100	5,600	8,500
Inland Fish	\$ 2,859	2,700	3,000	3,200	3,400	3,700
TES Species	\$ 4,079	5,620	4,131	5,800	5,100	7,200
Anadromous Fish	\$ 2,890	3,780	3,000	3,900	3,100	4,200
Subtotal - WL&F	\$ 14,997	20,000	15,500	21,000	17,200	23,600
No. of Partnerships		3,500		3,350		3,600
SOIL, WATER, AND AIR MGMT.						
Watershed Improvements	\$		500	500	500	500
No. of Partnerships		0		9		9
RECONSTRUCTION & CONSTRUCTION						
Rec. Facilities	\$ 4,000	10,020	4,000	10,056	2,000	5,000
Roads	\$ 1,500	1,500	1,550	1,550	1,550	1,550
Trails	\$ 2,471	6,200	2,500	6,164	2,600	6,200
Subtotal - Const.	\$ 7,971	17,720	8,050	17,770	6,150	12,750
TOTAL (also, see discussion below)						
Dollars	\$ 33,373	58,981	34,450	60,550	34,250	58,190
No. of Partnerships		5,430		5,491		5,741

Overview

The Challenge Cost-share program was started in FY 1986 to respond to Forest Service needs and public desires for expansion and enhancement of wildlife and fish habitat improvement projects and activities. Since that time, the program has expanded to include recreation and trail operations and maintenance, construction of recreation facilities, roads and trails, and research projects.

Types of Partners

Contributors include local, county, State, and national agencies; private interest groups; senior citizens; disabled youths; correction facility inmates; students; utility companies; recreation industries; timber operators; interpretive associations; and private businesses.

Answer: At present, the Forest Service manages 55 major visitor centers. The previous number of 58 centers is reduced due to the refined definition of a "major" visitor center based on square footage, number of visitors served, costs, etc. Since 1994, we have voluntarily placed a halt on the construction of major new visitor centers. For the last several years we have been encouraging the use of collaboration with federal, state, and local partners at smaller, more centrally located "public lands information centers". Our visitors have responded very favorably to these interagency centers, citing the convenience of "one stop shopping" for information, maps, permits, and advice.

Visitation at major visitor centers varies from site to site. They range from a low of 40,000 visitors at some of the older, smaller facilities to a high of over 900,000 at a few of the larger, more modern facilities. Total annual visitation to the 55 major visitor centers is over 9 million visitors. There are an additional 5 million visitors each year to the hundreds of smaller information centers and interpretive sites across the country.

Costs also vary by size and season of operation for each center, but the total annual cost of staffing the 55 major visitor centers is estimated at about \$9 million. This is the cost of staffing only and does not include maintenance costs such as supplies, equipment, utilities, and new exhibits. It should also be noted that the staffing costs have been kept at this very low level through the extensive use of volunteers, partnerships, interpretive associations, and the Older American (SCSEP) program.

222. **Question:** What is the status of the Mendenhall Glacier visitor center outside of Juneau, Alaska? What funds are needed to upgrade this facility? What will the \$1.9 million included in the President's Budget buy? What will happen if you do not get that budget request? How many visitors does this center get? How many of these visitors are from commercial tours and ship cruises? Have you approached the tourism industry to see if there are opportunities to cost share the needed upgrades with the main beneficiaries of the center, the tourism industry? Why has the center not been included in the recreation fee demonstration?

Answer: The Center is consistently the third most visited site in the state of Alaska. The huge numbers of visitors have accelerated the ravages of time. Built in 1962, the Center is cramped and outdated. To remedy the situation, the Alaska Region awarded a construction contract in March 1997. Construction will begin in April, 1997 and include the new addition, improved visitor access, and renovation of the existing visitor center. Construction is expected to continue until May, 1998 and will include additional awards of optional items. The interior of the existing building will be closed to the public during construction. However, adjacent facilities will be safely available for visitor use and the Juneau Ranger District will continue to manage the site and provide interpretive programs.

The \$1.9 million in the FY 1998 budget will be used to complete the renovation and site improvements at Mendenhall Glacier Visitor Center (MGVC). With these funds, the MGVC building will be enlarged and improved access will be completed and finished. Updated exhibit fabrication and installation will be completed for the exhibit gallery and the facility will be ready for use by the public again.

This project was designed to receive funding over two fiscal years (1997 and 1998). If the 1998 budget request is denied we would not be able to open the MGVC for public use during the 1998 visitor season, and the Visitor Center would remain closed until construction could be completed in the public use areas of the building. The exhibit gallery area, including all the exhibit and interpretive information, would not be completed. We would be faced with a major facility being closed to the local community, independent travelers visiting Alaska, and tourists on private tours due to insufficient construction funds two-thirds the way through the project. This would have a major negative impact on the tourism industry in Juneau.

Approximately 270,000 people visited MGVC in 1996. Tourism growth both in the cruise ship industry and independent travelers has continued to increase in the past 5 years and is forecast to continue for Juneau. The City and Borough of Juneau has been working on a tourism management plan to respond to the recent dramatic growth in tourism. One of their suggestions has been to improve existing visitor facilities, including MGVC, to respond to this growth. Approximately 187,000 visitors (69%) who stopped at MGVC during 1996 were from commercial tours and/or ship cruises.

We did not directly approach the tourism industry with opportunities to cost share due to the sensitive nature of soliciting funds from the private sector. We have involved the tourism industry in the initial planning and design of the MGVC and have kept them informed of our plans. They have not approached us with partnership opportunities. However, during 1996, the Forest Service collected \$99,758 in special use permit fees from 23 commercial tourism operators bringing visitors to the Visitor Center, and returned these funds to the treasury.

The Alaska Region is planning to propose Mendenhall Glacier Visitor Center as a recreation fee demonstration site beginning in the 1998 visitor season, assuming the construction is finished. The Visitor Center was not proposed for a fee site in 1997, as visitor services and access to facilities will be reduced during construction.

223. **Question:** If the Forest Service loses the Senior Community Service Employment Program grant, how will that affect Forest Service programs, especially the recreation programs?

Answer: There would be a negative impact on the Forest Service (FS).

If during the reauthorization of the Older American's Act, the FS could no longer continue as a National Sponsor, the FS would lose over \$28 million a year in Department of Labor funding. That is the equivalent of about \$41 million of FS appropriated funds that would

need to be added to the fiscal year 1998 FS budget. Otherwise, significant on-the-ground resource work and office work would not be done in all branches of the FS.

The value of the work accomplished by SCSEP enrollees currently is over \$41 million annually, of which over \$20 million benefits the recreation program. Other FS programs such as fish and wildlife, range, timber, and soil and water management also benefit.

Question: How will this affect the workers in the program?

Answer: The majority of the senior workers are located in rural, isolated communities and would be forced to search for other employment.

Question: What other employment options are there for these people?

Answer: New state and local job opportunities could evolve out of special program initiatives to serve disadvantaged seniors. However, details of specific programs which could provide job opportunities are unknown.

Question: What has been the Forest Service record at placing these people in non-federal employment after their tour with the agency?

Answer: In Program Year 1995, the Forest Service placed 565 seniors into unsubsidized employment opportunities. This included a wide variety of assignments in both public, state, and private community organizations.

Question: Are these workers replacing normal agency employees?

Answer: No. The purpose of the SCSEP program is to provide seniors with work experience, training, and unsubsidized placement in the public and private sector labor markets. Seniors in the SCSEP program gain work experience and on-the-job training by assisting FS employees on a variety of office support projects, community service assignments, and conservation/resource projects.

Question: How many years do the SCSEP employees work with the Forest Service?

Answer: An analysis based on pay data at the National Finance Center shows that the average tenure of SCSEP seniors in the FS program is four years. The FS does not have a maximum duration on length of time in the program since each senior has a unique and individual situation.

224. Question: What have been the costs to date associated with the 2002 Olympics in Utah?

Answer:

EBLI

(\$ thousands)

FY96 FY97

National Forest Recreation Management	=	\$300	\$755
Construction Recreation Facilities	=	0	\$1,154
Construction Trails	=	0	\$62
Total	=	\$300	\$2,533

Whats been done to date:

The creation of the four-person Olympic Planning Team and the 3-person Venue Preparation Team. These teams have begun the process of establishing communications with the Salt Lake Olympic Organizing Committee, the Washington Office and the Department, and have embarked on day-to-day monitoring and oversight of the Snowbasin Ski Resort land exchange and attendant implementation of the Master Development Plan.

The establishment of a long-term partnership with the Salt Lake Convention and Visitor Bureau. The partnership to date is resulting in a cooperative effort to staff, operate and provide exhibits at the Salt Lake Regional Visitor Center, with plans currently being laid to cooperate similarly at visitor contact points throughout the greater Salt Lake area.

Reconstruction and repair of highly visible, highly used recreation facilities in close proximity to the venue areas and Salt Lake City.

Seed money to initiate a state-wide collaborative effort to streamline and improve delivery of environmental education and visitor services and products.

Question: What is included in the 1998 request that is related to this project? What construction or other costs are anticipated, by year, as the Olympics draws near?

Answer: The Olympic 2002 Planning effort continues to operate within the scope and philosophy of "Option III" of the 2/26/96 "Salt Lake Olympic Budget Strategy" as submitted by request to Senator Bennett (R-Ut) and Representative Hansen (R-Ut).

Subsequent to the 2/26/96 submittal of the budget strategy document, the planning team contracted for intensive research of costs/effects of past winter games, held de-briefings with Forest Service officials involved with the Atlanta Games, and conducted a project-by-project value analysis of the Strategy to validate and refine the costs for Option III. As a result of this effort, Option III costs are now different than the original 2/26/96 costs.

The following chart compares the original Option III numbers with the Value Analysis-driven refinements of Option III, and the available FY 1998 funding:

	2/26/96 "Opt III"			Revised "Opt III"			FY 98 Funding		
	NFRM	CNRF	CNTR	NFRM	CNRF	CNTR	NFRM	CNRF	CNTR
				Dollars in Thousands)					
FY98	\$981	\$1183	\$248	\$1276	\$1124	\$400	\$726	\$1124	\$400
FY99	\$999	\$1237	\$248	\$1406	\$1124	\$400	\$726	\$1124	\$400
FY00	\$1754	\$1458	\$248	\$1416	\$1124	\$400	\$726	\$1124	\$400
FY01	\$1779	\$1314	\$248	\$1312	\$1124	\$400	\$726	\$1124	\$400
FY02	\$1968	\$1235	\$248	\$1293	\$280	\$0	\$726	\$280	\$0
Total	\$7481	\$6427	\$1240	\$6703	\$4776	\$1600	\$3630	\$4776	\$1600
Grand Total	\$15,148			\$13,079			\$10,006		

NOTE: Identified additional needs from S&PF and Law Enforcement.
Status of available FY 1998 funding is not yet known.
(Dollars in thousands)

S&PF: FY98.....	\$1237	NFLE: FY98.....	\$75
FY99.....	\$1370	FY99.....	\$282
FY00.....	\$1380	FY00.....	\$284
FY01.....	\$1370	FY01.....	\$572
FY02.....	\$0	FY02.....	\$860
	<u>\$5357</u>		<u>\$2073</u>

Question: What will the facilities be used for after the Olympics?
How will this increase in developed recreation use affect the national forests?

Answer: Most of the 2002 projects are reconstruction of existing recreation facilities and restoration of adjacent damaged riparian habitat/resources. Therefore they will be used and enjoyed by the general public after the Olympics. The exception to this is the proposed construction of an environmental center/discovery center at Snowbasin in partnership with Snowbasin Ski Resort.

These reconstructed facilities will accommodate the existing/predicted increased use rate of Regional growth which, in turn, is already pressing the environmental conditions (especially watershed) along the Wasatch Front and near the Park City/Heber Valley areas.

225. **Question:** What is happening with the Ocoee River Olympics facility and nearby areas? What opportunities are there to enhance recreational use of that area and benefit local economic development?

Answer: Local community leaders are actively building upon the momentum to enhance their status as "...the site of the World's premier whitewater facility with the friendliest people." Even before the Olympics, in December, 1995, Polk County used a Forest Service Cooperative Forestry grant to submit an application and bid package for the Ocoee to be considered by the International Canoe Federation (ICF) for the 2001 Canoe/Slalom World Championships. In November, 1996, the County used the remainder of the grant to send a delegate to Paris, France, for the biennial ICF Congress to support its bid, and won over competing European contenders.

At the same time as the bid competition for the 2001 World Championships, events in 1997 have also required attention; the U.S. Team Trials, Ocoee Doubleheader, a World Cup race, an international rafting race, concerts, and an international mountain bike competition have been requested by various groups interested in the Ocoee and Polk County.

The people in Polk County are benefiting from their new capacity to plan ahead and follow through on their goals for the River and their communities, in pursuit of opportunities for economic development. Local Forest Service employees continue to provide technical assistance and to maintain a collaborative relationship for the management of recreational and other resources.

226. **Question:** How often do you update your national directory of offices? How much does it cost to print and distribute this book? When was the last one printed and when will another be available?

Answer: We normally update our organization directory once a year. However, for a variety of reasons, we were unable to print a directory in FY 1996. We did put a directory on the Forest Service Home Page so those external to the agency would have access to this information. It normally costs about \$35,000 to develop and print 15,000 copies of the organization directory. The last directory was printed in June 1995 and we plan to print the FY 1997 directory in July 1997.

ADDITIONAL SUBCOMMITTEE QUESTIONS

Government Performance Results Act (GPRA)

488. Question: GPRA, known as the Results Act, requires each executive agency to issue, no later than September 30, 1997, a strategic plan covering at least five years. In addition to a mission statement grounded in legislative requirements, the plans are to contain general goals and objectives that are expected to be outcome or results oriented (such as to improve literacy) as opposed to output or activity oriented (such as to increase the number of education grants issued).

- o What progress is the agency making in developing its strategic plan, including defining its mission and establishing appropriate goals?

Answer: The USDA Forest Service strategic planning process is guided by two Acts of Congress. These are the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA) and the Government Performance and Results Act of 1993 (GPRA). Both Acts require the development of a strategic plan and the Agency is currently working towards meeting the requirements of each Act. The Forest Service has been developing strategic plans for over 20 years under RPA and has been a pilot Agency for GPRA for the past three years. The agency is currently preparing the Secretary's Recommended Program based on the Draft RPA Program and is also preparing its draft GPRA Strategic Plan. The strategic goals for RPA and GPRA are the same. RPA provides the Secretary of Agriculture's broad guidance for the Agency in relation to these goals over a 50-year time frame, while the GPRA Strategic Plan focuses on performance goals/objectives and associated performance measures for a 3 to 5-year time frame. We expect to meet the September 30 deadline for completion of the GPRA Strategic Plan.

- o Has the agency identified conflicting goals for any of its program efforts? If so, what are the performance consequences of these conflicting goals and what actions--including seeking legislative changes--is the agency taking to address these conflicts?

Answer: The Forest Service's multiple-use mandate requires the agency to balance often conflicting resource needs and uses. Through the RPA strategic planning process, resource issues are identified, and strategies are identified to resolve them. This process involves engaging stakeholders and customers in the debate.

Conscious effort has been made to establish goals that are broad and overarching, e.g., protect and restore ecosystems, provide benefits to people, and ensure organizational effectiveness, from which strategic objectives can be derived. The goals and groups of objectives are related but not inherently in conflict. Where outcomes are dependent on availability of resources or other circumstances, these caveats have been defined in conjunction with expected results. At this juncture, no legislative remedies are proposed.

489. **Question:** Strategic plans must be based on realistic assessments of the resources that will be available to the agency to accomplish its goals. As you are developing your strategic plan, how are you taking into account projected resources that likely will be available--especially as we move to a balanced budget? What assumptions are you making? How are you ensuring that your goals are realistic in light of expected resources?

Answer: Having had a measure of experience in making realistic assessments of resource needs in the past so that agency goals can be accomplished there is every reason to believe that the Forest Service will continue to do so. Adjustments to goals and objectives will most likely need to be made in relation to the resources that are actually available.

The assumption has been made that projected resources may not provide the means for the Forest Service to accomplish all of the goals and objectives that it deems essential. Given that assumption, attention is being given to the potential for other sources of financing -- from internal efficiencies, from other sources, and from in-kind contributions -- to complement appropriations.

490. **Question:** For Congress, the heart of the Results Act is the statutory link between agency plans, budget requests, and the reporting of results. Starting with FY 1999, agencies are to develop annual performance plans that define performance goals and the measures that will be used to assess progress over the coming year. These annual goals are to measure agency progress towards meeting strategic goals and are to be based on the program activities as set forth in the President's budget.

- o What progress have you made in establishing clear and direct linkages between the general goals in your strategic plan and the goals to be contained in your annual performance plans? OMB expressed concern last year that most agencies had not made sufficient progress in this critical area.

Answer: The Forest Service believes that GPRA is an excellent tool for focusing agency priorities so that limited resources are used effectively. We have established clear linkages from the agency mission to strategic goals and objectives and in turn have linked annual performance goals to these strategic goals and objectives. We have developed a "hierarchy of Forest Service goals" which articulates this relationship. We have developed narrative which further explains the linkages between strategic goals and objectives and annual goals based on program activities so that the relationships we perceive between strategic and annual goals is clear and understandable.

- o More specifically, how are you progressing in linking your strategic and annual performance goals to the program activity structure contained in the President's budget? Do you anticipate the need to change or modify the activity structure to be consistent with the agency's goals?

Answer: As stated above, we have linked the annual goals to the strategic goals and objectives through a "hierarchy of Forest Service goals." We have not linked performance goals to budget line items, as we believe most goals encompass more than one line item. We are considering possible changes to the budget structure to allow a better match between budget and performance goals.

491. **Question:** If applicable, what lessons did the agency learn from its participation in the Results Act pilot phase and how are those lessons being applied to agency-wide Results Act efforts? What steps is the agency taking to build the capacity (information systems, personnel skills, etc.) necessary to implement the Results Act?

Answer: As a pilot, we developed performance plans for all agency objectives. As a result, we learned that we have to look on GPRA implementation as an iterative process and that success will not be achieved overnight, but is best made by building incrementally on previous experiences. Throughout the pilot process we applied lessons learned in prior plans to the next plan. We intend to continue this approach. We learned that GPRA must be integrated into ongoing processes like planning and budgeting rather than laid on top; and that the agency's leadership must be directly involved. We also learned that developing measures, especially in terms of outcomes, for natural resources, particularly resource condition, is not an easy task and will take some time. With regard to building the capacity to implement GPRA, we have utilized our existing strategic planning and budget staffs and have integrated GPRA requirements into existing processes. We do have a number of efforts underway to develop a corporate database for accomplishment information to replace the several systems currently in use.

492. **Question:** The Results Act requires agencies to solicit and consider the views of stakeholders as they develop strategic plans. Stakeholders can include state and local governments, interest groups, the private sector, and the general public, among others. Who do you consider to be your agency's primary stakeholders and how will you incorporate their views into the strategic plan?

Answer: A broad cross section of individuals and representatives of public and private organizations have been involved in the development of issues for the national strategic plan and in commenting on the content of the Draft RPA Program.

This has been a continuous process, beginning with early national scoping sessions with Congressional staff members; industry, commodity, conservation, recreation, and professional groups and organizations; and other interested individuals. During the interim period between these national meetings and the publication of the Draft RPA Program, contact was maintained with participants. They were also included in our outreach for comments following publication of the Draft RPA Program.

Approximately 1,500 comment letters on the Draft RPA Program were received between mid-October 1995 and May 31, 1996 and included an

even broader cross-section of the American public and increased participation by local, county and State governments. During the comment period, public "listening" sessions were held in Sacramento, CA; Milwaukee, WI; Albuquerque, NM; Atlanta, GA; Missoula, MT; and Washington, DC for the purpose of hearing public comment on the Draft RPA Program. We continue to receive and respond to comment letters and inquiries about the Draft RPA Program. A series of briefings were also held in Washington, DC following the release of the draft national strategic plan. Briefings were sponsored by other Federal agencies or private sector organizations who invited constituent organizations and other individuals who were interested in the content of the draft document. Comment letters were used, along with other sources of information, to develop or update issues for the Secretary's Recommended RPA Program. When the recommended program is published, all participants in the public involvement process will receive a copy. A report that provides information about the comment letters received will be prepared and sent to people who provided us with their thoughts and ideas about the proposed program.

Approximately 10,000 copies of the draft national strategic plan were distributed to the public and to Forest Service employees -- 7,500 copies to the public and 2,500 copies to employees. An estimated 2,500 copies were sent at the beginning of the first comment period to an external mailing list. An estimated 5,000 copies were sent to external organizations and individuals as a result of requests received via INTERNET, FAX, mail, or telephone call.

The draft national strategic plan was published in full on the INTERNET, at the USDA Forest Service national web site. Requests for the published document, as well as comments on the draft, were received via INTERNET. When completed, the Secretary's Recommended RPA Program and other related documents, including the Report of Public and Employee Comments received during the comment period for the draft national strategic plan will be published on the INTERNET.

493. **Question:** For the Results Act to be successful, agencies with similar missions, goals or strategies will need to ensure that their efforts are coordinated. What other federal agencies are you working with to ensure that your strategic plans are coordinated? What steps have you taken to ensure that your efforts complement and do not unnecessarily duplicate other federal efforts?

Answer: We have done this in a number of ways. Under the direction of the USDA CFO's Office we have reviewed the plans of other USDA agencies to identify cross cutting issues and ensure that agency goals are compatible. As part of this effort, we and the Natural Resources Conservation Service (NRCS) conducted a more indepth review of each other's plans. We are working with the USDA Research, Education and Economics Mission Area to ensure that their research goals are compatible with the Forest Service's goals. Our Research Deputy Area has also been coordinating with other research agencies in the development of ways to measure research accomplishments. Outside USDA, we co-founded and actively participate in the Natural Resources GPRA Forum. Members of this group all have some type of natural

resources mandate, whether it is land management (BLM, Forest Service, NPS, DOD) or regulatory (EPA, FWS). The purpose of the forum is to share GPRA related information, experiences and approaches and to work towards common or at least complementary approaches were possible. A current Forum project involves investigating the possibility of developing some common resource condition measures.

494. **Question:** The Results Act requires agencies to consult with Congress as they develop their strategic plans. Since these plans are due in September, now is the time for agencies to begin the required consultations. What are your plans for congressional consultation as you develop your strategic plan? Which Committees will you consult with? How will you resolve differing views?

Answer: All USDA Mission Areas/Agencies have prepared draft strategic plans which are currently being reviewed by the Under Secretary, the Senior Policy Staff and the Secretary. Upon completion of the review, the Department plans to provide copies of the strategic plan (including an overall Department Executive Summary and the strategic plans for individual Mission Areas/Agencies to the relevant Congressional Committees. Thereafter, we will look forward to meeting with Members or Staff to discuss our strategic plan and to solicit your input and advice on refinements to that plan.

495. **Question:** In passing the Results Act, Congress sought to fundamentally change the focus of federal management and decisionmaking to be more results-oriented. Organizations that have successfully become results-oriented have found that making the transformation envisioned by the Results Act requires significant changes in what they do and how they do it.

- o What changes in program policy, organization structure, program content and work process has the agency made to become more results-oriented?

Answer: We have integrated the development of the GPRA performance plan requirements into the existing budget process, and have integrated the reporting requirement into the Annual Report of the Forest Service required by the RPA. We are also incorporating goals into individual performance standards. Staffs are also working on developing better measures, particularly outcome measures.

- o How are managers being held accountable for implementing the Results Act and improving performance?

Answer: New SES performance standards are being developed and will be tied to the goals and accomplishments in the annual performance plans. GPRA accomplishments will be disaggregated to field offices in the field budget allocations and line managers held accountable for their achievement.

- o How is the agency using Results Act performance goals and information to drive daily operations?

Answer: Since full implementation is not scheduled until FY 1999, this is still being worked out. The intent is that the annual performance plan would constitute the "plan of work" for the year and be disaggregated to field units so that each unit had responsibility for specific accomplishments.

ADDITIONAL QUESTIONS FROM CHAIRMAN RALPH REGULA

Fire Policy

227. Question: Last year I talked a little with Chief Thomas about fire policy and he indicated that part of the problem had been a lack of balance. Quoting from the Chief's testimony: "Fifty years ago, the solution was to put out every fire. Now the solution to everything is burning. Neither one of those were correct in my opinion. But we do need a considerably more balanced program." Is this year's policy an attempt to achieve that balance?

Answer: Yes, this is an attempt to balance the program. Increasing the amount of all types of fuels treatment, including prescribed fire, will help restore fire dependent ecosystems and will result in healthier forests. We still need to suppress most of the fires that start on NFS lands every year. Through the use of fuels treatment activities, the fires that do occur will burn with a lower intensity, will result in less damage to the ecosystem, and should be easier to suppress.

Tongass

228. Question: I have read about the agreement between Louisiana-Pacific Corp and the government with respect to terminating KPC's timber contract in the Tongass and settling the company's law suit against the government. As I understand it KPC will shut down the pulp mill but keep the two saw mills operating with Tongass timber for three years. What happens after the three years to the saw mills? Could KPC continue to compete for Tongass timber under the independent sales program?

Answer: KPC may compete for independent sales not offered as Small Business Administration (SBA) set-aside sales to help supply timber to their mills in the same manner as in the past. There is nothing in the agreement that limits them and, in fact, the agreement recognizes the likelihood that open purchases will be necessary to maintain mill operations.

229. Question: The deal also provides \$110 million in retraining and other job displacement costs to Ketchikan. Is this on top of the \$100 million provided in the final FY 1996 appropriations bill to southeast Alaska?

Answer: As part of the FY 1996 appropriations act (The Balanced Budget Down Payment Act II) the Southeast Alaska Economic Assistance Fund was established to help Southeast Alaska communities deal with the transitioning timber industry. The fund totals \$110 million to be expended via a set schedule over 4 years (fiscal years 1996-1999). To date, the Forest Service has conveyed \$70,000,000 to twenty communities and/or boroughs, and will convey another \$40,000,000 over the next two fiscal years. Only communities and/or boroughs share in the distribution of this appropriation.

As part of the KPC long term contract termination agreement between the Government and Louisiana Pacific Corporation (LPC), parent company to KPC, the federal government will pay up to \$140 million to LPC that will settle KPC's legal claims under the KPC contract. The agreement provides no direct payment of funds to any communities in Southeast Alaska.

230. Question: Did the settlement resolve the allegations of timber theft against the company and if so what was the resolution.

Answer: The settlement agreement did not address any specific allegations regarding timber theft. The Regional Forester asked the Law Enforcement and Investigative Branch to review timber theft prevention practices in Alaska and he is now in the process of taking follow up action to the recommendations in the report.

231. Question: What impact will the termination of this contract have on the management of the Tongass National Forest?

Answer: Termination of the long term sale contract on the Tongass will now allow all of the new timber sale volume that is offered to be available under the independent sale program.

Condition of Forests

232. Question: The Chief has made the health of the land his number one priority. In that vein I was interested to read about a recently released study by the World Resources Institute which concluded that only 20 percent of the world's original forests remain intact and no where is the damage worse than in the continental United States, where 99 percent of its frontier forest has been destroyed or ruined. What is the impact of this and is this a cause for concern?

Answer: The objective of the recent World Resources Institute (WRI) study referenced in this question was to identify and map the areas of forest which have been largely un-influenced by human action. The purpose was to seek to encourage action designed to reduce the rate at which such "pristine" forests are being lost. Increases in human populations have put increasing pressures on such forests.

This study sought to identify and map world-wide what the study refers to as "frontier forests," or forests meeting relatively rigid criteria relative to the amount of human influence which is evident in the ecological development of such forests. This is a relatively new category of forest classification. To be classified as a "frontier forest" requires the existence of large contiguous tracts which have all of the suite of plants and animals that existed 8000 years ago (or before major human influences) and that have been shaped primarily by non-human ecological influences.

There is an implication in the above question that if a forest is not classified in the WRI study as frontier it has "been destroyed or ruined." This is not a correct interpretation. The WRI study made no such claim. Many non-frontier forest are viable, productive

ecosystems supporting diverse populations of plants and animals and providing other environmental services. There is no direct correlation between forests classified as frontier and forests which are healthy or unhealthy.

There are scores of countries which share with the U.S. a situation in which few, if any, of their forests meet the rigid criteria in the WRI study for classification as frontier forests. This does not mean that the forests of the U.S. or those of other countries are not diverse, healthy, resilient, and productive ecosystems. On a case-by-case basis, they may or may not be. But classification as frontier forest does not, in and of itself, provide the information necessary to make such an assessment.

233. Question: What is the significance of losing "frontier forests"? Can other types of forests perform the same functions?

Answer: Classification as frontier forest by the World Resources Institute (WRI) study provides little information on the biodiversity, health, or the resiliency of forests. As an example, eastern hardwood forests are some of the most productive and ecologically diverse forests in the U.S. today. These forests have recovered substantially from the logging, farm clearing, and fires of the late 19th century. In fact, some plant and animal species in these forests that were threatened with extinction a century ago have recovered. White-tailed deer, beaver and wild turkey are examples of species that have once again become plentiful in these forests. While these forests continue to show substantial evidence of human modification, and do not contain all of their original species (timber wolves and eastern panthers, once present, have not returned; the passenger pigeon and Carolina parakeet are extinct), eastern hardwood forests in many ways demonstrate a species richness and biodiversity index that is substantially higher than some forests classified as frontier in the WRI study (eg. the northern boreal forest of Canada and Russia).

We cannot determine what the significance is in losing frontier forests. It depends upon the qualities of what is lost, and what remains, which varies greatly. Other types of forests can perform many of the same ecological and socio-economic functions as frontier forests.

WAYNE NATIONAL FOREST

Land Acquisition

234. Question: What is the status of the land exchange between the Forest Service and the Ironton Country Club? Have the archeological examinations and boundary survey been completed?

Answer: All resource and land surveys have been completed on this exchange and that the Decision Notice to consummate the transaction was made on October 16, 1996. No appeals were filed and we are currently in the process of drafting deeds and completing title work on the non-Federal estate. The United States will receive

approximately 130 acres and convey 140 to Ironton Country Club with a cash equalization payment to the US of \$19,000. A formal exchange agreement has been signed on February 3, 1997, and we anticipate closing the transaction before May 1, 1997.

235. Question: What has been the impact of a lack of land acquisition funding on the Wayne and has the prohibition on acquisitions in Gallia, Washington, Lawrence and Monroe counties posed any specific problems? In other words are there acquisition needs in these counties that continued imposition of the moratorium prevent the FS from addressing?

Answer: The lack of land acquisition funding and prohibition on acquisitions in Gallia, Washington, Lawrence and Monroe counties has resulted in the loss of some key acquisitions. The Forest turned down a 40-acre tract surrounded by NFS land in Monroe County, and approximately 15,000 acres of mineral rights underlying the Forest in Lawrence and Gallia counties. Several thousand acres of land in Lawrence and Gallia Counties were offered first to the Forest Service, but then purchased by a large paper company. There may have been additional opportunities, but land owners may have failed to contact the Forest Service since they knew we were no longer able to acquire land in their counties.

236. Question: What has been done to improve the local attitude toward land acquisition and what more can or should be done to improve the situation.

Answer: The Forest Service has tried to impress upon local residents the importance of having a viable National Forest and both the direct and indirect benefits to communities in southeast Ohio. A continuing challenge is the expectation by some people that more needs to be done at the national level to assist local communities, governments and school districts to offset the loss of property taxes from National Forest landownership.

Supervisor's Office

237. Question: Last year \$2.2 million was appropriated for construction of a new supervisor's office on the Wayne. The land for the office was to be conveyed to the Forest Service through a long term lease by the Ohio Department of Transportation. Have the terms of the lease been finalized?

Answer: The lease was signed by the Deputy District Director of Ohio Department of Transportation (ODOT) on March 24, 1997. On completion of title work, the agreement will be signed by the Regional Forester and the lease recorded later in April.

238. Question: As I understand it the office was intended to be shared with the Ohio State Patrol. They have recently withdrawn their offer to share the site and there is now a shortfall of available funds to complete construction. Given that the facility will not need to also serve the Highway Patrol are there opportunities to reduce the

original \$3.2 million cost of the combined facility and if so what are those savings and what is the shortfall?

Answer: The estimated shortfall is \$500,000. Costs increased because many of the costs of the common areas of the building were going to be shared between the Forest and the Highway Patrol.

239. Question: Does this need to be made up immediately to proceed as scheduled (i.e. with reprogramming or supplemental) or can it wait for the FY 1998 appropriation cycle?

Answer: We believe the additional money could wait until FY 1998. We expect to complete planning and design work and have the contract ready near the end of this Fiscal Year. Delaying the contract until FY 1998 would not cause a significant delay in completion of the project.

240. Question: Does this new office continue to be a priority for the Forest and the community?

Answer: Yes it does.

Construction

241. Question: Has the Stone Church Horse Camp construction been completed?

Answer: The contract for the Stone Church Horse Camp was awarded in the 4th quarter of FY 1995 and construction began in the first quarter of FY 1996. The project is now completed.

242. Question: What is the status of the effort to stabilize the Ring Mill House? Did bids come in within budget and has this project been completed?

Answer: The contract was readvertised in the 3rd quarter of FY 1996. The bids came in within budget and the project was awarded. The construction has begun and will be completed this summer.

243. Question: Last year you indicated that the Lake Vesuvius waterline would not make it through another use season and that lower recreation construction projects were being deferred to address this priority. Was the waterline addressed and at what cost and what lower priority projects were deferred to replace the waterline?

Answer: A contract has been awarded for the design of the waterline on the preferred location. The contract for construction of the waterline was advertised and awarded in FY 1996 and construction was completed at a cost of \$228,095. One project, the reconstruction of the beach house and associated facilities, has been deferred indefinitely. Another project, the Sand Run picnic area, has been removed from the forests high priority list.

244. Your budget last year included \$300,000 to begin planning for rehabilitation on the Lake Vesuvius Dam which has been rated a Class I High Hazard dam. NEPA analysis was to begin in fiscal year 1996. Has the NEPA process been completed and has a preferred alternative for the rehabilitation been selected? What are the options for rehabilitation?

Question: Has the NEPA analysis been started?

Answer: The NEPA documentation is underway. The target date for completion is Sept. 30, 1997. This will include an Environmental Analysis incorporating an economic benefit/cost analysis, and collaboration with the ODNR-Divisions of Water and Wildlife and elected officials.

Question: Has a preferred alternative for the rehabilitation been selected?

Answer: We must complete the NEPA analysis and decision process before selection of a preferred alternative.

Question: What are the options for rehabilitation?

Answer: To meet the primary objective of bringing the dam into compliance with Federal Guidelines for Dam Safety and Ohio DNR recommendations, several alternatives to rehabilitation are possible. Alternatives could include lowering the lake level or even breaching the dam, leaving a debris retention pool. A scheduled Value Analysis will determine the most cost-effective way to harden the dam so it will withstand the Probable Maximum Flood.

245. Question: Last year you indicated that the construction could begin in FY 1998, however, your budget includes \$300,000 for this project in FY 1998. Could the construction be completed in FY 1998 and if so, what amount of funding is needed?

Answer: The recreation re/construction budget for FY 1998 is \$21.5 million for all 9 of the Forest Service Regions. The Eastern Regions funding level of \$1.4 million for FY 1998 reflects their highest priority projects for which funding is available. In order to balance the needs of all forests, staged construction is planned for a project of this size.

The NEPA study, engineering design, and Value Analysis review are scheduled to be completed in FY97. Should additional Recreation Re/construction funds be available, construction could be under contract in FY98. A better estimate will be available after a final design is completed. Actual construction may require more than one year to complete.

246. Question: Last year you estimated the total cost of the project at \$4.1 million and yet your budget includes \$300,000 with an outyear estimate of \$4.5 million. Why the cost increase?

Answer: This figure represents inflation from the estimate (of the least cost alternative identified) in the 1994 Woodward-Clyde engineering study, and the need to stage the project, which usually results in higher costs. However, we hope to reduce costs through a Value Analysis, partnerships, and broadening our range of acceptable alternatives.

247. Question: Given that you have indicated that there is a potential for loss of life and property should the dam fail, why should this project be further delayed?

Answer: The dam does not present an immediate hazard. At this point in time, we are still developing the alternatives. An immediate decision to breach (remove) the structure and drain the lake is considered premature. Reconstruction work on the dam may not be the best alternative at this time. The appropriate decision point will be when the NEPA work is completed.

248. Question: Last year your budget included funding for two recreation projects at Lake Vesuvius, reconstruction of the beach house and associated facilities and dredging in the boat ramp area. Are these projects underway and if so what is the status?

Answer: The contract for the water pipeline (reference Question above) used the funding for the first project, the beachhouse and associated facilities. Dredging of the boat ramp has been delayed until after the spring rains and will take place this summer.

249. Question: Last year you indicated the Sand Run picnic area was deferred so that the Lake Vesuvius waterline replacement could be completed. When will this project be rescheduled?

Answer: Forests and Regions are continually monitoring and adjusting project priorities to assure the best use of funds. The Forest has changed its development priorities and Sand Run picnic area is no longer on the near-term list of recreation construction priorities and presently not rescheduled for construction.

250. Question: For the record please provide a list of the Forest's high priority recreation construction projects and which counties these projects are located in.

Answer: Following are the Forest's unfunded high priority projects. Lake Vesuvius Dam Rehab is also a Regional priority.

1. Lake Vesuvius Dam Rehab (Region's priority No. 1) - Lawrence County (Included in FY 1998 President's budget) \$300,000
Rehabilitation of the dam to meet probable maximum flood standards. (FY97 \$300,000 funded; future needs could be up to \$4.35 million depending on the outcome of NEPA studies and survey and design work. The Forest also needs to conduct a benefit/cost analysis to determine if the costs of this project are not out of line with continued operation of Lake Vesuvius as a recreation site.)

2. Kenton Lake Dam Rehab (Region's priority No. 27) - Lawrence County \$690,000
The dam is in a state of failure and needs to be rehabilitated before failure causes extensive resource damage and the loss of Kenton Lake.
3. Wayne Drinking Water Replacement (Region's priority No. 29) - Lawrence & Hocking \$65,000
Needs to meet safe drinking water standards.
4. Wayne NF Campsite Renovation (Region's priority No. 36) - Lawrence & Hocking \$100,000
Replace substandard facilities with new facilities to meet current needs and provide access for all.
5. Information Board Upgrades (Region's priority No. 39) - Lawrence & Hocking \$100,000

Forest Plan

251. Question. A recent decision by the U.S. Court of Appeals for the Sixth Circuit in the case of Sierra Club v Thomas is likely to have a significant impact on rural economies in Ohio, as well as in Tennessee, Kentucky and Michigan. The decision invalidated the land and resource management plan for the Wayne National Forest, adopted by the Forest Service in 1987 under the National Forest Management Act. However, the decision will affect plans, and the upcoming revision, in all four states that make up the Sixth Circuit. While the decision has been appealed, what impact does the decision have on the management in the Wayne while the appeal is being considered?

Answer: The Justice Department filed a petition with the U.S. Court of Appeals for the Sixth Circuit, asking for a rehearing of the case by the full court. The request has been denied. We are exploring our options in light of this latest court order. We are still considering the impacts of the decision on the Wayne and other national forests. The Sixth Circuit ruling is at odds with rulings of the Fifth, Eighth, and Ninth Circuits. The Sixth Circuit is the only Circuit to hold that even aged management and clearcutting must be justified at the plan level, and that even aged management is only allowed in exceptional circumstances. No even-aged management projects are currently underway or proposed on the Wayne National Forest, and the Forest is continuing to manage under its existing forest plan at this time. Our forest plan revisions would have to take this court decision into account if it is not changed. Even-aged management decisions are not made in the forest plan, but at the project level. Before a particular project may be implemented, the Forest Service must ensure that the project proposals are consistent with the Plan's standards and guidelines. The Forest Service also must conduct a NEPA analysis to evaluate the environmental impacts of proposed projects. At this stage, the Forest Service also conducts project-specific evaluations for compliance with the requirements of the Endangered Species Act and other applicable laws. These evaluations provide the

basis for the determination for each proposed project whether even-aged management is "appropriate" and "consistent with the protection of soil, watershed, fish, wildlife, recreation, and aesthetic resources, and the regeneration of the timber resource" required by NFMA. 16 U.S.C. 1604(g) (3) (F) (i), (v).

252. **Question:** What is the Forest Service's position on the standing to challenge forest plans?

Answer: The United States position is that a Forest Plan does not dictate any concrete action, their adopting generally does not result in any concrete injury. The Supreme Court has held that cases must allege injury that is both concrete and "certainly impending" to be heard by the federal courts (Lujan v. Defenders of Wildlife, 504 U.S. 555, 563-64 & n.2 (1992)). Only when the Forest Service decides, after the final Plan has been issued, to undertake a project that will physically alter the forest can any injury from decisions made in adopting the Plan be said to be "certainly impending." At that time, persons may challenge both the proposed project and any aspect of the Forest Plan related to the actions responsible for the alleged injury. To sue for an environmental injury, a person should look to the effect of a project-level decision. This position is consistent with the 8th Circuit Court of Appeals holding in Sierra Club v. Robertson (1994) that a forest plan is "a general planning tool and the Eleventh Circuit's determination that a challenge to a forest plan is not ripe for judicial review (Wilderness Society v. Alcock)." Adoption of the Plan does not effectuate any on-the-ground environmental changes. Nor does it dictate that any particular site-specific action causing environmental injury must occur. Before an environmental change can come about, several events must transpire. First, a site-specific action (e.g. a timber sale) must be proposed and found to be consistent with the Forest Plan. Next, the action is subject to NEPA and NFMA analysis and public comment. Finally, the Forest Service must adopt the action.

A Forest Plan is, in essence, a programmatic statement of intent that operates prospectively, in a manner analogous to a zoning ordinance. It allows certain activities and prohibits others, but neither authorizes nor requires any. Our position concerning standing to sue on the forest plan reflects this multiple-level decisionmaking process. Our position is also consistent with the Justice Department briefs filed in our behalf before various Federal Courts, including the 6th Circuit Court of Appeals in the Wayne case, and the U. S. Supreme Court in the Government's 1995 petition for certiorari to the 9th Circuit Court of Appeals to review the judgment in the Pacific Rivers Council case.

253. **Question:** Do you fear the decision in this case could have ramifications for the timber program in other forests?

Answer: The Court's decision holds that the National Forest Management Act (NFMA) allows use of even-aged management "only in exceptional circumstances." NFMA itself does not impose such a limitation. Rather, it requires that the Forest Service meet certain

substantive restrictions before it selects even-aged management. Discretion to conduct even-aged management projects is essential to the Forest Service's ability to perform its duties as manager of the National Forest System lands. Clearcutting and other even-aged management practices may protect some species and forest resources while uneven-aged techniques may protect others. In accordance with its multiple use sustained yield mandate, the Forest Service can only perform its obligations by selecting among the full range of management practices to make optimum use of forest resources. And, as the Court of Appeals for the Fifth Circuit observed, harvesting trees using even-aged management techniques results in denser forests. Wildlife dependent on such cover would flourish at the expense of wildlife dependent on forest clearings. These forest dynamics make clear that protecting forest resources involves making trade-offs (Sierra club v. Epy, 38 P 3d 792, 800 (5th Cir. 1994)). As for other forests, we have had a challenge to a timber sale on the Daniel Boone National Forest which includes an issue of even-aged management. We can expect other litigation.

Fee Demonstrations

254. **Question:** It is my understanding that the Wayne has requested permission to implement a fee demonstration program to charge a fee for horseback riding, ORV use, mountain bike or motorcycle use. Has this project been approved and if not, why not? What is the estimated revenue from this fee?

Answer: The Wayne has gained local public support and is submitting a proposal to the Washington Office. If the project meets the National recreation fee demonstration needs and is selected we will begin to collect user fees this summer. We estimate collecting \$25,000 in fee revenues the first year of implementation.

VER

255. **Question:** What impact does OSM's recent proposed VER rule have on the Belville Mining claims?

Answer: In July of 1993, the Court of Appeals found that Belville Mining Company has rights to surface mine coal on its claims in the Wayne National Forest. Therefore, any change in the definition of valid existing rights (VER) would probably not affect Belville's claims.

Research

256. **Question:** The Forest has entered into a long-term study to determine the ecological response of flora, fauna, and soils of mixed-oak communities in southern Ohio to prescribed burning. This project is a cooperative effort between the Northeastern Forest Experiment Station, the Forest, and Mead Paper Corporation. Research partners include Ohio State University, Ohio University, North Central Forest Experiment Station, the Nature Conservancy, and the Ohio Department of Natural Resources. Is this project funded in the FY 1998 budget and

what are the long-term objectives of this study and what are the results thus far?

Answer: Funding for the project is included in the FY 1998 budget.

The overall objective of the study is to understand the role of prescribed fire in restoring oak forests, and to monitor the effects of fire on the whole ecosystem.

Oaks have been the dominant tree species in southeastern Ohio and throughout much of the eastern U.S. for approximately 10,000 years. It is widely accepted that oaks are resistant to fire and that Native Americans used spring and fall fires to drive game and "open-up" the forests to ease travel. Following extensive logging in the mid-to-late 1800s, much of southeastern Ohio has reforested. These forests originated before fire protection (circa 1930) and are still dominated by large oak trees, which have great economic value and are beneficial (via acorn crops) to many wildlife species. However, these forests are changing dramatically; the oaks are not replacing themselves, instead they are being replaced by red maple, sugar maple, blackgum, and other shade-loving tree species.

Even before the prescribed fires were started, the study produced some exciting, detailed information about the oak forests in southeastern Ohio. For example, over 350 plant, 500 insect, and 32 bird species have been identified, including some very rare plant and insect species. This information is being compiled in a Forest Service General Technical Report that will be published in 1997.

In April, 1996, 650 acres were burned in 9 separate fires. Soils were found to be affected by fire as predicted and they may now be more conducive to oak growth. Oak saplings were very resistant to fire, while competing species such as maples were extensively killed. More light is now reaching the forest floor, which should favor oaks and hickories. Most wildflower and grass species were just as abundant after the fires and many new plants germinated. Most bird species were unaffected by the fires. Although a few ground- and shrub-nesting birds chose to nest less often in burned areas, they also fed more often in burned areas. Results from this research should prove extremely useful to land managers in National Forests throughout the eastern U.S. who are contemplating the use of fire for restoring their oak forests and the associated flora and fauna.

257. **Question:** What is the status of the neo-tropical migrant bird population study being conducted for the Wayne?

Answer: Bird abundance and nesting-success are among the parameters measured by the Northeastern Forest Experiment Station and cooperators while conducting research on the use of prescribed fire in restoring mixed-oak forest ecosystems in southern Ohio. Thus far, 32 bird species have been identified in the study area on and near the Wayne National Forest. Most bird species have been unaffected by the fires although a few ground- and shrub-nesting birds are nesting less often in the burned areas. Birds have been observed feeding more often in

the burned areas. The bird population study is continuing. Study findings will be evaluated in FY 1998 and a decision made whether or not to continue the study.

258. Question: Has the Ecological Classification System for the Wayne been completed and what is the benefit of this survey?

Answer: The Northeastern Forest Experiment Station completed its involvement in this project in 1995 and personnel on the Wayne National Forest have continued the work since that time. The project was designed to identify ecological units known as Ecological Land Types. According to personnel on the Wayne, development of the system is very close to completion with an expected finish date of September 1997. The classification system should be applicable to much of the forested region in southeastern Ohio and will provide detailed information on forest communities and trends for future management.

259. Question: What is the status of the effort to identify stands at risk for gypsy moth outbreaks and to assist in reducing losses?

Answer: Gypsy moth risk and hazard rating systems are available. These systems have been used on many of the managed stands on National Forest System lands that are immediately at risk from gypsy moth. Stands on certain other federal lands where silvicultural management is being considered to protect habitat from gypsy moth damages have also been risk/hazard rated. These risk/hazard rating systems are available to States and private landowners who wish to consider gypsy moth when managing their forest lands.

Timber

260. Question: For the record please provide an update on the timber program in the Wayne over the past 10 years, i.e. timber offered, timber sold timber harvested, etc.?

Answer: The 10-year timber sale program by fiscal year is summarized in the following table that was provided by the field.

WAYNE NF TIMBER VOLUMES

<u>FY</u>	<u>Volume Offered</u>	<u>Volume Sold</u>	<u>Volume Harvested</u>
All figures in thousand board feet - MBF			
1987	*	7,636	9,951
1988	3,074	7,661	10,138
1989	7,596	7,160	8,506
1990	4,192	5,666	6,073
1991	5,051	3,587	6,307
1992	1,473	3,668	5,339
1993	139	139	2,070
1994	152	261	1,972
1995	1,500	1,510	749
1996	146	147	145

* Wayne volume was not broken out separately in reporting for FY 1987.

In 1988 the Wayne-Hoosier Forest Plan established an ASQ of 7.5 MMBF for the Wayne. The following year the forest offered their ASQ. Then, during the early 1990s, concerns arose on the Forest about maintaining a proper balance of outputs/outcomes in the Forest Plan without allowing the timber program to get too far out-of-balance. In FY 1992 there was an increase in public opposition to timber sales, three of the Forest's environmental assessments (EAs) were appealed, and the Forest Supervisor remanded all three. From that point on the Forest has found it difficult to regain the lost timber sale pipeline. In addition, the Hoosier and the Wayne split into separate Forests in FY 1992, and accomplishing that split, realigning duties, etc. required much of the energy of those small staffs, which also contributed to the difficulty in restoring and maintaining timber sale pipeline.

ADDITIONAL RESEARCH QUESTIONS

261. **Question:** Your budget proposes a \$58,000 cut in Dutch elm disease research at Delaware, Ohio. Why is that? Has the disease been eradicated and what is the impact of this budget cut?

Answer: Due to the serious illness of one of the principal scientists a portion of the research planned for FY 1998 will be delayed. Consequently, \$58,000 less was needed for the Dutch elm disease research at this unit for FY 1998. We have reviewed the status of the research and the potential for future staffing and have determined that this reduction will not terminate the work, but will slow our progress for one year. With our current knowledge we do not feel that this reduction in funding for one year will significantly alter the nature of the research outcome.

Dutch elm disease (DED) has not been eradicated and the Northeastern Station continues an active research program aimed at developing strategies to control the disease.

- o At Delaware, DNA markers have been used to determine the parentage of the Princeton elm, an elm selection with tolerance to DED. The likely maternal parent has been identified and pollen is being collected for crosses with other elms that exhibit tolerance to the disease.
- o Efforts are also underway at Delaware to isolate and characterize several disease-resistance genes from DED-tolerant American elms. We are studying gene activation in American elm varieties to help in selecting other DED-tolerant trees more readily.
- o Cell cultures are being used in Delaware to learn how the DED fungus attacks elms, and how the elms respond to successfully resist infection.

262. **Question:** For the record provide a 10 year breakdown of the timber volume harvested under clear-cut versus other harvest methods?

Answer: We can only retrieve accurate data for the last 9 years. Clearcut volume harvested versus volume harvested by other methods is as follows:

<u>Fiscal year</u>	<u>Clearcut Volume Harvested--MBF</u>	<u>Other Harvest Volume--MBF</u>	<u>Clearcut Volume As % of Total</u>
1988	6,736,968	5,859,393	53%
1989	3,591,506	8,359,431	30%
1990	4,171,670	6,328,608	40%
1991	2,301,067	4,257,822	35%
1992	1,429,175	5,860,457	20%
1993	1,181,984	4,734,953	20%
1994	828,413	3,986,916	17%
1995	682,674	3,183,238	18%
1996	714,874	3,009,678	19%
Total	21,638,331	45,580,496	32%

Data on Clearcut volume harvested is from Timber Activity Control System - Program Sale Statement 44 report run on 4/9/97.

Additional Questions

- 262a. **Question:** It has come to my attention that American Electric Power and the Forest Service have started a dialogue to address problems with the management of a third party contractor that is producing the Environmental Impact Statement for the proposed Wyoming to Cloverdale transmission line. AEP is paying for this consultation and the Forest Service is directing its activities. Could progressive alternative dispute resolution techniques, such as an independent neutral project facilitator, be used to facilitate disputes and still protect the integrity of the EIS process while at the same time address legitimate concerns about the expense and scope of a project?

Answer: I am advised that the Forest Service official responsible for the preparation of the Environmental Impact Statement has contacted American Electric Power (AEP) regarding their concerns about the management of the third-party contract. The Forest Service has advised AEP of its willingness to discuss options for addressing their concerns. a meeting between the Forest Service and the AEP has been scheduled for early April 1997 to specifically discuss this matter.

- 262b. **Question:** Last week in response to a recommendation in DOE's August 1996 report to the President entitled "The Electrical Outages in the

Western United States, July 2-3, 1996," three regional electric reliability Councils in cooperation with the North American Electric Reliability Council concluded "that there is a potential power supply reliability risk due to the delayed compilation of AEP's proposed Wyoming-Cloverdale 756KV line." Over five years ago AEP applied to the Forest Service for a special use permit to construct this line. What steps is USDA taking to avoid the Forest Service being a significant cause of a major power outage with regard to this line?

Answer: My understanding is that the Virginia State corporation commission and the West Virginia Public Service Commission are the entities responsible for: a) determining whether the demand for electricity predicted by American Electric Power (AEP) actually exists, b) determining whether the proposed transmission line is the best method for satisfying that demand and whether it is needed for system reliability purposes, c) identifying the private land corridor for such a line, and d) considering the overall environmental consequences associated with its construction, operation, and maintenance.

The Forest Service is responsible for making a decision on this proposed line, but only with respect to AEP's proposed use and occupancy of National Forest System lands (approximately 10 percent of the total transmission line route as proposed by AEP.) By law the agency must follow the procedural requirements of the National Environmental Policy Act in making this decision. In June 1996 a Draft Environmental Impact Statement for the project was issued. The Final Environmental Impact Statement and Record of Decision will take into account public comment, new information and the findings of the two State Commissions when they are issued. The Department is trying to be as cooperative as possible with both States and with AEP.

ADDITIONAL QUESTIONS FROM CONGRESSMAN MCDADE

Urban Forestry

263. **Question:** What is the planned allocation of Urban Forestry funds in the FY 1998 budget proposal for the states in the Northeast and Midwest? If it is not the same as fiscal years 1996 and 1997, why not?

Answer: The President's Budget includes \$9,533,000 for the twenty States and District of Columbia which make up the Northeastern Area. The Urban and Community Forestry budget allocations are developed by providing \$150,000 to each State and the District for support of base programs. The balance of the appropriation is distributed, for support of state and community grants, to the Northeast/Midwest, the South, and the West according to demographic data. The Northeast/Midwest receives 44% of that balance, with 34% going to the South, and 21% going to the West. The budget allocations have been developed according to the same criteria in FY 1996, FY 1997, and FY 1998.

In FY 1996 and 1997 the Northeastern Area received additional funds. In FY 1996 Washington Office carryover funds were provided to the Area, and in FY 1997 Congressional earmarks and intent directed funds to the Area. These additional special funds are not included in the FY 98 proposal.

Fire

264. **Question:** One of the highest priority conservation issues facing America today is the protection of lives and property from fire in the wildland/urban interface. What does the FY 1998 budget include to address this issue? How does this compare with the budget level supported by the National Association of State Foresters for this activity in FY 1998?

Answer: The first line of defense in wildland/urban interface fires is often the Rural Volunteer Fire Departments. The Cooperative Fire Protection Program provides technical and financial assistance to the Rural Volunteer Fire Departments in cooperation with the State Foresters. Within the total constrained budget level for FY 1998 the Cooperative Fire Protection Program is proposed for a funding amount of \$18,002,000, essentially the same level as FY 1997. The State Foresters have recommended a program level of \$25,000,000, an increase of 39%.

265. **Question:** Does a strong program in cooperative lands fire protection help control fires on federal land? If so, how?

Answer: The cooperative lands fire protection program helps control fires on federal forest lands in many ways. The program works to increase local, rural, and State capabilities for coordinated fire suppression preparedness and mobilization for both federal and

non-federal lands. This builds an enhanced organizational capacity to respond to fires on federal lands.

In addition, shared fire protection resources are developed and maintained among Federal, State, and local agencies for more cost effective operations and mobilization. Technologies and information are developed and exchanged among federal and State organizations.

The fire prevention program activities deliver a nationwide information and education campaign to minimize outbreak of human-caused fire on all forest land ownerships.

Economic Action Programs

266. **Question:** The Economic Action Programs (EAP) has been significantly reduced from the current level -- \$17,150,000 in FY 1997 to \$9,000,000 in the FY 1998 proposal. If the proposed level is adopted by Congress, what will happen to the continuation of the rural development through forestry initiative in the Northeast and Midwest?

Answer: The Rural Development component is one of several program components within the Economic Action Program. With the reduction in Economic Action Programs, the Rural Development component will also be reduced.

In prior years, earmarks to the Economic Action Programs have directed more than 50% of the Rural Development component's national budget to the Northeast and Midwest. At the proposed level in the FY 1998 budget, the national budget for Rural Development will be allocated across all regions based on the established national program criteria of forest cover and economic vitality.

Thus, under the proposed budget the rural development through forestry initiative in Northeast and Midwest will continue, but at a reduced level. Through earmarks, the initiative has received special funding for over 4 years, and should be well established by now.

State and Private Forestry

267. **Question:** What are the highest priorities in the State and Private Forestry budget in FY 1998?

Answer: Given the administration's efforts to reduce government budget expenditures, it must first be recognized that all activities proposed in the State and Private Forestry budget are included because they are priorities.

Within that context, particular priorities emerge. One priority focuses on enhancing forest health, through the forest health, cooperative fire, stewardship and urban and community programs. Another priority focuses on the wildland-urban interface, primarily through the cooperative fire and urban and community programs. An additional priority focuses on economic vitality of communities and

the role of forests, through the stewardship, economic action, and pacific northwest programs.

268. **Question:** How important are the cooperative programs of State and Private Forestry?

Answer: Non-industrial private forest landowners, 9.9 million strong, own 44% of the nation's forests and 59% of its commercial timberland. State and urban forests represent additional components of the national forest landscape. Forest Service cooperative forestry programs provide technical and financial assistance to these partners, to better manage, use and protect their natural resources. The programs are particularly important in achieving broad national objectives such as clean air and water, improved forest ecosystem health, reduced risk of wildfire, and a sustainable wood supply.

Forest Service cooperative forestry programs are cost effective partnerships: every dollar of Federal investment leverages an equal or greater value in State and private sector funds and in-kind contributions. Cooperative programs also contribute to economic development in rural areas. Cooperative programs save the Federal government dollars in the future, by promoting forest management practices which minimize the risk of insect and disease outbreaks, which reduce the potential for catastrophic wildfire, which maintain and enhance wildlife habitat, and provide clear air and water to the nation.

ADDITIONAL QUESTIONS FROM CONGRESSMAN KOLBE

Forest Service Chief

As you know, the Grand Canyon Visibility Transport Commission, on which the Forest Service was a member, recently released its recommendation on measures to address visibility impairment in Class I areas on the Colorado Plateau.

One of the key elements of these recommendations addresses the issue of fire on public lands. The Commission recommended the implementation of programs to minimize emissions and visibility impacts, as well as to educate the public. The Commission concluded that the visibility impacts of burning on public lands could be significant, but could be mitigated through smoke management programs.

Chief Dombeck, your testimony today -- and that of Secretary of Agriculture Dan Glickman -- indicates that the Forest Service is expecting to provide between \$30 and \$50 million for hazardous fuels reduction, a 25 to 100 percent increase over 1997 levels.

443. Question: With this increase in prescribed burning on federal lands, what Forest Service land in Arizona is expected to be impacted?

Answer: All land within the six National forests in Arizona will be subject to increased prescribed burning programs. The major areas affected will be in the short interval-fire adapted ecosystems.

444. Question: Has the Forest Service analyzed the impact the prescribed burns will have on visibility in Class I areas, including the Colorado Plateau? If so, what are those impacts? If not, will you analyze the impacts and report to me the results of your inquiry? Also, could you please inform me how the Forest Service will determine the significance of the impacts?

Answer: Yes, the Forest Service has analyzed the impact in conjunction with an analysis of the Grand Canyon Visibility Transport Commission.

Initial analysis indicates that it would slow the reasonable progress towards the visibility goals.

We plan to further refine the analysis to cover areas outside the Colorado Plateau.

445. Question: What is the relative contribution to visibility degradation of burning on federal lands compared to other sources of visibility degradation? What is the relative contribution to visibility degradation of burning on federal lands compared to other sources of visibility degradation assuming the 25% increase called for in the FY 1998 budget?

Answer: While there are times when a specific wildfire or prescribed fire may affect a local area significantly, over time and over the west, wildfire and prescribed fire emissions are not major sources of particulates or visibility problems. The inventory created for the Grand Canyon Visibility Transport Commission (GCVTC) process included wildfire, prescribed fire, and projections of a 6-fold increase in acres burned.

Particulate emissions are broken down into three categories. Sulfates account for approximately one third, organics another third, and nitrates, dust and other the final third. Fires show up in the organics. We do not have an effective method to determine the percent of visibility degradation contributed by wildfire and prescribed fire, but we estimate that it is a small percentage compared to other sources of degradation. In addition, burning on non-Federal lands, including State, private, tribal, and agricultural lands, also contributes to that percentage.

446. Question: What measures will the Forest Service undertake to mitigate the visibility degradation resulting from prescribed burning? Will additional mitigation measures be required in view of the requested budget increase?

Answer: In conjunction with other agencies and working with the states, analysis is being done to determine where smoke management programs need to be strengthened. That analysis is ongoing and will answer item #4 of the Grand Canyon Visibility Transport Commission (GCVTC) related to smoke management planning.

Smoke management is the best available control measure for prescribed fire emissions. Where we do not have smoke management programs that meet the best available control measure, the programs will be improved and strengthened. The analysis referenced above will identify these areas.

447. Question: How does the Forest Service intend to analyze the alternatives to prescribed burning?

Answer: Alternatives to prescribed burning are typically addressed in initial project planning as part of NEPA.

Prescribed burning has been identified as being the most cost-effective hazardous fuel treatment measure; however, during the analysis process for each project, alternative methods are considered.

As part of the Grand Canyon Visibility Transport Commission process, an analysis was conducted to determine where biomass utilization may be feasible. The market for these products is quite uncertain; therefore, the use of this type of mechanical treatments may not be feasible at this time.

448. Question: Since the EPA is currently considering more stringent air quality standards -- particularly for particulate matter -- what is the Forest Service going to do to mitigate the prescribed burns?

"contribution" to air quality? Is the Forest Service going to work with city, county, and state officials before planning any prescribed burns? If it is determined that prescribed burns on federal lands was a major factor in a county's inability to comply to the EPA clean air standards what role will the Forest Service play in correcting this problem?

Answer: The Forest Service is evaluating the need for stronger smoke management programs. Alternatives to burning are also being considered and will be especially important in the wildland/urban interface.

The Forest Service is working with city, county, and State officials in evaluating the effectiveness of current smoke management programs and in setting up new programs.

The Forest Service is a member of the Western Regional Air Partnership, looking at the implementation of the Grand Canyon visibility Transport Commission recommendations. The Forest Service is working with other federal agencies to ensure that the recommendations of the Commission are implemented within the agencies.

The Forest Service is part of an EPA ad hoc group of federal and state forestry and air agencies reviewing EPA's fire policy.)

The Forest Service will be an active player in working with a county to correct the problems of being unable to comply to EPA clean air standards. The Forest Service helps with monitoring and data analysis and smoke management plans.

ADDITIONAL QUESTIONS FROM CONGRESSMAN SKEEN

412. Question: What is the law enforcement budget for your different regions by Forest, Region, and nationally?

Answer: All funding for the straight-line Law Enforcement (LE) program is allocated to the Washington Office. For FY 1997, the LE program had approximately \$59.6 million available nationally for the entire program. The LE program does not breakdown funding by forest in the new straight-line organization.

Region 1	4,147,000
Region 2	3,418,000
Region 3	4,401,000
Region 4	4,069,000
Region 5	13,173,000
Region 6	9,042,000
Region 8	10,583,000
Region 9	4,583,000
Region 10	1,666,000
WO	4,557,000

413. Question: How many citations were issued in 1993, 1994, 1995 and 1996?

Answer: Information for the number of citations (violation notices) is taken from the Law Enforcement Management Statistical Report.

1993 - 18,855	1994 - 24,766
1995 - 26,578	1996 - 18,195

414. Question: How many warning citations were issued during those same periods?

Answer: Following lists the warning citations (warning notices) issued:

1993 - 21,648	1994 - 29,621
1995 - 29,507	1996 - 24,331

NOTE: Warning notices are different from violation notices.

415. Question: What has been the cost of the Unser prosecution to date?

Answer: We do not keep track of costs on a case by case basis. The prosecution of this case is under the jurisdiction of the United States Attorney's Office, Department of Justice. Costs associated with prosecution, if tracked, would be kept by that agency.

416. Question: What is the projected cost of the Unser prosecution?

Answer: The costs are unknown, for reasons stated in answer to question #415.

417. Question: Did anyone observe Mr. Unser during this alleged violation?

Answer: Robert Kennedy the Assistant U.S. Attorney in Denver who will be prosecuting this case for the Department of Justice has requested that the Forest Service not discuss details regarding this case. Therefore, it would be inappropriate to disclose these details of the case at this time because it involves a pending case under the jurisdiction of the United States Attorney.

418. Question: If not for what reason were the charges brought?

Answer: It would be inappropriate to disclose these details of the case at this time because it involves a pending case under the jurisdiction of the United States Attorney.

419. Question: Was the Forest Service at the local level in contact with any environmental groups regarding any aspect of this case?

Answer: According to Forest Supervisor Jim Webb, the Rio Grande National Forest was not in contact with any environmental groups regarding any aspects of this case until well after the allegations made by Unser appeared in the media. The Forest is routinely in contact with a wide variety of environmental groups on many issues related to the National Forest.

420. Question: If so please indicate the duration, the nature and the substance of that contact?

Answer: The nature of the contacts was responding to the questions of the environmental group about what was occurring to cause the media attention. The duration is unknown.

421. Question: Please provide the names of all newspapers the Forest Service has contacted on this issue and the substance of that contact?

Answer: Information provided by Forest Public Affairs Officer Ron Jablonski indicates the only newspapers the Forest Service contacted on this issue were the following:

Monte Vista Journal
Valley Courier
Rio Grande Sun
Santa Fe New Mexican
Pueblo Chieftain
Associated Press (Denver and Albuquerque)

422. Question: Please provide copies of all news releases, fact sheets, briefing papers and other relevant documents on the Unser case?

Answer: The news release prepared on this situation is shown below. According to Public Affairs Officer Jablonski there were no "fact sheets" or "briefing papers" done at the Forest or Regional level. A copy of the violation notice and probable cause statement have been provided to the Subcommittee.

US FOREST SERVICE NEWS---SAN JUAN/RIO GRANDE NF, CO

UNSER CITED FOR ALLEGED WILDERNESS VIOLATION

A citation was issued Wednesday (1/8/97) by U. S. Forest Service (USFS) Special Agents in Albuquerque, New Mexico, to Bobby Unser for allegedly violating the Wilderness Act of 1964 by using motorized equipment in a Congressionally-designated Wilderness Area. The citation stems from a snowmobiling incident just before Christmas in the South San Juan Wilderness, Rio Grande National Forest, Colorado. The USFS is working with Unser to facilitate removal of a snowmobile, by primitive means, that is reportedly still in the Wilderness. Congressionally-designated Wilderness Areas are public lands set aside for non-motorized and non-mechanized uses and are protected under the Code of Federal Regulations. This case will be prosecuted by a U. S. Attorney and heard by a Federal Magistrate. Maximum penalties are a \$5,000 fine and 6-months in jail.

423. **Question:** Provide a list of wilderness violations prosecuted in the past five years outlining the nature of the violation and the result of the case?

Answer: We do not have a list of wilderness violations prosecuted in the last five years or the result of those cases. However, we have provided the total number of violation notices, incident reports, and warning notices that have been recorded for the past five years in wilderness areas.

Wilderness regulations are found at Title 36 Code of Federal Regulations Part 261. General wilderness regulations are found at Part 261.16.

261.16 National Forest Wilderness. The following are prohibited in a National Forest Wilderness:

- (a) Possessing or using a motor vehicle, motorboat or motorized equipment except as authorized by Federal Law for regulation.
 - (b) Possessing or using a hang glider or bicycle.
 - (c) Landing or aircraft, or dropping or picking up any material, supplies, or person by means of aircraft, including a helicopter.
- [42 FR 2957, Jan. 14, 1977, as amended at 42 FR 35959, July 13, 1977; 50 FR 16231, Apr. 25, 1985]

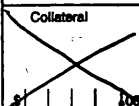
	<u>FY 92</u>	<u>FY 93</u>	<u>FY 94</u>	<u>FY 95</u>	<u>FY 96</u>
261.16a	1,218	684	866	843	1,459
261.16b	276	213	201	142	84
261.16c	5	5	4	7	11

424. **Question:** What is the current estimate of wilderness area violations occurring each year? How many are intentional and how many are inadvertent?

UNITED STATES DISTRICT COURT
 VIOLATION NOTICE

District of Colorado

Please Print

Violation No. F 1810020			
CVB Loc. Code 11212	Officer's No. 12612	Officer's Signature Brenda J. Sluby	
VIOLATION CHARGED			
Date Mo. Day Yr. 11/21/09	Time 3:00 am ☒ pm ☐	Arrest ☐ Yes ☒ No	
Violation Code	Offense Code 12611161a	Place of Offense San Juan Wilderness Rio Grande National Forest	
Offense Description 16 USC 551; 36 CFR 261.16(a) Use of motorized equipment (snowmobile) in the Wilderness			
Parking: ☐ Overt ☐ Restr. Zone Speeding: ☐ Exceeding posted limit by Driving _____ mph in _____ zone		Visibility: ☐ Day ☐ Night ☐ Fog/Rain/Snow Traffic: ☐ Light ☐ Heavy ☐ Medium Surface: ☐ Dry ☐ Wet ☐ Snow ☐ Ice	
AGAINST THIS PERSON			
Last Name Unser		First Name Bobby	Mid. Init.
Street Address 7700 Central SW			
City Albuquerque	State CO	Zip Code 87105	Phone (Area) 505-1500-9367
Birth Date Mo. Day Yr. 02/26/34	Sex M	Race W	Height Weight 6'0" 160
Driver's License No. or Other I.D. 012085745		State NM	☒ Adult ☐ Juvenile
VEHICLE DESCRIPTION			
Tag No.	Vehicle Yr.	Color	State Make Body
COURT APPEARANCE			
Court Address Municipal Building 4 Chico Camino Monte Vista, CO.		Date _____ Hour _____	
A ☒ Mandatory Appearance	If box A is checked, you must appear in court at the time and place shown above. If no court appearance date is shown above, you will be notified of your appearance date.		
B ☐ Optional Appearance	If box B is checked, you must either: 1. Pay the collateral amount shown by mailing within 7 days; or 2. Appear in court at the time and place shown above. If no court appearance date is shown above, you will be notified of your appearance date.		
Collateral 			
Previous edition is obsolete. ENTRY VIOLATION BUREAU COPY FS-5300-4(8/87)			

 Violation No.
F 1810020

STATEMENT OF PROBABLE CAUSE
(for issuance of an arrest warrant or summons)

I state that on December 30, 1996, while exercising my duties as a law enforcement officer at or near

South San Juan Wilderness

in the Rio Grande National Forest

District of Colorado

SEE ATTACHED
STATEMENT OF PROBABLE CAUSE

The foregoing statement is based upon:

- ☐ my personal observation
☐ my personal investigation
☐ information supplied to me from my fellow officer's observation.
☐ other (explain above)

I declare under penalty of perjury that the information which I have set forth above and on the face of the violation notice is true and correct to the best of my knowledge.

Executed this 8th day of January, 1997

Brenda J. Schultz

(Signature)

Brenda J. Schultz, Special Agent

(Print Name and Title)

Probable cause has been stated for the issuance of a warrant for the arrest of the defendant named or identified herein.

(Date)

United States Magistrate

PROMISE TO APPEAR

My signature below signifies that I have received a copy of the violation notice. It is not an admission of guilt. I promise to appear for trial at the time and place specified on the violation notice or any other date set by the court in the future.

(Signature of Defendant)

(Signature of Officer)

(Date)

F - 1810020

STATEMENT OF PROBABLE CAUSE
(for issuance of an arrest warrant or summons)

I state that on December 20, 1996, while exercising my duties as a law enforcement officer at or near the South San Juan Wilderness, Rio Grande National Forest, in the District of Colorado, : Bobby Unser did enter the South San Juan Wilderness on a snowmobile. Unser was accompanied by Robert Gayton, who was also on a snowmobile belonging to Unser which broke down and was abandoned near Dipping Lake within the Wilderness. The abandoned snowmobile was observed near Dipping Lake by Search and Rescue officer RICHARD MARTIN, of 115 South Third, Manassa, Colorado. In addition, on January 8, 1997, UNSER pointed out to Agents Schultz and Burd the location on a topographic map where he abandoned the second snowmobile. This location was also within the Wilderness.

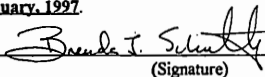
According to Forest Service Law Enforcement Officer Chris Ortiz, he and another Forest Officer contacted UNSER in January, 1993, near Red Lake Trailhead on snowmobiles. Ortiz informed UNSER at that time that they were traveling in the direction of the South San Juan Wilderness and that it was illegal to have motorized use in the Wilderness. UNSER stated to Ortiz that he was aware where the Wilderness was and was not planning on traveling in that area, but if he did nobody would be able to catch him.

The foregoing statement is based upon:

- ☒ my personal observation
☒ my personal investigation
☒ information supplied to me from my fellow officer's observation
☒ other (explain above)

I declare under penalty of perjury that the information which I have set forth above and on the face of the violation notice is true and correct to the best of my knowledge.

Executed this 8th day of January, 1997.


 (Signature)

Brenda J. Schultz, Special Agent
 (Print Name and Title)

Probable cause has been stated for the issuance of a warrant for the arrest of the defendant named or identified herein.

(Date)

United States Magistrate

PROMISE TO APPEAR

My signature below signifies that I have received a copy of the violation notice. It is not an admission of guilt. I promise to appear for trial at the time and place specified on the violation notice or any other date set by the court in the future.

 (Signature of Defendant)

 (Signature of Officer)

 (Date)

Answer: The Forest Service does not estimate the number of violations, but uses statistical data provided by our law enforcement personnel. This data appears in the answer to question #423. We do not estimate how many are intentional or inadvertent. After a citation has been issued either the violator pays the fine or the court makes the determination on whether a violation occurred. Our statistical database does not have data on convictions.

As is the case with many law enforcement issues, violations occur both due to ignorance and willful disregard, and our approach is to deal with these appropriately. Where violations appear to be due to ignorance, increased patrolling, signing, and education will help alleviate the problem. In the case of willful violations, a stronger response is needed.

One effort we are pursuing is to enlist the snowmobile industry and user groups in delivering the message to their peers that misuse of the machines reflects badly on snowmobilers in general. While a focused law enforcement effort is needed, it is unlikely that available resources will allow the level of enforcement necessary to substantially reduce the problem. An emphasis on working through the snowmobile industry and associations to promote responsible use, combined with focused law enforcement will be a more effective use of funding.

The National Wilderness Preservation System that the Congress has created for the enduring enjoyment of the American people is one of the great conservation success stories in the world. Others look to our leadership on caring for this unparalleled legacy and we take our responsibilities very seriously in our stewardship role.

425. Question. How much damage has been done in wilderness areas? Please provide by individual area.

Answer. Congress enacted the 1964 Wilderness Act stating that areas placed in the National Wilderness Preservation System (NWPS) were to be administered so as to maintain their primeval character and influence, appear primarily affected by natural forces, and provide outstanding opportunities for solitude and primitive unconfined recreation. The 1964 Act also provided management direction by prohibiting certain uses while allowing others. Prohibitions on roads, most commercial enterprises, motorized equipment and mechanical transport, aircraft landings, and structures and other installations, were included in the original Act. Many other uses were provided for in specific wilderness area legislation, including mineral exploration and development on valid claims, livestock grazing, control measures for fire, insects, and disease as well as certain commercial uses such as outfitting and guiding. Many of the more than 100 wilderness bills which have been enacted since 1964 have contained specific provisions applicable to either the wilderness system in total or to specific wilderness areas.

With regard to damage to Forest Service components of the NWPS. The extent of resource deterioration and its impacts on wilderness ecosystems is not fully known. While some areas appear to be in relatively good condition, many areas show signs of adverse impact, especially on trails and bridges and around popular camping areas. Unauthorized and conflicting activities in wilderness areas such as noise from snowmobiles and low-level aircraft are adversely affecting people's opportunity to enjoy the solitude of wilderness areas.

While the Forest Service does not maintain a list of damage by wilderness area, a FY 1995 Forest Service assessment of wilderness summary report on national conditions and trends noted the following information reported in by individual Forest Service Regional Offices:

The single most prominent threat to wilderness nationwide was reported as human use impacts. Others frequently mentioned were fire management and motorized/mechanized equipment use. Noxious weeds; grazing; air and water quality; development; inholdings; overflights; stocking; and lack of public understanding of wilderness values were noted by several regions.

Resource management issues included impacts from heavy recreational use; grazing; noxious weeds; fire management; old roads; boundary conflicts; riparian health; trail degradation; protected species management; air & water quality; pests; state wildlife agency cooperation; commercial fishing in adjacent waters; and lack of monitoring of baseline data.

Social issues included increased recreational use with attendant concerns about solitude, group sizes, litter, and vandalism; Outfitting & Guiding service administration; motorized and mechanized trespass; specialized recreation such as climbing; Native American concerns; conflicts between competing user groups; lack of public understanding of the wilderness resource; and lack of wilderness education in general.

426. Question. How much money is budgeted for wilderness management?

Answer. The Forest Service is responsible for managing almost 400 of the 630 units in the NWPA, comprising nearly 35 million acres. This is approximately 63 percent of wilderness in the contiguous 48 States and more than one third of the entire NWPS. The FY 1998 President's Budget provides \$34 million for wilderness management.

427. Question. How much money is budgeted for other categories benefiting wilderness areas?

Answer. In FY 1995 the Forest Service budget structure changed and moved the benefitting funds into the area it supported. Altho there may be instances of several resources benefitting from the same activity (such as prescribed fire) and each one funding a proportional share, the majority of the funds for managing wilderness areas is contained in the Wilderness Management budget line item.

In the case of law enforcement within wilderness areas, funding is provided mainly by wilderness management and law enforcement when special situations require it. Wilderness management funds provide personnel to work within the wilderness areas to maintain trails, campsites, clear hazards, provide visitor contacts and education, resource condition observations, visitor use patterns, and sometimes there is a need to issue violation notices for observed violations. However, the primary role of these Forest Protection Officers is in wilderness resource and use management. When Forest Protection Officers encounter a situation that exceeds their law enforcement training due to the complexity or seriousness of the event (ie, death of a visitor, illegal drug trafficking, assaults and crimes against persons, illegal immigrants, illegal outfitting), they call on the Agency Law Enforcement Officers (LEO's) who are specially trained to deal with serious situations and take appropriate action.

428. Question: What is the level of law enforcement in wilderness areas?

Answer: Forest Protection Officers primarily enforce regulations within wilderness areas, as per Forest Service policy. The vast acreage of wilderness and the small number of officers in the law enforcement program does not allow for routine patrol by uniformed law enforcement officers.

429. Question: How does the Forest Service police wilderness areas?

Answer: As stated above, Forest Protection Officers enforce regulations within the wilderness as per Forest Service policy. Law Enforcement Officers also enforce regulations, as time and circumstance allow.

430. Question: Please provide copies of any correspondence from groups or individuals complaining about violations of the wilderness regulations?

Answer: Copies of correspondence has been provided to the Subcommittee.

431. Question: Please list your biggest problems in wilderness management.

Answer: According to a 1995 Forest Service assessment of wilderness, the single most prominent wilderness management challenge nation wide was human use impacts. Other major issues were fire management, motorized and mechanical equipment use, noxious weeds, air and water quality, inholdings, aircraft overflights.

432. Question: Please provide all law enforcement memos, regulations and other documents dealing with the law enforcement issues dealing specifically with wilderness areas?

Answer: The Wilderness Act states, in part, "...no use of motorized vehicles..." thus, the Secretary of Agriculture promulgated regulations to carry out the intent of the Act. Law enforcement



United States
Department of
Agriculture

Forest
Service

Washington
Office

14th & Independence SW
P.O. Box 96090
Washington, DC 20090-6090

File Code: 1510

Date: MAR 10 1997

Mr. James A. Hahn
11027 W. Derby Avenue
Wauwatosa, WI 53225

Dear Mr. Hahn:

Senator Kohl has referred your January 22, 1997, letter concerning the Bobby Unser incident and asked that we respond directly to you.

As this incident now involves a pending law enforcement investigation, it would be inappropriate to disclose some of the details of the case which have come to light since the search and rescue operation was successfully concluded. Despite how it was reported in the media, the violation notice was issued for actions that occurred before the men became lost, and not necessarily for inadvertently entering the wilderness while lost.

There was also no pressure on local officials to make a decision one way or another concerning this case. The decision to proceed with prosecution depends upon the circumstances of a particular case. While we would not speculate what some of those circumstances might be, our officers are responsible for conducting a proper investigation, documenting the facts, and taking appropriate action.

Mr. Unser's case is scheduled for a hearing before the U.S. Magistrate on March 11. At this time, the evidence will be presented and a determination made by the Magistrate. If you are interested in the outcome of that case or some of the details that will emerge then, we would be pleased to provide that to you.

I appreciate your sincere interest in the Forest Service and our management of the National Wilderness Preservation System. We do our very best to comply with the laws passed by the Congress and expect that of every employee of the Forest Service.

Sincerely,

Barbara C. Wzber
for MIKE DOMBECK
Chief

Enclosure



Caring for the Land and Serving People

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Doc: SEN. KOHL REPLY-UNSER
Bill:
Jacket: 97000462

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P&L		
CO		



United States
Department of
Agriculture

Forest
Service

Washington
Office

14th & Independence SW
P.O. Box 96090
Washington, DC 20090-6090

File Code: 1510

Date: FEB 20 1997

Mr. Craig Cotton
7045 Chantilly Lane
Dallas, TX 75214

Dear Mr. Cotton:

Thank you for your January 11, 1997, e-mail message to President Clinton regarding the Bobby Unser incident. The White House referred your message to me as the Forest Service is responsible for managing the Rio Grande National Forest where Bobby Unser was lost.

As this incident now involves a pending law enforcement investigation, it would be inappropriate to disclose some of the details of the case which have come to light since the search and rescue operation was successfully concluded. However, the violation notice issued to Mr. Unser was for actions that occurred prior to the men becoming lost.

Although it was reported by the media that the Washington Office of the Forest Service had intervened in the case, that is not accurate. The decisions about how to proceed were made at the local level by the law enforcement officials directly involved with the case. I did not intervene and I am assured by the local officials that no one else applied any pressure on them to make a decision one way or another regarding the case.

I appreciate your sincere interest in the Forest Service and our management of the National Wilderness Preservation System.

Sincerely,

Mike Dombeck

MIKE DOMBECK
Chief



Caring for the Land and Serving People

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FS-6200-28b (12/93)





United States
Department of
Agriculture

Forest
Service

Washington
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14th & Independence SW
P.O. Box 96090
Washington, DC 20090-6090

File Code: 1510

Date: FEB 10 1997

Honorable Steve Schiff
U.S. House of Representatives
2404 Rayburn House Office Building
Washington, DC 20515

Dear Congressman Schiff:

I am responding to your January 28, 1997, letter concerning your question with respect to using motorized vehicles within designated wilderness areas. Your specific question was if we would "consider it a prosecutable offense if any person, while lost, ventured inside a designated wilderness area using a motorized vehicle?"

Any use of a motor vehicle within designated wilderness is a prosecutable offense, unless otherwise provided for by law. Accidental or inadvertent use is not an exception provided for by the Wilderness Act or other statutes. Having said that, our officers have discretion in deciding what action will be taken in handling certain cases. The enclosed copy of Forest Service policy discusses handling Class B Misdemeanor violations such as the one involved in the Unser case.

In summary, the decision to proceed with prosecution depends upon the circumstances of a particular case. While we would not speculate what some of those circumstances might be, our officers are responsible for conducting a proper investigation, documenting the facts, and taking appropriate action.

We have also enclosed a copy of the pertinent section of the Wilderness Act and the Forest Service regulation that address the use of motorized vehicles within designated wilderness.

I will continue to keep you advised of the status of the Unser case and appreciate your sincere interest in the Forest Service and our management of the National Wilderness Preservation System.

Sincerely,

MIKE DOMBECK
Chief

Enclosure



Caring for the Land and Serving People

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United States
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Washington
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14th & Independence SW
P.O. Box 96090
Washington, DC 20090-6090

File Code: 1510

Date: FEB 10 1997

Honorable Pete V. Domenici
United States Senate
328 Hart Senate Office Building
Washington, DC 20510

Dear Senator Domenici:

I am responding to your January 28, 1997, letter concerning your question with respect to using motorized vehicles within designated wilderness areas. Your specific question was if we would "consider it a prosecutable offense if any person, while lost, ventured inside a designated wilderness area using a motorized vehicle?"

Any use of a motor vehicle within designated wilderness is a prosecutable offense, unless otherwise provided for by law. Accidental or inadvertent use is not an exception provided for by the Wilderness Act or other statutes. Having said that, our officers have discretion in deciding what action will be taken in handling certain cases. The enclosed copy of Forest Service policy discusses handling Class B Misdemeanor violations such as the one involved in the Unser case.

In summary, the decision to proceed with prosecution depends upon the circumstances of a particular case. While we would not speculate what some of those circumstances might be, our officers are responsible for conducting a proper investigation, documenting the facts, and taking appropriate action.

We have also enclosed a copy of the pertinent section of the Wilderness Act and the Forest Service regulation that address the use of motorized vehicles within designated wilderness.

I will continue to keep you advised of the status of the Unser case and appreciate your sincere interest in the Forest Service and our management of the National Wilderness Preservation System.

Sincerely,

MIKE DONBRECK
Chief

Enclosure



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Folder: NEW MEXICO

Doc: ~~UNSEN-REPLY II~~ 1510

Bill: 2/10/97

Jacket: 97000396

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United States
Department of
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Washington
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14th & Independence SW
P.O. Box 96090
Washington, DC 20090-6090

File Code: 1510

Date: FEB 10 1997

Honorable Ben Nighthorse Campbell
United States Senate
380 Russell Senate Office Building
Washington, DC 20510

Dear Senator Campbell:

I am responding to your January 17, 1997, letter concerning the Bobby Unser snowmobiling incident on the Rio Grande National Forest. You asked for information concerning Forest Service policy in such matters.

It should be noted that the original search and rescue operation involving the two lost men was not impeded in any way because the search area involved wilderness. The search and rescue operation was granted full authority to immediately pursue the search, using motorized vehicles if necessary.

As this incident now involves a pending law enforcement investigation, it would be inappropriate to disclose some of the details of the case which have come to light since the search and rescue operation was successfully concluded. However, the violation notice was issued for actions that occurred prior to the men becoming lost. That decision was made at the local level by the law enforcement officials directly involved with the case.

You also requested that we provide information concerning our policy in such matters. Any use of a motor vehicle within designated wilderness is a prosecutable offense, unless otherwise provided for by law. Accidental or inadvertent use is not an exception provided for by the Wilderness Act or other statutes. Having said that, our officers have discretion in deciding what action will be taken in handling certain cases.

The enclosed copy of Forest Service policy discusses handling Class B Misdemeanor violations such as the one involved in the Unser case. We have also enclosed a copy of the pertinent section of the Wilderness Act and the Forest Service regulation that address the use of motorized vehicles within designated wilderness.

In summary, the decision to proceed with prosecution depends upon the circumstances of a particular case. While we would not speculate what some of those circumstances might be, our officers are responsible for conducting a proper investigation, documenting the facts, and taking appropriate action.



Caring for the Land and Serving People

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Honorable Ben Nighthorse Campbell

2

I will continue to keep you advised of the status of the Unser case and appreciate your sincere interest in the Forest Service and our management of the National Wilderness Preservation System.

Sincerely,

A handwritten signature in black ink that reads "Mike Dombeck". The signature is written in a cursive, slightly slanted style.

MIKE DOMBECK
Chief

Enclosure



United States
Department of
Agriculture

Forest
Service

Washington
Office

14th & Independence SW
P.O. Box 96090
Washington, DC 20090-6090

File Code: 1510

Date: JAN 17 1997

Honorable Larry Craig
United States Senate
313 Hart Senate Office Building
Washington, DC 20510

Dear Senator Craig:

I am responding to your January 10, 1997, letter concerning the Bobby Unser snowmobiling incident on the Rio Grande National Forest.

As this incident now involves a pending law enforcement investigation, it would be inappropriate to disclose some of the details of the case which have come to light since the search and rescue operation was successfully concluded. However, I can assure you that the decision to proceed with the issuance of a violation notice was made at the local level by the law enforcement officials directly involved with the case. I did not, and I am assured by the local officials who made these decisions, that no pressure was applied to them by anyone to decide one way or another concerning the case.

It also should be clarified that the original search and rescue operation involving the two lost men was not impeded in any way because the search area involved wilderness. The search and rescue operation was granted full authority to immediately pursue the search, using motorized vehicles if necessary.

The case will be scheduled for a hearing before the U.S. Magistrate in Monte Vista, Colorado, sometime in the next month or so. I will keep you advised of the status and appreciate your sincere interest in the Forest Service and our management of the National Forest System. I also appreciate your support for and trust in Forest Service professionals and am confident that the outcome of the case will demonstrate that support to be well placed.

Sincerely,

MIKE DOMBECK
Chief



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United States
Department of
Agriculture

Forest
Service

Washington
Office

14th & Independence SW
P.O. Box 96090
Washington, DC 20090-6090

File Code: 1510

Date: JAN 24 1997

Honorable Pete V. Domenici
United States Senate
328 Hart Senate Office Building
Washington, DC 20510

Dear Senator Domenici:

I am responding to your January 10, 1997, letter concerning the Bobby Unser snowmobiling incident on the Rio Grande National Forest.

As this incident now involves a pending law enforcement investigation, it would be inappropriate to disclose some of the details of the case which have come to light since the search and rescue operation was successfully concluded. However, I can assure you that the decision to proceed with the issuance of a violation notice was made at the local level by the law enforcement officials directly involved with the case. I did not, and I am assured by the local officials who made these decisions, that no pressure was applied to them by anyone to decide one way or another concerning the case.

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Sincerely,

MIKE DOMBECK
Chief



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United States
Department of
Agriculture

Forest
Service

Washington
Office

14th & Independence SW
P.O. Box 96090
Washington, DC 20090-6090

File Code: 1510

Date: JAN 24 1997

Honorable Steve Schiff
U.S. House of Representatives
2404 Rayburn House Office Building
Washington, DC 20515

Dear Congressman Schiff:

I am responding to your January 10, 1997, letter concerning the Bobby Unser snowmobiling incident on the Rio Grande National Forest.

As this incident now involves a pending law enforcement investigation, it would be inappropriate to disclose some of the details of the case which have come to light since the search and rescue operation was successfully concluded. However, I can assure you that the decision to proceed with the issuance of a violation notice was made at the local level by the law enforcement officials directly involved with the case. I did not, and I am assured by the local officials who made these decisions, that no pressure was applied to them by anyone to decide one way or another concerning the case.

It also should be clarified that the original search and rescue operation involving the two lost men was not impeded in any way because the search area involved wilderness. The search and rescue operation was granted full authority to immediately pursue the search, using motorized vehicles if necessary.

The case will be scheduled for a hearing before the U.S. Magistrate in Monte Vista, Colorado, sometime in the next month or so. I will keep you advised of the status and appreciate your sincere interest in the Forest Service and our management of the National Forest System. I also appreciate your support for and trust in Forest Service professionals and am confident that the outcome of the case will demonstrate that support to be well placed.

Sincerely,

MIKE DOMBECK
Chief



Caring for the Land and Serving People

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FS-6200-280 (11/93)



FS:P&L:LA:TKlabunde:imp:205-0579:01/15/97

Drawer: WILDERNESS
 Folder: NEW MEXICO
 Doc: UNSER LETTER - DOMENICI
 Bill:
 Jacket: 97000299

STAFF	INITIALS	DATE
LA	TK	1/15/97
LE&I	KT	
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P&L		
CO		
RH&WR	DH	
LA		

personnel and Forest Protection Officers enforce these regulations found at Title 36 Code of Federal Regulations Part 261. The answer to question number 423 states the number of violation notices, incident reports and warning notices that were written dealing with wilderness issues. For FY 1996, the number written was 1,554. We have not provided copies of these notices since they are retained at the field level service-wide and it would take excessive personnel hours of work to make copies and send to the Washington Office. Law Enforcement and Investigations issues both manual and handbook direction to further carry out the intent of the law and regulation. These documents give direction to employees regarding enforcement of law and regulations, including those affecting wilderness areas. These documents are voluminous; we would be happy to provide them if needed. The above documents are those that provide direction to field personnel, including wilderness areas. The Forest Service does not generally issue permanent direction to the field through memorandum. However, in some instances, we will temporarily issue direction through memorandum. We have provided the Subcommittee documents that specifically address temporary authorization for enforcement actions within specific wilderness areas in California. To date, this is the only memorandum that discusses additional enforcement actions not specifically addressed in manual/handbook direction. However, we will continue to search service-wide for other similar documents.

On May 6, the Law Enforcement and Investigations staff further clarified with the Congressman's staff the particular concerns. In addition to the above documents, we have also provided the Subcommittee with information that will give an overview of the issues surrounding wilderness areas. These issues have been occurring for some time, yet the gravity of the situation is just now unfolding. Thus, the Forest Service is looking at the whole issue of wilderness and related violations and pursuing an effective method of education and enforcement to address the problem. The Subcommittee is also being provided a briefing paper prepared by the Recreation Staff discussing this nation-wide issue and a draft communication plan prepared by Public Affairs which illustrates the agency's current efforts at addressing the problem.

433. Question. Please provide an inventory of all damage to wilderness areas in New Mexico and southern Colorado caused by snowmobiles.

Answer. Snowmobile trespass is a problem in specific areas rather than throughout the NWPS. However, some intrusions are occurring in nearly every wilderness having snow conditions suitable for snowmobiles and violations are increasing in many parts of the NWPS. Snowmobile trespass is significant in Montana, Idaho, and California, and is also common in Utah, Wyoming, Colorado, New Mexico, Oregon, Washington, and the Lake States. Specific areas with significant numbers of violations include Boundary Waters Canoe Area - MN; Absorka Wilderness - WY; Mokelumne and Desolation Wildernesses - CA; and Jedediah Smith Wilderness - WY, (violations estimated to have doubled in each of the last 3 years); Three Sisters Wilderness - OR (estimated 8-10 violations per week); Savage Run/Houston Park Wilderness - WY; and Mount Zerkel and the Flattops Wilderness - CO. The number of

United States
Department of
Agriculture

Forest
Service

Eldorado N.F.

File Code: 2320/5330
Route To:

Date: December 19, 1996

Subject: Snowmobile Use in Desolation and Mokelumne Wilderness
for Specific Law Enforcement Needs

To: Regional Forester

I request Regional Forester authorization for appropriate Forest Service personnel and other law enforcement individuals to use snowmobiles or other over-snow vehicle (OSV) within the Desolation Wilderness and Mokelumne Wilderness under conditions described in Section 2326.1(5) of the Forest Service Manual. Specifically, I request approval for the use of snowmobiles or other OSV to issue citations to unauthorized individuals within the wilderness that have been observed by surveillance flights or other means, or where there is clear evidence through reports from individuals, audible evidence, etc., that unauthorized uses are occurring at the time within the wilderness.

It is understood that the following conditions will apply:

- 1.) That motorized entry into the wilderness will only occur under conditions where unauthorized individuals are observed directly, or vehicle noise can be heard and there is a reasonable likelihood of successful contact. Patrolling is not authorized.
- 2.) That a citation will be issued, not just a verbal or written warning.
- 3.) That a fine will be levied of \$150 for first time offenders and that a mandatory appearance will be required for subsequent offenses.
- 4.) The Forest will notify the Regional Office after incidents of motorized entry and inform the Regional Wilderness Coordinator of the number of citations issued.

The Forest has already completed signing of the major entry points and will continue to monitor to assure that the signing is in place and that the users have had adequate notification that use of snowmobiles is not permitted within the Mokelumne or Desolation Wildernesses. The Forest has also worked with the U.S. Magistrate to assure success in our efforts to enforce the regulations concerning non-use of motorized equipment within the wilderness.

JOHN PHIPPS
Forest Supervisor

cc:
District Rangers, Amador and Pacific
Supervisory LEO

United States
Department of
Agriculture

Forest
Service

RO

File Code: 2320/5330
Route To:

Date: December 19, 1996

Subject: Snowmobile Use in Desolation and Mokelumne Wilderness
for Specific Law Enforcement Needs

To: Forest Supervisor
Eldorado National Forest

I am giving authorization for appropriate Forest Service personnel and other law enforcement individuals to use snowmobiles or other over-snow vehicle (OSV) within the Desolation Wilderness and Mokelumne Wilderness under conditions described in Section 2326.1(5) of the Forest Service Manual. Specifically, I approve the use of snowmobiles or other OSV to issue citations to unauthorized individuals within the wilderness that have been observed by surveillance flights or other means, or where there is clear evidence through reports from individuals, audible evidence, etc., that unauthorized uses are occurring at the time within the wilderness.

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- 3.) That a fine will be levied of \$150 for first time offenders and that a mandatory appearance will be required for subsequent offenses.
- 4.) The Forest will notify the Regional Office after incidents of motorized entry and inform the Regional Wilderness Coordinator of the number of citations issued.

I understand that the Forest has already completed signing of the major entry points and will continue to monitor to assure that the signing is in place and that the users have had adequate notification that use of snowmobiles is not permitted within the Mokelumne or Desolation Wildernesses. I understand that the Forest has also worked with the U.S. Magistrate to assure success in our efforts to enforce the regulations concerning non-use of motorized equipment within the wilderness.

/s/ John Shilling for
Regional Forester Team

DRAFT
4.11.97

COMMUNICATION PLAN

SNOWMOBILE TRESPASS IN WILDERNESS

GOAL: To reduce snowmobile use in Congressionally designated Wilderness.

OBJECTIVES:

1. Snowmobile users and new legislators and their staffs understand the restrictions under the Wilderness Act of 1964.
2. The snowmobiling community adopts a land ethic, demonstrating their respect for wilderness.
3. The Forest Service provides challenging places for snowmobilers to ride outside of wilderness areas.
4. Law enforcement penalties are tightened.

BACKGROUND: Snowmobile use in Congressionally designated Wilderness has grown in visibility over the past year. Thousands of snowmobilers trespass on National Forest system Wilderness yearly. The problem has been most significant in Regions 1 and 5, and portions of Regions 2, 4 and 9. Specific locations of controversy include:

Boundary Waters Canoe Area--where violations are estimated in the thousands.

Absoraka Wilderness--hundreds of violations (yearly??)

Mokelumne and Desolation Wildernesses, Jedediah Smith Wilderness--where violations have doubled in the each of the last 3 years.

Three Sisters Wilderness--with an estimated 8-10 violations each week.

Savage Run/Houston Park, Mount Zirkel and Flattops Wilderness

The sport continues to grow in popularity. The number of snowmobilers has risen. Technological advancements have improved snowmobile machinery. As a result, inexperienced riders are now able to ride in more difficult terrain.

Many factors are bringing this issue to the forefront. Recent high publicity citations have created new media interest. Recent litigation has raised the visibility of the issue.

DISCUSSION AND KEY PROBLEMS:

There are two components to the problem. First, there is a lack of knowledge about restrictions associated with the Wilderness Act. Next, some violators are aware of the restrictions but chose to ignore them. There is a belief that it is worth the risk of getting caught to ride in violation of the Wilderness

Act. A portion of the snowmobiling community seems to accept the behavior of snowmobiling in Wilderness. A "catch me if you can" philosophy exists. There also may be a perception that the most rugged terrain is within Wilderness. Additionally, law enforcement penalties are not severe enough to deter Wilderness use.

KEY PROBLEMS:

- * Lack of understanding about why motorized vehicles and equipment are not allowed in Wilderness. The lack of resource damage makes it difficult to demonstrate impacts. Need to show impacts on experience.
- * Wilderness boundaries are not easily defined. Maps are difficult to read. There is inadequate signing.
- * In some places, snowmobiling registration money is used to fund trail grooming. Many times grooming is done right to the Wilderness boundary, almost inviting riders to venture beyond.
- * Lack of a coordinated, cooperative law enforcement approach. Differences in opinion between local, state or federal law enforcement personnel over regulations creates problems.
- * Penalties are inconsequential compared with the expense of machinery and equipment.
- * Tourism industry is actively promoting snowmobiling. Need to coordinate messages.
- * Time and expense of catching violators is very high (ie recent BWCA case). The logistic complexity adds to the time and expense. For instance, aerial flights and ground support is often necessary. Many Wilderness access points adds to the problem.
- * Forest Service work schedule is not in sync with times of high snowmobile use.
- * Road corridors are often winter snowmobile routes, enticing riders to climb adjacent hillsides.

STRATEGY:

1. Educate snowmobile users, new legislators and their staffs about the Wilderness Act and restrictions it places on visitors.
2. Create a land use ethic within snowmobiling community. Tier off "Tread Lightly" and "Leave no Trace."
3. Provide challenging places to ride outside of Wilderness. Market these areas to snowmobiling community, chambers of commerce.
4. Tighten enforcement penalties.

Key audiences:

Congress:

Especially new legislators, who aren't aware of the Wilderness Act of 1964.

Interest groups and User groups:

National Snowmobile Association.
 Blue Ribbon Coalition
 International Snowmobile Administration Association
 Tread Lightly: explore partnering with them to develop a winter sport campaign -- see Tom Crimmins, R5 OHV, Trails coordinator; 510.609.6115
 Wilderness Society: Mike Francis, 202.429.2662 or Bill Reffalt 202.429.2681
 Friends of the Boundary Waters
 Montana Wilderness Association
 Wilderness Watch
 Outfitter and guide associations
 America Outdoors
 State licensing agencies
 Snowmobile manufacturers, winter sports industry
 Local snowmobile clubs

Internal:

Rec/wilderness staffs in appropriate regions and forests
 Public affairs officers in Regions and forests
 Law Enforcement
 Chief and Staff
 R/F/D
 NPS, BLM, Fish and Wildlife Service

Communication strategies:

Develop a national briefing package including:

Portions of the Wilderness Act
 Fact sheet of general wilderness facts
 Fact sheet on impact of motorized equipment in wilderness
 Fact sheet on scope of Congressionally Designated Areas in Forest Service

Work with interest groups to coordinate efforts.

Develop legislated affairs plan to brief and discuss with members and staffers from impacted areas.

In conjunction with snowmobile industry, develop a winter version to Tread Lightly program. Incorporate responsible riding and winter safety messages. Market message "Protect your right to ride" to promote responsible snowmobile use. Work with industry to create incentives for distributors that actively promote responsible use message. Put pressure on industry to help solve problem.

Work with law enforcement division to enable concentrated effort in key spots to catch violators. Use examples from BWCA (Superior Forest) and Absoraka Wilderness (Gallatin Forest) on what can be done to work with court system so consequences of trespass are more substantial.

In each state where trespass is a problem, designate a representative to State Trail Program. Tiering off national effort, work with State Trails program to promote responsible use via snowmobile trail maps, instructional videos, promotional materials. Pressure State to withhold trail grooming funds where local cooperation isn't occurring. Create incentives for local communities to receive benefits from State if actively promote responsible use.

Target one "hot spot" in each state and focus enforcement efforts to get some convictions. Develop story lines for media to increase awareness of why motorized use is not allowed in Wilderness (before winter season). Develop messages that can be incorporated into news releases to tell the Forest Service story quickly when violators are caught.

Provide direction to wilderness and law enforcement divisions on how to multi-finance effort to prevent trespass.

Improve maps to better delineate wilderness boundaries.

Incorporate requirements and educational information into the special use permit operating plans of permitted snowmobile operators.

Coordinate issues with other agencies. Explore coordinated strategy/tactics.

Engage partners/organizations/citizens/snowmobile permittees in assisting with monitoring, reporting violations, signing, education efforts.

Action Plan Specifics:

Action	Due Date	Who
Share communication plan with field	4/97	Feldman
Coordinate with Law Enforcement	4/97	
Develop national briefing package	5/97	Stokes
*Fact sheet of wilderness facts		
*Fact sheet on impact of motorized equipment in wilderness		
*Fact sheet on scope of Congressionally designated Areas in FS		
Develop marketing tools such as winter "tread lightly" program	5/97	
*Responsible riding and winter safety messages		
*Market message "protect your right to ride" -- responsible use		
*Work with industry to create incentives for distributors to promote message		
*Work with industry to help solve problem		
Develop schedule to meet w/interest groups	5/97	Stokes
Brief Congressional contacts	6/97	Klabunde,

Make national media contacts	6/97	Stokes Feldman
Coordinate with DOI agencies		Stokes, Feldman
Develop list of alternate places		
Market alternate places		

EVALUATION

How will we know when we are successful?

Monitor numbers of infractions

Monitor use in other alternative places to ride for increased use.

**BRIEFING PAPER: National Recreation Directors Meeting
February 18-21, 1997 ---- Burlington, Vermont**

ISSUE: Snowmobile trespass in Wilderness

BACKGROUND/Situation/Significance:

The Wilderness Act of 1964 states that, there "shall be no use of motor vehicles or motorized equipment except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area)". The prohibition of motorized travel is a key provision to meet the purpose of the Act "to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States...". The presence of snowmobiles or tracks destroys the sense of wildness, remoteness, and quiet associated with a setting where human activities do not dominate.

Snowmobile trespass is generally viewed as a problem in specific areas rather than throughout the National Wilderness Preservation System. However, some intrusions are occurring in nearly every Wilderness having snow conditions suitable for snowmobiling. The problem is seen as significant in regions 1 and 5 and in parts of regions 2, 4, 6 and 9. The number of violations is not known but is thought to be much higher than the number of observed incidents. Hot spots in the country include the Boundary Waters Canoe Area (violations estimated in the thousands), Absaroka Wilderness (hundreds of violations), Mokelumne and Desolation Wildernesses, Jedediah Smith Wilderness (violations estimated to have doubled in each of last 3 years), Three Sisters Wilderness (estimated 8-10 violations/week), Savage Run/Houston Park Wildernesses, and Mount Zirkel and Flattops Wildernesses. The trend in number of violations appears to be increasing due to growing popularity of the sport and better machines that enable less experienced people to ride more difficult terrain.

Media coverage relative to recent citations (BWCA, Unser case), rescues or fatalities of snowmobilers occurring in Wilderness, and pressure from interest groups to address issue (litigation by Montana Wilderness Association) are combining to bring this issue to the forefront.

DISCUSSION / Key Problems:

Where violations appear to be due to ignorance, Forest personnel believe that patrolling, signing, and education will help alleviate the problem. However, in the "hot spots", violators know they are in the wilderness but believe it is worth the risk of being caught.

Key Problems:

- * Lack of understanding about why motorized vehicles and equipment are not allowed in Wilderness. Since there is usually no direct resource impact, people do not understand what the problem is.
- * Lack of a coordinated, cooperative law enforcement approach. In some places, local, state or federal law enforcement personnel don't agree with regulation thus may work against effort.
- * Insignificant deterrent. The fine is inconsequential compared with expense of machine, buying fuel, etc.
- * Many rural communities are actively promoting snowmobiling to boost winter tourism thus may work against efforts to regulate snowmobile access.
- * The time and expense necessary to catch one violator is very high (e.g. recent BWCA case). These are often complex cases involving aerial flights with ground support. The large number of access points compounds the problem.

In some places, a violator may have 60 different ways to exit the wilderness. Violators are often travelling from homes, thus no vehicles are present.

- * Funding mechanism. Currently, funding for law enforcement, patrols, signing, and education comes out of NFWM dollars. The expense of catching violators quickly drains NFWM funds. Forests are being forced to choose between funding a summer program and catching snowmobilers.
- * Winter patrols need to be done by pairs of people due to safety concerns which adds to expense. Trained law enforcement personnel are needed to stop violators in a safe manner.
- * Scheduling problems. Violations often occur on the weekends when less personnel are in the field. Some areas are seeing more nighttime riding by snowmobilers.
- * The number of access points greatly increases in the winter, necessitating more signing and boundary survey than typically is needed in the summer. Again, this adds expense.
- * Some wilderness boundaries aggravate the potential for violations especially where road corridors create "cherry stems". Road corridors are often winter snowmobile routes and the urge to climb adjacent hillsides creates trespass situations. Groomed snowmobile trails adjacent to wilderness boundaries increase the potential for trespass to occur.

ALTERNATIVES:

- 1 Do Nothing
- 2 All out law enforcement and education effort
- 3 Strong education emphasis with some law enforcement (concentrate on reaching the majority of people who want to do right thing)
- 4 Strong law enforcement emphasis with some education (concentrate on catching perpetual violators in hopes that this will send message to others)

RECOMMENDATION:

A significant reduction in snowmobile trespass will only occur when the message starts coming from the snowmobile industry and user groups (based on rationale that true behavior change occurs most rapidly when there is peer pressure). For this reason, alternative 3 is recommended with education focused on developing a relationship with snowmobile industry and organizations. While a focused law enforcement effort is needed, it is unlikely that budgets will ever allow the level of law enforcement needed to substantially reduce the problem. An emphasis on working through the snowmobile industry and associations to promote responsible use combined with some law enforcement will be a more effective use of dollars.

Since perpetual violators are often local residents, the national and regional response to this issue must focus on facilitating the ability of Forests and districts to respond at the State and local level.

SNOWMOBILE TRESPASS IN WILDERNESS
Draft: National / Inter-regional Action Plan

National Response:

- * In conjunction with snowmobile industry, develop a winter version to Tread Lightly program. Incorporate responsible riding and winter safety messages. Market message "Protect your right to ride" to promote responsible use. Work with industry to create incentives for distributors that actively promote responsible use message. Put pressure on industry to help solve problem.
- * Work with law enforcement division to enable concentrated effort in key spots to catch violators. Use examples from BWCA (Superior Forest) and Absaroka Wilderness (Gallatin Forest) on what can be done to work with court system so consequences of trespass are more substantial.

Inter-Regional Response:

- * In each state where trespass is a problem, designate a representative to State Trail Program. Tiering off national effort, work with State Trails program to promote responsible use via snowmobile trail maps, instructional videos, promotional materials. Pressure State to withhold trail grooming funds where local cooperation isn't occurring. Create incentives for local communities to receive benefits from State if actively promote responsible use.
- * Target one "hot spot" in each state and focus enforcement efforts to get some convictions. Develop story lines for media to increase awareness of why motorized use is not allowed in Wilderness (before winter season). Develop messages that can be incorporated into news releases to tell the Forest Service story quickly when violators are caught.
- * Provide direction to wilderness and law enforcement divisions on how to multi-finance effort to prevent trespass.
- * Share examples where a coordinated law enforcement approach was built into cooperative agreements with local and State law enforcement agencies.
- * Engage partners/organizations/citizens/snowmobile permittees in assisting with monitoring, reporting violations, signing, education efforts.

violations appears to be increasing due to growing popularity of the sport and better machines that enable less experienced people to ride more difficult terrain.

See the above information on condition and trend. Snowmobiles intrude on the quiet and solitude of the wilderness which is one of the purposes outlined in the the 1964 Act. Further, in extreme cases, compaction caused by excessive snowmobile use can change the path of water from melting snow, resulting in increased erosion. However, the Forest Service does not track resource damage in wilderness areas by user category.

434. Question. Do Forest Service employees use snowmobiles? Please indicate how many snowmobiles the Forest Service owns? Are they allowed to use them for personal use.

Answer. Employees of the Forest Service regularly use snowmobiles to accomplish their work on national forest lands that receive significant snowfall. The Forest Service owns 1,184 snowmobiles. The use of government-owned snowmobiles is restricted to official business only. Personal use is not allowed.

435. Question. Does the FS ever enlist the help of individual citizens with snowmobiles?

Answer. Individual citizens snowmobile use OUTSIDE wilderness areas: We do enlist help from groups using snowmobiles outside wilderness for winter trail operation/maintenance/grooming (local clubs, States, etc.), and search and rescue (sheriff's departments, ski areas, etc.). Others, like guides/outfitters, utility companies, et.al. who have permitted winter uses have machines available and could conceivably be called on in an emergency. Organized snowmobile groups have been helpful in providing information and education to snowmobile users concerning the value of wilderness and the prohibition of snowmobile use in designated wilderness areas.

436. Question: How many grazing lease renewals were issued last year?

Answer: Approximately 900 permits were to expire December 31, 1996. All of these are to be re-issued in January 1998. An exact number of expired permits would be available at the Ranger District or Forest Headquarters level. This information is not usually collected nationally.

437. Question: How many are pending?

Answer: In Oregon, 32 permits that have expired have not been re-issued due to a Federal District Court order associated with the lawsuit of Oregon Natural Desert Association versus Thomas (ONDA v Thomas) decision. That decision held that grazing is subject to Section 401 provisions of the Clean Water Act requiring certification by the State that the grazing activity would not result in a discharge of pollutants into a navigable stream. So, at this time 32 permits are pending.

Once the State has certified that the grazing activity meets their standard, then the Forest Service would be able to proceed with the re-issuance of the grazing permit.

438. Question: Have any grazing lease renewals been turned down? If so, for what reasons?

Answer: No renewals of expiring permits have been turned down. However, as stated in the previous question, 32 permits are pending renewal in Oregon.

439. Question: How long is a renewal now taking?

Answer: Renewal of expiring permits does not take but a day or two to produce the permits and make contact with the permit holder for signature. Due to the Rescissions Act of 1995, the Forest Service is required to issue new permits, with the same terms and conditions, when the present ones expire when the only reason that a new one would not normally be issued is if no National Environmental Policy Act (NEPA) analysis was completed on the permit.

440. Question: What is the cost of complying with NEPA on grazing lease renewals?

Answer: National Environmental Policy Act (NEPA) analysis is conducted when allotment management plans are being prepared not on grazing permit renewals. The Rescissions Act of 1995 provided that NEPA analysis for re-issuance of grazing permits is not required. However, the Rescissions Act of 1995 required the Forest Service to prepare a schedule for completion of all needed NEPA analysis for grazing allotments. A schedule has been prepared, and a copy of the national summary has been provided to the Subcommittee.

The Forest Service has not conducted an assessment of what the total costs are associated with the completion of NEPA analysis for grazing allotments. The cost for complying with NEPA on grazing allotment plans is highly variable from one allotment to another based on the issues being addressed. The greater the number of issues and the more complex they are, the greater the costs. Costs include the salary for various specialists to perform the environmental analysis, coordinate and consult with appropriate federal and state entities, and obtain public comment so they can produce the required decision document.

441. Question: Please list the above information by Forest and State.

Answer: The information requested is generally available at the Ranger District or Forest headquarters level. It is not normally collected nationally. It would take a considerable amount of time to do so for all information requested.

442. Question: Do any Forest Service expenditures through MOU'S or Interagency Agreements end up funding other government agency activities? If so, how much and what agencies?

Answer: No. Memoranda of Understanding (MOU's) are not used to provide funding. The Forest Service uses Interagency Agreements to acquire services and supplies from other government entities, but they are never used to fund the activities of other government entities.

ADDITIONAL QUESTIONS FROM CONGRESSMAN NETHERCUTT

Interior Columbia Basin Ecosystem Management Project

449. **Question.** Please provide a breakdown of how much money has been spent to date on the Interior Columbia Basin Ecosystem Management Project (ICBEMP) by fiscal year and across all involved federal agencies, including but not limited to the Forest Service, the Bureau of Land Management, the Environmental Protection Agency, the National Marine Fisheries Service, the Fish and Wildlife Service, and the U.S. Geological Survey. The breakdown should also include the number of FTEs by agency devoted to the Project in each fiscal year.

Answer. The following represents the BLM and Forest Service contributions, to date, for the Project. These costs have been tracked by the Project offices in Walla Walla and Boise. Costs for the other federal agencies have not been tracked by these offices and are not readily available.

<u>Fiscal Year</u>	<u>Agency</u>	<u>Amount</u>
1994	FS	\$ 8.704 MM
	BLM	.657 MM
1995	FS	11.812 MM
	BLM	3.806 MM
1996	FS	3.649 MM
	BLM	1.419 MM
1997 (estimated)	FS	3.684 MM
	BLM	<u>1.416 MM</u>
Total		\$35.147 MM

The following represents the FTEs for the BLM and Forest Service, and for other federal agencies who had employees directly assigned to one of the Project offices (Walla Walla, Washington; Boise, Idaho), to date.

<u>Fiscal Year</u>	<u>Agency</u>	<u>Number FTEs</u>
1994	FS	38.3
	BLM	4.2
	EPA	0.6
	FWS	0.4
	USGS	0.8
1995	FS	105.9
	BLM	12.4
	EPA	1.6
	FWS	1.7
	USGS	1.0
1996	NBS	0.7
	FS	45.4
	BLM	7.6
1997 (estimated)	FWS	0.5
	FS	32.6
	BLM	7.5
Total	FWS	<u>0.5</u>
		261.7

(Also, a Forest Service employee worked for NMFS at the beginning of the project for the first six months; 0.5 FTE).

450. **Question:** Have you completed feasibility studies on the most likely alternatives? If so, did the reports indicate any potential problems with implementation? What were the problems identified and how do you intend to overcome the problems identified?

Answer: Alternative 4 (Aggressive ecosystem health restoration) is preferred and the availability of the Draft EISs was publically announced April 23. In preparation for selecting a preferred alternative, five forests in eastern Oregon and Washington were asked to review the DEIS to provide input to the Regional Forester. There were a number of concerns identified. Some of those concerns included: adequate level of funding to do what standards and objectives require, the amount of time to do subbasin review and ecosystem analysis, potential conflicts in standards and objectives, concern about making site specific adjustments to standards and objectives, impacts on the timber and grazing programs, and the need to clarify the intent of terms.

Some of these concerns have already been addressed during the final layout of the Draft EISs. Many of the concerns will be answered in the Final EISs. Many of the implementation concerns will be tested before a final decision is made.

451. **Question:** Do you plan to conduct further feasibility studies before identifying a preferred alternative to determine if the alternative favored is possible to implement under current budget and socioeconomic realities?

Answer: The preferred alternative and Draft EISs were announced April 23. The Draft EISs display the estimated implementation costs and how they compare to current funding. Additional work on implementation procedures, methods, costs and funding will be done before the Final EISs.

452. **Question:** Could lands managed under a Habitat Conservation Plan (HCP) be affected in any way by the record of decision? If so, under what authority will those lands be affected?

Answer: The use of HCPs is referenced in the Endangered Species Act (Section 10.(2)(A)) and is intended for application on non-federal lands. The record(s) of decision for the Project would apply only to federal lands administered by the BLM and FS.

453. **Question:** How much money was spent on the "Ecosystem Management in the Interior Columbia Basin, Science and Management in Partnership" conference held March 3-5, 1997? What were the conference objectives? Do you feel the objectives were met? What percentage of the individuals attending the conference were representatives of the federal government?

Answer: The conference was a cooperative effort between Washington State University (WSU) and the Pacific Northwest (PNW) Forest and Range Experiment Station. The PNW Station share of the costs was \$20,000. An additional \$2,200 was spent on science posters (displays) for the conference. WSU obtained a \$8,000 grant from the Ford Foundation to help put on the conference. Part of this money was used to provide "scholarships" for those who needed help in paying the registration fee.

There were two primary objectives for the conference:

1. Increase the understanding of the scientific assessment by presenting in-depth descriptions of the science methods, findings and products.
2. Provide opportunities for interaction with interested stakeholders, land managers and the scientific community.

Generally, we felt the objectives were met. The evaluation forms from the conference (20% response rate) indicated that nearly 70% of the respondents felt the conference goals were met and that the information was relevant. We did get feedback that many attendees would have liked the concurrent sessions to have been given twice.

Nearly 650 people attended the conference. The attendance breakdown follows:

- 70% Federal representatives including employees from BLM, Forest Service, US Fish and Wildlife Service, Dept. of Justice and Bureau of Indian Affairs, and congressional staff;
- 6% Environmental/conservation groups;
- 5% Timber industry;
- 5% State, local and tribal government representatives;
- 3% Universities;
- 11% Other organizations and individuals.

454. **Question:** When do you intend to release the draft environmental impact statements, identify a preferred alternative, and issue a record of decision?

Answer: The principal documents of the ICBEMP scientific assessment have already been released (December 1996). The identification of a preferred alternative took place on April 23. The alternative (4) would aggressively restore ecosystem health through active management using an integrated ecosystem management approach. The two Draft EISs were released April 23, along with the Scientific Evaluation of Alternatives. The individual chapters of the Assessment of Ecosystem Components will follow in June. The Draft EISs are available at both Project offices and at the BLM and Forest Service administrative units throughout the Basin. The Draft EISs will be available on the Internet (<http://www.icbemp.gov>) in mid May, and will be mailed to all who have so requested. There will be a 120 day comment period on the Draft EISs. The final environmental impact statements and record(s) of decision will follow approximately one year later.

455. **Question:** Will the record of decision immediately amend all land management plans in the Project area?

Answer: Yes. At this point we intend that the Record(s) of Decision will immediately amend the portions of current BLM and Forest Service management plans subject to the decision. The primary focus of these decisions (based on the EISs) is at the broad scale, focusing on issues such as forest health, range health, and fish and wildlife protection, which transcend administrative boundaries. National Forests will need to reconcile any differences between the new direction and their existing plans.

456. **Question:** Will individual forest units need to proceed with their own plan amendments after the record of decision is issued? How long will this process take and how much money do you estimate will be needed for individual plan amendments?

Answer: Individual forest units will not need to do additional amendments to respond to the direction in the Record(s) of Decision. Individual National Forests are already on a schedule for revision of their National Forest Land and Resource Management Plan (forest plan), and will incorporate the decision in their revised planning. We anticipate the decisions from this Project will streamline the revision process because the broad scale issues will have been addressed in a consistent manner.

457. **Question:** How will allowable sale quantity (ASQ) targets be developed under the Project and will those targets be met in the year following release of the record of decision?

Answer: The Project is not developing new allowable sale quantities. That work will be done by individual forests where the appropriate information exists.

Minerals and Geology Division

458. **Question:** What has the Forest Service requested for a Minerals and Geology Division budget each year from Fiscal Year 1994 to Fiscal Year 1998 before the budget was sent to the Office of Management and Budget (OMB)?

Answer: After review and adjustment by the Department, the Forest Service's requests were as follows.

<u>Fiscal Year</u>	<u>Request</u>
1994	\$45,000,000
1995	35,311,000
1996	38,666,000
1997	37,292,000
1998	35,355,000

459. **Question:** What reductions, if any, were made by the Office of Management and Budget during that time period?

Answer: The adjustments were as follows.

<u>Fiscal Year</u>	<u>Request</u>	<u>OMB Final</u>
1994	\$45,000,000	\$34,996,000
1995	35,311,000	35,311,000
1996	38,666,000	37,392,000
1997	37,292,000	35,000,000
1998	35,355,000	35,355,000

460. **Question:** If there were reductions, what was the basis for the reductions?

Answer: Reductions in most programs was necessary in order to reduce the deficit and help balance the federal budget.

461. **Question:** If there were reductions in the Minerals and Geology Division budget, were comparable reductions made in the budget of non-commodity programs?

Answer: Our major non-commodity programs are Recreation Use, and Wildlife and Fisheries Habitat Management. In any given year these programs may be reduced by more or less than Minerals and Geology. For example, in Fiscal Year 1994, Minerals and Geology was reduced 22%, Recreation Use by 1%, while Wildlife and Fisheries Habitat was increased 5.5%. However, in Fiscal Year 1998, Recreation Use was reduced 3.5%, Minerals and Geology was not reduced, and Wildlife and Fisheries Habitat was increased 5%.

462. **Question:** How much money do mining companies and oil and gas companies spend on environmental documents, studies and reports prepared for operations on the National Forest System?

Answer: We do not currently request that information. However, we estimate companies are spending \$6-10 million per year.

463. **Question:** Why does the Forest Service pay for National Environmental Policy Act, Endangered Species Act, Clean Water Act, and National Historic Preservation Act compliance to renew grazing permits, but not for mining or oil and gas activities?

Answer: The Forest Service does pay these costs for mining and oil and gas activities to the extent the budget and other priority uses for limited funds allow. In fact, a recent audit by the Office of Inspector General questioned why we were not passing all of these costs on to operators. As a result of that audit, we are currently reviewing all commercial uses of national forests to determine who should and should not be paying for environmental compliance costs. To the extent grazing permittees have not been required to pay such costs it has involved such factors as tradition, ability to pay, the relative difference in costs, the value of the benefits obtained, and the importance of maintaining local communities.

464. **Question:** Do individual forests and regions request a sufficient budget to prepare environmental studies, and reports for mining and

oil and gas activities before offering companies the option of retaining a third party contractor?

Answer: For large projects that are important to local economies or that require environmental impact statements, Forests and Regions typically do request funds, but only to monitor and review third party contracts, not to actually prepare the documents. Paying to prepare environmental impact statements at current budget levels would simply displace too much other priority work within the Minerals and Geology program.

465. Question: Will any of the Minerals and Geology Division budget be used to reclaim abandoned mines? If so, how much, and is this consistent with the "benefitting program pays" concept? Will this affect the Forest Service's ability to process mining proposals and to administer existing operations?

Answer: For Fiscal Year 1997 as much as \$1.2 million of funding for Minerals and Geology may be used to reclaim abandoned mines, subject to approval of reprogramming by the Appropriations Committees. For Fiscal Year 1998, unless reprogramming becomes necessary, reclamation of abandoned mines using Minerals and Geology funding will be deferred as stated in the President's Budget unless there is imminent threat to public safety. Using Minerals and Geology funds to reclaim abandoned mines would impair our ability to process proposals and administer existing operations.

466. Question: To what extent is the Forest Service allowed to transfer Minerals and Geology Division money to other programs?

Answer: Reprogramming of the lesser of 10 percent or \$3 million of any Budget Line Item can be approved by the Chief. Reprogramming of large amounts must be submitted to the Appropriations Committees for approval.

467. Question: To what extent has Minerals and Geology Division money been spent on other programs?

Answer: Minimal amounts in past years have been reprogrammed with the exception of FY 1995 in which \$423,000 was reprogrammed from Minerals and Geology to better reflect implementation of the FY 1995 budget reform and to help fund environmental analyses for renewal of grazing permits.

468. Question: If funding for the Minerals and Geology program was increased, would it be spent on mining operations, environmental studies and monitoring, or would it be reprogrammed?

Answer: Unless otherwise specified in the Appropriations Act, our first priority would be to improve inspection of existing operations to ensure environmental protection. Currently, only about 60 percent of operations are being adequately inspected. Our second priority would be to expedite processing of new proposals. We would not plan to reprogram funds.

469. Question: What does the current Minerals and Geology program budget cover now that it did not cover five years ago?

Answer: Beginning in Fiscal Year 1995, the Appropriations Committees approved a change in budget structure for the Forest Service such that each program now pays all costs related to its projects. For example, processing a proposed plan of operation typically requires input from a number of specialists including biologists, archaeologists, soils scientists, landscape architects, etc. These costs, previously paid by the programs providing input, are now being paid by Minerals and Geology. Similarly, costs of geologists working on projects of other programs are now paid by those programs.

470. Question: How many mining plans of operations has the Forest Service processed each year for the past ten years?

Answer: Our accomplishment reporting system is being revised to allow processing of plans of operations to be accurately reported. However, we estimate that between 2,000 and 2,500 operations requiring approval of formal plans were processed in each of the past ten years.

471. Question: How many active mining plans of operations under the Mining Law existed at the end of fiscal year 1997?

Answer: Our reporting system is being revised to allow an accurate count of the number of active plans of operations. However, we estimate that approximately 4,000 operations requiring approval of formal plans were active at the end of Fiscal Year 1997.

472. Question: Often it takes the Forest Service more than five years to approve mining plans of operations. Are these delays due to budgetary constraints?

Answer: They are due primarily to budget constraints. However, the need to comply with various environmental statutes is also a factor.

473. Question: How much of an increase in the fiscal year 1998 budget request would be adequate to prevent or shorten these administrative delays?

Answer: We estimate that \$6 million would substantially reduce, if not eliminate, delays caused by budget constraints. However, unless otherwise directed, our first priority for any budget increase would be to improve inspection of existing operations to ensure protection of the environment. As indicated in the President's Budget, an additional \$4 million is needed to ensure adequate inspection.

Additional Questions

474. Question: Please provide national and regional figures on the status of preparation for green timber sales, also known as the "pipeline"?

Answer: The goal in timber sale pipeline is to have about 70% of NEPA work completed and a substantial amount of the field layout completed for the fiscal year at the start of the fiscal year. The following table shows the pipeline volume by region at the start of fiscal year 1997 for fiscal year 1997 timber sales as of October 19, 1997. In addition, the table shows the status of pipeline volume for fiscal year 1998 as of the same date.

Advanced Sale Preparation for Fiscal Years 1997 and 1998

Region	FY 1997 (Volume in million board feet)	FY 1998
1	179.4	56.1
2	66.6	11.5
3	6.1	12.0
4	125.7	35.8
5	179.5	0.0
6	321.3	54.5
8	434.7	137.9
9	367.3	145.8
10	135.3	88.7
Total	1,815.9	542.3

475. **Question:** The President eliminated purchaser road credits and cut the road program \$12 million in his 1998 Budget Request. With your initiative to reintroduce prescribed fire into forest land ecosystem, reduce fuel loads, and thin overstocked stands, how do you propose to access these lands and conduct these management actions when the product values will not carry road construction costs?

Answer: There is no cause and effect relationship between proposals to eliminate purchaser road credits and reduce the road engineering program by \$ 12 million, and our ability to reintroduce prescribed fire, reduce fuel loads, and thin overstocked stands. In most cases we can accomplish these forest health type treatments using our existing forest road system, and there would be no need for additional road construction.

476. **Question:** Secretary Babbitt recently cited research being conducted by Dr. Wally Covington at Mt. Trumbull where he is using thinning and prescribed fire to replicate old growth ponderosa pine stands. Since you worked with Secretary Babbitt when you were Acting BLM Director to authorize and fund this project, I gather you also advocate thinning federal forests to reduce stand densities, eliminate undesirable species, and remove fuel ladders. Do you support single tree or group selection using scientifically sound silvicultural prescription to regenerate pine forests? If not, how do you propose to regenerate these stands? Do you support active management (prescribed burning, understory thinning and salvage harvesting to remove fuels, and regeneration harvesting) in roadless areas and wilderness areas, or would you let wildfires consume them? What restoration process would you prescribe for roadless forests following a devastating wildfire?

Answer: Yes, I support thinning and other methods to sustain, improve, and establish new Ponderosa Pine stands. This is only one part of the larger need we have on the National Forests to treat overstocked stands to accomplish forest health objectives. We will continue to use sound silvicultural prescriptions that employ several different methods, including single tree and group selection harvesting coupled with reforestation where necessary, to regenerate pine forests.

Fire does have a role in the restoration of wilderness ecosystems. The use of prescribed fire, using both lightning ignitions and management ignitions, is a well established program for the Forest Service and will continue to play an important role. Although the use of natural ignitions, i.e. lightning, may be preferred, many areas can still be treated using well planned, management-ignited, prescribed fires. In the roadless areas, which are outside designated wilderness, a full range of fuel treatment options will be considered. In fact, due to the current condition of many areas, it isn't possible to re-introduce fire without first using other mechanical means. These areas have such a heavy build-up of fuels that fire cannot safely be the primary fuels treatment method. After using mechanical treatment, fire can then be applied safely without damaging the ecosystems we are trying to restore.

With regards to wildfire restoration, the Forest Service manages a specific program designed to address the challenges. The Burned Area Emergency Rehabilitation (BAER) program uses fire suppression funds to assess burned areas, prescribe treatments, and install them promptly following devastating wildfires. Specially trained interdisciplinary teams assess the burned area, design a range of alternative treatments, then implement the treatments selected by land management officials. In areas served by roads we can employ a wide variety of vegetative and structural treatments to both the land and channels. In roadless and wilderness areas we still employ BAER procedures but restrict the range of alternative treatments to fit the management limits of the area. Our preferred alternative in these areas is to let natural recovery occur. Where significant dangers exist to resources, health, and safety outside the area, we prescribe the least intrusive measures that will accomplish our goals. This includes hand or non-mechanical treatments, use of native materials such as local rock and plant materials, and seeding with native and short-lived species that will retain the natural character of the area. Motorized equipment, such as chain-saws and aircraft, are only authorized for these areas if similar equipment was required in the suppression effort. Even in these situations we prefer non-motorized techniques.

477. Question: To effectively utilize the enhanced hazardous fuels reduction funding in the Administration's proposal, the forests in greatest need of fuels treatment must be identified and prioritized. I am concerned that despite the existence of the Forest Health Monitoring program, the Forest Service has been unable to accurately identify these severe risk areas. How does the Forest Service intend to identify and prioritize those areas in greatest need of fuels

treatment to most effectively utilize the \$30 million for Hazardous Fuel Treatment in the President's proposal.

Answer: In conjunction with Forest Service Research, we are designing an analysis process that will identify the extent and location of the critical areas of hazardous fuel treatment needs.

For FY98 the areas for priority fuel treatment are being identified using the following criteria:

- (1) Protection of high risk interface areas, with special emphasis placed on treatments in short interval fire-dependent ecosystems.
- (2) Treatment of fuel situations within and adjacent to wilderness areas that currently reduce prescribed (natural) fire opportunities.
- (3) Treatments that reduce expected long range fire suppression costs by the restoration and maintenance of fire adapted ecosystems which are at risk or are projected to become at risk from damaging wildfire.

478. **Question:** It is clear that the Administration's budget cannot support a 4.0 Billion Board Feet (BBF) timber sale program on the national forests. How did you arrive at the 4.0 BBF figure?

Answer: The President's Budget fully supports the timber sale program level we proposed of 3.78 BBF. This includes 2.505 BBF in green volume and 1.275 BBF in salvage volume. The green volume was based upon regional volume estimates for various funding levels and each region's capability to offer timber for sale. The salvage volume was based on each region's latest estimates of salvage. It is possible that the 3.78 BBF program was rounded up to 4.0 BBF, which would account for the discrepancy.

479. **Question:** Despite repeated Congressional direction to reduce inventory cycles of the Forest Inventory and Analysis (FIA) program, the inventory cycle continues to get longer. Why has the Agency failed to reduce the cycle intervals?

Answer: The length of the FIA inventory cycle is controlled by three main factors: (1) a mandated accuracy requirement which determines the amount of data to be collected; (2) funding for personnel and equipment which determines the speed at which the data are collected; and (3) funding for research to develop new and improved technology which, in application, could increase efficiency and reduce the collection burden on personnel and equipment without sacrificing accuracy.

The first controlling factor, amount of data needed for accuracy, is required and necessary to provide quality information to make sound management and economic decisions.

The second controlling factor, funding, is the central issue. Since the FY 1995 appropriation, overall funding for the Forest Service Research program has been reduced by 10 percent. However, FIA has remained a high priority in the research program. During this period of reduction and downsizing, the FIA field program funding has been increased by 3 percent. This modest increase in FIA funds has not been sufficient to offset the continuous increase in costs of employing and maintaining personnel and equipment in the field to physically take the inventory information.

Continued funding at current levels will further erode funding needed to decrease the cycle length unless the third controlling factor, new technology can be developed to bridge the gap. However, it has been difficult to maintain or increase funding for technology research because the need for current information has demanded that we focus funding on crews and equipment to collect field data. Scientifically sound research is critical to the application of any new technology or data collection methods that will improve the cycle. With a constrained Research budget, FIA strives to maintain a balance between the potential gains in efficiency from development and application of new technology and the demand for shorter current cycles.

The Agency has maintained FIA as a high priority (no overall reduction). But with the numerous and many competing priorities demanded by all of our customers, we have been unable to increase funding sufficiently to maintain or reduce the overall cycle length.

480. **Question:** The Interior and Agriculture Departments are seeking a \$40-\$50 million increase in funding in 1998 to treat an additional 1-2 million acres. Where are the acres located? How many acres would receive prescribed burning? Thinning? Regeneration harvest?

Answer: Hazardous fuel reduction treatment is planned for all areas of the country. The primary areas of treatment are the southeast, west and northwest portion of the United States.

The exact breakdown by practice is not identified at the national level, but approximately 90% of the treatments are projected to be accomplished with prescribed fire.

481. **Question:** The Wilderness Society released a report stating that the Forest Service timber sale program loses money and is a subsidy to the forest products industry. Two weeks later, the Economic Report of the President was released making, for the first time ever, the exact same claims. Secretary Glickman has stated that the Forest Service timber sale program made a profit of \$59 million in 1995. Did the timber sale program make money or lose money? What process do you use to calculate your figures, and what process did the Council of Economic Advisors use? Did the Council of Economic Advisors use accepted GAO accounting procedures?

Answer: The timber subsidy figures contained in the Economic Report of the President make two basic modifications to the Forest Service's timber accounting system (TSPIRS). First, purchaser road credits are

subtracted from both revenues and costs. Second, payments to States are added to program costs. It should be noted that these same modifications to the TSPIRS system were endorsed by the Congressional Budget Office in its August 1996 report on Reducing the Deficit: Spending and Revenue Options.

The rationale for the first change is that the Forest Service treats road base as an infinitely-lived capital asset. There are two basic ways to adjust TSPIRS revenues and costs to account for road base depreciation: one is to add road base depreciation to timber program costs; the other is to subtract purchaser road credits from revenues and depreciated road costs from program costs. The CEA, consistent with the CBO's analysis, adopted the second modification in preparing its Economic Report.

The Council also subtracted Payments to States from timber program proceeds since they are a variable cost to the Forest Service. That is, unlike Payments in Lieu of Taxes (PILT) which are assessed on a per-acre basis, revenue sharing only occurs when there is a timber sale. The CBO has also endorsed this modification.

482. Question: Approximately what percentage of the Administration's request for road construction is intended for reconstruction of existing Forest Service roads, what percentage for new roads; and of the percentage of new roads, what percentage of that can be classified as timber roads?

Answer: The FY 1998 Roads Reconstruction and Construction appropriation is planned to be expended as follows:

	Timber		Recreation		General Purpose		Total	
	MM\$	%	MM\$	%	MM\$	%	MM\$	%
Reconstruction (Existing Rds)	34.1	(40%)	24.2	(28%)	11.8	(13%)	70.1	(81%)
Construction (New Rds)	13.3	(15%)	2.4	(3%)	0.5	(1%)	16.2	(19%)
Total	47.4	(55%)	26.6	(31%)	12.3	(14%)	86.3	(100%)

% shown is percent of total planned road reconstruction and construction appropriation

Of the \$13.3 million for new timber roads, \$11.5 million or 86% is for engineering support of timber roads that will be constructed by timber purchasers, and \$0.5 million or 3% is for construction of timber roads from appropriated funds. The remaining \$1.3 million or 11% is for reconstruction of arterial and collector roads (includes engineering support).

All costs shown above include administrative support, planning, right's of way, survey, design, and contract administration costs.

483. **Question:** Why was the purchaser credit roads program initiated and why has it been proposed for elimination?

Answer: Purchaser credits were instituted in 1964 as part of the National Forest Roads and Trails Act. (P.L. 88-657).

- This program provided the Forest Service with a mechanism to better control the reconstruction and construction of engineered roads needed for long term access on national forest lands.
- It provided a simple method of compensating purchasers for needed change orders, simplifying contract administration and thereby improving the quality of road reconstruction and construction.
- It allowed purchasers to move credits earned from road construction from one sale to other sales. This encouraged advanced road construction. Building the roads in advance of harvest and hauling allows the roads to "heal up" before they are used, decreasing soil disturbance and environmental damage.
- It reduced the cost of money for the purchasers, allowing higher bids and receipts.

The goal in proposing elimination of purchaser credits is threefold:

- Eliminate the cost of tracking purchaser credits
- Reduce litigation associated with the program
- Eliminate the perception that the taxpayers are subsidizing the timber program by making the road work a direct cost of the timber sale.

484. **Question:** Please list the number of purchaser road credit sales by region, total number of sales, sale value, and the percentage of total sales.

Answer: The following table provides the requested information for sales that were sold in FY 1996. The data was obtained from the Automated Timber Sale Accounting System. It differs from what has been publicly reported for FY 1996 because that information was based upon a mid-October, 1996 capture date. Since then the data has changed.

<u>Region</u>	<u>No. of Sales With PRC</u>	<u>Value of Sales w/ PRC</u>	<u>Total No. of Sales</u>	<u>Value of All Sales</u>	<u>Percent of Sales w/ PRC</u>
1	98	\$ 40,745,628	359	\$ 51,262,199	27
2	24	6,334,370	73	6,861,619	33
3	0 1/	0	28	79,675	0
4	41	14,492,981	224	20,284,077	18
5	75	30,174,781	285	49,196,019	26
6	190	173,320,732	640	196,200,042	30
8	380	86,446,672	693	92,675,888	55
9	340	53,788,200	382	55,753,213	89
<u>10</u>	<u>11</u>	<u>3,454,459</u>	<u>41</u>	<u>14,957,016</u>	<u>27</u>
Total	1159	\$ 408,752,823	2725	\$ 487,269,748	43

1/ No sales due to court injunction

485. Question: How would the elimination of the purchaser credit roads program affect payments to counties?

Answer: The Administration is concerned about the impact on payments to counties and is submitting language which would provide that the costs of permanent roads would be counted as money received for the purposes of calculating payments to States.

486. Question: How would the elimination of the purchaser credit roads program affect small operators?

Answer: It should not, since we will be retaining the Purchaser Election Program for small business.

487. Question: What is the extent of the health problems on lands administered by your agency? Do you have an accurate on-the-ground inventory of these forested lands and the type of treatment prescribed for them? If not, why not?

Answer: Forest Service forest health programs address forest health on all ownerships across the broader landscape. Nationally, we do have a good handle on the major forest health issues. We also have detailed information for some National Forests, but not an overall report for the National Forest System alone. Generally speaking, many U.S. forests are in good shape. There are, however, regional hot spots and issues that concern us. Principal forest health concerns are summarized in a recently completed report, "America's Forests: 1996 Health Update" (attached). The following summarizes some of that report and actions the Forest Service is taking to address forest health issues.

In the intermountain West, increased tree mortality has led to a large increase in the amount of dead wood in forests and poses severe wildfire risks. Activities underway to improve forest health include thinning to regulate stand density, vegetation management to reverse species conversion, planting trees at proper densities with genetically adapted seedlings, conducting prescribed burns, and promoting wildfire prevention in the urban interface. To reduce fire risk, the Forest Service goal is to reduce hazardous fuels on 3 million acres each year, either mechanically or with prescribed fire, by the year 2005.

In the South, southern pine beetle reached historically high levels in 1995 and caused extensive tree mortality. There has also been a reduction in longleaf pine habitat. Activities underway to improve forest health include commercial harvest of trees infested by southern pine beetle to reduce further spread, and enhancement of longleaf pine habitat.

In the East and South, gypsy moth is now established in 17 States, affecting many oaks and other hardwood species. The Forest Service, jointly with the Animal and Plant Health Inspection Service (APHIS), has an active gypsy moth management program--using a strategy of

eradicating new infestations beyond the existing range of the insect, slowing the spread of the advancing insect front, and suppressing the outbreaks within the generally infested area.

In Alaska, large scale outbreaks of the spruce beetle are occurring, especially on the Kenai and in the Copper River area. Destructive wildfires arising from the fuel buildup are a concern. Activities underway include reforestation, thinning and pruning trees to reduce overcrowding, and silvicultural treatments specifically designed to produce and enhance wildlife habitat.

Exotic pests are a problem throughout our forested ecosystems. This includes exotic forest insects, diseases, and weeds. The agency continues its productive partnership with the Animal Plant Health Inspection Service to prevent inadvertent introductions of exotic pests. Noxious weeds and exotic plant species pose an increasing threat to native ecosystems, crop lands, and on other plant species nationwide. The Forest Service has developed a new strategy on noxious weeds that advocates increased prevention, education, monitoring, control, and research.

A number of different inventories are conducted on National Forest System lands. The Forest Inventory and Analysis program, based on permanent sample plots, is operational in Regions 3, 4, 8, 9, and 10, with Regions 1, 2, 5, and 6 in the process of implementation. In addition, Stand Compartment examinations are carried out at the Forest level to inform localized management decisions. Resource specific inventories (air quality surveys, soil surveys, wildlife surveys, etc) are also executed. Depending on the level of information technology available on any Forest, this data may or may not be integrated into a Geographic Information System. The Forest Service and its cooperators conduct aerial surveys annually over most of the forestland in the US to determine forest health status. In addition, the Forest Health Monitoring program has a statistically reliable permanent plot system that measures various indicators of forest health on an annual basis in the same manner across the nation. In 1995, 40 percent of the forested area in the lower 48 states was monitored through the permanent plot system, with 53% monitored in 1997, and 60% projected in 1998. The emphasis is on expanding this program to build statistically reliable data that allows scientists and managers to detect and respond to early, subtle, yet significant economic change.

ADDITIONAL QUESTIONS FROM CONGRESSMAN SIDNEY R. YATES

Urban Forestry

The Midwestern and Northeastern states comprise nearly half of America's population and over half of the nation's urban forest resources. I am deeply concerned that your allocation of urban forestry funds is not in-line with the population and forestry distribution. This Committee appropriated \$25.5 million for urban forestry nation-wide in FY 97 and from that, the Service allocated \$10 million for the Northeastern and Midwestern States. In FY 98, you have requested the same total for urban forestry as last year, \$25.5 million, but your allocation for the Northeast and Midwest is only \$8.6 million -- a cut of \$1.4 million. This cut will have a devastating impact on a number of urban forestry projects, including several in Chicago.

269. **Question:** Why are you attempting to move \$1.4 million in urban forestry funding away from the Northeast and Midwest?

Answer: Please see the answer to Question H-315 for an explanation of how Urban and Community Forestry funds in the President's budget are allocated. The Urban and Community Forestry budget allocations are developed by providing \$150,000 for program support in each State and the District of Columbia. The balance of the appropriation is distributed, for support of state and community grants, to the Northeast/Midwest, the South, and the West according to demographic data. The Northeast/Midwest receives 44% of that balance, with 34% going to the South, and 21% going to the West. The budget allocations have been developed according to the same criteria in FY 1996, FY 1997, and FY 1998. The President's budget does not bring forward from FY 1997 any Congressional earmarks or comparable intent in any State and Private Forestry program except for \$150,000 in Economic Action Programs for a Forest Service position located in Princeton, West Virginia.

The FY 1998 President's budget includes \$9,533,000 for the twenty States and District of Columbia which make up the Northeastern Area. This level of funding is considered tentative based on the funding level in the President's budget. The final level of funding for the Northeastern Area may be revised based on new information on program priorities and Congressional action.

The Forest Service has provided special funding to Chicago for various projects since 1990. Rapid population growth is occurring in communities throughout the South and parts of the West, resulting in increasing interest in and requests for U&CF assistance, not all of which the agency can meet. In addition, natural catastrophic events such as Hurricane Fran in North Carolina, and floods along the west coast, present additional challenges. The President's Budget balances the very worthwhile activities the agency has supported in Chicago for as many as 7 years with increasing needs elsewhere.

270. Question: What can be done to ensure that urban forestry projects in Illinois, Ohio, and Pennsylvania are maintained in FY 98?

Answer: Urban and Community Forestry allocations are developed by providing \$150,000 in base program funds for each State, and providing a percentage (based on State demographic data) of the remaining balance for State and community grants. Earmarks reduce the balance amount distributed for support to State and community grants.

Each year, once the Washington Office allocates funds to the Regions and Northeastern Area, the Regional Foresters and Area Director determine the distribution of funds to States, establishing priorities in consultation with the States and other partners.

Within the President's budget, the Northeastern Area will receive more funds for support to state and community grants than it did in FY 97, when Congressional earmarks and intent reduced the funds available for such activities. The nearly \$1.3 million additional grant funds will provide the Northeastern Area with resources to apply toward maintaining urban forestry projects in the Region, including activities in Illinois, Ohio, and Pennsylvania. States should work closely with the Area to demonstrate the particular benefits, values, and efficiencies of alternative activities.

Discrimination

271. Question: I am very disturbed by charges of racial discrimination being leveled against your Department and the Forest Service by your minority employees. Mr. Glickman, I know you engaged in a number of field hearings on this subject and issued a report on the matter. What were the findings of the report?

Answer: I too am very concerned about the charges of discrimination in the Department and Forest Service. There are four major findings in the Civil Rights Action Team (CRAT) report. The findings are:

- o There is a lack of management commitment to civil rights at USDA.
- o There is a general perception of apathy, neglect, and a negative bias towards all minorities on the part of most local USDA government officials directly involved in decision making for program delivery.
- o Many of the problems in USDA's program delivery system are related to the under representation of minorities and women in the USDA workforce.
- o There are significant organizational and structural problems that impact USDA's ability to ensure civil rights enforcement for its customers and employees.

272. Question: Have Forest Service employees been discriminated against?

Answer: I don't have specific information to state that discrimination has occurred or that it has not occurred. My findings show that there is a need for further investigation into the alleged complaints leveled by Forest Service employees. We continue to work diligently to determine the details of each case and to work toward resolving all complaints in an expeditious manner. We know that every day that goes by without a resolution seems like a very long time to the employee who believes he or she has been discriminated against. This makes it even more important for us to reach resolutions and to keep employees informed about the status of cases related to their personal situations.

273. Question: Is there a pattern of discrimination that permeates the Agency against minority employees and customers?

Answer: A pattern of discrimination does not appear to permeate the Agency. There are, however, allegations of discrimination made in Equal Employment Opportunity (EEO) complaints. During the four-year period, fiscal years 1993 through 1996, the number of formal EEO complainants was about 0.6 percent of the permanent employee population. During the same four-year period, African American and Hispanic complainants were disproportionately represented in the numbers of complainants compared to their respective workforce representation. African American complainants equaled 1.7 percent of their permanent workforce representation as compared to Hispanic complainants that equaled 1.0 percent of their permanent workforce representation. Of course, filing an EEO complaint does not automatically mean that discrimination has occurred. I will not allow a pattern of discrimination to permeate the Agency against any of its employees or its customers.

274. Question: What specific actions are you taking to address these charges?

Answer: I have named Mr. Pearlie Reed to serve as Acting Assistant Secretary for Administration. He will have full authority to implement the majority of actions recommended in the Civil Rights Action Team report to correct civil rights issues at USDA. I am developing a civil rights policy which clearly states what is expected of supervisors and managers to assure employees have a safe environment in which to work. The following additional steps have been taken to improve the situation in the Forest Service:

- A performance improvement plan will be required of managers and supervisors who do not satisfactorily meet Equal Employment Opportunity and Civil Rights performance standards.
- The role of supervisors and managers will be reflected in performance evaluations, in implementing the Continuous Improvement Process employee survey findings and actions to improve the work environment.
- Civil rights training will be provided for supervisors and managers.

- An Early Intervention Program will be established throughout the Agency to address employee concerns before they become complaints.

Purchaser Road credit System

275. Question: I am deeply troubled by your proposal to change the timber road purchaser credit system. It seems to me that this is merely an attempt by the Service to skirt Congressional accountability by reducing our ability to control the amount that is set aside for this program. As I understand it, under your new system, Congress will not be able to set the amount for the road purchaser credit but instead, the bidding price for certain timber sales will simply be lowered by the amount of the road construction costs. Is this correct?

Answer: While the motivation for the proposal to change the purchaser credit system is not to skirt Congressional accountability, it is true that a limit for purchaser credits for road work would no longer be set by Congress. Instead of the purchaser receiving credits for road work, road costs will be borne by the purchaser since they will be a cost to the sale. This cost will be reflected in reduced bids for the timber.

276. Question: What is the goal in suggesting this change?

Answer: The goal is threefold:

- Eliminate the cost of tracking purchaser credits
- Reduce litigation associated with the program
- Eliminate the perception that the taxpayers are subsidizing the timber program by making the road work a direct cost of the timber sale.

277. Question: Will this change effect your policy on the amount of timber that will be offered for sale where your costs won't be recovered?

Answer: This change will not have any effect on our policy. The offering of sales for personal use, forest health, etc. will not change.

278. Question: Will this change result in roads that do less damage to soil, water and fish resources?

Answer: Permanent system roads reconstructed and constructed with purchaser credits are designed to prevent damage to soil, water and fish resources. Current design requirements will continue to be included in timber sales. Much of the road reconstruction done under the present purchaser credit program is for mitigation of environmental impacts caused by old roads that were not designed to be environmentally friendly. We expect this to continue as road work becomes a cost of the timber sale.

279. Question: Who are the winners and who are the losers in this proposal?

Answer: If this change eliminates the perception that we are trading roads for national forest trees and thus reduces the controversy surrounding funding of timber roads on the national forests we will all win.

Contract modification will be required to allow small purchasers to elect to have the government build required roads. Without this, small purchasers ability to purchase sales will be decreased.

280. **Question:** Will this change eliminate "Deficit Sales", and Wooden Dollar Bids when road credits are "ineffective"?

Answer: The elimination of purchaser road credit would not eliminate deficit sales. It would most likely cause their number to increase. Roads would become a direct cost of the timber sale, rather than a credit, and purchasers would have to account for those costs by lowering their bids for the timber. The costs to plan, prepare, offer, award, and administer those sales would be unaffected by the elimination of purchaser credit. However, sale appraisals are based upon the average operator. It is common practice when a sale appraises deficit (when road costs exceed the value of the timber) for industry to be contacted to determine if there is any interest in the sale. Purchasers have often decided that they can make money on these sales, and do submit bids. These bids are made in cash or certified check. We do not accept bids without payment, if that is what is meant by "Wooden Dollar Bids." Of course, the elimination of purchaser road credit would also eliminate ineffective credit as well.

Forest Ecosystem Restoration and Maintenance Fund

281. **Question:** Please explain why you want to create the "Forest Ecosystem Restoration and Maintenance Fund".

Answer: P.L. #104-19, The 1995 Rescission Act generated substantial public controversy surrounding the definition of salvage timber sales. The public believes the definition is too broad and needs to be restricted. Further, there is concern that new funding is needed to implement a broader range of on-the-ground activities that better support forest health and ecosystem restoration activities.

282. **Question:** How will this new fund impact payments to the states?

Answer: Payments to states will still be made on receipt-generating activities of the FERM fund.

283. **Question:** Do you need legislation to create this fund?

Answer: Yes, legislation is needed to create the proposed FERM Fund. It is necessary to:

- o Redirect the 10 percent receipts now directed to roads and trails by law

- o Transfer of salvage fund balances to a new fund
- o Establishment of the FERM revolving fund and purpose.

Tongass Land Management Plan

284. **Question:** What is the status of the Tongass Land Management Plan Revision process?

Answer: Work is proceeding on the substantive and legal review of key elements of the proposed final plan and EIS. Also, the scientific risk assessment panels have begun their process of reviewing and rating alternatives with respect to the likelihood of maintaining viable populations of certain species of wildlife and fish. The Secretary of Agriculture has stated that these activities will be completed on or before June 20.

285. **Question:** I understand you have delayed release of the final plan and I am concerned that you are being unduly influenced by the timber interests in Alaska. Why has the release been delayed?

Answer: The decision to delay the release of the revised Tongass Land Management Plan and final Environmental Impact Statement was not influenced by timber interests or other groups in Alaska. The delay has occurred because additional work was identified as being necessary to assure that the final plan is legally defensible, scientifically credible, and will sustain the resources of the forest. The work includes legal and substantive reviews of several key elements of the plan, plus reconvening the scientific "risk assessment panels" to rate the estimated effects of the proposed final alternative and other alternatives on certain species of wildlife and fish.

286. **Question:** Has the \$110,000,000 provided to the "Southeast Alaska Economic Disaster Fund" in the FY 96 Omnibus appropriations bill been fully dispersed?

Answer: All FY 96 (\$50 million) and FY 97 (\$20 million) funds have been certified as dispersed to the 20 communities and boroughs eligible for assistance through the Southeast Alaska Economic Disaster Fund.

287. **Question:** What impact did this payment have on Southeast Alaska?

Answer: These funds have helped buffer the eligible communities of Southeast Alaska from many of the adverse effects resulting from structural changes in the region's timber industry. The City and Borough of Sitka and the City of Wrangell will use a portion of their funds to employ former timber workers, while Sitka, Wrangell, and the Ketchikan Gateway Borough will use some of the funds for related community development projects.

The 20 communities and boroughs eligible for assistance through the Fund, Petersburg, Wrangell, Craig, Hoonah, Hydaburg, Kake, Klawock, Pelican, Skagway, Angoon, Coffman Cove, Kasaan, Tenakee Springs,

Thorne Bay, Metlakatla, Borough of Haines, City and Borough of Juneau, Ketchikan Gateway Borough, City and Borough of Sitka, and City and Borough of Yakutat, have received their FY 1997 payments. The majority of payments over the four year life of the fund go to Ketchikan (\$25 million), Wrangell (\$37 million), and Sitka (\$18 million).

288. **Question:** What industry generates the most economic activity and jobs in Southeastern Alaska?

Answer: Government services (federal, state, and local), commercial fishing, tourism, and the forest-products industry generate the most economic activity and jobs in Southeastern Alaska.

Special Use Fees and Permits

The GAO released a report on December 20, 1996 entitled "U.S. Forest Service: Fees for Recreation Special Use Permits Do Not Reflect Fair Market Value." In this report, GAO alleges that "the Forest Service charges considerably less than fair market prices for the use of the land for ... major commercial activities and that as a result federal fee revenues are millions of dollars less than they could be."

289. **Question:** Do you agree with these serious findings?

Answer: The Forest Service generally agrees with the reports conclusions. Many holders of special use authorizations do not pay fair market value for the right and privilege of use and occupancy of National Forest System lands. The Forest Service recognizes the importance of obtaining a better return for the use of public resources and to recover the costs for providing these recreation opportunities. It endorses the concept of placing the special use authorization program on a more business-like basis. However, in the Forest Service response to the GAO report we state "The audit report contains over-generalizations and statements not fully supported by fact or applicable law or regulation. Thus, the Forest Service cannot fully agree with the audit recommendations."

290. **Question:** GAO states that the fee system used by the Service for commercial activities has not been updated in 30 years. Is this true?

Answer: As GAO reported, "Most of these fees [Commercial Fees] are set using the Graduated Rate Fee System (GRFS)." Until the end of the 104th Congress this statement would have been true in regards to gross receipts to the government. With the passage of the new ski fee system within the Omnibus Parks and Public Lands Management Act of 1996 (PL 104-333), the majority of receipts to the government will be outside the scope of the GRFS.

The Forest Service uses several systems for calculating fees. Examples include fees for the use of government-owned facilities for commercial use, outfitter/guide services, organizational camps, and ski resorts. In most of these cases, fees are based on a land value appraisal or percentage of gross revenue. Currently the Forest

Service is developing an updated fee for golf courses and is in communication with the outfitter/guide community in their efforts to pass legislation that will include fee system language.

In summary, GAO's statement on the age of the GRFS system is correct, but the Forest Service is moving towards updating its fee systems as shown in the recently passed ski resort fee system and pending Outfitter/Guide legislation.

291. Question: If so, how can you expect to get a fair market value based upon a system that is 30 years out of date?

Answer: The Forest Service is moving towards updating its fees systems to better reflect fair market value. The challenge with any fee system is balancing the benefits of retaining its currency with the administrative costs of doing so. In many cases, the Forest Service is indexing fee schedule rates to retain some degree of fair market value currency between periodically scheduled (and costly) fee structure updates.

292. Question: If you were asked to start from scratch and develop a special-use permit fee formula today, would you create this system?

Answer: No. Any future fee systems would be designed to incorporate standard business practices that are easy to implement and keep current.

293. Question: How much additional revenue could be raised if the Service charged fair market value for special-use permits, similar to the fees being charged on state and private lands?

Answer: This value can not be determined without extensive appraisal and market rent studies to determine the value of the various types of uses we authorize throughout the country. The Forest Service believes the GAO report generalizes on the matter of fees for recreation use. For example, in rare cases, we have discovered that the fees we were assessing had been higher than the current fair market value would indicate. The GAO report makes broad-based conclusions of the Forest Service's overall program by using results from only a small sampling of specific types of uses, rather than examining the full array of uses in the many locations, including those types of uses that are not commercial in nature.

The Forest Service also objects to the report's consideration of values established by a county tax assessor for tax purposes as an indicator of market value for recreation residence fee purposes. (The Forest Service acknowledges that the GAO qualifies its discussion on this subject by a footnote in the report). Procedures used by county tax assessors do not meet the more rigid requirements applicable to Federal agencies when appraising property. Federal law and administrative direction would not permit use of county tax assessors' value determinations in setting rental fees for use of the Federal lands.

The Forest Service also challenges the comparison with return rates for uses on state lands. Without further analysis, one cannot determine the comparability between similar uses occurring on State and National Forest System land to make conclusions as to the basis for fee differences. For example, differences in fees could be reflective of differences in the types of authorizations that have been used, and the terms/conditions of such authorizations which restricts a holder's use and occupancy of the land.

We must insert a note of caution and concern when initiating action on permit rental fee determinations. Nearly every effort the Forest Service initiated for many years to develop a fee determination process or bring fees to fair market value has resulted in some manner of Congressional action resulting in permit holders paying fees below those rates proposed by the Agency. For example, an extensive effort to evaluate and develop a more equitable fee structure for communication sites was pre-empted by congressional action which required a complete rewrite of the fee schedule. This is a decision for the Congress and the Administration to make.

In summary, the Forest Service recognizes there is a gap between the current level of fees for recreation uses and the fair market value of such uses. We believe that processes and procedures currently available can close this gap, but will require staff and funding support as well as Congressional support. However, we do not agree with the report's comparison between the Forest Service's fee determination procedures and that used by other public entities to establish value and fees.

294. Question: When the Service does collect these commercial special use permit fees, where does the revenue go?

Answer: Except for fees collected under the authorities of the Granger/Thye Act and the Land and Water Conservation Fund Act, all receipts are returned to the Treasury. The Granger/Thye Act allows fees to be used for the restoration and maintenance of government-owned facilities. The Land and Water Conservation Fund Act allows for 15% of fees collected to be retained by the unit to pay for administrative costs associated with the issuance of authorizations pursuant to that authority.

295. Question: Do you think the Service would have more of an incentive to update the fee collection system and be more aggressive about that collection if the individual Forests were allowed to retain those fees, as we are doing with the recreational fee demonstration project?

Answer: In those areas retaining more fees, these additional resources have allowed for improved fee collection. If increased fee collection is followed by offsetting cuts in appropriated funding we would not see any change in the relative amount of funding available to support collections.

Midewin National Tallgrass Prairie

296. **Question:** The House report that accompanied your FY 97 appropriation bill earmarked \$1,600,000 to operate the Midewin National Tallgrass Prairie--the same amount the former Chief had testified would be necessary to run this new unit. This earmark was necessary because the service failed to live up to its commitment to properly maintain Midewin and had asked for less than \$1,600,000 in the FY 97 request. I am optimistic that you have seen the error in your ways and that your FY 98 request provides \$1,600,000 to run Midewin, thus eliminating the need for this Committee to earmark again. How much is the Service requesting for operations at the Midewin Prairie in FY 98?

Answer: The President's Budget contains \$1,300,000 for Midewin Prairie in FY 1998. The need is reduced because of elimination of several single-year costs associated with start-up at the unit. In FY 1997, the unit is expecting to spend in excess of \$300,000 to move employees to the unit. These costs will not exist in FY 1998. Accordingly the need for FY 1998 is \$1,300,000 instead of the \$1,600,000 that was needed in FY 1997.

297. **Question:** Last year this Committee appropriated \$1,600,000 for construction activities at Midewin NTP. Please provide the Committee with a progress report on that construction?

Answer: Two construction projects will be undertaken with these funds, an administrative site and a recreation site. The design for the administrative site and a service building have been completed. We are negotiating contracts to begin the construction for these two projects and expect to have them awarded within 60 days. The design of the office was initiated the week of March 24, 1997. We will have a better idea of the construction schedule once this effort is completed. Design for the recreation site will begin prior to June 1, 1997. We expect to have the contract awarded for this effort prior to September 30, 1997.

298. **Question:** I know that there are land acquisition opportunities at Midewin, NTP and I am interested in having the Service secure these important properties before developers consume them. I am most interested in having the Service acquire the 11 acre "Barr" tract as well as the larger "Barr-Wix" tract. If acquired, how would these properties fit with the existing acreage at Midewin?

Answer: The 11-acre "Barr" tract lies adjacent to the west boundary of Midewin and is within the Prairie Creek corridor. Public acquisition of this property would afford additional protection of the corridor and the attributes of Midewin. The "Barr-Wix" tract is two large properties (507 acres owned by James W. Barr, and 410 acres owned by Jeff & Beverly Wix) that adjoin each other and are located west of Midewin along the Illinois River. Plans for future expansion of Midewin have not been developed. These undeveloped lands could be a logical inclusion for Midewin if it is determined that it is desirable and in the public interest to expand Midewin to include lands along the Illinois River. However, it would be prudent to wait until the management plan for the unit is complete before going into large land acquisitions.

299. Question: What is the cost for these properties?

Answer: Appraisals have not been prepared on these properties so we are unable to provide a cost estimate. We have plans to have an appraisal of the 11-acre property completed in the near future.

300. Question: Are they owned by willing sellers?

Answer: The 11-acre property was purchased by the American Land Conservancy. It is their desire to sell it to a public entity. The "Barr-Wix" tract is also owned by willing sellers.

301. Question: Are outside groups attempting to assist the Service in acquiring these properties?

Answer: No, other than the fact that the American Land Conservancy purchased the 11-acre tract for future conveyance. Currently, we do not have funding to purchase these properties.

302. Question: Why doesn't the service appreciate the important ecological and recreational opportunities available at Midewin, not only for the people of the Chicago area, but for the entire nation?

Answer: The Forest Service appreciates the importance of Midewin, that is why we undertook efforts to initiate its transfer from the Army to the Forest Service. This is also why we testified in support of the two bills that led to the transfer of the property to the Forest Service. The Forest Service has committed a large amount of resources to make Midewin a success. In fact, prior to its transfer to the Forest Service, we redirected funds in excess of \$500,000 toward efforts at Midewin to insure it could get off to a successful start.

303. Question: Do you consider Midewin to be less important than the Shawnee NF and other timber-producing units within the National Forest System?

Answer: We consider Midewin to be on a par with other units within the National Forest System. We believe it provides a unique opportunity for an urban population to learn more about our ecosystems. It also makes an important ecological contribution to the greater Chicago area as well as providing outstanding recreational opportunities.

304. Question: Please provide the Committee with a list of accomplishments at Midewin NTP, in FY 97 and what is planned there for FY 98.

Answer:

FY97

929 acres of prairie restoration
75,000 lineal feet of prairie forb seed production beds constructed
10,000 lineal feet of prairie forb seed production beds planted

20 acres of prairie grass seed production area created
 52,000 lineal feet of stream protection fencing
 2,370 lineal feet of wetland protection fencing
 70 permanent vegetative monitoring plots established
 65 agricultural leases converted to special use permits
 150 person-days of ecosystem health monitoring
 Site plan developed for administrative site.
 Planning started on facilities and transportation plan
 Fire management plan developed
 Land & Resource Management Planning started
 Volunteers spent 576 hours leading 72 tours for 1,284 people.
 Volunteers also constructed 3,500 lineal feet of seed beds, planting
 and nurturing 20 species of root stock whose seed will be used for
 future onsite restoration. In total, 139 individuals donated more
 than 850 hours to complete this project.

FY98

1,200 acres of prairie restoration
 10,000 lineal feet of prairie forb seed production beds planted
 100 acres of prairie grass seed production area created
 5,000 lineal feet of stream protection fencing
 5,000 lineal feet of streambank stabilization
 2,000 lineal feet of wetland protection fencing
 20 permanent vegetative monitoring plots established
 300 person-days of ecosystem health monitoring
 10,000 lineal feet of fence row woody vegetation removal
 Construction of administrative site completed
 Construction of recreation facilities funded in FY97 completed
 Facilities and transportation plan completed
 Draft L&RM Plan completed
 Volunteer contributions are expected to increase in volume and value
 over FY97.

Evanston Research Work Unit & Lincoln Park

I was very pleased with your FY 98 request for the Evanston Research
 Unit (NC-4902). The Service's recognition of the important work
 performed at this station and of the extraordinary staff there is very
 gratifying and will go a long ways to addressing the forestry needs of
 the Chicago area. John Dwyer heads up this talented office and
 through his visionary leadership, urban forestry research in Chicago
 and throughout the world has taken great strides.

305. **Question:** Currently, the Evanston Station is engaged in very
 important restoration work at Lincoln Park in Chicago. What has been
 accomplished to date in this restoration project?

Answer: Collaborative research studies have been initiated and are
 currently in progress with the Chicago Park District, Friends of
 Lincoln Park, and the Lincoln Park Advisory Council. These studies are
 focusing on understanding: (1) public perceptions of ecological
 restoration, (2) the role of volunteer stewards in ecological
 restoration, and (3) expectations of diverse public groups for urban

park rehabilitation. Presently, we are primarily in the data collection phase of the studies with major data analyses and interpretation to come, followed by publication of at least four user friendly guides in late FY 1998.

306. Question: What is planned for the Lincoln Park restoration work in FY 98?

Answer: The Research Work Unit at Evanston will continue the research studies conducted in partnership with the Chicago Park District, Friends of Lincoln Park, and the Lincoln Park Advisory Council. These studies are focused on (1) the effectiveness of urban environmental education programs, (2) decision models for management of urban park vegetation, and (3) evaluating the acceptability of alternative approaches to restoration among important segments of the public.

Beneficial products from this research will include:

- a. Guidelines for using volunteer stewards in urban landscape restoration projects
- b. Guidelines for restoring and managing developed sites with diverse and conflicting use demands
- c. A decision support system for urban park vegetation, and
- d. Guidelines for environmental education programs focusing on the resources of urban parks.

307. Question: If this Committee added \$500,000 for the Lincoln Park Restoration to the Evanston Station's base request of \$1,350,000 what could be accomplished in FY 98?

Answer: Research would be conducted to identify the public benefits derived from park restoration alternatives, and the distribution of those benefits across diverse urban population segments. However, a higher funding level for this program area without a corresponding increase in the President's Budget would require an offset by providing lower funding for other research activities which the Administration considers of higher priority. An offset within the President's Budget would terminate research and the jobs of 8-10 employees at North Central Station or elsewhere.

308. Question: Does your FY 98 request for the Evanston Station provide sufficient funding for the unit to continue to provide critical research support for important projects in the area like the "Ecosystem Management Project in the Greater Chicago Metropolitan Area", "Chicago Region Biodiversity Council" URP and Midewin, NTP?

Answer: Yes. In addition to the \$500,000 provided for the ongoing ecosystem restoration research at Lincoln Park, the FY 1998 President's budget provides \$853,000. This should provide sufficient funding to support the long term research needs associated with important projects such as the "Ecosystem Management Project in the

Greater Chicago Metropolitan Area", "Chicago Region Biodiversity Council", the "Urban Resources Partnership", and the "Midewin National Tallgrass Prairie". The FY 1998 request provides what we think is the most appropriate balance of funding for these projects within the overall priorities set in the Forest and Rangeland Research President's budget.

309. Question: Does your FY 98 request for the Urban Forestry Center for the Midwestern States provide sufficient funding for the Center to continue its vital technology transfer efforts in urban forestry?

I believe this transfer is critical for effective management of the significant urban forest resources of the Midwest and of the entire nation. The Center staff has played a key role in getting critical initiatives underway such as the "Ecosystem Management Project in the Greater Chicago Metropolitan Area", "Chicago Region Biodiversity Council" and URP. A strong Urban Forestry Center is critical for the continued success of these and other high priority efforts.

Answer: Yes, the FY 98 request provides for a base level of funding for the Urban Forestry Center for the Midwestern States to continue its role of technology transfer in urban forestry. The Center will continue to support the Chicago Region Biodiversity Council and the Urban Resources Partnership.

310. NO QUESTION:

Urban and Community Forestry

I am very excited about the Service's work in the Urban Resources Partnerships program. Under the leadership of Mr. Lyons and the outstanding work done by Karen Hobbes, this program has become a success story throughout the nation. I understand Ms. Hobbes is leaving the URP program in order to run the new American Heritage Rivers program at the White House. While I am saddened by her departure from URP, I have renewed confidence that the Heritage Rivers program will be a success under her direction.

311. Question: I understand, Mr. Lyons, that you are considering expanding the list of cities that are currently involved in URP. If this is true, what cities are under consideration?

Answer: The following cities have expressed their interest in participating in the program, and are presently under consideration: Boston, Buffalo, Pittsburgh, Baltimore, the District of Columbia, South Florida, Milwaukee, Las Vegas, and San Francisco.

312. Question: While I support expansion of URP, I hope it will not reduce the level of support being provided to key existing URP cities. What could be accomplished if an Interior Department agency like the Fish and Wildlife Service were to expand its role in URP from one of purely technical assistance, as is the case now, to a role that called for full participation and financial commitment at the same level of the Forest Service?

Answer: While the Forest Service is not in a position to speak to the budget of any other federal agency, additional financial support to the URP program could allow for participation by additional cities in the program, and could serve to leverage additional matching resources from potential partners in those locations.

313. **Question:** How much are you requesting for Urban and Community Forestry in FY 98?

Answer: The FY 1998 President's Budget proposes \$25,500,000 for Urban and Community Forestry programs.

314. **Question:** How does this compare with the current program level?

Answer: The FY 1997 enacted appropriation is \$25,505,000 for Urban and Community Forestry programs. Thus, the program in FY 1998 is essentially maintained at the same level as FY 1997.

315. **Question:** Please provide the Committee with an analysis of the allocation of the FY 98 urban forestry funds and the specific criteria used in determining these allocations.

Answer: Urban and Community Forestry funds are allocated annually to the Regions and Northeastern Area according to the same criteria. Funding of \$150,000 is provided for base program support in each State and the District of Columbia. The remaining balance is distributed to the North, West, and South for support of State and community grants. The distribution for the State and community grants is based on demographic data, and results in a distribution of 44% for the North, 34% for the South, and 21% for the West.

The budget also includes \$1,000,000 which is used to support competitive grants submitted to the National Urban and Community Forestry Advisory Council (NUCFAC), and \$2,000,000 which is used to support the Urban Resources Partnership (URP) program. Grants awarded to the field through these two mechanisms are in addition to the criteria-driven allocations described in the preceding paragraph.

316. **Question:** In FY 97, \$1,400,000 was provided for special urban forestry projects in Chicago, specifically Chicago Wilderness. How much is being provided for this project in your FY 98 request?

Answer: Please see the answer to Question 315 for the allocation of FY 1998 Urban and Community Forestry funds in the President's budget. Based on the President's budget approximately \$200,000 will be available for the Chicago Wilderness project from the funds allocated to the Northeastern Area. This is a tentative funding level. The level of funding allocated for Urban and Community Forestry activities in Chicago may be revised in response to emerging information on program priorities and to Congressional action.

317. **Question:** If this is different than FY 97, why?

Answer: The allocation criteria for FY 97 and FY 98 are exactly the same. The FY 98 budget does not include the \$2,550,000 in Congressional earmarks and intent provided to the Northeast and Midwest.

The Forest Service has provided special funding to Chicago for various projects since 1990. Rapid population growth is occurring in communities throughout the South and parts of the West, resulting in increasing interest in and requests for U&CF assistance, not all of which the agency can meet. In addition, natural catastrophic events such as Hurricane Fran in North Carolina, and floods along the west coast, present additional challenges. The President's Budget balances the very worthwhile activities the agency has supported in Chicago for as many as 7 years with increasing needs elsewhere.

318. **Question:** In FY 97 \$1,150,000 was provided for the Northeast Pennsylvania Urban Forestry Initiative. How much are you requesting for this project in FY 98?

Answer: Please see the answer to Question H-315 for the allocation of FY 1998 Urban and Community Forestry funds in the President's budget. The President's budget does not bring forward FY 1997 earmarks, including the \$1,150,000 earmarked in FY 1997 for the Northeast Pennsylvania Urban Forestry Initiative. The final level of funding allocated for Urban and Community Forestry activities in the Northeastern Area for urban and community forestry programs in the Northeast and Midwest may be revised in response to emerging information on program priorities and to Congressional action.

319. **Question:** If this is different than FY 97, why?

Answer: The funds provided in the FY 97 budget for the Northeast Pennsylvania Urban Forestry Initiative were through a Congressional earmark. While the Initiative and its associated activities are important locally, the agency's national program management and budget allocation process must consider all competing needs across the country, and has not identified this particular Initiative as a priority in either FY 97 or FY 98.

320. **Question:** Does the Northeast/Midwest Region have a long-range plan for the management of the Area's urban forestry resources?

Answer: Yes, Northeastern Area State & Private Forestry has prepared and is currently implementing the Urban Forestry 5-year plan for 1995-1999. The plan is specifically targeted to the Northeast/Midwest Region and was developed with input from program constituents.

321. **Question:** If so, please provide the Committee with a copy.

Answer: A copy of the Urban Forestry 5-year plan has been provided to the Subcommittee.

322. **Question:** Please include a summary of the latest published accomplishments for the urban forestry program in the region.

Answer: The latest summary of published accomplishments for the urban forestry program for FY 95 and the FY 96 report has been provided to the Subcommittee.

Fire Management

323. **Question:** One of the most important challenges facing natural resource managers today is the protection of lives and property from fire in the wildland/urban interface. What are you requesting to deal with this problem?

Answer: The first line of defense in wildland/urban interface fires is often the Rural Volunteer Fire Departments. The FY 1998 budget includes \$18,002,000 for the Cooperative Fire Protection Program, which provides technical and financial assistance to the Rural Volunteer Fire Departments through the State Foresters.

The President's budget also includes an estimated \$30 - \$50 million to reduce hazardous fuels on National Forest System lands. Funds for hazardous fuels reduction work will come from the proposed Fire Operations budget line item within the Wildland Fire Management appropriation. This level of funding will result in between 850,000 and 1,300,000 acres of fuels reduction work on National Forest System lands compared to 750,000 acres of fuels work planned for FY 1997. Hazardous fuels reduction work on National Forest System lands provides opportunities to coordinate with adjacent landowners to maximize the effectiveness of reducing wildfire hazards in the wildland/urban interface areas.

324. **Question:** Is this a change from the current level?

Answer: The FY 1998 budget level of \$18,002,000 is essentially the same as the current year enacted level of \$18,001,000.

325. **Question:** What did the National Association of State Foresters recommend for this activity in FY 98?

Answer: The State Foresters have recommended a program level in FY 1998 of \$25,000,000, an increase of 39%.

326. **Question:** Does a strong program in cooperative lands fire protection help control fires on federal land? If so, how?

Answer: The cooperative lands fire protection program helps control fires on federal forest lands in many ways. The program works to increase local, rural, and State capabilities for coordinated fire suppression preparedness and mobilization for both federal and non-federal lands. This builds an enhanced organizational capacity to respond to fires on federal lands.

In addition, shared fire protection resources are developed and maintained among Federal, State, and local agencies for more cost

effective operations and mobilization. Technologies and information are developed and exchanged among federal and State organizations.

The fire prevention program activities deliver a nationwide information and education campaign to minimize outbreak of human-caused fire on all forest land ownerships.

State and Private Forestry

327. **Question:** The economic action programs have been significantly reduced from the current level of \$17,150,000 in FY 1997 to \$9,000,000 in your FY 98 request. At the requested level, what will happen to the continuation of the rural development through forestry initiative in the Northeast and Midwest?

Answer: The Rural Development component is one of several program components within the Economic Action Program that provides technical and financial assistance critical to natural resource dependent rural communities. These programs also help communities to position and use other USDA, federal, state and private programs. With the reduction in Economic Action Programs a significant local presence of USDA field staff (Forest Service) will be unavailable to interact and work with rural communities. The Reduction in Rural Development program dollars will reduce the community driven input vital to the quality of State Rural Development Strategic Plans developed under the USDA Rural Development Rural Community Advancement Program (RCAP).

In prior years, earmarks to the Economic Action Programs have directed more than 50% of the Rural Development national budget to the Northeast and Midwest. At the proposed level in the FY 1998 budget, the national budget for Rural Development will be allocated across all regions based on the established national program criteria of forest cover and economic vitality.

Thus, under the proposed budget the rural development through forestry initiative in Northeast and Midwest will continue, but at a reduced level. Through earmarks, the initiative has received special funding for over 4 years, and should be well established by now.

328. **Question:** What are the highest priorities in the State and Private Forestry budget in FY 98?

Answer: Given the administration's efforts to reduce government budget expenditures, it must first be recognized that all activities proposed in the State and Private Forestry budget are included because they are priorities.

Within that context, particular priorities emerge. One priority focuses on enhancing forest health, through the forest health, cooperative fire, stewardship and urban and community programs. Another priority focuses on the wildland-urban interface, primarily through the cooperative fire and urban and community programs. An additional priority focuses on economic vitality of communities and

the role of forests, through the stewardship, economic action, and pacific northwest programs.

329. Question: Why is it so important that we maintain and, in some instance emphasize, the cooperative programs of State and Private Forestry?

Answer: The cooperative programs of State and Private Forestry help landowners achieve their private land management objectives while achieving broad national objectives such as clean air and water, reduced risk of insect and disease outbreaks, lower risk of wildfire outbreak, and sustainable economic development. Investments in State and Private Forestry programs return significant benefits, both through the additional resources leveraged as well as through the prevention of potential future costs of forest deterioration.

It is critical to maintain these program, as the need for forest stewardship, to maintain and improve forest health and productivity, on the 58% of the nation's forests which are owned by non-industrial private forest landowners, remains enormous. Less than 20% of those NIPF lands are professionally managed. National interests related to clean air and water, abundant wildlife, and a sustainable wood supply are linked to the management of these lands.

The cooperative programs of State and Private Forestry also perform a broad over-arching national policy role. Federal policies are best developed and implemented through a coordinated mechanism. In addition, the role for development and dissemination of technical expertise and emerging technologies is also managed most cost-effectively through a national conduit.

American Heritage Rivers

As I said earlier, I am very pleased that Karen Hobbes has been chosen to run the American Heritage River initiative. I originally had grave reservations about this program and believe that the already scarce resources being devoted to urban environmental restoration work would be further diluted. With Karen Hobbes running this program, however, my concerns have evaporated. My focus now turns to helping the Administration ensure that this program works and I stand willing to work with you in order to ensure that it does. I am also very interested in having the Chicago River be included in the initiative. The Chicago River is truly one of America's great rivers and this coupled with the enormous restoration work already underway by the Friends of the Chicago River, would make a perfect candidate for inclusion.

330. Question: This is a top priority of mine and I wonder if you can tell me what can be done to ensure that the Chicago River is selected as one of your American Heritage Rivers?

Answer: The President's Council on Environmental Quality is currently working with a multi-agency team to develop a nomination process for American Heritage Rivers. The team includes the Forest Service,

Natural Resource Conservation Service, National Park Service, Environmental Protection Agency and Advisory Council on Historic Preservation. Given the work of the Friends of the Chicago River and the Chicago Demonstration Project, I am sure the advocates working on behalf of the Chicago River will submit a strong application for consideration. On April 28, Chicago scheduled a regional meeting to get public input on the initiative.

Timber Sales

331. Question: What is being done by the Service to ensure that in the future the high bidder in timber sales will be awarded the sale, regardless of whether or not the bidder plans to cut the timber?

Answer: Current policy is that the timber sale contract is one of several "tools" the Forest Service has to implement vegetative management decisions which meet Land Management Plan goals and objectives. The contract is a legally binding agreement between the Forest Service and a purchaser. In this agreement, the Forest Service agrees to sell timber to the purchaser and permit the purchaser to cut and remove the timber designated in the contract, and the purchaser agrees to purchase, cut, and remove the included timber. If purchasers buy timber with no intent to cut and remove this timber, vegetative management objectives will not be met.

Purchasers who sign contracts with the Forest Service, and then do not cut the timber, default the timber sale contract. The Forest Service is required to aggressively pursue contract default damages under the timber sale contract and 36 CFR 223, Subpart C.

Furthermore, in accordance with the National Forest Management Act of 1976, timber sale contracts are awarded to the highest, responsible bidder who can fulfill the terms of the contract, including cutting and removing the timber. After assessment of financial responsibility per 36 CFR 223.101, a check for debarment or suspension and an EEO compliance check (on sales over \$1,000,000 in value) are made. If the apparent high bidder passes these screens, the sale is awarded; otherwise, either the next highest responsible bidder is offered the sale at the high bid or the sale is readvertised.

The Administration views this as an important issue and will further examine the implications of current policy and possible variations.

332. Question: The Forest Service gives out gross figures on the National Forest acres burned but doesn't provide the public or the Congress with specific information on the acres burned that are used for timber production, grazing, campgrounds, wilderness, the "urban interface", etc.?

Please provide this for 1994 through 1996 and compare each year with the average 1984-1993 average.

Answer: The Forest Service does not collect this information at a national level. Establishing the cover type after it has burned would be a costly and difficult statistic to gather, and in our estimation would be highly inaccurate.

333. **Question:** What was the cost per acre to protect each area by type of cover?

Answer: Some local units with geographic information systems (GIS) are able to gather such information, but at present this is not available throughout the National Forest System. The FS and DOI wildland firefighting agencies are currently re-examining their fire statistical information needs as part of the new Federal Fire Policy implementation plan. All such information gathering is predicated on the availability of GIS based data.

334. **Question:** What was the cost per acre to put out fires, same basis?

Answer: See above.

335. **Question:** How many of the timber acres burned in 1994, 1995, and 1996 had salvage sales? Show acres sold and volume sold.

Answer: Timber sales are not sold by acres, but rather by volume. Many of the acres burned were in wilderness, roadless, or streamside management areas where timber is not harvested. The salvage volume sold was as follows:

1994	0.946 billion board feet
1995	1.390 billion board feet
1996	1.712 billion board feet

336. **Question:** How much volume was prepared, offered, and sold?

Answer: The salvage offer and sold volumes are given below:

Fiscal Year	Offered	Sold
1994	1.005 BBF	0.946 BBF
1995	1.852 BBF	1.390 BBF
1996	1.936 BBF	1.712 BBF

337. **Question:** What was the difference between advertised and bid prices?

Answer: The difference varied depending upon in what part of the country sales were sold, what species were offered, and in what condition was the timber. These factors varied sale by sale. This information is not available except on a sale by sale basis.

338. **Question:** For sales where cutting has been completed what was the difference between volume and dollars sold and cut?

Answer: We do not track information on the differences between cut and sold timber volumes and values for sales where cutting has been completed. We do track sold and cut volumes and values each quarter on a fiscal year basis, but this information represents information from all sales that were sold or cut during that period, and are not comparable. For example, a sale sold in FY 1994 might be harvested in FY 1995 or 1996. The cut volume and value would be recorded in the year that the timber is cut. Another reason for differences between sold and cut values is the timber sale contract provisions that adjust rates based upon the increase or decrease in the timber price indices.

339. Question: What was the estimated time that timber would have economically recoverable volume after a fire?

Answer: The time will vary by species and location. For example, with the high humidity in the South the salvage must be harvested in a couple of months or blue stain and rot will make it worthless. In the West pine can last for a couple of years or longer while the true firs will decay much faster. In a few places in the Rockies standing dead lodgepole pine may even last ten years or longer. With lodgepole pine, while it is no longer valuable for sawtimber, it does remain a viable product for cabin logs.

340. Question: How much time elapsed before contact award?

Answer: Some contracts are awarded soon (within weeks) after the salvage is discovered, especially in the Southern Region where there is threat of the southern pine beetle and where rot occurs rapidly. In the Western Regions the time frame may run from months or even a year or longer where extensive environmental analyses are necessary and where threatened or endangered species are involved. Additionally, priorities are established that results in some sales being worked on before others.

341. Question: What was the timber contract time length?

Answer: The contract length varies according to the species involved, the total volume involved, and the amount of road reconstruction or construction needed. Sales of southern pines usually last for only one logging season. Generally, most salvage sales are one to two year contracts. Sales with large volume amounts or road building might take three years.

Salvage Sales

342. Question: Using the format of the 1992-1994 study GAO did for me, show for 1995-1996, for each forest the salvage timber volume sold, receipts, costs and net in board feet cut, dollars, and dollars per thousand board feet and per acre cut.

Answer: The specific information requested by Congressman Yates is quite detailed and quite massive in scope. Most of the data is available, except dollars per acre cut that we do not collect. However, it is outside our ability to collect, collate, analyze,

summarize and present it in a meaningful way within any reasonable length of time while still carrying out the day-to-day work needed to manage the National Forests. Further, we suggest that it would be far more efficient for the GAO to replicate their completed 6-month study, "Distribution of Timber Sales Receipts Fiscal Years 1992-94," based on its assumptions by including fiscal years 1995 and 1996 than it would be for the Forest Service to initiate this work from the beginning.

343. **Question:** Was the 22,900 new jobs, \$976,000,000 increases in wages, and estimated \$150,000,000 in added federal tax revenue used when the salvage rider was under consideration provided by in whole or in part by the Forest Service?

Answer: We can not find any Forest Service reference to the jobs, income and taxes referenced in the question and we do not know what volume level is associated with the estimates.

344. **Question:** What is the annualized outcome of these 3 indicators from your salvage cut to date under the rider?

Answer: It is very difficult to estimate the amount of harvest associated with the Emergency Salvage Sale provisions from other harvest because timber sale contracts can be active in several fiscal years. Employment and income outcomes in addition to those associated with the original salvage sale program most likely started being realized in late fiscal year 1996 and will continue into fiscal year 1998.

345. **Question:** In a March 1995 speech, the former Chief said that 18.3 bbf could be potentially salvaged from 1995 to 1997. At the same time, Congress was told it would only be 12.7 bbf. The Chief also said that only 4.45 bbf would "pay its way out of the woods." This Committee was told that between 5.6 bbf and 7.2 bbf of salvage removed would not be below cost sales. Why the discrepancies?

Answer: The different figures are not discrepancies but rather different answers to different questions with different conditions and time frames involved. The 18 bbf was the estimated total dead volume. Much of it was not economically viable but technically could have been "salvaged" if we had paid someone to take it out. Other figures, such as the 12 bbf, represented the amount that might be harvested if environmental considerations and workforce limitations were not a factor. Additionally, when the "Taylor Amendment" was first considered, an effects statement was offered that responded to the conditions and time frame of his proposed bill. As you know, that version was vetoed by the President. By the time another version was passed it had different conditions and several months had passed.

346. **Question:** This Committee was also told that 1.8 bbf was the five year salvage average between 1990 and 1994. However, I don't remember being told if this was timber offered, sold or cut. Which is it?

Answer: It is volume offered.

347. Question: The 1996-1997 salvage offer estimate is 1.68 bbf and 1998 is 1.275 bbf. Both of these figures are well below earlier estimates. Why?

Answer: Estimates are updated based upon on-the-ground conditions as they become known. The amount of viable salvage remaining and the amount of volume resulting from events that create the need for salvage, such as fires and insect attack, all will affect the latest estimate. Estimates are made by the field units based upon the best information they have at the time the estimate is made. Ground verification and the actual amounts available will continue to be adjusted based on what is prudent and possible.

348. Question: What timberland acreage are these estimates based on?

Answer: Acreages are not tracked. The volumes per acre will vary significantly depending on the location, the species, and the salvage condition. That is why it is necessary to make an estimate of the volume based on several variables. It is possible that acreages were used by some forests where salvage was fairly uniform in the salvage area, but we have no record of that.

349. Question: What are your current estimates of actual dead timber and the potential to recover costs?

Answer: We do not estimate the actual dead timber, but rather what we are able to salvage. For FY98 we propose to offer 1.28 billion board feet of salvage. This national estimate comes from regional estimates, which are used to determine the salvage sale funds needed and represent a level with a reasonable potential to recover costs.

350. Question: Please compare these salvage estimates on a per acre and percent of inventory basis with Forest Survey estimates of actual mortality. How do they differ?

Answer: Since the salvage estimates are not made on a per acre basis it is not possible to compare them to estimates of actual mortality on a per acre basis. However, one can describe some differences in the estimates. Salvage estimates are based on salvage opportunities identified by the field units. Such an "opportunity" would have sufficient salvage present to prompt a salvage sale effort. The actual salvage volume included would be that amount that could be economically removed and still meet other environmental considerations such as riparian, wildlife, and visual needs. Additionally, in a regular green sale there are usually incidental amounts of salvage that are marked and included for harvest if they are not needed for other environmental considerations. Mortality on the other hand would include all volume regardless of whether it would be economical or environmentally sound to harvest and regardless of its location. For a national picture of this, when estimates were made for the amount of salvage available under the Rescission Act, there was an estimated volume of 18 billion board feet of dead material (mortality). However, much of it was not economical to harvest because of size, location and other factors. It was estimated that a volume in the

range of 5 billion board feet could be offered for sale after excluding the uneconomical portion and providing for environmental considerations and work force capability. Salvage efforts will also be variable depending on market factors especially for small logs and chip type material. When there is a depressed market for this type material, as we have recently been experiencing, there is no demand for this type of salvage.

351. Question: Please provide for 1990 to 1996, by year and in total, annual salvage volume offered, sold and cut, with prices in dollars and per mbf. Show receipts and total cost/sale planning through regeneration and 25% payments.

Answer: Prior to the Emergency Salvage Sale provisions there was no need to track volume sold, volume harvested, cost, nor receipts by a category of timber sale, such as, salvage. These statistics were recorded on an individual timber sale basis but there was no specific identifier that would aggregate data by a type of timber sale. Therefore, we can not provide this information. We have tracked salvage volume offered for sale since this was a management attainment item and directly related to expenditures from the salvage sale fund. We have also tracked deposits to and obligations from the salvage sale fund. However, we did not track total receipts from salvage sales. We have had numerous requests for this type of information since discussion on the Emergency Salvage Sale provisions began. In an attempt to track this information we have added a qualifier to our data to identify salvage sales subject to the provisions. Therefore we can provide some limited data.

Some limited receipt data does exist for salvage sales that were sold after enactment of the Emergency Salvage Sale provisions and harvested in fiscal year 1996. There was 517.4 million board feet harvested in fiscal year 1996 with a total value of \$53.8 million and a unit value of \$103.94 per thousand board feet. Similar data does not exist for other years.

The obligations from the Salvage Sale Fund include the cost of sale preparation, resource support, engineering support, harvest administration, and general administration overhead. These cost accurately reflect the cost of preparing the volume offered and administering the salvage volume under contract. As stated earlier, we do not track the cost of reforestation activities by type of sale.

Fiscal Year	Salvage Volume			Salvage Sale Fund	
	Offer	Sold	Harvest	Collections	Obligations
	(billion board feet)			(million \$)	(million \$)
1990	2.87			163.4	111.0
1991	1.71			144.2	130.4
1992	1.41			171.8	130.4
1993	1.91			193.7	169.6
1994	1.01	.95		163.3	181.0
1995	1.85	1.39	1.94	133.0	155.1
1996	1.94	1.71	1.04	181.2	205.0

BBF - billion board feet.

The sold volume for fiscal year 1994 is a national estimate. Sold and harvest volumes for fiscal years 1995 and 1996 were determined by each region.

352. Question: Will this relationship for 1997 and 1998 be better or worse?

Answer: There is a time lag between volume offered for sale and volume sold and between volume sold and volume harvested. Timber sales offered in the last quarter of a fiscal year are often awarded, sold, in the following fiscal year. Harvest volume could be reported in the year sold or in following years depending upon the length of the contract and how rapidly the purchaser removes the timber. Given these generalities, it is likely that the volume sold in fiscal year 1997 will be similar to that of fiscal years 1995 and 1996. Harvest volumes should increase over the volume in fiscal year 1996 as contracts will be expiring from salvage sales sold in prior fiscal years. It is difficult to project receipts. First quarter fiscal year 1997 revenues per thousand board feet were down for volume sold but up for volume harvested when compared to the same period in fiscal year 1996.

Range

353. Question: Provide for grazing permit areas burned the range restoration cost and grazing receipts. Compare the costs per acre for treatment with the annual receipts per acre from grazing use.

Answer: The Agency does not collect information specific to rangelands burned or associated loss of grazing receipts. It would take an extensive information inquiry to the field to determine. Nearly all of the acres burned annually are not suitable livestock forage areas. Restoration costs vary significantly based on site conditions and potential for adverse erosional effects. An average cost per acre would not have a meaningful context. For the most part, the costs related to rangeland rehabilitation pertain to erosion prevention. Grass seeding is typical however erosion prevention structures are often needed on highly erosive lands. Typically, rangelands that are burned are rested for 2 full growing seasons in order to allow the forage to re-establish itself. Often, alternative grazing is found for the displaced livestock, therefore the reduction in use and concomitant loss of grazing receipts is not directly proportional to acreage burned.

Fire

354. Question: Have there been either GAO or OIG reports dealing with fire costs? If so what are their principal points?
- 355.

Answer: An April 1991 GAO report "Funding Alternatives for Fire-fighting Activities at USDA and Interior" noted that emergency firefighting funding was consistently underestimated, creating impacts on other accounts. The report proposed alternatives for funding emergency firefighting.

In addition, OIG accompanied a FS review team (9/5/96) on a field trip to examine the causes of large fire costs and prepared an informal trip report with no recommendations.

356. **Question:** What actions have been taken on their recommendations? Please have your answers reviewed by each agency and provide any comments they chose to make.

Answer: The Department of Agriculture and the Department of Interior have worked together to develop respective agency funding requests that address the need for alternative funding for wildland fire management activities. The President's budget for the Wildland Fire Management appropriation (Forest Service budget) proposes a major improvement in how fire management costs are funded. The President's budget funds hazardous fuels management activities from the Fire Operations BLI and funds only fire preparedness activities from the Preparedness BLI. Between \$30 and \$50 million is included for hazardous fuels management activities in the Fire Operations budget. The actual amount spent on hazardous fuels reduction will depend on a variety of factors including weather, the availability of crews, and completion of environmental analyses in accordance with the requirements of NEPA. The Fire Operations BLI also funds fire suppression operations, burned area emergency rehabilitation, and fire preparedness activities during severe condition (severity funding). Funding for fire operation needs above the appropriated amount would be requested from a government-wide emergency contingency account, following appropriate documentation from USDA.

Additional Timber Questions

357. **Question:** I also understand that the timber sale costs you furnished GAO for their 1992-1994 report didn't cover all appropriated funds that are expended in connection with timber sales. Is this correct?

Answer: It is true that the GAO, in its report entitled Distribution of Timber Sale Receipts Fiscal Years 1992-94, only considered, in their words, "outlay categories directly related to timber sales." This was by design, however, and not because the Forest Service restricted the cost information made available to them. The GAO, as noted on page 12 of their report, took their cost information from the agency's TPIR-01 "Source and Application of Funds Worksheets," which contain a complete enumeration of all timber-related expenditures. GAO limited the costs they considered because they were expressly asked to provide information on how "receipts deposited to the General Fund of the Treasury compared to the Forest Service's outlays for preparation and administration of timber sales." (Emphasis added. See page 1 of the report.)

The specific outlay categories that GAO considered, as stated on page 12 of their report, were as follows: harvest administration, general administration-sales, sale preparation, analysis and documentation, appeals/litigation-sales; other resource support, timber planning, transportation planning, and silvicultural examinations. The outlay categories they did not consider are discussed in answering question 358.

358. **Question:** If so, what are the other appropriated fund expenditures made because timber was cut for 1992-1994? List by budget category and amount nationally.

Answer: GAO states, on page 12 of their report, that they excluded: (1) costs in the nature of long-term investments -- e.g., road costs, and facilities costs; (2) costs not directly related to preparing and administering timber sales -- e.g. genetic tree improvement costs and timber stand improvement costs; and (3) costs recovered through timber purchaser charges -- e.g. brush disposal costs and cooperative road maintenance costs.

A worksheet displaying costs not considered in the GAO analysis has been provided to the Subcommittee. Only national totals are presented. The data are displayed as they appear on the TPIR-01 "Source and Application of Funds Worksheets," which were the original information sources used by GAO. They are shown by account description rather than by budget category as is being requested.

359. **Question:** Update the 1992-1994 GAO timber study by Forest to include 1995 & 1996. Show the annual dollars, 5 year total dollars, and 5 year average dollars. Show the 5 year volume in board feet and acres cut. Show the annual outcome on a per acre cut and per MBF cut and 5 year average. Incorporate the Regional and Washington office costs into each Forest.

Answer: The specific information requested by Congressman Yates is quite detailed and quite massive in scope. Most of the data is available, except per acre numbers that we do not collect. Distributing all overhead costs to each Forest would not be representative of how our budget process is executed. However, it is outside our ability to collect, collate, analyze, summarize and present it in a meaningful way within any reasonable length of time while still carrying out the day-to-day work needed to manage the National Forests. Further, we suggest that it would be far more efficient for the GAO to replicate their completed 6-month study, "Distribution of Timber Sales Receipts Fiscal Years 1992-94," based on its assumption by including fiscal years 1995 and 1996 than it would be for the Forest Service to initiate this work from the beginning.

360. **Question:** What standard do you apply to determine when the cost per acre to get a desired resource condition can be performed in a more cost-effective way with direct action versus a timber sale. Provide 10 specific examples.

Answer: When national forest managers identify an objective that requires manipulating the existing vegetation, e.g. reducing forest fuels or creating desirable habitat conditions for certain species wildlife, current agency policy stipulates that an analysis be performed to determine what will be the least net cost method of attaining the stated goal. Other things being equal, eg. environmental consequences, the least net cost procedure is to be employed. Although the overall costs of timber sales are typically greater than those associated with other vegetative management practices, e.g. prescribed burning, the use of herbicides, or cut and leave, oftentimes their net cost is lower because the other practices do not produce any revenue to help offset the costs of implementing them.

In addition, whenever a timber sale is to be undertaken, current agency policy stipulates that a financial/economic efficiency analysis is to be performed during gates 1 and 2 of the sale preparation process. Gate 1 is "Position Statement Development." The activity is to ensure the addition of timely, efficient, and environmentally sound project proposals to the timber sale action plan. The financial/economic efficiency analysis helps establish the justification for making further project investments. Gate 2 is "Sale Area Design." The activity is to formulate an environmentally sound and cost efficient project in conformity with National Environmental Policy Act (NEPA) requirements, and to develop a design for field layout of the project. The financial/economic efficiency analysis provides information on the financial/economic implications of all project implementation alternatives, and represents one piece of information the responsible line officer considers in selecting the preferred alternative. The Forest Service has developed a computer model called TSPAS (Timber Sale Planning and Analysis System) that is available to all field units to perform the required analyses.

Because projects are designed and implemented at the forest and district levels, this is where the required financial/economic efficiency analyses are performed. Records of these analysis are not routinely kept at the Regional or Washington Office levels, however, a few examples have been compiled during periodic timber program field reviews. While 10 examples are not available, the five examples listed below have been provided to the Subcommittee and are believed to be sufficient to assess the rigor of the analyses being performed. The specific examples included herewith are:

- 1) Morrell Sale; Lolo NF; Region 01.
- 2) Canyon Face Sale; Lolo NF; Region 01.
- 3) White Swan/Holmes Project; Medicine Bow-Routt NF; Region 02.
- 4) Abbott/Salmon Timber Sale Project; Mt. Hood NF; Region 06.
- 5) Moose Pass Cooperative Project; Chugach NF; Region 10.

361. **Question:** Show for five forests for 1992-1996 how your Timber Sale Accounting Program was used to make decisions on how much timber to sell and what sort of timber to include in sales?

United States
Department of
Agriculture

Forest
Service

Lolo
National Forest
(406) 329-3750

Building 24
Fort Missoula
Missoula, MT 59801

File Code: 2400

Date: 09/21/95

Route To:

Subject: MORRELL TIMBER SALE

To: DENNY MALONE

Attached is the economic information for the proposed Morrell timber sale. I have all of the background information in a folder to be included in the Project File when you are ready for it. Please let me know if you need further information.

/s/ Fred J. Stewart

Fred J. Stewart
Forest Economist

MORRELL ENVIRONMENTAL ASSESSMENT
ECONOMIC INFORMATION

ECONOMIC EFFICIENCY

Each action alternative in the proposed Morrell Environmental Assessment would result in a viable sale offering based on current market conditions (Summer 1995). Table 1 shows summary economic information for each of the alternatives considered in this Environmental Assessment. Alternative 1 has the largest harvest volume and number of acres treated. Each subsequent alternative has declining harvest volume and treatment acres. Predicted stumpage values decline as harvest volume drops primarily because historical stumpage prices have been sensitive to total sale volume. The economic implications of higher stumpage prices being associated with larger volumes is shown in the revenue figures in Table 1. While the harvest volume of alternative 1 is 6.8 times larger than alternative 5, the gross revenue is 9.5 times larger. The Present Net Value (PNV) for Alternative 1 is estimated to be \$537,000 which is \$514,000 more than Alternative 5, the alternative with the smallest Present Net Value. Present Net Value takes into account the timing of costs and revenues, collapsing all economic activity into one time frame by discounting future activity. Forest Service projects use a 4% discount rate. With PNV information for all alternatives, it is possible to compare alternatives even when costs and revenues occur at different times. The PNV for each alternative includes \$3,000 for treating noxious weeds on existing roads and ski trails. The PNV information in this Environmental Assessment is presented in current 1995 base year dollars.

Beyond the control of the Lolo Forest are timber market conditions which could greatly influence the viability of a selected sale alternative and the associated revenue to the government and 25% Fund payment to counties. The stumpage appraisal model used by Region 1 of the Forest Service (TECALC) is updated quarterly and based on sale information from the past 3 years. The current appraisal model indicates that all alternatives would be viable sale offerings. The timber stumpage market has retreated from the record high levels at the beginning of 1994. Information from the University of Montana Bureau of Business and Economic Research shows that Montana mill-delivered timber prices in the 1st Quarter of 1995 were down 15-44 percent from the year earlier (Table 2).

The declines in mill-delivered timber prices from record levels in late 1993 has resulted from declines in lumber prices, reduced Montana mill capacity and higher than anticipated harvest on nonindustrial private lands. Lumber prices as measured by the Western Wood Products Association Lumber Price Index showed the following declines by the end of the 1st Quarter 1994 to the end of the 1st Quarter 1995: ponderosa pine down 9 percent, Douglas fir/larch down 21 percent, and lodgepole pine/Englemann spruce down 18 percent. Delivered mill values are now generally less than \$500/mbf which shows that under current market conditions, stumpage prices may fall below the estimated values shown in Table 1. In a period of falling market prices it is not uncommon for the stumpage appraisal model to overestimate the stumpage price that will be paid for timber. Economic information on proposed sales in each alternative is included in the Morrell project file.

ECONOMIC IMPACTS

Impacts on local communities are estimated by quantifying jobs and income associated with harvesting and processing the timber into final products. Each million board feet of timber provides a total of 33.5 jobs and \$ 956,000 of income, based on the MicroIMPLAN Input-Output Model estimates for the Lolo forest. These total job and income estimates include direct, indirect and induced effects. Job and income impact estimates apply to the market area of the Lolo forest. However, the actual job and employment impacts from the sales included in this Environmental Assessment may vary from the estimates depending on the timing of other harvest activity in the market area and flows of timber into and out of the market area.

Counties with Lolo Forest acreage receive 25% of the gross revenues generated by timber sales. These funds are used by the counties to support their road and school programs. Estimates of the 25% Fund payments for each alternative are shown in Table 1. Job and income effects of 25% Fund expenditures and Forest Service employment and expenditures are included in the total job and income estimates.

TABLE 1. MORRELL ECONOMICS COMPARISON

<u>INDICATOR</u>	<u>ALT. 1</u>	<u>ALT. 2</u>	<u>ALT. 3</u>	<u>ALT. 4</u>	<u>ALT. 5</u>
AREA TREATED (ACRES)	741	378	157	109	49
TIMBER HARVESTED (MBF)	2,051	1,345	561	456	300
PREDICTED HIGH BID (\$/MBF)	362	337	275	273	257
SPECIFIED ROAD COSTS (\$/MBF)	1	2	1	0	0
PRED. STAT. HIGH BID (\$/MBF)	361	335	274	273	257
GROSS REVENUE	\$743,000	\$453,000	\$154,000	\$124,000	\$ 77,000
25% FUND PAYMENT TO COUNTIES	\$186,000	\$113,000	\$ 39,000	\$ 31,000	\$ 19,000
REVENUE ABOVE REGENERATION	\$743,000	\$450,000	\$153,000	\$124,000	\$ 77,000
TIMBER SALE PRESENT VALUE	\$537,000	\$307,000	\$ 79,000	\$ 58,000	\$ 23,000

Table 2. TIMBER PRICES (\$/MBF)

<u>SPECIES</u>	<u>1ST QUARTER</u> <u>1994</u>	<u>1ST QUARTER</u> <u>1995</u>	<u>% CHANGE</u>
YELLOW PINE	585	500	- 15
BULL PINE	488	275	- 44
DOUGLAS FIR	482	368	- 24
WESTERN LARCH	490	368	- 25
LOGSPOLE PINE	480	360	- 25

MISSOULA COUNTY PAYMENTS IN LIEU OF TAXES (PILT) COMPUTATIONS

Missoula county receives money from the Federal government through both the 25% Fund and payment in lieu of taxes (PILT). The 25% Fund pays 25% of the total forest receipts from timber harvest, land uses, recreation uses and fees, power lines, mining, grazing, reforestation, purchaser road credits and salvage harvest. Twenty five percent of the total forest receipts from the Lolo forest is paid to counties based on the proportion of forest acres in each county.

There are two computations that are used to determine the amount of PILT payments that will go to Missoula County.

Alternative A

Determine the lesser of 1 or 2:

1. \$0.75 for each Entitlement Acre for Missoula County
... = $\$0.75 \times (705,884 \text{ acres}) = \$529,413$
OR
2. Population Ceiling (which is based on county population)
... = \$1,000,000

LESS

Prior Year Payment for Missoula County @ \$363,828
... = $\$529,413 - \$363,828 = \$165,585$

Note: for values less than 0, use \$0.

Alternative A computation is \$165,585.

Alternative B

Determine the lesser of 1 or 2:

1. \$0.10 for each Entitlement Acre for Missoula County
... = $\$0.10 \times (705,884 \text{ acres}) = \$70,588$
OR
2. Population Ceiling = \$1,000,000

Alternative B computation is \$70,588

The greater of Alternative A or Alternative B computations becomes the county designation and thus determines the PILT payment for the county for that year. For 1994, Missoula county was an "A" county and the PILT payment was \$165,585. As an "A" county, a modest change in the revenue from future timber sales will have an offsetting effect on the amount of the PILT payment for the county. For each change in 25% Fund, the PILT payment will move in the opposite direction. The magnitude of change will equal the amount of the 25% Fund payment that is made to a unit of local government, as long as the total of all revenue sharing payments to the county is between \$0 and \$458,825. Once those payments total \$458,825 any further increase would NOT affect the PILT payment which would have hit the lower limit of \$70,588. In 1994 the Prior Year

Payments to Missoula county were \$363,828, so changes in 25% Fund payments would have an effect on PILT payments. If the revenue sharing payments were to drop to \$0, the PILT payment would reach its maximum level of \$529,413. Thus PILT payments will fall into the range of \$70,588 to \$529,413 as long as the total amount budgeted for PILT payments at the national level stays at the current level of \$105 million. Total PILT payments have stayed at a relatively constant level near \$105 million since the legislation was passed in 1977.

In 1994 legislation was passed that increased dollar values for population ceiling and entitlement acre rates used in both PILT computations. For Fiscal Year 1995, there was no increase in appropriated funds for PILT payments. Unless there are increases in appropriated funds in the future, then the 1994 legislation will not result in larger PILT payments, even though the new PILT computations would give that impression.

AVERAGE REVENUE PER ENTITLEMENT ACRE

In Fiscal Year 1994, the 705,884 acres of entitlement lands produced \$1,095,707 in 25% Fund payments and \$165,585 in PILT payments for Missoula County. That total of \$1,261,292 was an average of \$1.79/acre. There are relatively minor federal revenue sharing payments from other sources in addition these two.

For the most recent tax year, 1994, the average industrial forest land property tax for Missoula county ranged from \$1.07 - \$1.34/acre. This tax was based on the average value of category three land of \$357/acre and mill levies for the county that range from 380.3 - 475.4 mills.

Thus, based on the most recent information available, federal lands generate revenues to Missoula county residents through their county government and independent school districts that is somewhat larger on a per acre basis than property taxes generated by industrial forest land. This situation changes from year to year, particularly as timber stumpage prices vary and as mill levies change.

Missoula county contains 24.4% of the Lolo Forest acreage and this proportion determines the share of revenue from timber sales that will be paid back to the county. Each \$1.00 of timber revenue would generate \$0.25 for the 25% Fund payment to the counties with land in the Lolo Forest, and the Missoula county share would be \$0.061.

HISTORICAL PILT & 25% FUND INFORMATION
(OVER 98% OF LOLO FOREST RECEIPTS ARE FROM TIMBER REVENUES)

COUNTY NAME	MISSOULA
STATE NAME	MONTANA
25% FUND PAYMENTS-----FY1988	358,415
FY1989	322,250
FY1990	630,831
FY1991	349,827
FY1992	545,299
FY1993	831,506
FY1994	1,095,707
 PILT CHARACTERISTICS++++ENTITLEMENT ACRES	705,884
PRIOR YEAR PAYMENT	363,828
POPULATION	50,000
CEILING	1,000,000
ALTERNATIVE A COMP.	165,585
ALTERNATIVE B COMP.	70,588
PAYMENT	165,585
1993 A OR B COMP.	A
A OR B ...1998 TO 1994	A
 PILT PAYMENTS=====	
FY1988	339,003
FY1989	344,629
FY1990	290,532
FY1991	314,557
FY1992	108,892
FY1993	295,628
FY1994	165,585

United States
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Forest
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File Code: 2400

Date: 04/15/96

Route To:

Subject: CANYON FACE TIMBER SALE

To: STEVE DAGGER

Attached is the economic information for the proposed Canyon Face timber sale. Please let me know if you need further information. I have all of the documentation put together for the project file, let me know when your work is finished and I'll send it to you.

Fred J. Stewart
Forest Economist

ECONOMIC ANALYSIS FOR THE PROPOSED CANYON FACE TIMBER SALE

I. ECONOMIC EFFICIENCY ANALYSIS

Alternatives 3, 4 and 5 in the proposed Canyon Face timber sale project would each result in a viable sale offering under current market conditions (Spring 1996). Alternative 2 does not include a timber sale, but does include many of the same vegetative treatments as Alternatives 3, 4 and 5. Total acres treated are greatest in Alternative 5. Table 1 shows that the timber revenue in Alternatives 3, 4, and 5 more than offsets the cost of both the timber sale and the other area vegetative treatments, while Alternative 2 has an estimated total cost of \$498,000. The estimated stumpage values were generated by the current appraisal model which is based on Regional sale data from the last three years. The stumpage market has been volatile recently so there is no way to know what the actual stumpage price will be when this sale is sold. The "Revenue Above Base Rates" shows the amount of sale revenue available to fund sale area improvements. If the total cost of sale area improvements exceeds the revenue above base rates, then appropriated funds would be needed to pay for the costs that exceeded the revenue above base rates. The availability of appropriated funds for sale area improvements is always uncertain. For the Canyon Face sale, Alternatives 3, 4 & 5 are all estimated to generate significantly more revenue above base rates than the cost of sale area improvements. The stumpage value could drop by approximately \$205/mbf for Alternative 3, \$153/mbf for Alternative 4, and \$185/mbf for Alternative 5 and still generate enough revenue to cover specified roads, reforestation and sale area improvements.

Table 1 also shows the Present Net Value (PNV) of all alternatives. The PNV calculation includes all Forest Service costs incurred in offering timber sales, such as preparation of sale environmental documents, reforestation and engineering costs. The cost of environmental document preparation is estimated at \$336,000 for all alternatives considered in this analysis. Costs and revenues in the PNV calculation are discounted by a factor of 4%/year to reflect the time when they occur to bring all costs and revenues into a common time frame. The costs of all area improvements are shown for each alternative. The PNV/Acre treated shows that Alternatives 3, 4 and 5 all have positive values because timber revenues offset all of the costs of area improvements. Alternative 2, with no timber revenue available to offset the cost of area improvements, has relatively high PNV/Acre of -\$346/Acre. Alternative 3 has the highest sale revenue and the fewest acres treated, so its PNV/Acre is the largest of all alternatives, \$546/Acre. Alternative 5 has the largest number of acres treated and the second highest sale revenue resulting in a PNV/Acre of \$161/Acre. The stumpage value for Alternative 5 could drop by approximately \$55/mbf down to \$176/mbf and the timber revenue would still cover all costs of the alternative.

TABLE 1. ECONOMIC SUMMARY INFORMATION

	<u>ALT 2</u>	<u>ALT 3</u>	<u>ALT 4</u>	<u>ALT 5</u>
SALE VOLUME (MBF)	0	5,403	3,298	4,722
ACRES HARVESTED	0	688	468	628
HIGH BID (\$/MBF)	-	261	223	251
SPECIFIED ROADS (\$/MBF)	-	18	24	20
STAT. HIGH BID	-	243	199	231
SALE PRESENT NET VALUE (M\$)	-	647	140	353
SALE PNV (\$/MBF)	-	120	42	75
ROAD OBLITERATION (M\$)	11	<u>1/</u>	<u>1/</u>	<u>1/</u>
GATE INSTALLATION & REMOVAL (M\$)	3	<u>1/</u>	<u>1/</u>	<u>1/</u>
STABILIZE CLOSED ROADS (M\$)	3	<u>1/</u>	<u>1/</u>	<u>1/</u>
AREA IMPROVEMENTS				
WEED SPRAYING (M\$)	5	5	5	5
ECOBURN (M\$)	58	6	22	21
RELEASE & WEED (M\$)	63	32 <u>2/</u>	13 <u>2/</u>	46 <u>2/</u>
PRE-COM. THIN (M\$)	-	28	19	32
TRAILHEAD & CAMPGROUND IMPROVEMENTS AND STRUCTURE REMOVAL (M\$)				
	<u>3</u>	<u>11</u>	<u>11</u>	<u>11</u>
TOTAL IMPROVEMENTS (M\$)	146	82	70	115
PNV TOTAL AREA IMPROVEMENTS	-130	-73	-62	-102
TOTAL ALTERNATIVE PNV (M\$) <u>3/</u>	-460	575	78	251
TOTAL ACRES TREATED	1,330	1,053	1,272	1,556
PNV/ACRE TREATED (\$)	-346	546	61	161
REVENUE ABOVE BASE RATES (M\$)	NA	1,188	574	988
TOTAL SALE REVENUE (M\$)	NA	1,412	735	1,186
25% FUND PAYMENT TO COUNTIES (M\$)	NA	353	184	296

1/ Included in the sale costs.

2/ Release & Weed costs included on some timber harvest units also.

3/ Includes the discounted cost for preparation of the environmental document.

II. ECONOMIC IMPACTS

Impacts on local communities are estimated by quantifying jobs and income associated with harvesting and processing the timber into final products. Each million board feet of timber provides a total of 33.5 jobs and \$ 956,000 of income, based on the IMPLAN Input-Output Model estimates for the Lolo forest. These total job and income estimates include direct, indirect and induced effects. Counties with Lolo Forest acreage receive 25% of the gross revenues generated by timber sales. These funds are used by the counties to support their road and school programs. Estimates of the 25% Fund payments for each alternative are shown in Table 1. Job and income effects of 25% Fund expenditures and Forest Service employment and expenditures are included in the total job and income estimates.

ATTACHMENT A
PAYMENT IN LIEU OF TAXES AND 25% FUND PAYMENTS TO COUNTIES

Sanders County Payments in Lieu of Taxes (PILT) Computations

Sanders county receives money from the Federal government through both the 25% Fund and payment in lieu of taxes (PILT). The 25% Fund pays 25% of the total forest receipts from timber harvest, land uses, recreation uses and fees, power lines, mining, grazing, reforestation, purchaser road credits and salvage harvest. Twenty five percent of the total forest receipts from the Lolo forest is paid to counties based on the proportion of forest acres in each county.

There are two computations that are used to determine the amount of PILT payments that will go to Sanders County.

Alternative A

Determine the lesser of 1 or 2:

1. \$0.75 for each Entitlement Acre for Sanders County
... = $\$0.75 \times (910,349 \text{ acres}) = \$682,762$
OR
2. Population Ceiling (which is based on county population)
... = \$342,000

LESS

Prior Year Payment for Sanders County @ \$1,062,656
... = $\$342,000 - \$1,062,656 = - \$720,656$

Note: for values less than 0, use \$0.

Alternative A computation is \$0.

Alternative B

Determine the lesser of 1 or 2:

1. \$0.10 for each Entitlement Acre for Sanders County
... = $\$0.10 \times (910,349 \text{ acres}) = \$91,035$
OR
2. Population Ceiling = \$342,000

Alternative B computation is \$91,035

The greater of Alternative A or Alternative B computations becomes the county designation and thus determines the PILT payment for the county for that year. For 1994, Sanders county was a "B" county and the PILT payment was \$91,035. As a "B" county, a modest change in the revenue from future timber sales will not have any effect on the amount of the PILT payment for the county since revenues are only included in "A" county computations. Of course a change in revenue would result in a change in the 25% Fund portion of the total payment to the county.

The 1977 Payment in Lieu of Taxes (PILT) Act is administered by the BLM. As long as the Prior Year Payments (PYP) are greater than \$250,965 (= \$342,000 - \$91,035), Sanders County will continue to have a PILT payment of approximately \$91,035 based on alternative B computation. Prior Year Payments for FY 1994 were \$1,062,656. If Prior Year Payments were to drop to \$0, then PILT could climb as high as \$342,000 based on alternative A computation.

Thus PILT payments will stay in the range of \$91,035 to \$342,000 as long as the total amount budgeted for PILT payments at the national level stays at the current level of \$105 million. Total PILT payments have stayed at a relatively constant level near \$105 million since the legislation was passed in 1977.

If, in the future, Prior Year Payments were to drop to \$0 for Sanders County, then it is likely that the payments would have dropped for many other counties as well. This means that the method used to divide the \$105 million among the counties would result in PILT payments much closer to the current \$91,035 than the higher figure of \$342,000.

Average Revenue per Entitlement Acre

In Fiscal Year 1994, the 910,349 acres of entitlement lands produced \$1,821,836 in 25% Fund payments and \$ 91,035 in PILT payments for Sanders County. That total of \$1,912,871 was an average of \$2.10/acre. There are relatively minor federal revenue sharing payments from other sources in addition these two.

For the most recent tax year, 1994, the average industrial forest land property tax for Sanders county was \$0.87/acre. This tax was based on the average value of category three land of \$357/acre and a county mill levy of 310 mills.

Thus, based on the most recent information available, federal lands generate revenues to Sanders county residents through their county government and independent school districts that is somewhat larger on a per acre basis than property taxes generated by industrial forest land. This situation changes from year to year, particularly as timber stumpage prices vary and as mill levies change.

Sanders county contains 23.1% of the Lolo Forest acreage and this proportion determines the share of revenue from timber sales that will be paid back to the county. Alternative 5, the preferred alternative for this project, would generate an estimated High Bid value of \$ 251/mbf for a total sale value of \$1,186,000. This would result in a 25% Fund payment of \$ 296,000 to the counties with land in the Lolo Forest, and the Sanders county share would be approximately \$ 68,000.

HISTORICAL PILT & 25% FUND INFORMATION

COUNTY NAME	SANDERS
STATE NAME	MONTANA
25% FUND PAYMENTS-----FY1988	969,087
FY1989	851,802
FY1990	1,378,868
FY1991	1,053,960
FY1992	1,593,975
FY1993	1,452,079
FY1994	1,821,836
PILT CHARACTERISTICS++++ENTITLEMENT ACRES	910,349
PRIOR YEAR PAYMENT	1,062,656
POPULATION	9,000
CEILING	342,000
ALTERNATIVE A COMP.	0
ALTERNATIVE B COMP.	91,035
PAYMENT	91,035
1994 A OR B COMP.	B
A OR B ...1998 TO 1994	B
PILT PAYMENTS=====FY1988	90,665
FY1989	90,709
FY1990	90,696
FY1991	90,696
FY1992	90,696
FY1993	90,746
FY1994	91,035

White Swan/Holmes Project Medicine Bow-Routt NF

Social and Economic

Site-specific Affected Environment

A discussion of the social setting for this area is included within the final Environmental Impact Statement for the Forest Plan. This discussion is summarized, in part, here, but for a full discussion, the reader is directed to the Plan EIS (Pages III-16 through III-28).

The communities that may be affected by this proposed project include Albany, Woods Landing, Encampment, Mountain Home, Saratoga, and Laramie in Wyoming. All of these communities are relatively stable at the present time, however, Laramie is the only community with a highly diversified economy. Processing logs for resale as wood products plays a smaller role in Laramie, with much greater dependence in Encampment and Saratoga. All of these communities rely on tourism to some degree for their present economic well being with towns of Albany, Woods Landing, and Mountain Home as the most heavily dependent on tourism.

Use of the project area and adjacent areas by those living in the local communities centers on recreation use such as hiking, horseback riding, hunting, camping, driving for pleasure, and snowmobiling. In meeting these recreation needs, management of the Forest plays an important role in defining the fabric of the community and the reason that many residents live in these locations.

Results of social impact analysis conducted as part of the Forest Planning effort indicated that management strategies that use such activities as logging to enhance wildlife habitat, recreation, and visual quality would have a net positive effect on social structure and long-term economic stability. This conclusion and the implications for this project appear to have been strengthened during recent years as evidenced by the information obtained for the Annual Monitoring Evaluation Report for the Forest Plan. This report is available from the Forest Supervisor's Office in Laramie.

The supply of sawtimber for mills in Encampment, Laramie, and Saratoga has declined during recent years. This decline has been enough to threaten closure of one or more of the sawmills in those communities. In response, they are looking much further from their traditional operating areas for supplies of timber. If they are not successful, either layoffs or complete shut down of these mills may result. Two of the communities involved are dependent on these sawmills for economic well being. Loss of income and employment at these mills could have a noticeable impact on the social structure of these communities as well as the ability of local government agencies to provide services to others within these communities. This does not appear to be an immediate problem for Laramie, because of the size and diversity of that community.

Environmental Consequences

It is difficult to state the economic and social consequences from just one sale since one sale is only a small part of the total timber sale program for the Forest. It is not the case that this one sale would create jobs or that, without the sale (No Action Alternative), employment would be reduced. Rather, selection of one of the action alternatives (Alternatives 2 through 5) would help the mills retain their supply, thus maintaining jobs. Not having a sale could contribute to the existing supply problem that the mills are having which could lead to a lay-off or mill closure.

Alternative 1 - No Action

This alternative could cause a feeling of dissatisfaction and disappointment in the towns of Encampment and Saratoga among timber industry and associated employee's families. They would be disappointed that the Forest Service is not having a timber sale that could maintain jobs for them. Because Laramie is a more diverse community, this alternative would have a lesser impact on Laramie from a social perspective.

In terms of economic impact, because no timber would be supplied with this alternative, there could be reduced employment and income as a result of a potential lay-off or mill closure.

Alternative 2 - Vegetation Treatment Without Clearcutting

Potential effects described in Alternative 1 on Encampment and Saratoga would be less likely with this alternative. However, this alternative would also appear to some in these communities as a move away from commodity production on the Forest.

The supply of timber would benefit the community having the mill to which the sale was awarded. This could enhance both employment and income, thereby enhancing the ability of local government agencies, as well as volunteer organizations, in carrying out their missions.

Alternative 3 - Vegetation Treatment (Including Clearcutting) without Road Construction

Potential effects related to maintaining jobs in Encampment, Saratoga and Laramie would be greater under this alternative than under Alternatives 1 and 2. This alternative would also appear to some in these communities as a move toward commodity production on the Forest.

The supply of timber is greater in this alternative than in Alternative 2 and would be a greater benefit to one of the communities. This would enhance both employment and income and thereby enhance the ability of local government agencies, as well as volunteer organizations, in carrying out their missions.

Alternative 4 - Desired Future Condition

Potential effects related to maintaining timber based jobs would be the greatest under Alternative 4 because the supply of timber is greater under this alternative than any other alternative considered in detail.

Because the supply of timber would be the greatest under this alternative, implementation of Alternative 4 has the potential to provide a greater economic benefit to one of the communities. Alternative 4 also has the potential to enhance both employment and income and the ability of local government agencies, as well as volunteer organizations, to carry out their mission to a greater degree than any other alternative.

Alternative 5 - Vegetation Treatment to Limit Sediment Levels

Because the supply of timber is very similar in Alternative 5 to that in Alternative 3, the potential effects are the same.

Cumulative effects from past activities, the White Swan/Holmes Timber Sale and reasonably foreseeable actions have been reviewed and Forest Plan Standards and Guidelines would be met while carrying out each alternative.

Economic Efficiency Analysis

A discussion of the overall economic setting for this area is included within the Final EIS for the Forest Plan. The relevant discussion for this project is summarized, in part, here, but for a full discussion, the reader is directed to the Forest Plan EIS (Pages III-5 through III-15).

The cost, benefit, and revenue values used in the economic analysis are calculated using the Forest Service DGECON computer program. This program calculates the present value of costs, benefits, and revenues. The main criterion used in assessing economic efficiency is Present Net Value (PNV), which is defined as the value of discounted benefits minus discounted costs. A PNV analysis includes all outputs to which monetary values are assigned. The monetary values include both market and non-market values. In addition, a cost efficiency analysis is completed to determine the financial returns of each alternative. A cost efficiency analysis is the PNV of Federal returns and costs.

The financial values used were based on actual revenues and costs. Economic values (benefits) were developed by the Regional Office of the Rocky Mountain Region. Timber revenues are based on a 3-year average of actual harvest (cut) values. Benefit values for other resources are based on 1990 RPA Program Values.

The analysis consists of two measures of efficiency: (1) PNV (discounted values minus discounted costs) and (2) benefit-cost ratios (discounted benefits divided by discounted costs). All monetary values are expressed in constant dollars with no allowance for inflation and a four percent discount rate was used over the period of the analysis. A 3-year period (1993 to 1995) was considered in the analysis.

For purposes of this analysis the No-Action Alternative is the base alternative from which the other alternatives are to be compared. The incremental analysis compares each action alternative against the No-Action Alternative to determine the effects of the various actions associated with the different options. In this economic analysis, the costs and benefits for the No-Action Alternative were not estimated and are not displayed. A four percent discount rate is

used. The intent of the analysis is for the action alternative(s) benefits and costs to be shown as incremental numbers from the no action alternative.

Table 29 - SUMMARY OF ECONOMIC EFFICIENCY

Alt.	Discounted Total Costs	Discounted Total Benefits	Discounted Present Net Value	Discounted Benefit/Cost
Alt. 1	\$ 0.0	\$ 0.0	\$ 0.0	0.0
Alt. 2	289,843	304,934	15,091	1.05
Alt. 3	704,146	1,344,120	639,970	1.91
Alt. 4	986,082	1,737,290	751,206	1.76
Alt. 5	684,641	1,121,370	436,732	1.71

Table 30 - SUMMARY OF FINANCIAL EFFICIENCY

Alt.	Discounted Total Costs	Discounted Total Revenues	Discounted Present Net Value	Discounted Revenue/Cost
Alt. 1	\$ 0.0	\$ 0.0	\$ 0.0	0.0
Alt. 2	289,843	208,273	-81,570	0.72
Alt. 3	704,146	1,070,850	366,704	1.52
Alt. 4	986,082	1,370,860	384,779	1.29
Alt. 5	684,641	833,977	199,336	1.29

Table 29 displays the economic PNV and Table 30 displays the financial PNV for each alternative. The most economically and financially efficient alternative, as measured by PNV and benefit-cost ratio, is Alternative 4. Alternative 5 is also financially efficient, with a positive financial PNV. Alternative 2 generates far less in terms of revenues and benefits, while incurring high costs. Thus, Alternative 2 is the least economically and financially efficient alternative.

The economic analysis results, however, must be tempered by the knowledge that resources such as wildlife, scenic beauty, watershed condition, and dispersed recreational opportunities are not commonly assigned dollar values in our society, and were not valued in dollar terms here. The interdisciplinary team also had no reliable way to place economic values on these items. Therefore, the analysis of revenues and actual project costs alone of each alternative offers only a partial guide to the decision process (40 CFR 1502.23).

ABBOTT/SALMON TIMBER SALE PROJECT
ECONOMIC ANALYSIS

Prepared By: Steve Rheinberger
Forest Engineer
Jan. 17, 1998

ABBOTT - SALMON PROJECT ECONOMIC CONSIDERATIONS

The proposed Abbott/Salmon timber sale is a large project with a significant amount of potentially marginal units. Due to a combination of expensive yarding systems, small timber, and expensive administrative costs, the project was examined on a unit-by-unit basis to determine their economic viability. In addition, the project's three action alternatives were also compared on a sale-as-a-whole basis. Attached to this report are numerous computer printouts and tables which are the core of this analysis.

The Timber Sale Planning and Analysis System (TSPAS) was used to determine economic viability. TSPAS is a computer program (DG based) developed by the USDA Intermountain Research Station (Ogden, UT). TSPAS addresses many of the important economic and financial questions encountered in sale design, such as:

- What is the economic contribution of individual harvest units?
- Is this particular sale alternative or unit likely to sell?
- Is the net value of sale alternatives positive?
- What are the likely effective and ineffective road credits?
- How much discretionary K-V can be supported by a sale alternative?

The Abbott/Salmon sale was analyzed with these questions in mind. The following tables summarize the three action alternatives (unit-by-unit). In these tables a determination was made as to the likelihood of an average purchaser's ability to bid on the alternative or unit. The Transaction Evidence Appraisal system (TEA) was used as a basis to determine whether an alternative or unit would be bidable or not. If the calculated Advertised Rate was significantly greater than the calculated Base Rate, the alternative or unit was considered bidable (denoted by a "yes" in the bidable column of the tables). A questionable unit would be one which the Ad Rate was very near the Base Rate (denoted by a "y/n" in the bidable column). Alternatives or units in which the Predicted Bid Premium was negative were considered non-bidable (denoted by a "no" in the bidable column of the tables).

Note also that the three tables that follow include columns which relate the Timber Value, Net Value, and the Net Discounted Value. The Timber Value is the predicted value of the timber minus any specified road costs. The Net Value is the Timber Value minus essential K-V and associated Forest Service costs (i.e. planning, prep, and admin. costs). The Net Discounted Value is simply the discounted Net Value (in this case at 4.0% to Jan. 1, 1997).

A summary at the bottom of each table breaks out the appropriate values and volumes by bidable category (yes, y/n, and no). In addition, the summary for each table also includes a category for whether or not the bidable units are above cost or below cost. An "above cost" unit has Net Discounted Value greater than zero (i.e. all cost are covered by the timber value).

ECONOMIC ANALYSIS SUMMARY - ABBOTT/SALMON - ALT #1

UNIT	ACRES	VOL-MBF	VALUE TIMBER	VALUE NET	VALUE DISC NET	BIDABLE	NOTES
204	2	32.0	3,200	800	400	yes	hell, small timber
207	59	234.0	-158,900	-178,800	-157,100	no	very small timber
208	17	57.8	9,500	6,200	5,100	yes	
209	141	634.5	56,700	19,900	13,200	yes	

ECONOMIC ANALYSIS SUMMARY - ABBOTT/SALMON - ALT #1

UNIT	ACRES	VOL-MBF	VALUE TIMBER	VALUE NET	VALUE DISC NET	BIDABLE	NOTES
210	41	162.0	-6,800	-18,200	-7,500	y/n	small timber, high road cost
211	25	100.0	-36,200	-42,000	-30,100	no	small timber, high road cost
221	38	375.0	101,800	80,000	68,200	yes	
243	5	90.0	14,000	8,700	5,400	yes	hell
258	30	300.0	40,300	22,900	18,700	yes	
260	11	202.5	18,000	1,100	100	yes	small timber, hell
265	28	420.0	45,700	19,800	12,700	yes	
260	5	100.0	18,000	7,200	5,600	yes	
272	1	10.0	-300	-200	-100	no	small timber, hell
274	27	285.0	37,800	20,500	16,700	yes	
277	5	45.0	2,200	-400	-500	yes	hell
278	24	120.0	-20,800	-27,800	-24,800	no	small timber, hell
279	19	95.1	-4,100	-9,800	-8,800	no	small timber, hell
2AF	24	360.0	61,500	38,300	29,300	yes	hell
2AG	37	550.0	98,600	60,800	50,700	yes	hell
2AM	16	242.6	91,200	73,800	63,400	yes	
312	130	360.0	110,600	88,000	74,100	yes	
316	21	63.0	-38,400	-43,000	-3,400	no	high road cost
317	694	883.7	+198,000	-263,100	-124,700	no	high road cost, small timber
318	20	40.0	-27,800	-30,100	-1,800	no	high road cost
330	80	240.0	-91,400	-105,300	-75,400	no	high road cost, small timber
332	38	131.3	-43,200	-50,800	-44,800	no	small timber, part hell
335	196	746.0	-301,200	-344,500	-303,600	no	small timber, part hell
342	3	36.0	3,000	300	0	yes	high road cost
346	128	1,883.0	575,000	448,800	381,700	yes	
347	5	67.5	18,300	14,700	12,500	yes	
352	106	530.0	128,000	82,100	68,900	yes	
355	0	38.5	8,800	5,900	5,000	yes	
357	52	260.0	39,900	24,400	19,400	yes	
359	100	398.1	10,400	-12,200	-12,300	yes	small timber, part hell
361	100	398.1	-17,100	-40,200	-28,300	no	small timber, high road cost
374	33	148.6	88,000	44,400	38,100	yes	
376	10	55.1	20,400	15,700	13,900	yes	
378	8	22.0	3,100	1,000	800	yes	small timber
38G	12	54.0	22,200	17,300	14,800	yes	
38K	16	212.8	78,300	60,900	52,200	yes	
38L	9	40.5	-600	-1,300	-1,000	no	small timber

ECONOMIC ANALYSIS SUMMARY - ABBOTT/SALMON - ALT #1

UNIT	ACRES	VOL-MBF	VALUE TIMBER	VALUE NET	VALUE DISC NET	BIDABLE	NOTES
611	21	231.0	-15,500	-32,100	-28,600	no	small timber, high sky cost
617	31	152.8	32,600	22,300	18,800	yes	
618	23	181.0	24,100	13,500	11,100	yes	
620	62	341.1	-90,500	-110,300	-54,100	no	high road cost, small timber
621	173	1,211.1	152,800	81,700	64,800	yes	
624	71	312.4	-99,500	-128,300	-113,300	no	small timber, part hell
641	16	180.0	50,300	37,900	32,400	yes	
687	11	66.0	7,800	3,800	3,200	yes	
698	18	98.8	4,500	-1,100	-1,200	y/n	small timber
699	74	493.0	-144,000	-197,300	-174,300	no	small timber
6AE	18	310.1	44,500	17,300	13,600	yes	
6AM	40	800.0	-97,200	-137,400	-119,600	no	small timber
6AP	9	119.7	17,200	8,500	6,900	yes	
6AX	3	25.0	4,800	3,000	2,500	yes	
6BB	2	99.0	8,800	3,700	3,000	yes	
6BD	3	85.0	8,300	3,000	2,300	yes	hell
6BF	3	117.0	16,000	6,500	4,300	yes	hell
6BH	8	73.2	10,100	5,700	4,700	yes	hell
6HJ	180	897.5	-164,900	-217,000	-149,600	no	small timber, high sky cost
6HK	173	858.6	65,300	4,900	700	yes	part hell
6HM	38	981.1	258,900	180,300	162,400	yes	
6ID	10	28.6	-19,400	-21,100	-1,900	no	high road cost
6IH	10	60.0	-9,700	-16,100	-3,300	y/n	high road cost
6IM	26	198.0	9,000	-5,100	-5,300	yes	high road cost
6IS	18	239.4	42,200	17,800	13,600	yes	
SALE	3,345	19,817.8	876,100	-1,037,700	-988,400	yes	

ALTERNATIVE #1 SUMMARY

BIDABLE	ACRES	VOL-MBF	VALUE TIMBER	VALUE NET	VALUE DISC NET	# UNITS
yes	1,544	12,393.7	2,421,200	1,554,000	1,296,600	43
y/n	87	318.0	-12,000	-32,400	-12,100	3
no	1,734	8,305.3	-1,836,100	-1,973,400	-1,446,700	20
yes-below cost	131	583.1	21,600	-17,700	-18,100	3
yes-above cost	1413	11,804.6	2,399,600	1,371,700	1,314,700	40

ECONOMIC ANALYSIS SUMMARY - ABBOTT/SALMON - ALT #2

UNIT	ACRES	VOL-MBF	VALUE TIMBER	VALUE NET	VALUE DISC NET	SIDABLE	NOTES
204	2	30.0	3,200	800	400	yes	hell, small timber
207	59	234.0	-168,800	-178,800	-167,100	no	very small timber
208	17	57.8	8,600	8,200	5,100	yes	
208	141	634.8	56,700	19,600	13,200	yes	
210	41	182.0	-8,800	-18,200	-7,500	y/n	small timber, high road cost
211	25	100.0	-38,200	-42,000	-30,100	no	small timber, high road cost
221	38	376.0	101,800	80,000	68,200	yes	
243	8	90.0	14,000	6,700	5,400	yes	hell
258	30	300.0	40,300	22,900	18,700	yes	
260	11	202.8	18,000	1,100	100	yes	small timber, hell
265	28	420.0	45,700	18,600	12,700	yes	
266	5	100.0	16,000	7,200	5,900	yes	
272	1	10.0	-300	-200	-100	no	small timber, hell
274	27	285.0	37,900	20,500	18,700	yes	
277	8	48.0	2,200	-400	-500	yes	hell
278	24	120.0	-20,900	-27,900	-24,800	no	small timber, hell
279	19	88.1	-4,100	-9,600	-8,600	no	small timber, hell
2AF	24	360.0	61,500	35,300	29,300	yes	hell
2AG	37	550.0	68,800	60,800	50,700	yes	hell
2AM	16	242.6	61,200	73,600	63,400	yes	
317	8	24.0	-15,300	-17,900	-2,600	no	high road cost, small timber
332	31	108.0	-32,700	-38,000	-34,500	no	small timber, part hell
335	11	44.0	-14,400	-18,900	-19,000	no	small timber, part hell
346	23	337.5	95,400	72,400	61,800	yes	
347	5	67.8	18,300	14,700	12,500	yes	
352	73	385.0	105,800	71,200	60,100	yes	
355	8	38.8	8,800	8,900	6,000	yes	
356	35	194.6	7,000	-800	-1,300	yes	small timber, part hell
374	33	148.8	58,000	44,400	38,100	yes	
376	10	58.1	20,400	16,700	13,500	yes	
378	6	22.0	3,100	1,000	800	yes	small timber
386	12	54.0	22,200	17,300	14,800	yes	
38K	16	212.8	76,300	60,800	52,200	yes	
39L	0	40.8	800	-4,300	-4,000	no	small timber
611	21	231.0	-15,900	-32,100	-29,000	no	small timber, high sky cost
617	31	162.0	32,600	22,800	18,800	yes	
618	23	181.0	24,100	13,500	11,100	yes	

ECONOMIC ANALYSIS SUMMARY - ABBOTT/SALMON - ALT #2

UNIT	ACRES	VOL-MBF	VALUE TIMBER	VALUE NET	VALUE DISC NET	BIDABLE	NOTES
620	62	341.1	-80,500	-110,300	-54,100	no	high road cost, small timber
621	173	1,211.1	152,000	81,700	64,600	yes	
697	11	68.0	7,800	3,900	3,300	yes	
698	16	98.0	4,500	-1,100	-1,300	y/n	small timber
699	74	493.0	-144,000	-197,300	-174,300	no	small timber
6AE	16	310.1	44,500	17,300	13,600	yes	
6AM	40	800.0	-67,200	-137,400	-118,600	no	small timber
6AP	9	119.7	17,200	8,600	8,600	yes	
6BB	2	38.0	6,800	3,700	3,000	yes	
6BD	3	85.0	8,300	3,000	2,300	yes	hell
6BF	5	117.0	16,000	5,500	4,300	yes	hell
6BH	8	73.2	10,100	5,700	4,700	yes	hell
6HJ	180	887.3	-184,800	-217,000	-149,500	no	small timber, high sky cost
6HK	173	859.5	85,300	4,800	700	yes	part hell
6HM	38	851.1	258,200	189,600	161,800	yes	
6IH	10	60.0	-9,700	-15,100	-3,300	y/n	high road cost
6IM	26	156.0	18,000	4,800	3,200	yes	high road cost
6IS	18	239.4	52,200	27,600	22,500	yes	
SALE	1,770	13,413.4	959,400	-870,800	-648,300	yes	

ALTERNATIVE #2 SUMMARY

BIDABLE	ACRES	VOL-MBF	VALUE TIMBER	VALUE NET	VALUE DISC NET	# UNITS
yes	1,139	9,558.7	1,728,000	1,048,000	867,300	38
y/n	67	318.0	-12,000	-32,400	-12,100	3
no	564	3,538.7	-764,700	-1,030,800	-603,700	14
yes-below cost	40	179.6	3,200	-1,200	-1,800	2
yes-above cost	1089	9,379.1	1,718,800	1,047,200	896,100	38

ECONOMIC ANALYSIS SUMMARY - ABBOTT/SALMON - ALT #3

UNIT	ACRES	VOL-MBF	VALUE TIMBER	VALUE NET	VALUE DISC NET	BIDABLE	NOTES
207	59	234.0	-156,500	-178,800	-157,100	no	very small timber
208	17	57.8	8,600	6,280	5,100	yes	

ECONOMIC ANALYSIS SUMMARY - ABBOTT/SALMON - ALT #3

UNIT	ACRES	VOL-MBF	VALUE TIMBER	VALUE NET	VALUE DISC NET	BIDABLE	NOTES
209	141	634.6	56,700	19,500	13,200	yes	
210	41	162.0	-6,800	-16,200	-7,500	y/n	small timber, high road cost
211	25	100.0	-36,200	-42,000	-30,100	no	small timber, high road cost
317	8	24.0	-16,500	-17,500	-2,600	no	high road cost, small timber
332	31	108.5	-32,700	-39,000	-34,600	no	small timber, part hel
335	11	44.0	-14,400	-1,700	-1,500	no	small timber, part hel
346	40	600.0	177,700	136,800	116,600	yes	
347	3	67.5	19,300	14,700	12,600	yes	
352	73	365.0	105,800	71,200	60,100	yes	
356	6	38.5	8,800	5,900	6,000	yes	
368	36	134.6	7,000	-800	-1,300	yes	small timber, part hel
374	33	148.6	58,000	44,400	38,100	yes	
376	10	58.1	20,400	15,700	13,800	yes	
378	6	22.0	3,100	1,000	800	yes	small timber
38G	12	54.0	22,200	17,300	14,600	yes	
38K	16	212.8	78,300	60,600	52,200	yes	
38L	9	49.5	-600	-4,300	-4,000	no	small timber
611	21	231.0	-16,900	-32,100	-28,000	no	small timber, high sky cost
617	31	152.6	32,600	22,300	18,600	yes	
618	23	161.0	24,100	13,500	11,100	yes	
620	82	341.1	-90,500	-110,500	-54,100	no	high road cost, small timber
621	173	1,211.1	152,000	61,700	64,600	yes	
697	11	66.0	7,800	3,900	3,200	yes	
698	16	98.0	4,500	-1,100	-1,300	y/n	small timber
699	216	1,440.0	-395,700	-480,200	-425,200	no	small timber
SHJ	180	887.5	-164,900	-217,000	-149,500	no	small timber, high sky cost
SALE	1,311	7,499.7	71,100	-424,400	-483,100	no	

ALTERNATIVE #3 SUMMARY

BIDABLE	ACRES	VOL-MBF	VALUE TIMBER	VALUE NET	VALUE DISC NET	# UNITS
yes	632	3,951.1	781,300	514,800	428,500	16
y/n	57	258.0	-2,300	-17,500	-8,800	2
no	622	3,460.6	-924,900	-1,123,400	-887,600	10
yes-below cost	35	134.6	7,000	-800	-1,300	1
yes-above cost	597	3,868.5	774,300	515,400	428,600	15

The above tables also include a Notes column. This column gives some possible reasons why a particular unit may be non-bidable or show a low timber value. Several items appear to stand out as major players of high costs. These items include the following:

- Small, low value timber
- Expensive yarding systems (i.e. helicopter)
- Split yarding systems (i.e. several different systems on a given unit)
- High specified road cost

For a given uneconomical unit, one or more of these items could possibly be altered to make the unit more economically viable. For example, the yarding system or road access could be altered to improve the economic viability. In most cases where very small timber is the problem (i.e. less than 10" average DBH), very little can be done to improve the economic status of the unit (short of changing the silviculture prescription). Given the current market situation, most units with small timber or a large component of non-saw material are suspect regardless of yarding systems and some of the other items listed above.

For a entire sale to be economically viable (i.e. bidable), I would recommend that units which fall into the "Bidable = yes" column only be considered for a commercial timber sale. Units which received a "y/n" rating could also be evaluated in terms of the above cost-reducing items to see if one or more of these items can be reduced or changed. In fact, to increase the probability of a sale being "bidable", all of the units included in the proposed sale should be screened as per the above items. If costs are reduced or systems changed, the TSPAS program can easily be run to see the outcome of these changes. Indeed, sensitivity analysis and "what if" scenarios would be desirable before a final decision is made as per the makeup of any potential viable commercial timber sale.

The analysis shows that other KV (non-essential KV) appears to be best served with Alternative #2. This alternative has a big enough KV "pot" to pay for all the non-essential KV. In the case of Alternatives #1 and #3, a significant portion of the non-essential KV will not be covered by the predicted timber receipts (see the Overall Management Summary printouts attached).

Based on the total sale value, Alternative #2 has the lowest negative total return when all planning, prep, administration, and KV costs are figured in. Both Alternatives #1 and #2 are considered "bidable" as they now stand. However, the uneconomical units within these alternatives drive the total return to a negative value. Even though Alternatives #1 and #2 appear bidable, there is a significant probability that these alternatives could receive no bids due to the uneconomical units they contain. A summary of the current sale is displayed below. All costs are discounted to 1997 at 4.0%.

SALE SUMMARY CONSIDERING ALL UNITS (INCLUDES NON-BIDABLE UNITS)

ALT	ACRES	MBF	KV COSTS COVERED	KV COSTS NOT COVERED	FS COSTS	TIMBER VALUE	NET SALE VALUE	BIDABLE (Y or N)
1	3,346	19,017	687,800	240,200	1,043,700	746,100	-1,220,600	Y
2	1,770	13,415	733,200	0	736,300	824,200	-645,300	Y
3	1,311	7,700	42,600	378,100	422,600	62,000	-781,200	N

In all three alternatives in the above table the Net Sale Value is negative. The timber value does not cover the sum of the KV costs and the Forest Service Costs.

The total timber receipts could be substantially higher if the alternatives were screened for units considered non-bidable. Sensitivity analysis was done on the three alternatives using this screening procedure. I have attached a computer printout which displays the alternatives

based on this approach (see section "Bidable Units Only" attached to this report). A table which displays the summary of these findings is shown below. All costs are discounted to 1997 at 4.0%.

SALE SUMMARY CONSIDERING BIDABLE UNITS ONLY

ALT	ACRES	MBF	KV COSTS COVERED	KV COSTS NOT COVERED	FS COSTS	TIMBER VALUE	NET SALE VALUE	BIDABLE (Y or N)
1	1,544	12,394	948,100	0	680,200	2,103,800	475,600	Y
2	1,138	9,559	709,300	0	524,600	1,506,600	268,500	Y
3	832	3,881	471,600	0	218,500	677,500	-12,600	Y

As the above table shows, all the alternatives are now considered bidable. In addition, the Net Sale Value is positive for Alternatives #1 and #2. The KV "pot" is large enough to pay for both essential and non-essential KV projects. The probability of any of these alternatives becoming a viable commercial timber sale (i.e. receive bids) has been substantially increased.

The following pages contain computer printouts of various reports generated by TSPAS. They include unit specific analyses (by alternative) as well as side-by-side alternative comparisons. In addition, detailed calculations concerning yarding cost determination and production rates are on file at the Supervisor's Office in Sandy, OR. I am willing to meet with the district IDT or representatives of the IDT to discuss and explain the meaning and implications of the TSPAS analysis.



United States
Department of
Agriculture
Forest Service



Alaska
Region

R10-MB-281
1995

Moose Pass Cooperative Project Environmental Assessment



ECONOMIC ANALYSIS REPORT

for

MOOSE PASS COOPERATIVE PROJECT

The resources considered in this analysis have both tangible and intangible benefits and costs and have been identified to the extent they are known for the project area. The relationship of tangible and intangible benefits and costs for some resources is shown below.

Tangible resources	Intangible resources
Wood Salvage	Fisheries
Access facilities	Wildlife
Recreation	Recreation
Wild Fires Protection Costs	Wild Fire Protection Benefits and Costs

Overall Economic Comparison

The Net Present Value for the project area for resources considered in this analysis:

Alternative A	+\$29,250,320
Alternative B	+\$42,425,160
Alternative C	+\$27,745,060
Alternative D	+\$36,991,750
Alternative E	+\$38,379,340

A comparison of Alternative A and C demonstrate the need for the decision maker to consider the intangible benefits and costs and not rely solely on the comparison of tangible benefits and costs. Alternative C has a smaller Net Present Value than does Alternative A, the No Action alternative. There are intangible benefits to the community of Moose Pass in the reduction in wild fire risk resulting from activities in Alternative C. Alternative A appears to have more value, but does not have the reduced wild fire risk as in C. If a wild fire starts and burns throughout the project area, the Net Present Value of Alternative A would decrease from loss of tangible and/or intangible benefits.

For example, considering the intangible benefits in Alternative C, the decision maker may find Alternative C more valuable than Alternative A or other alternatives. This will be applicable to comparing any of the alternatives. The benefits and costs as they pertain to each of the identified resources in the project area are discussed by resource in more detail in this analysis. The individual resource discussions recognize both the tangible and intangible benefits and costs. The alternative comparison above is a result of the tangible resources benefits and costs.

A 4 percent rate of return was used in calculating the Net Present Values. The first year for the analysis is 1995.

The timeline at the end of this report was used as the schedule of actions for preparing the analysis. The benefit and cost values shown in the timeline are estimates of returns and expenditures to occur in the identified year. The values shown in the timeline are current best estimates and are subject to change if an action is chosen to be implemented.

No sensitivity determination is included in the analysis.

Appendix D

Assumptions

1. All costs for work or task accomplishments and benefits and returns will be used without regard for State and Federal boundary lines. Forest Service cost and benefit units will be applied throughout the project area.
2. The timeline for actions and the economic analysis is from 1995 to 1999, a 5 year activity period. Some actions may have effects for a longer period, but the benefits and costs of those effects is only identified until 1999.

Fisheries

The economic value for fisheries is based on input expressed by Mark Wenger, Seward RD Fisheries Biologist.

Any economic value of this resource would be for resident fish populations and the ability to take, by sport means, resident fish in the lakes and streams of the project area.

While sportfishing does take place in the lakes and streams within the project area, the level of activity is too low to determine any economic benefit to the community of Moose Pass.

No action is being taken to change the populations or manipulate the habitat of trout and other resident fish.

Salmon are excluded from this analysis for two reasons. First, sportfishing for salmon is closed in the project area water bodies. Secondly, no actions are being taken which would lead to a change in the salmon population numbers or directed at habitat manipulation to change salmon population numbers. No commercial fisheries exist in the project area.

The project area water bodies are part of the Kenai Lake drainage system and support the spawning and rearing of salmon which do have a regional commercial value. This value supports an industry located in several communities outside the project area. This economic picture is not intended to portray a regional picture, but is intended to portray the economic benefits and costs to Moose Pass and the project area. Moose Pass is not a community associated with the salmon fishing guiding industry on the Kenai River nor with the Gulf of Alaska commercial salmon fishing industry.

The Net Present Value of the Fisheries resource in the project area is:

All Alternatives: Intangible

Recreation

The activity values shown below are recreation monetary values reported to the 1990 RPA Program in 1987 dollars and provided by Steve Hennig, Chugach NF SO Forest Landscape Architect.

Camping, Picnicking and Swimming	\$22.90
Motorized travel, Viewing Scenery, Recreational Driving	\$24.77
Hiking, Horseback riding, Water Travel	\$18.13
Winter Sports.....	\$71.51

The Recreation Visitor Day (RVD) levels shown below are provided by Karen O'Leary, Seward Ranger District, Recreation/Lands Forester. The RVDs are based on fee and registration information or the RIM (Recreation Information Management) annual reports. All RVD numbers are in thousands.

Johnson Pass Trail.....	10.0
Carter Lake Trail.....	10.3
Canoeing, other Watercraft.....	0.2
Ptarmigan Creek Trail.....	7.2
Auto Travel.....	100.9
Trail River Campground.....	18.2
Train & Bus Touring.....	4.2
Ship Creek Campground.....	0.5
Meadow Creek Campground.....	0.5
Crescent Lake Campground.....	1.0
Crescent Saddle Campground.....	0.8
Ice and Snow travel.....	3.3
Viewing Scenery.....	93.2
Power boating.....	1.0

The mitigation measures identified in the EA are expected to keep the level of RVDs unchanged from the present and equal for all alternatives.

The recreation resource value in the project area by activity is listed below.

Camping, Picnicking and Swimming

Trail River Campground.....	18,200 RVDs
Ship Creek Campground.....	500 RVDs
Meadow Creek Campground.....	500 RVDs
Crescent Lake Cabin.....	1,000 RVDs
Crescent Saddle Cabin.....	800 RVDs
Total:	21,000 RVDs x \$22.90 per RVD = \$480,900

Motorized travel, Viewing Scenery, Recreational Driving

Auto Travel.....	100,900 RVDs
Train & Bus Touring.....	4,200 RVDs
Viewing Scenery.....	93,200 RVDs
Total:	198,300 RVDs x \$24.77 per RVD = \$4,911,891

Hiking, Horseback riding, Water Travel

Power Boating.....	1,000 RVDs
Canoeing, Other Watercraft.....	200 RVDs
Johnson Pass Trail.....	10,000 RVDs
Carter Lake Trail.....	10,300 RVDs
Ptarmigan Creek Trail.....	7,200 RVDs
Ice and Snow Travel.....	3,300 RVDs
Total:	32,000 RVDs x \$18.13 per RVD = \$580,160

There are other trails in the project area such as Vagt Lake trail, Victor Creek and Crescent Creek Trail. No RVDs are available, so these trails are not actually included in the value calculation of the recreational

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activities. The trails without known use levels are valuable to the users and an asset to the development of a recreation facility complex in the project area. As such these values are considered intangible recreation values.

The recreation growth rate within the project area shall be considered the same rate as for the State of Alaska, which is approximately 3 percent per year. The growth rate annual figures for the economic analysis will be calculated as a straight line growth based on the first year rather than an exponential growth rate using the previous year as the base. This will tend to be a conservative estimate of the value of the recreation activities in the project area.

The number and value of the RVDs is not evenly spread throughout the project area. The reaction activities that occur in connection with some use of the road corridor for the Seward Highway and connected public and private developments constitute 79 percent of the RVDs for the entire project area. The value of the RVDs connected with the road corridor constitutes 82 percent of the RVD value for the entire project area.

Implementation of proposed projects as mitigated would not change or decrease the RVD value related to the road corridor for the Seward Highway.

It's important to recognize the value of the recreation component within the project area is not solely the RVD values. Some may contend the RVD value should be different. In affect what's being stated is there are some intangible values for the public pursuing recreation activities in a setting that fits the beholders definition of a natural pleasing environment.

In fact, there is an intangible value to the vegetative pattern and landform as it is now and how it is evolving. After all, nature is a dynamic force and every situation exists in a static condition for only a brief interval of time. The intangible value can not be quantitatively taken into account in this analysis, but is recognized as existing and should not be forgotten in forming conclusions from this analysis.

The recreation activity shown above has an estimated value in 1995 of \$5,972,951. Projecting the 1995 annual value over the 1995-1999 period shown in the timeline for the economic analysis, results in a Net Present Value of the Recreation resource in the project of:

All Alternatives: +\$29,250,320

Wildlife

The economic value for wildlife is based on input expressed by Bill Shuster, Seward RD Fish, Wildlife, Fire and Facilities Staff Officer and Steve Zemke, Chngach NF SO Fisheries Biologist and Forest Subsistence Coordinator.

Moose Pass is not a hub for commercial guiding activities for sport hunting. Hunters in the project area may use services located in the community such as eating and sleeping facilities. Area campgrounds may also be used as a base for sport hunting in the area. The level of this activity is not identifiable for this analysis.

Studies have shown land within the project area does get used for the purpose of taking game for subsistence. Moose Pass is not a rural community as recognized by the Federal Subsistence Board. Surrounding communities of Cooper Landing, Hope and Whittier outside the project area are recognized as rural communities and do use the project area.

For subsistence purposes, game animals do have a value. The subsistence value is a non-cash value. Actions taken to harm the population health, change access for subsistence harvesters or increase competition to harvest subsistence game would change the non-cash subsistence value. The economic analysis can recognize there is value for these factors, but can not take it into direct account for the benefits and costs associated with actions in the project area.

Bear, Moose and other wildlife habitats occur within the project area. Wildlife habitat has value, though this value is intangible. The effects on the habitats can be described in the EA. The intangible value and changes can not be shown directly in terms of tangible benefits and costs. An increase in the carrying capacity for moose caused by vegetative manipulations would cause an increase in moose habitat value. Likewise, if a species such as bear would be driven away by a change in existing habitat a decrease in bear habitat value could occur.

Timelines For Economic Analysis

The following timelines are put together to estimate the sequence of actions proposed in each alternative following a decision to take action. The cost of preparing the decision and the benefit of the information assembled which may be of value to other actions and analyzes is not included in the timelines.

The timelines are not intended to be substituted for an implementation plan which would result from a decision statement. The timelines will facilitate the equitable analysis of the economic effects for each alternative and approximate the order and timing of actions if chosen in a decision statement.

Below each task shown is a value or cost number. They are non-discounted estimated monetary figures associated with performing the work. Each is shown as a benefit or cost with a (B) or (C) following each figure.

Year	Alternatives			
	B	C	D	E
95	Rd Preconstruct \$256,060 (C)	Rd Preconstruct \$128,770 (C)	Rd Preconstruct \$186,460 (C)	Rd Preconstruct \$296,050 (C)
	Construct Roads \$2,560,310 (C)	Construct Roads \$1,287,560 (C)	Construct Roads \$1,864,440 (C)	Construct Roads \$3,214,000 (C)
	Rd Constr Admin \$127,950 (C)	Rd Constr Admin \$64,340 (C)	Rd Constr Admin \$93,190 (C)	Rd Constr Admin \$147,920 (C)
	Sil Treat Layout - 1/2 ST & FS \$307,260 (C)	Sil Treat Layout - 1/2 ST & FS \$104,010 (C)	Sil Treat Layout - 1/2 ST & FS \$166,880 (C)	Sil Treat Layout - 1/2 ST & FS \$298,360 (C)
	Build fuelbreaks \$59,510 (C)	Build fuelbreaks \$59,510 (C)		
	Fuelbreak Admin. \$11,300 (C)	Fuelbreak Admin. \$11,300 (C)		
	Rec Activity \$5,972,950 (B)	Rec Activity \$5,972,950 (B)	Rec Activity \$5,972,950 (B)	Rec Activity \$5,972,950 (B)
96	Sil Treat Layout - 1/2 ST & FS \$307,260 (C)	Sil Treat Layout - 1/2 ST & FS \$104,010 (C)	Sil Treat Layout - 1/2 ST & FS \$166,880 (C)	Sil Treat Layout - 1/2 ST & FS \$298,360 (C)
	Silvi Treatment - 1/2 ST & FS \$14,011,520 (B) \$3,972,100 (C) \$139,500 (C)	Silvi Treatment - 1/2 ST & FS \$4,743,010 (B) \$1,143,750 (C) \$54,000 (C)	Silvi Treatment - 1/2 ST & FS \$7,609,980 (B) \$1,462,600 (C) \$166,500 (C)	Silvi Treatment - 1/2 ST & FS \$13,605,670 (B) \$2,507,710 (C) \$308,250 (C)
	Sil Treat Admin - 1/2 ST & FS \$130,430 (C)	Sil Treat Admin - 1/2 ST & FS \$44,150	Sil Treat Admin - 1/2 ST & FS \$70,840 (C)	Sil Treat Admin - 1/2 ST & FS \$126,650 (C)
	Prescribed Fires - all BB \$153,860 (C)	Prescribed Fires - all BB \$76,480 (C)	Prescribed Fires - all BB \$270,020 (C)	Prescribed Fires - all BB \$244,200 (C)
	Fuelbreak Maint. \$1,300 (C)	Fuelbreak Maint. \$1,300 (C)		
	Rec Activity \$6,154,140 (B)	Rec Activity \$6,152,140 (B)	Rec Activity \$6,152,140 (B)	Rec Activity \$6,152,140 (B)

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Year	Alternatives			
	B	C	D	E
97	Silvi Treatment - 1/2 ST & FS \$14,011,520 (B) \$3,972,100 (C) \$139,500 (C)	Silvi Treatment - 1/2 ST & FS \$ 4,743,010 (B) \$1,143,740 (C) \$54,000 (C)	Silvi Treatment - 1/2 ST & FS \$7,609,980 (B) \$1,442,590 (C) \$166,500 (C)	Silvi Treatment - 1/2 ST & FS \$13,605,670 (B) \$2,507,710 (C) \$308,250 (C)
	Sil Treat Admin - 1/2 ST & FS \$130,430 (C)	Sil Treat Admin - 1/2 ST & FS \$44,150	Sil Treat Admin - 1/2 ST & FS \$70,840 (C)	Sil Treat Admin - 1/2 ST & FS \$126,650 (C)
	Fuels Inventory \$16,720 (C)	Fuels Inventory \$5,730 (C)	Fuels Inventory \$14,590 (C)	Fuels Inventory \$16,480 (C)
	Prescribed Fires - all BF \$16,080 (C)	Prescribed Fires - all BF \$10,090 (C)	Prescribed Fires - all BF \$84,660 (C)	Prescribed Fires - all BF \$9,060 (C)
	Fuelbreak Maint. \$1,300 (C)	Fuelbreak Maint. \$1,300 (C)		
	Site Preparation - 1/2 ST & FS \$274,510 (C)	Site Preparation - 1/2 ST & FS \$67,140 (C)	Site Preparation - 1/2 ST & FS \$108,660 (C)	Site Preparation - 1/2 ST & FS \$110,190 (C)
	Plant - 1/2 ST & FS \$195,830 (C)	Plant - 1/2 ST & FS \$137,550 (C)	Plant - 1/2 ST & FS \$19,250 (C)	Plant - 1/2 ST & FS \$309,230 (C)
	Rec Activity \$6,331,330 (B)	Rec Activity \$6,331,330 (B)	Rec Activity \$6,331,330 (B)	Rec Activity \$6,331,330 (B)
98	Site Preparation - 1/2 ST & FS \$274,510 (C)	Obliterate Roads \$395,840 (C)	Site Preparation - 1/2 ST & FS \$108,660 (C)	Site Preparation - 1/2 ST & FS \$110,190 (C)
	Fuelbreak Maint. \$1,300 (C)	Fuelbreak Maint. \$1,300 (C)		
	Plant - 1/2 ST & FS \$195,820 (C)		Plant - 1/2 ST & FS \$19,250 (C)	Plant - 1/2 ST & FS \$309,220 (C)
	Rec Activity \$6,510,520 (B)	Rec Activity \$6,510,520 (B)	Rec Activity \$6,510,520 (B)	Rec Activity \$6,510,520 (B)
99	Obliterate Roads \$699,090 (C)		Obliterate Roads \$452,160 (C)	
	Fuelbreak Maint. \$1,300 (C)			
	Rec Activity \$6,689,710 (B)	Rec Activity \$6,689,710 (B)		

3. Grant/Vagt Lakes: \$133,010 per mile
 - \$ 11,570 per mile pre-construction
 - \$115,660 per mile, with bridges, construction
 - \$ 5,780 per mile contract administration
 - \$ 14,730 per mile reconstruction
4. Upper Trail Lake East Side RR Access: \$68,400 per mile
 - \$ 5,950 per mile pre-construction
 - \$59,480 per mile construction
 - \$ 2,970 per mile contract administration
5. North Shore slopes of Upper Trail Lake: \$87,400 per mile
 - \$ 7,600 per mile pre-construction
 - \$76,000 per mile construction
 - \$ 3,800 per mile contract administration

The cost estimates for the following items, 6-8, are based on generic work estimates for the entire project area rather than by subset areas as for items 1-5 above.

The cost of a temporary road includes the construction and obliteration of the road by the operator.

Trail River Bridge is an estimate of one time costs to prepare the bridge for the additional traffic generated by the proposals.

The road obliteration cost is per mile of road in addition to extra work in the first 300 feet of a road being obliterated from a road to be left open. The additional work is intended to allow for the condition of the road to be made more natural to a traveler. This work would be done by a separate contract than the contract for salvage actions. This would be necessary as road obliteration would occur at the end of use of the road for all actions.

6. Temporary Roads: \$15,000 per mile
7. Trail River Bridge Reconditioning: \$28,200
8. Road Obliteration Costs: \$26,080 per mile for all TSL roads.
 - \$ 9,180 per initial road section.
 - Plus mobilization

Railroad

Shipping Costs

Shipping costs down the Alaska Railroad as provided by the Railroad are a range. Without a specific proposal, their estimates have to be broad. Estimates can not be provided based on other agreements/contracts to carry logs as those cost figures are proprietary figures.

The transportation of logs on the railroad for any distance less than 400 miles is a constant. Each log car can carry 8,600 bf. The transport cost per car is estimated at \$900 to \$1,600 per car. This converts to a range of \$105 to \$186 per mbf, which the mid point range cost is \$145 per mbf.

Landing Costs

The cost for construction of a minimal sized landing is estimated for an area 400 feet by 200 feet. The landing will also have to a level pad excavated out of ground on a 20 percent sideslope. The landing would be immediately adjacent to the railroad bed and near the same level as the railroad bed. The development of railroad landing sites would also generate some usable material for construction of roads connected with railroad transport. This may generate some savings in the road construction costs for the haul of construction material. The savings can not be determined until site design is underway.

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The cost estimate for the landing construction is \$380,000 per site.

No Net Present Value is determined individually for the access facilities. The costs associated with this work is taken into account in determining the Net Present Value of the Wood Salvage.

Wild Fire Protection

Wildfire protection measures can be undertaken as a direct effort such as constructing fuelbreaks or indirect effort such as harvesting salvageable wood fiber and treating the area to reduce slash and non-utilizable woody material to reduce fuel build-up.

This analysis of the project economic situation will be constrained to include projects which can be constructed or implemented prior to reduce or prevent the risk of wild fire starts. This is not an analysis of fighting wild fires, so those costs will not be brought into the discussion:

Some construction is known to be necessary ahead of a wild fire outbreak, without actually doing the construction. Construction of firelines, for example, can be projected as a measure needed to react to the start of a wild fire before the fire starts. The location and length of firelines can not be implemented until a fire is in progress. Past fire records show hand built fireline can cost from \$0.18 to \$1.86 per foot, while dozer built fireline can cost \$0.20 per foot. Benefits are gained from the construction of fireline but are not quantifiable. The costs are generally associated with the fire, along with many other cost factors, and not with management projects.

A decrease in the risk of a wild fire start is a value in the project area. However, assigning an actual dollar value to the decrease risk level can not be done as a tangible value as a return on the investment of work and dollars expended. The decrease risk will have to be considered an intangible which justifies money being spent to get a reduced risk of wild fire in the project areas.

The tangible costs which can be identified are included in the timeline as costs and shown in tasks identified as, build fuelbreaks, prescribed fires, fuels inventory and site preparation.

The Net Present Costs of the Wild Fire Protection actions in the project area is:

Alternative A	0
Alternative B	-\$253,790
Alternative C	-\$163,870
Alternative D	-\$351,390
Alternative E	-\$258,410

Timelines For Economic Analysis

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Appendix D

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	Fuelbreak Maint. \$1,300 (C)			
	Rec Activity \$6,689,710 (B)	Rec Activity \$6,689,710 (B)		

Notes to Economic Analysis Timeline:

- Values and Costs which are a constant and identified in the economic analysis are not reflected in the timeline, but are used to calculate the Present Net Value (discounted) for the alternative comparison.
- The figures under Silvicultural (Silvi) Treatment represent timber value, logging costs and temporary road costs, in that order.
- Road Preconstruction (Rd Preconstruct) is estimated as 9 percent of the estimated road construction cost. This activity includes final layout, survey, design and contract preparation.
- Road Construction Administration (Rd Constr Admin) is estimated as 6 percent of the estimated road construction cost.
- Silvicultural Treatment Layout (Sil Treat Layout) is estimated to cost per mbf, provided by Dwayne Johnson, Seward Ranger District.
- Silvicultural Treatment Administration (Sil Treat Admin) is estimated to cost \$8.49 per mbf, provided by Duane Harp, Seward District Ranger.
- The hauling costs for railroad transport is not included, though it has been identified. The railroad transport information as provided by the Alaska Railroad was speculative and broadly general not based on past activities. The railroad transport cost can only be applied to a portion of the wood salvage. All wood did receive a truck transport cost, indifferent to railroad transport, so a cost projection was made within the estimated timber appraisal.

Prepared by
Sam Grimes
Transportation Planner
Chugach National Forest
February 1995

Answer: The Forest Service's Timber Sale Program Information Reporting System (TSPIRS) was never intended to guide decisions about such things as how much timber to sell or what sorts of timber to include in sales. These matters are determined on the basis of: (1) the resource objectives found in forest land management plans and subsequent project-level environmental analyses; and (2) the results of financial/economic efficiency analyses conducted during the sale preparation process.

TSPIRS was designed to collect and report the financial and economic consequences of the agency's decisions in the timber sale arena. It has value for program management purposes because it can, for example, be used to monitor unit cost trends and make cost comparisons between forests having similar timber programs.

The Forest Service also has an Automated Timber Sale Accounting System (ATSA) that was designed to collect and report information about each timber sale, such as volumes, species, and revenues received. This system, like TSPIRS, does not guide decisions on how much timber to sell or what sorts of timber to include in sales.

362. Question: Explain how timber, receipts and costs are allocated to your Timber Commodity, Forest Stewardship, and Personal Use categories. Provide actual examples for at least one Forest in each Region that had a profit and one that had losses.

Answer: At the time a timber sale is prepared, codes are assigned and entered into the agency's Automated Timber Sale Accounting (ATSA) system that are used to track the receipts, costs, and other particulars for that sale. These codes include:

- 1) A sale purpose code that reflects both the primary forest plan objective being addressed within the management unit and the particular sale objectives set forth in the "Purpose and Need" section of the approved NEPA document. The applicable sale purposes are timber commodity, forest stewardship, and personal use.
- 2) A resource activity code that reflects the principal benefiting resource or further clarifies the sale purpose. For timber commodity sales the resource activity can only be coded as timber. For forest stewardship sales the resource activity or purpose can be any or all of the following: forest and ecosystem health; recreation, visual, and cultural resource enhancement; wildlife habitat management; fisheries habitat management and watershed improvement; threatened and endangered species habitat management; range resource enhancement; nontimber products; and other. Finally, for personal use sales the resource activity can only be coded as personal use products.
- 3) The portion of total sale volume expected to be obtained from each management unit, expressed as a percentage.

With two significant exceptions, costs are allocated among the different sale purposes based upon the proportion of total harvest volume associated with each purpose. One exception is the handling of

harvest administration costs. Field personnel working in sale administration use different work activity codes to indicate how much time they devote to overseeing timber commodity, forest stewardship, and personal use sales, and this information is recorded directly into the agency's Central Accounting System (CAS). The second exception is for costs largely inapplicable to personal use purpose sales, e.g. road design and construction and reforestation costs.

TPIRO2 spreadsheets have been provided to the Subcommittee which illustrate the information and sale purpose categories described above. The figures pertain to all sales that were active on the selected forests in FY 1996. A total of 17 spreadsheets are provided, ie. two from every Region, with one representing an above-cost forest and one a below-cost forest. The one exception is Region 03 for which there were no above cost forests, so only one spreadsheet is attached. The timber program in Region 03 has been strongly impacted by the Silver v. Thomas court case. The line to focus on to determine above or below cost is "Net Gain or Loss" found in the middle of the second side of each spreadsheet.

The specific spreadsheets being provided are as follows:

Region 01:

Idaho Panhandle NF (above-cost)
Clearwater NF (below-cost)

Region 02:

Medicine Bow-Routt NF (above-cost)
Shoshone NF (below-cost)

Region 03:*

Coconino NF (below-cost)

Region 04:

Caribou NF (above-cost)
Bridger-Teton NF (below-cost)

Region 05:

Plumas NF (above-cost)
Mendocino NF (below-cost)

Region 06:

Willamette NF (above-cost)
Wenatchee NF (below-cost)

Region 08:

Marion-Sumter NF (above-cost)
Chattahoochee-Oconee NF (below-cost)

Region 09:

Chippewa NF (above-cost)
Superior NF (below-cost)

Region 10:

Tongass-Ketchikan NF (above-cost)
Chugach NF (below-cost)

363. **Question:** Why isn't TSPIRS for 1996 out a month after a fiscal year closes, as would be the case with any business?

Answer: Annual reports for publicly traded corporations are commonly received in March for the fiscal year that closed the prior December 31st. Even a three-month period in which to prepare a final Timber Sale Program Annual Report would be unusual because of the need to draw information from so many different sources for which information is not immediately available after our fiscal year ends. These sources include: the Automated Timber Sale Accounting (ATSA) system, the Cut & Sold Report, the Periodic Timber Sale Accomplishment Report (PTSAR), and the TRACS-SILVA Report.

At the end of each fiscal year, we must verify the integrity of the information in these databases, and display the numbers in the desired reporting formats. Additionally, preparation of the Economic Account, and the Employment, Income, and Program Level Account, requires that the forests and/or regions do independent analyses that cannot be commenced until such time as the final program accomplishment figures are known. All of these tasks must be completed while normal work activities are being carried out by a constantly shrinking timber program workforce. Once a draft of the report has been prepared, it must be reviewed both within the agency and by the Department of Agriculture prior to release.

Grazing

We are supplying a copy of the Annual Grazing Statistical Summary for 1995 to the Subcommittee. The requested information is displayed by National, Regional, and State totals. We do not sort this information by individual national forest. The 1996 Annual Grazing Statistical Summary is currently being compiled and we will supply a copy of that document as soon as possible.

Also, we are including as a part of our answers to questions 364-368 the following statistical table which displays the number of acres in grazing allotments for each State. The number of head months of grazing are displayed in Table 30 of the Report of the Forest Service which is provided to Congress.

RU 02/05/97
 RGUN 1004

 USDA FOREST SERVICE TPIR 02
 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 CHUGACH N.F. REPORT 01

2

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1				
R-10 APPROPRIATED RD MTCE /2				
R-10 LAND LINE LOCATION /2				
TOTAL TIMBER SALE INDIRECT				
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	231	153,529		153,760
TOTAL TIMBER PROG INDIRECT	231	153,529		153,760
TOTAL INDIRECT EXPENSES	231	153,529		153,760
TOTAL TIMBER EXPENSES	8,277	1,674,317		1,682,594
GAIN/LOSS BEFORE EXTRAORD. EXP.	3,111-	1,583,012-		1,586,123-
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	3,111-	1,583,012-		1,586,123-
TIMBER VOLUME (MBF) INFORMATION				
	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
VOLUME HARVESTED	5	3,282		3,287
VOLUME UNDER CONTRACT ENDING		4,294		4,294
GROWING STOCK INVENTORY				1,610,618
PAYMENTS TO STATES			15,398	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			1,253,935	
GROWTH ACTIVITY POOL BALANCE			1,163,703	
FACILITIES ASSET BALANCE			4,028	
ROAD ASSETS BEING DEPRECIATED BALANCE			478,858	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			983,475	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED TSI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				

/1 ANNUAL EXPENSE

/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST

/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES

RUN 02/05/97 USDA FOREST SERVICE TPIR 02 F.
 RGUN 1004 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 CHUGACH N.F. REPORT 01

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
REVENUES				
TIMBER SALES	5	87,848		87,853
PURCHASER ROAD CREDIT				
ASSOCIATED CHARGES	45	3,457		3,502
INTEREST AND PENALTIES	5,116			5,116
TOTAL REVENUES	5,166	91,305		96,471
DIRECT EXPENSES				
TIMBER SALE EXPENSES				
HARVEST ADMIN /1	5,892	85,896		91,788
GENERAL ADMIN - SALES /1	625	416,364		416,989
SALE PREPARATION /2	1,026	682,933		683,959
ANALYSIS/DOCUMENTATION /2	199	132,478		132,677
APPEALS/LITIGATION-SALES /2		154		154
BRUSH DISPOSAL FUND /2		1-		1-
ROAD MAINTENANCE /2		190		190
UNDEPRECIATED ROAD WRITEOFF /1				
DEPRECIATION EXPENSES /3				
ROAD DESIGN AND CONSTRUCTION	18	12,034		12,052
PURCHASER ROAD CREDITS		151		151
TOTAL TIMBER SALE EXPENSES	7,760	1,330,199		1,337,959
TIMBER PROGRAM EXPENSES				
TRANSPORTATION PLANNING /1	68	45,388		45,456
SILVICULTURAL EXAMINATIONS /2	214	142,740		142,954
GENETIC TREE IMPROVEMENT /4				
APPROPRIATED REFORESTATION /4	2	1,022		1,024
KV REFORESTATION /4		190		190
APPROPRIATED STAND IMPROV /4	2	1,020		1,022
KV STAND IMPROVEMENT /4		95		95
DEPRECIATION /3				
FACILITIES DEPRECIATION		134		134
TOTAL TIMBER PROGRAM EXP	286	190,589		190,875
TOTAL DIRECT EXPENSES	8,046	1,520,788		1,528,834

RUN DATE 02/05/97
RGUN 1005

USDA FOREST SERVICE
STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
TONGASS-KETCHIKAN REPORT 01

TPIR 02

PAGE 2

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1				
R-10 APPROPRIATED RD MTCE /2	2,255			2,255
R-10 LAND LINE LOCATION /2	1,292			1,292
TOTAL TIMBER SALE INDIRECT	3,547			3,547
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	332,967			332,967
TOTAL TIMBER PROG INDIRECT	332,967			332,967
TOTAL INDIRECT EXPENSES	336,514			336,514
TOTAL TIMBER EXPENSES	11,542,614	1,760		11,544,374
GAIN/LOSS BEFORE EXTRAORD. EXP.	8,996,916	15,653-	40	8,981,303
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	8,996,916	15,653-	40	8,981,303
TIMBER VOLUME (MBF) INFORMATION				
	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
VOLUME HARVESTED	88,827			88,827
VOLUME UNDER CONTRACT ENDING	323,307			323,307
GROWING STOCK INVENTORY				21,084,802
PAYMENTS TO STATES			4,771,024	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			18,405,628	
GROWTH ACTIVITY POOL BALANCE			15,350,153	
FACILITIES ASSET BALANCE			8,066,823	
ROAD ASSETS BEING DEPRECIATED BALANCE			56,309,789	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			199,326,185	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED TSI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				

/1 ANNUAL EXPENSE

/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST

/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES

RUN DATE 02/05/97
RGUN 1005

USDA FOREST SERVICE
STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
TONGASS-KETCHIKAN REPORT 01

TPIR 02

PAGE 2

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1				
R-10 APPROPRIATED RD MTCE /2	2,255			2,255
R-10 LAND LINE LOCATION /2	1,292			1,292
TOTAL TIMBER SALE INDIRECT	3,547			3,547
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	332,967			332,967
TOTAL TIMBER PROG INDIRECT	332,967			332,967
TOTAL INDIRECT EXPENSES	336,514			336,514
TOTAL TIMBER EXPENSES	11,542,614	1,760		11,544,374
GAIN/LOSS BEFORE EXTRAORD. EXP.	8,996,916	15,653-	40	8,981,303
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	8,996,916	15,653-	40	8,981,303
TIMBER VOLUME (MBF) INFORMATION				
	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
VOLUME HARVESTED	88,827			88,827
VOLUME UNDER CONTRACT ENDING	323,307			323,307
GROWING STOCK INVENTORY				21,084,802
PAYMENTS TO STATES			4,771,024	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			18,405,628	
GROWTH ACTIVITY POOL BALANCE			15,350,153	
FACILITIES ASSET BALANCE			8,066,823	
ROAD ASSETS BEING DEPRECIATED BALANCE			56,309,789	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			199,326,185	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED TSI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				

/1 ANNUAL EXPENSE

/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST

/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES

RUN 02/05/97 USDA FOREST SERVICE TPIR 02
 RGUN 0509 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 SUPERIOR N F REPORT 01

2

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1				
R-10 APPROPRIATED RD MTCE /2				
R-10 LAND LINE LOCATION /2				
TOTAL TIMBER SALE INDIRECT				
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	72,413	43,341	69	115,823
TOTAL TIMBER PROG INDIRECT	72,413	43,341	69	115,823
TOTAL INDIRECT EXPENSES	72,413	43,341	69	115,823
TOTAL TIMBER EXPENSES	2,068,961	1,299,257	2,799	3,371,017
GAIN/LOSS BEFORE EXTRAORD. EXP.	142,829	289,336-	1,562-	148,069-
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	142,829	289,336-	1,562-	148,069-
TIMBER VOLUME (MBF) INFORMATION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
VOLUME HARVESTED	59,190	35,431	58	94,679
VOLUME UNDER CONTRACT ENDING	117,592	59,025	13	176,630
GROWING STOCK INVENTORY				6,494,379
PAYMENTS TO STATES			806,969	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			3,060,048	
GROWTH ACTIVITY POOL BALANCE			28,766,277	
FACILITIES ASSET BALANCE			48,386	
ROAD ASSETS BEING DEPRECIATED BALANCE			3,897,610	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			18,561,080	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED TSI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				

/1 ANNUAL EXPENSE

/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST

/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES

RUN 02/05/97 USDA FOREST SERVICE TPIR 02 P,
 RGUN 0909 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 SUPERIOR N F REPORT 01

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
REVENUES				
TIMBER SALES	2,089,165	941,957	1,237	3,032,359
PURCHASER ROAD CREDIT	80,450	42,392		122,842
ASSOCIATED CHARGES	41,387	24,918		66,305
INTEREST AND PENALTIES	788	654		1,442
TOTAL REVENUES	2,211,790	1,009,921	1,237	3,222,948
DIRECT EXPENSES				
TIMBER SALE EXPENSES				
HARVEST ADMIN /1	245,916	207,996	1,623	455,535
GENERAL ADMIN - SALES /1	315,028	188,553	303	503,884
SALE PREPARATION /2	530,171	317,322	509	848,002
ANALYSIS/DOCUMENTATION /2	307,070	183,790	295	491,155
APPEALS/LITIGATION-SALES /2	10,218	6,117		16,335
BRUSH DISPOSAL FUND /2	10,339	6,190		16,529
ROAD MAINTENANCE /2	51,909	31,079		82,988
UNDEPRECIATED ROAD WRITEOFF /1				
DEPRECIATION EXPENSES /3				
ROAD DESIGN AND CONSTRUCTION	80,534	48,218		128,752
PURCHASER ROAD CREDITS	16,362	9,796		26,158
TOTAL TIMBER SALE EXPENSES	1,567,547	999,061	2,730	2,569,338
TIMBER PROGRAM EXPENSES				
TRANSPORTATION PLANNING /1	11,730	7,023		18,753
SILVICULTURAL EXAMINATIONS /2	116,016	69,462		185,478
GENETIC TREE IMPROVEMENT /4	33,653	20,149		53,802
APPROPRIATED REFORESTATION /4	192,614	115,322		307,936
KV REFORESTATION /4	16,681	9,988		26,669
APPROPRIATED STAND IMPROV /4	52,950	31,703		84,653
KV STAND IMPROVEMENT /4	4,348	2,604		6,952
DEPRECIATION /3				
FACILITIES DEPRECIATION	1,009	604		1,613
TOTAL TIMBER PROGRAM EXP	429,001	256,855		685,856
TOTAL DIRECT EXPENSES	1,996,548	1,255,916	2,730	3,255,194

RUN 02/05/97
 RGUN 0903

 USDA FOREST SERVICE
 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 CHIPPEWA NF REPORT 01

TPIR 02

2

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1				
R-10 APPROPRIATED RD MTCE /2				
R-10 LAND LINE LOCATION /2				
TOTAL TIMBER SALE INDIRECT				
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	208,335	96,706	123	305,164
TOTAL TIMBER PROG INDIRECT	208,335	96,706	123	305,164
TOTAL INDIRECT EXPENSES	208,335	96,706	123	305,164
TOTAL TIMBER EXPENSES	1,826,581	892,066	6,333	2,724,980
GAIN/LOSS BEFORE EXTRAORD. EXP.	771,698	102,535	3,788	665,375
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	771,698	102,535	3,788	665,375
TIMBER VOLUME (MBF) INFORMATION				
	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
VOLUME HARVESTED	42,541	19,745	26	62,312
VOLUME UNDER CONTRACT ENDING	88,566	31,725	6	120,297
GROWING STOCK INVENTORY				4,385,490
PAYMENTS TO STATES			897,953	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			2,010,048	
GROWTH ACTIVITY POOL BALANCE			15,248,727	
FACILITIES ASSET BALANCE			80,810	
ROAD ASSETS BEING DEPRECIATED BALANCE			1,644,913	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			10,124,389	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED TSI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				

/1 ANNUAL EXPENSE

/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST

/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES

RUN 02/05/97 USDA FOREST SERVICE TPIR 02 1
 RGUN 0903 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 CHIPPEWA N F REPORT 01

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
REVENUES				
TIMBER SALES	2,565,109	766,709	2,545	3,334,363
PURCHASER ROAD CREDIT	11,919	16,961		28,880
ASSOCIATED CHARGES	20,653	5,647		26,300
INTEREST AND PENALTIES	598	214		812
TOTAL REVENUES	2,598,279	789,531	2,545	3,390,355
DIRECT EXPENSES				
TIMBER SALE EXPENSES				
HARVEST ADMIN /1	143,463	110,810	5,566	259,839
GENERAL ADMIN - SALES /1	477,656	221,721	280	699,657
SALE PREPARATION /2	471,161	218,706	276	690,143
ANALYSIS/DOCUMENTATION /2	151,172	70,172	88	221,432
APPEALS/LITIGATION-SALES /2	107	49		156
BRUSH DISPOSAL FUND /2	626	291		917
ROAD MAINTENANCE /2	14,971	6,948		21,919
UNDEPRECIATED ROAD WRITEOFF /1				
DEPRECIATION EXPENSES /3				
ROAD DESIGN AND CONSTRUCTION	61,797	28,681		90,478
PURCHASER ROAD CREDITS	18,636	8,650		27,286
TOTAL TIMBER SALE EXPENSES	1,339,589	666,028	6,210	2,011,827
TIMBER PROGRAM EXPENSES				
TRANSPORTATION PLANNING /1	12,644	5,868		18,512
SILVICULTURAL EXAMINATIONS /2	72,713	33,748		106,461
GENETIC TREE IMPROVEMENT /4	41,438	19,233		60,671
APPROPRIATED REFORESTATION /4	75,435	35,011		110,446
KV REFORESTATION /4	32,543	15,104		47,647
APPROPRIATED STAND IMPROV /4	30,809	14,300		45,109
KV STAND IMPROVEMENT /4	11,235	5,214		16,449
DEPRECIATION /3				
FACILITIES DEPRECIATION	1,840	854		2,694
TOTAL TIMBER PROGRAM EXP	278,657	129,332		407,989
TOTAL DIRECT EXPENSES	1,618,246	795,360	6,210	2,419,816

RUN 02/05/97
 RGUN 003

 USDA FOREST SERVICE
 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 CHATT-OONEE NFS REPORT 01

TPIR 02

2

PERIOD ENDING SEPTEMBER 30, 1996.

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1	874	2,309	53	3,236
R-10 APPROPRIATED RD MTCE /2				
R-10 LAND LINE LOCATION /2				
TOTAL TIMBER SALE INDIRECT	874	2,309	53	3,236
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	78,529	207,444	4,769	290,742
TOTAL TIMBER PROG INDIRECT	78,529	207,444	4,769	290,742
TOTAL INDIRECT EXPENSES	79,403	209,753	4,822	293,978
TOTAL TIMBER EXPENSES	1,150,602	2,657,685	54,155	3,862,441
GAIN/LOSS BEFORE EXTRAORD. EXP.	212,074	733,128-	43,265-	564,318-
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	212,074	733,128-	43,265-	564,318-
TIMBER VOLUME (MBF) INFORMATION				
VOLUME HARVESTED	10,560	27,896	642	39,098
VOLUME UNDER CONTRACT ENDING	26,430	9,727	13	36,170
GROWING STOCK INVENTORY				5,553,201
PAYMENTS TO STATES			825,219	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			1,934,662	
GROWTH ACTIVITY POOL BALANCE			29,370,774	
FACILITIES ASSET BALANCE			138,780	
ROAD ASSETS BEING DEPRECIATED BALANCE			3,955,207	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			8,367,111	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED TSI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				

/1 ANNUAL EXPENSE

/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST

/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES

RUN 02/05/97 USDA FOREST SERVICE TPIR 02
 RGUN 0003 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 CHATT-OCONEE NFS REPORT 01

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
REVENUES				
TIMBER SALES	1,223,523	1,867,236	10,890	3,101,649
PURCHASER ROAD CREDIT	123,243	5,323		128,566
ASSOCIATED CHARGES	15,579	46,143		61,722
INTEREST AND PENALTIES	331	5,855		6,186
TOTAL REVENUES	1,362,676	1,924,557	10,890	3,298,123
DIRECT EXPENSES				
TIMBER SALE EXPENSES				
HARVEST ADMIN /1	190,032	120,225	10,160	320,417
GENERAL ADMIN - SALES /1	166,263	439,203	10,095	615,561
SALE PREPARATION /2	130,246	344,059	7,908	482,213
ANALYSIS/DOCUMENTATION /2	348,657	921,017	21,170	1,290,844
APPEALS/LITIGATION-SALES /2	1,662	4,390		6,052
BRUSH DISPOSAL FUND /2				
ROAD MAINTENANCE /2	38,699	102,228		140,927
UNDEPRECIATED ROAD WRITEOFF /1				
DEPRECIATION EXPENSES /3				
ROAD DESIGN AND CONSTRUCTION	43,026	113,660		156,686
PURCHASER ROAD CREDITS	37,003	97,749		134,751
TOTAL TIMBER SALE EXPENSES	955,588	2,142,531	49,333	3,147,451
TIMBER PROGRAM EXPENSES				
TRANSPORTATION PLANNING /1	1,008	2,661		3,669
SILVICULTURAL EXAMINATIONS /2	47,136	124,516		171,652
GENETIC TREE IMPROVEMENT /4	9,342	24,679		34,021
APPROPRIATED REFORESTATION /4	26,223	69,271		95,494
KV REFORESTATION /4	11,697	30,899		42,596
APPROPRIATED STAND IMPROV /4	12,777	33,752		46,529
KV STAND IMPROVEMENT /4	6,158	16,267		22,425
DEPRECIATION /3				
FACILITIES DEPRECIATION	1,270	3,356		4,626
TOTAL TIMBER PROGRAM EXP	115,611	305,401		421,012
TOTAL DIRECT EXPENSES	1,071,199	2,447,932	49,333	3,568,463

RUN DATE 02/05/97
RGUN 0812

USDA FOREST SERVICE
STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
MARION-SUMTER NFS REPORT 01

TPIR 02

PAGE 2

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1	1,632	1,330	13	2,975
R-10 APPROPRIATED RD MTCE /2				
R-10 LAND LINE LOCATION /2				
TOTAL TIMBER SALE INDIRECT	1,632	1,330	13	2,975
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	186,531	151,985	1,496	340,012
TOTAL TIMBER PROG INDIRECT	186,531	151,985	1,496	340,012
TOTAL INDIRECT EXPENSES	188,163	153,315	1,509	342,987
TOTAL TIMBER EXPENSES	1,911,823	1,455,104	25,178	3,392,105
GAIN/LOSS BEFORE EXTRAORD. EXP.	1,262,656	218,583-	22,973-	1,021,100
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	1,262,656	218,583-	22,973-	1,021,100
TIMBER VOLUME (MBF) INFORMATION				
	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
VOLUME HARVESTED	18,411	15,000	147	33,558
VOLUME UNDER CONTRACT ENDING	19,689	36,097	1	55,787
GROWING STOCK INVENTORY				4,952,489
PAYMENTS TO STATES			910,776	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			1,882,662	
GROWTH ACTIVITY POOL BALANCE			22,842,814	
FACILITIES ASSET BALANCE			41,495	
ROAD ASSETS BEING DEPRECIATED BALANCE			11,110,108	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			15,807,841	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED ISI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				

/1 ANNUAL EXPENSE

/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST

/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES

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RGUN 12USDA FOREST SERVICE
STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
MARION-SUMTER NFS REPORT 01

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PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
REVENUES				
TIMBER SALES	3,040,827	1,110,985	2,205	4,154,017
PURCHASER ROAD CREDIT	83,229	80,578		163,807
ASSOCIATED CHARGES	49,417	44,242		93,659
INTEREST AND PENALTIES	1,006	716		1,722
TOTAL REVENUES	3,174,479	1,236,521	2,205	4,413,205
DIRECT EXPENSES				
TIMBER SALE EXPENSES				
HARVEST ADMIN /1	245,090	96,990	17,365	359,445
GENERAL ADMIN - SALES /1	258,120	210,316	2,070	470,506
SALE PREPARATION /2	300,842	245,126	2,413	548,381
ANALYSIS/DOCUMENTATION /2	227,055	185,005	1,821	413,881
APPEALS/LITIGATION-SALES /2	2,823	2,301		5,124
BRUSH DISPOSAL FUND /2				
ROAD MAINTENANCE /2	14,819	12,076		26,895
UNDEPRECIATED ROAD WRITEOFF /1				
DEPRECIATION EXPENSES /3				
ROAD DESIGN AND CONSTRUCTION	160,341	130,659		291,000
PURCHASER ROAD CREDITS	203,571	165,888		369,459
TOTAL TIMBER SALE EXPENSES	1,412,661	1,048,361	23,669	2,484,691
TIMBER PROGRAM EXPENSES				
TRANSPORTATION PLANNING /1	27,855	22,698		50,553
SILVICULTURAL EXAMINATIONS /2	76,154	62,057		138,211
GENETIC TREE IMPROVEMENT /4	120,054	97,830		217,884
APPROPRIATED REFORESTATION /4	23,741	19,347		43,088
KV REFORESTATION /4	37,652	30,682		68,334
APPROPRIATED STAND IMPROV /4	19,644	16,007		35,651
KV STAND IMPROVEMENT /4	5,137	4,186		9,323
DEPRECIATION /3				
FACILITIES DEPRECIATION	762	621		1,383
TOTAL TIMBER PROGRAM EXP	310,999	253,428		564,427
TOTAL DIRECT EXPENSES	1,723,660	1,301,789	23,669	3,049,118

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USDA FOREST SERVICE
STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
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PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1				
R-10 APPROPRIATED RD HTCE /2				
R-10 LAND LINE LOCATION /2				
TOTAL TIMBER SALE INDIRECT				
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	22,695	906,588	74,913	1,004,196
TOTAL TIMBER PROG INDIRECT	22,695	906,588	74,913	1,004,196
TOTAL INDIRECT EXPENSES	22,695	906,588	74,913	1,004,196
TOTAL TIMBER EXPENSES	260,560	11,074,866	564,614	11,900,040
GAIN/LOSS BEFORE EXTRAORD. EXP.	275,505	7,532,189	468,046	7,724,730
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	275,505	7,532,189	468,046	7,724,730
TIMBER VOLUME (MBF) INFORMATION				
VOLUME HARVESTED	2,069	82,824	6,846	91,739
VOLUME UNDER CONTRACT ENDING	25,634	47,647	784	74,065
GROWING STOCK INVENTORY				5,063,199
PAYMENTS TO STATES			3,122,915	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			5,598,822	
GROWTH ACTIVITY POOL BALANCE			22,289,920	
FACILITIES ASSET BALANCE			203,216	
ROAD ASSETS BEING DEPRECIATED BALANCE			18,420,383	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			57,276,649	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED ISI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				
/1 ANNUAL EXPENSE				
/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST				
/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES				

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 USDA FOREST SERVICE
 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 WENATCHEE REPORT 01

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PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
REVENUES				
TIMBER SALES	375,679	2,896,101	96,568	3,368,348
PURCHASER ROAD CREDIT	128,432	4,180		132,612
ASSOCIATED CHARGES	15,241	639,719		654,960
INTEREST AND PENALTIES	16,713	2,677		19,390
TOTAL REVENUES	536,065	3,542,677	96,568	4,175,310
DIRECT EXPENSES				
TIMBER SALE EXPENSES				
HARVEST ADMIN /1	1,555	725,218	32	726,805
GENERAL ADMIN - SALES /1	32,889	1,313,809	108,562	1,455,260
SALE PREPARATION /2	73,180	2,923,298	241,557	3,238,035
ANALYSIS/DOCUMENTATION /2	42,276	1,688,808	139,550	1,870,634
APPEALS/LITIGATION-SALES /2	519	20,745		21,264
BRUSH DISPOSAL FUND /2	19,900	795,662		815,562
ROAD MAINTENANCE /2	6,026	240,934		246,960
UNDEPRECIATED ROAD WRITEOFF /1	2,010	80,372		82,382
DEPRECIATION EXPENSES /3				
ROAD DESIGN AND CONSTRUCTION	14,862	594,214		609,076
PURCHASER ROAD CREDITS	9,538	381,365		390,903
TOTAL TIMBER SALE EXPENSES	202,755	8,764,425	489,701	9,456,881
TIMBER PROGRAM EXPENSES				
TRANSPORTATION PLANNING /1	4,384	175,270		179,654
SILVICULTURAL EXAMINATIONS /2	18,116	724,346		742,462
GENETIC TREE IMPROVEMENT /4	2,420	96,768		99,188
APPROPRIATED REFORESTATION /4	2,123	84,870		86,993
KV REFORESTATION /4	4,831	193,178		198,009
APPROPRIATED STAND IMPROV /4	2,067	82,658		84,725
KV STAND IMPROVEMENT /4	1,004	40,154		41,158
DEPRECIATION /3				
FACILITIES DEPRECIATION	165	6,609		6,774
TOTAL TIMBER PROGRAM EXP	35,110	1,403,853		1,438,963
TOTAL DIRECT EXPENSES	237,865	10,168,278	489,701	10,895,844

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 USDA FOREST SERVICE
 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 WILLAMETTE REPORT 01

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PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1	29,357	25,317	980	55,654
R-10 APPROPRIATED RD MTCE /2				
R-10 LAND LINE LOCATION /2				
TOTAL TIMBER SALE INDIRECT	29,357	25,317	980	55,654
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	657,149	566,706	21,926	1,245,781
TOTAL TIMBER PROG INDIRECT	657,149	566,706	21,926	1,245,781
TOTAL INDIRECT EXPENSES	686,506	592,023	22,906	1,301,435
TOTAL TIMBER EXPENSES	8,758,576	7,570,451	230,770	16,559,797
GAIN/LOSS BEFORE EXTRAORD. EXP.	3,571,763	3,550,348	189,684	6,932,427
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	3,571,763	3,550,348	189,684	6,932,427
TIMBER VOLUME (MBF) INFORMATION				
	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
VOLUME HARVESTED	29,661	25,579	991	56,231
VOLUME UNDER CONTRACT ENDING	72,576	58,337	76	130,989
GROWING STOCK INVENTORY				10,316,547
PAYMENTS TO STATES			26,020,321	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			9,026,196	
GROWTH ACTIVITY POOL BALANCE			57,712,914	
FACILITIES ASSET BALANCE			5,228,845	
ROAD ASSETS BEING DEPRECIATED BALANCE			107,474,053	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			119,105,862	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED TSI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				

/1 ANNUAL EXPENSE

/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST

/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES

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 RGUN 0618 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 WILLAMETTE REPORT 01

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
REVENUES				
TIMBER SALES	10,060,111	9,089,606	41,084	19,190,801
PURCHASER ROAD CREDIT	572,189	738,870		1,311,059
ASSOCIATED CHARGES	1,407,876	1,255,303		2,663,179
INTEREST AND PENALTIES	290,163	37,020	2	327,185
TOTAL REVENUES	12,330,339	11,120,799	41,086	23,492,224
DIRECT EXPENSES				
TIMBER SALE EXPENSES				
HARVEST ADMIN /1	530,449	473,913	118,941	1,123,303
GENERAL ADMIN - SALES /1	1,419,808	1,224,400	47,372	2,691,580
SALE PREPARATION /2	839,754	724,178	28,018	1,591,950
ANALYSIS/DOCUMENTATION /2	405,605	349,781	13,533	768,919
APPEALS/LITIGATION-SALES /2	47,702	41,146		88,848
BRUSH DISPOSAL FUND /2	465,039	401,117		866,156
ROAD MAINTENANCE /2	231,240	199,454		430,694
UNDEPRECIATED ROAD WRITEOFF /1	72,839	62,827		135,666
DEPRECIATION EXPENSES /3				
ROAD DESIGN AND CONSTRUCTION	1,185,573	1,022,608		2,208,181
PURCHASER ROAD CREDITS	2,235,665	1,928,360		4,164,025
TOTAL TIMBER SALE EXPENSES	7,433,674	6,427,784	207,864	14,069,322
TIMBER PROGRAM EXPENSES				
TRANSPORTATION PLANNING /1	171,368	147,813		319,181
SILVICULTURAL EXAMINATIONS /2	68,364	58,967		127,331
GENETIC TREE IMPROVEMENT /4	133,719	115,338		249,057
APPROPRIATED REFORESTATION /4	27,296	23,544		50,840
KV REFORESTATION /4	107,967	93,127		201,094
APPROPRIATED STAND IMPROV /4	30,406	26,226		56,632
KV STAND IMPROVEMENT /4	5,697	4,913		10,610
DEPRECIATION /3				
FACILITIES DEPRECIATION	93,579	80,716		174,295
TOTAL TIMBER PROGRAM EXP	638,396	550,644		1,189,040
TOTAL DIRECT EXPENSES	8,072,070	6,978,428	207,864	15,258,362

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 USDA FOREST SERVICE
 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 MENDOCINO REPORT 01

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PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1				
R-10 APPROPRIATED RD MTCE /2				
R-10 LAND LINE LOCATION /2				
TOTAL TIMBER SALE INDIRECT				
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	192,172	428,600	80,586	701,358
TOTAL TIMBER PROG INDIRECT	192,172	428,600	80,586	701,358
TOTAL INDIRECT EXPENSES	192,172	428,600	80,586	701,358
TOTAL TIMBER EXPENSES	949,073	1,997,625	209,586	3,156,284
GAIN/LOSS BEFORE EXTRAORD. EXP.	139,497-	1,243,728-	185,031-	1,568,256-
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	139,497-	1,243,728-	185,031-	1,568,256-
TIMBER VOLUME (MBF) INFORMATION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
VOLUME HARVESTED	1,741	3,883	730	6,354
VOLUME UNDER CONTRACT ENDING	3,613	333	307	4,253
GROWING STOCK INVENTORY				5,432,622
PAYMENTS TO STATES			2,251,992	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			592,994	
GROWTH ACTIVITY POOL BALANCE			28,891,847	
FACILITIES ASSET BALANCE			235,806	
ROAD ASSETS BEING DEPRECIATED BALANCE			21,939,205	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			38,027,439	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED TSI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				
/1 ANNUAL EXPENSE				
/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST				
/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES				

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 RGUN 0508 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 MENDOCINO REPORT 01

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
REVENUES				
TIMBER SALES	350,954	561,204	24,555	936,713
PURCHASER ROAD CREDIT	425,425	105,785		531,210
ASSOCIATED CHARGES	33,197	86,908		120,105
INTEREST AND PENALTIES				
TOTAL REVENUES	809,576	753,897	24,555	1,588,028
DIRECT EXPENSES				
TIMBER SALE EXPENSES				
HARVEST ADMIN /1	57,581	9,467		67,048
GENERAL ADMIN - SALES /1	122,143	272,414	51,219	445,776
SALE PREPARATION /2	172,797	385,388	72,461	630,646
ANALYSIS/DOCUMENTATION /2	12,685	28,292	5,320	46,297
APPEALS/LITIGATION-SALES /2	107	239		346
BRUSH DISPOSAL FUND /2	24,001	53,520		77,521
ROAD MAINTENANCE /2	28,410	63,352		91,762
UNDEPRECIATED ROAD WRITEOFF /1				
DEPRECIATION EXPENSES /3				
ROAD DESIGN AND CONSTRUCTION	126,870	282,916		409,786
PURCHASER ROAD CREDITS	107,487	239,694		347,181
TOTAL TIMBER SALE EXPENSES	652,081	1,335,282	129,000	2,116,363
TIMBER PROGRAM EXPENSES				
TRANSPORTATION PLANNING /1	14,466	32,258		46,724
SILVICULTURAL EXAMINATIONS /2	12,143	27,079		39,222
GENETIC TREE IMPROVEMENT /4	65,030	145,015		210,045
APPROPRIATED REFORESTATION /4	2,484	5,538		8,022
KV REFORESTATION /4	3,879	8,649		12,528
APPROPRIATED STAND IMPROV /4	1,346	3,000		4,346
KV STAND IMPROVEMENT /4	3,039	6,777		9,816
DEPRECIATION /3				
FACILITIES DEPRECIATION	2,433	5,427		7,860
TOTAL TIMBER PROGRAM EXP	104,820	233,743		338,563
TOTAL DIRECT EXPENSES	756,901	1,569,025	129,000	2,454,926

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STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
PLUMAS REPORT 01

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1				
R-10 APPROPRIATED RD MICE /2				
R-10 LAND LINE LOCATION /2				
TOTAL TIMBER SALE INDIRECT				
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	564,558	101,622	106,023	772,203
TOTAL TIMBER PROG INDIRECT	564,558	101,622	106,023	772,203
TOTAL INDIRECT EXPENSES	564,558	101,622	106,023	772,203
TOTAL TIMBER EXPENSES	6,302,162	1,139,602	715,617	8,157,381
GAIN/LOSS BEFORE EXTRAORD. EXP.	4,936,792	930,599-	571,509-	3,434,684
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	4,936,792	930,599-	571,509-	3,434,684
TIMBER VOLUME (MBF) INFORMATION				
	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
VOLUME HARVESTED	30,554	5,501	5,734	41,789
VOLUME UNDER CONTRACT ENDING	39,689	16,976	1,592	58,257
GROWING STOCK INVENTORY				21,484,917
PAYMENTS TO STATES			3,876,653	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			5,395,069	
GROWTH ACTIVITY POOL BALANCE			51,139,129	
FACILITIES ASSET BALANCE			589,303	
ROAD ASSETS BEING DEPRECIATED BALANCE			19,669,095	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			65,264,012	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED TSI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				

/1 ANNUAL EXPENSE

/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST

/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES

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 PLUMAS REPORT 01

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
REVENUES				
TIMBER SALES	10,366,755	69,249	144,108	10,441,614
PURCHASER ROAD CREDIT	298,803	30,473		329,276
ASSOCIATED CHARGES	548,915	208,131		757,046
INTEREST AND PENALTIES	24,481	39,648		64,129
TOTAL REVENUES	11,238,954	209,003	144,108	11,592,065
DIRECT EXPENSES				
TIMBER SALE EXPENSES				
HARVEST ADMIN /1	6,475	6,169	1-	12,643
GENERAL ADMIN - SALES /1	1,256,009	226,085	235,877	1,717,971
SALE PREPARATION /2	1,580,833	284,554	296,880	2,162,267
ANALYSIS/DOCUMENTATION /2	409,151	73,648	76,838	559,637
APPEALS/LITIGATION-SALES /2	5,734	1,033		6,767
BRUSH DISPOSAL FUND /2	541,413	97,498		638,911
ROAD MAINTENANCE /2	186,551	33,594		220,145
UNDEPRECIATED ROAD WRITEOFF /1	297	53		350
DEPRECIATION EXPENSES /3				
ROAD DESIGN AND CONSTRUCTION	469,812	84,604		554,416
PURCHASER ROAD CREDITS	741,181	133,472		874,653
TOTAL TIMBER SALE EXPENSES	5,197,456	940,710	609,594	6,747,760
TIMBER PROGRAM EXPENSES				
TRANSPORTATION PLANNING /1	97,136	17,492		114,628
SILVICULTURAL EXAMINATIONS /2	239,225	43,080		282,305
GENETIC TREE IMPROVEMENT /4	104,648	18,845		123,493
APPROPRIATED REFORESTATION /4	14,904	2,684		17,588
KV REFORESTATION /4	31,922	5,748		37,670
APPROPRIATED STAND IMPROV /4	7,632	1,374		9,006
KV STAND IMPROVEMENT /4	28,036	5,049		33,085
DEPRECIATION /3				
FACILITIES DEPRECIATION	16,645	2,998		19,643
TOTAL TIMBER PROGRAM EXP	540,148	97,270		637,418
TOTAL DIRECT EXPENSES	5,737,604	1,037,980	609,594	7,385,178

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STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
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PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1				
R-10 APPROPRIATED RD MTCE /2				
R-10 LAND LINE LOCATION /2				
TOTAL TIMBER SALE INDIRECT				
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	42,789	49,303	64,128	156,220
TOTAL TIMBER PROG INDIRECT	42,789	49,303	64,128	156,220
TOTAL INDIRECT EXPENSES	42,789	49,303	64,128	156,220
TOTAL TIMBER EXPENSES	376,363	427,785	360,230	1,164,378
GAIN/LOSS BEFORE EXTRAORD. EXP.	77,566	55,794-	309,269-	287,497-
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	77,566	55,794-	309,269-	287,497-
TIMBER VOLUME (MBF) INFORMATION				
	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
VOLUME HARVESTED	2,128	2,452	3,190	7,770
VOLUME UNDER CONTRACT ENDING	3,507	8,428	3,490	15,425
GROWING STOCK INVENTORY				2,818,154
PAYMENTS TO STATES			230,747	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			909,125	
GROWTH ACTIVITY POOL BALANCE			5,133,164	
FACILITIES ASSET BALANCE			17,671	
ROAD ASSETS BEING DEPRECIATED BALANCE			2,315,685	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			8,950,205	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED TSI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				

/1 ANNUAL EXPENSE

/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST

/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES

K 02/05/97 USDA FOREST SERVICE TPIR 02
 RGUN 003 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 BRIDGER-TETON N F REPORT 01

1

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
REVENUES				
TIMBER SALES	403,184	324,184	48,602	775,970
PURCHASER ROAD CREDIT	18,100	34,685		52,785
ASSOCIATED CHARGES	21,236	12,476	2,359	36,071
INTEREST AND PENALTIES	11,409	646		12,055
TOTAL REVENUES	453,929	371,991	50,961	876,881
DIRECT EXPENSES				
TIMBER SALE EXPENSES				
HARVEST ADMIN /1	32,800	31,899	21,738	86,437
GENERAL ADMIN - SALES /1	92,362	106,424	138,425	337,211
SALE PREPARATION /2	85,487	98,503	128,122	312,112
ANALYSIS/DOCUMENTATION /2	5,215	6,009	7,817	19,041
APPEALS/LITIGATION-SALES /2				
BRUSH DISPOSAL FUND /2	2,672	3,080		5,752
ROAD MAINTENANCE /2	6,479	7,466		13,945
UNDEPRECIATED ROAD WRITEOFF /1				
DEPRECIATION EXPENSES /3				
ROAD DESIGN AND CONSTRUCTION	20,732	23,891		44,623
PURCHASER ROAD CREDITS	29,460	33,950		63,410
TOTAL TIMBER SALE EXPENSES	275,207	311,222	296,102	882,531
TIMBER PROGRAM EXPENSES				
TRANSPORTATION PLANNING /1	1,624	1,871		3,495
SILVICULTURAL EXAMINATIONS /2	49,773	57,357		107,130
GENETIC TREE IMPROVEMENT /4				
APPROPRIATED REFORESTATION /4	3,777	4,352		8,129
KV REFORESTATION /4	2,286	2,634		4,920
APPROPRIATED STAND IMPROV /4	553	638		1,191
KV STAND IMPROVEMENT /4	80	93		173
DEPRECIATION /3				
FACILITIES DEPRECIATION	274	315		589
TOTAL TIMBER PROGRAM EXP	58,367	67,260		125,627
TOTAL DIRECT EXPENSES	333,574	378,482	296,102	1,008,158

RUM 02/05/97
RGUR 0405USDA FOREST SERVICE
STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
CARIBOU N F REPORT 01

TPIR 02

2

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1				
R-10 APPROPRIATED RD MTCE /2				
R-10 LAND LINE LOCATION /2				
TOTAL TIMBER SALE INDIRECT				
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	27,038	6,165	12,194	45,397
TOTAL TIMBER PROG INDIRECT	27,038	6,165	12,194	45,397
TOTAL INDIRECT EXPENSES	27,038	6,165	12,194	45,397
TOTAL TIMBER EXPENSES	520,827	222,307	160,511	903,645
GAIN/LOSS BEFORE EXTRAORD. EXP.	601,445	136,081-	110,682-	354,682
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	601,445	136,081-	110,682-	354,682
TIMBER VOLUME (MBF) INFORMATION				
	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
VOLUME HARVESTED	5,223	1,191	2,356	8,770
VOLUME UNDER CONTRACT ENDING	16,344	1,006	1,631	18,981
GROWING STOCK INVENTORY				1,111,963
PAYMENTS TO STATES			271,546	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			809,646	
GROWTH ACTIVITY POOL BALANCE			3,423,882	
FACILITIES ASSET BALANCE			101,052	
ROAD ASSETS BEING DEPRECIATED BALANCE			1,361,784	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			6,377,603	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED TSI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				

/1 ANNUAL EXPENSE

/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST

/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES

RUK 02/05/97
RGUN 0405

USDA FOREST SERVICE
STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
CARIBOU N F REPORT 01

TPIR 02

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PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
REVENUES				
TIMBER SALES	745,782	85,361	34,433	865,576
PURCHASER ROAD CREDIT	352,386			352,386
ASSOCIATED CHARGES	24,104	865	15,396	40,365
INTEREST AND PENALTIES				
TOTAL REVENUES	1,122,272	86,226	49,829	1,258,327
DIRECT EXPENSES				
TIMBER SALE EXPENSES				
HARVEST ADMIN /1	8,648	105,520	12,711	126,879
GENERAL ADMIN - SALES /1	121,442	27,689	54,767	203,898
SALE PREPARATION /2	149,042	33,982	67,214	250,238
ANALYSIS/DOCUMENTATION /2	30,212	6,889	13,625	50,726
APPEALS/LITIGATION-SALES /2	172	39		211
BRUSH DISPOSAL FUND /2	9,610	2,192		11,802
ROAD MAINTENANCE /2	2,177	497		2,674
UNDEPRECIATED ROAD WRITEOFF /1				
DEPRECIATION EXPENSES /3				
ROAD DESIGN AND CONSTRUCTION	44,475	10,142		54,617
PURCHASER ROAD CREDITS	47,150	10,752		57,902
TOTAL TIMBER SALE EXPENSES	412,928	197,702	148,317	758,947
TIMBER PROGRAM EXPENSES				
TRANSPORTATION PLANNING /1	8,365	1,908		10,273
SILVICULTURAL EXAMINATIONS /2	47,552	10,844		58,396
GENETIC TREE IMPROVEMENT /4				
APPROPRIATED REFORESTATION /4	6,939	1,583		8,522
KV REFORESTATION /4	11,416	2,603		14,019
APPROPRIATED STAND IMPROV /4	1,605	366		1,971
KV STAND IMPROVEMENT /4	2,241	511		2,752
DEPRECIATION /3				
FACILITIES DEPRECIATION	2,743	625		3,368
TOTAL TIMBER PROGRAM EXP	80,861	18,440		99,301
TOTAL DIRECT EXPENSES	493,789	216,142	148,317	858,248

RUM 02/05/97

USDA FOREST SERVICE

TPIR 02

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STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
COCONINO REPORT 01

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1	21	2,084	3,996	6,101
R-10 APPROPRIATED RD MTCE /2				
R-10 LAND LINE LOCATION /2				
TOTAL TIMBER SALE INDIRECT	21	2,084	3,996	6,101
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	683	68,629	131,594	200,906
TOTAL TIMBER PROG INDIRECT	683	68,629	131,594	200,906
TOTAL 'NDIRECT EXPENSES	704	70,713	135,590	207,007
TOTAL TIMBER EXPENSES	15,863	1,792,417	1,456,479	3,264,759
GAIN/LOSS BEFORE EXTRAORD. EXP.	11,412-	1,552,041-	1,364,014-	2,927,467-
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	11,412-	1,552,041-	1,364,014-	2,927,467-
TIMBER VOLUME (MBF) INFORMATION				
	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
VOLUME HARVESTED	34	3,421	6,561	10,016
VOLUME UNDER CONTRACT ENDING		14,760	43	14,803
GROWING STOCK INVENTORY				3,643,802
PAYMENTS TO STATES			81,289	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			2,185,982	
GROWTH ACTIVITY POOL BALANCE			17,704,030	
FACILITIES ASSET BALANCE			18,564	
ROAD ASSETS BEING DEPRECIATED BALANCE			5,638,830	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			11,714,030	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED TSI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				
/1 ANNUAL EXPENSE				
/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST				
/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES				

RUN DATE 02/05/97
RGUN 0304

USDA FOREST SERVICE
STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
COCONINO REPORT 01

TPIR 02

PAGE

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
REVENUES				
TIMBER SALES	4,451	199,309	92,455	296,215
PURCHASER ROAD CREDIT		25,771		25,771
ASSOCIATED CHARGES		15,056		15,056
INTEREST AND PENALTIES		240	10	250
TOTAL REVENUES	4,451	240,376	92,465	337,292
DIRECT EXPENSES				
TIMBER SALE EXPENSES				
HARVEST ADMIN /1	280	221,795	87,522	309,597
GENERAL ADMIN - SALES /1	2,596	260,845	500,157	763,598
SALE PREPARATION /2	1,753	176,172	337,800	515,725
ANALYSIS/DOCUMENTATION /2	2,053	206,217	395,410	603,680
APPEALS/LITIGATION-SALES /2	228	23,052		23,280
BRUSH DISPOSAL FUND /2	1,249	126,193		127,442
ROAD MAINTENANCE /2	495	50,019		50,514
UNDEPRECIATED ROAD WRITEOFF /1				
DEPRECIATION EXPENSES /3				
ROAD DESIGN AND CONSTRUCTION	1,613	162,981		164,594
PURCHASER ROAD CREDITS	1,966	198,687		200,653
TOTAL TIMBER SALE EXPENSES	11,777	1,379,857	1,320,889	2,712,523
TIMBER PROGRAM EXPENSES				
TRANSPORTATION PLANNING /1	896	90,553		91,449
SILVICULTURAL EXAMINATIONS /2	2,011	203,220		205,231
GENETIC TREE IMPROVEMENT /4				
APPROPRIATED REFORESTATION /4	127	12,872		12,999
KV REFORESTATION /4	22	2,177		2,199
APPROPRIATED STAND IMPROV /4	133	13,487		13,620
KV STAND IMPROVEMENT /4	187	18,925		19,112
DEPRECIATION /3				
FACILITIES DEPRECIATION	6	613		619
TOTAL TIMBER PROGRAM EXP	3,382	341,847		345,229
TOTAL DIRECT EXPENSES	15,159	1,721,704	1,320,889	3,057,752

RUN DATE 02/05/97 USDA FOREST SERVICE TPIR 02 PAGE 2
 RGUN 0214 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 SHOSHONE NF REPORT 01

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1	28	12	60	100
R-10 APPROPRIATED RD MTCE /2				
R-10 LAND LINE LOCATION /2				
TOTAL TIMBER SALE INDIRECT	28	12	60	100
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	24,106	10,616	51,802	86,524
TOTAL TIMBER PROG INDIRECT	24,106	10,616	51,802	86,524
TOTAL INDIRECT EXPENSES	24,134	10,628	51,862	86,624
TOTAL TIMBER EXPENSES	267,967	85,401	311,798	665,166
GAIN/LOSS BEFORE EXTRAORD. EXP.	194,982	23,400	255,974-	37,592-
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	194,982	23,400	255,974-	37,592-
TIMBER VOLUME (MBF) INFORMATION				
	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
VOLUME HARVESTED	1,633	719	3,509	5,861
VOLUME UNDER CONTRACT ENDING	2,742	536	3,097	6,375
GROWING STOCK INVENTORY				555,597
PAYMENTS TO STATES			153,251	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			284,849	
GROWTH ACTIVITY POOL BALANCE			2,683,616	
FACILITIES ASSET BALANCE			1,190-	
ROAD ASSETS BEING DEPRECIATED BALANCE			848,714	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			5,392,837	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED TSI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				

/1 ANNUAL EXPENSE

/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST

/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES

RUI 02/05/97 USDA FOREST SERVICE TPIR 02 1
 RGUN 4 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 SHOSHONE NF REPORT 01

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
REVENUES				
TIMBER SALES	425,325	108,204	54,194	587,723
PURCHASER ROAD CREDIT	25,252	31		25,283
ASSOCIATED CHARGES	12,256	566	1,630	14,452
INTEREST AND PENALTIES	116			116
TOTAL REVENUES	462,949	108,801	55,824	627,574
DIRECT EXPENSES				
TIMBER SALE EXPENSES				
HARVEST ADMIN /1	74,067	13	51,297	125,377
GENERAL ADMIN - SALES /1	35,680	15,714	76,676	128,070
SALE PREPARATION /2	33,888	14,925	72,824	121,637
ANALYSIS/DOCUMENTATION /2	27,520	12,120	59,139	98,779
APPEALS/LITIGATION-SALES /2	111	49		160
BRUSH DISPOSAL FUND /2	1,923	847		2,770
ROAD MAINTENANCE /2	5,180	2,281		7,461
UNDEPRECIATED ROAD WRITEOFF /1				
DEPRECIATION EXPENSES /3				
ROAD DESIGN AND CONSTRUCTION	18,190	8,009		26,199
PURCHASER ROAD CREDITS	5,952	2,621		8,573
TOTAL TIMBER SALE EXPENSES	202,511	56,579	259,936	519,026
TIMBER PROGRAM EXPENSES				
TRANSPORTATION PLANNING /1				
SILVICULTURAL EXAMINATIONS /2	21,578	9,501		31,079
GENETIC TREE IMPROVEMENT /4				
APPROPRIATED REFORESTATION /4	10,886	4,793		15,679
KV REFORESTATION /4	247	109		356
APPROPRIATED STAND IMPROV /4	4,571	2,012		6,583
KV STAND IMPROVEMENT /4	4,068	1,791		5,859
DEPRECIATION /3				
FACILITIES DEPRECIATION	28-	12-		40-
TOTAL TIMBER PROGRAM EXP	41,322	18,194		59,516
TOTAL DIRECT EXPENSES	243,833	74,773	259,936	578,542

RUN 02/05/97
 RGUN 0006

 USDA FOREST SERVICE TP1R 02
 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 MEDICINE BOW/ROUTT NF REPORT 01

2

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1	6,454	1,293	1,434	9,181
R-10 APPROPRIATED RD MTCE /2				
R-10 LAND LINE LOCATION /2				
TOTAL TIMBER SALE INDIRECT	6,454	1,293	1,434	9,181
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	197,369	39,530	43,853	280,752
TOTAL TIMBER PROG INDIRECT	197,369	39,530	43,853	280,752
TOTAL INDIRECT EXPENSES	203,823	40,823	45,287	289,933
TOTAL TIMBER EXPENSES	2,294,800	491,936	301,641	3,088,377
GAIN/LOSS BEFORE EXTRAORD. EXP.	922,312	66,771-	216,700-	638,841
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	922,312	66,771-	216,700-	638,841
TIMBER VOLUME (MBF) INFORMATION				
	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
VOLUME HARVESTED	15,262	3,056	3,392	21,710
VOLUME UNDER CONTRACT ENDING	34,322	8,935	2,982	46,239
GROWING STOCK INVENTORY				6,744,146
PAYMENTS TO STATES			935,479	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			2,845,480	
GROWTH ACTIVITY POOL BALANCE			15,187,112	
FACILITIES ASSET BALANCE			26,480	
ROAD ASSETS BEING DEPRECIATED BALANCE			8,148,132	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			36,994,233	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED TSI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				
/1 ANNUAL EXPENSE				
/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST				
/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES				

RL E 02/05/97 USDA FOREST SERVICE TPIR 02
 RGUN 0206 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 MEDICINE BOW/ROUTT NF REPORT 01

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
REVENUES				
TIMBER SALES	2,711,922	396,041	73,568	3,181,531
PURCHASER ROAD CREDIT	332,242	15,983		348,225
ASSOCIATED CHARGES	150,607	10,965	11,373	172,945
INTEREST AND PENALTIES	22,341	2,176		24,517
TOTAL REVENUES	3,217,112	425,165	84,941	3,727,218
DIRECT EXPENSES				
TIMBER SALE EXPENSES				
HARVEST ADMIN /1	282,105	88,890	13,700	384,695
GENERAL ADMIN - SALES /1	394,974	79,107	87,759	561,840
SALE PREPARATION /2	407,615	81,639	90,568	579,822
ANALYSIS/DOCUMENTATION /2	289,513	57,985	64,327	411,825
APPEALS/LITIGATION-SALES /2	1,191	239		1,430
BRUSH DISPOSAL FUND /2	72,475	14,509		86,984
ROAD MAINTENANCE /2	76,243	15,263		91,506
UNDEPRECIATED ROAD WRITEOFF /1				
DEPRECIATION EXPENSES /3				
ROAD DESIGN AND CONSTRUCTION	186,986	37,433		224,419
PURCHASER ROAD CREDITS	101,647	20,349		121,996
TOTAL TIMBER SALE EXPENSES	1,812,749	395,414	256,354	2,464,517
TIMBER PROGRAM EXPENSES				
TRANSPORTATION PLANNING /1	99,885	19,996		119,881
SILVICULTURAL EXAMINATIONS /2	136,984	27,423		164,407
GENETIC TREE IMPROVEMENT /4				
APPROPRIATED REFORESTATION /4	12,106	2,424		14,530
KV REFORESTATION /4	5,117	1,024		6,141
APPROPRIATED STAND IMPROV /4	17,717	3,547		21,264
KV STAND IMPROVEMENT /4	5,683	1,138		6,821
DEPRECIATION /3				
FACILITIES DEPRECIATION	736	147		883
TOTAL TIMBER PROGRAM EXP	278,228	55,699		333,927
TOTAL DIRECT EXPENSES	2,090,977	451,113	256,354	2,798,444

RUN DATE 02/05/97
RGUN 0105

USDA FOREST SERVICE
STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
CLEARWATER REPORT 01

TPIR 02

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PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1	6,925	3,159	803	10,887
R-10 APPROPRIATED RD MTCE /2				
R-10 LAND LINE LOCATION /2				
TOTAL TIMBER SALE INDIRECT	6,925	3,159	803	10,887
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	533,436	243,363	61,805	838,604
TOTAL TIMBER PROG INDIRECT	533,436	243,363	61,805	838,604
TOTAL INDIRECT EXPENSES	540,361	246,522	62,608	849,491
TOTAL TIMBER EXPENSES	4,970,125	2,287,546	291,492	7,549,163
GAIN/LOSS BEFORE EXTRAORD. EXP.	462,663	1,036,330-	271,044-	844,711-
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	462,663	1,036,330-	271,044-	844,711-
TIMBER VOLUME (MBF) INFORMATION				
	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
VOLUME HARVESTED	15,913	7,260	1,845	25,018
VOLUME UNDER CONTRACT ENDING	48,991	29,152	366	78,509
GROWING STOCK INVENTORY				15,528,288
PAYMENTS TO STATES			1,477,099	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			7,169,178	
GROWTH ACTIVITY POOL BALANCE			43,427,043	
FACILITIES ASSET BALANCE			494,202	
ROAD ASSETS BEING DEPRECIATED BALANCE			28,014,062	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			78,971,656	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED TSI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				

/1 ANNUAL EXPENSE

/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST

/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES

RUN 2/05/97
 RGUN

 USDA FOREST SERVICE TPIR 02
 STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 CLEARWATER REPORT 01

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
REVENUES				
TIMBER SALES	4,738,972	927,997	19,991	5,686,960
PURCHASER ROAD CREDIT	264,828	83,570		348,398
ASSOCIATED CHARGES	420,444	217,099	457	638,000
INTEREST AND PENALTIES	8,544	22,550		31,094
TOTAL REVENUES	5,432,788	1,251,216	20,448	6,704,452
DIRECT EXPENSES				
TIMBER SALE EXPENSES				
HARVEST ADMIN /1	465,901	232,593	9,607	708,101
GENERAL ADMIN - SALES /1	997,666	455,153	115,592	1,568,411
SALE PREPARATION /2	546,874	249,493	63,362	859,729
ANALYSIS/DOCUMENTATION /2	348,027	158,776	40,323	547,126
APPEALS/LITIGATION-SALES /2	38,062	17,365		55,427
BRUSH DISPOSAL FUND /2	178,178	81,292		259,470
ROAD MAINTENANCE /2	186,204	84,954		271,158
UNDEPRECIATED ROAD WRITEOFF /1				
DEPRECIATION EXPENSES /3				
ROAD DESIGN AND CONSTRUCTION	548,950	250,453		799,403
PURCHASER ROAD CREDITS	460,459	210,080		670,539
TOTAL TIMBER SALE EXPENSES	3,770,321	1,740,159	228,884	5,739,364
TIMBER PROGRAM EXPENSES				
TRANSPORTATION PLANNING /1	105,741	48,244		153,985
SILVICULTURAL EXAMINATIONS /2	200,646	91,543		292,189
GENETIC TREE IMPROVEMENT /4	293,953	134,113		428,066
APPROPRIATED REFORESTATION /4	21,343	9,737		31,080
KV REFORESTATION /4	18,079	8,249		26,328
APPROPRIATED STAND IMPROV /4	3,995	1,822		5,817
KV STAND IMPROVEMENT /4	4,374	1,996		6,370
DEPRECIATION /3				
FACILITIES DEPRECIATION	11,312	5,161		16,473
TOTAL TIMBER PROGRAM EXP	659,443	300,865		960,308
TOTAL DIRECT EXPENSES	4,429,764	2,041,024	228,884	6,699,672

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RGUN 0104

USDA FOREST SERVICE
STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
IDAHO PANHANDLE REPORT 01

TPIR 02

PAGE 1

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
REVENUES				
TIMBER SALES	22,455,258	40,028	36,929	22,532,215
PURCHASER ROAD CREDIT	704,731			704,731
ASSOCIATED CHARGES	1,389,150	1,344	11,713	1,402,207
INTEREST AND PENALTIES	8,810			8,810
TOTAL REVENUES	24,557,949	41,372	48,642	24,647,963
DIRECT EXPENSES				
TIMBER SALE EXPENSES				
HARVEST ADMIN /1	1,109,508	3,603	16,717	1,129,828
GENERAL ADMIN - SALES /1	2,524,033	5,082	145,499	2,674,614
SALE PREPARATION /2	2,087,499	4,203	120,335	2,212,037
ANALYSIS/DOCUMENTATION /2	2,536,605	5,107	146,224	2,687,936
APPEALS/LITIGATION-SALES /2	17,436	35		17,471
BRUSH DISPOSAL FUND /2	1,797,119	3,601		1,800,720
ROAD MAINTENANCE /2	562,295	1,127		563,422
UNDEPRECIATED ROAD WRITEOFF /1	440,794	883		441,677
DEPRECIATION EXPENSES /3				
ROAD DESIGN AND CONSTRUCTION	867,750	1,739		869,489
PURCHASER ROAD CREDITS	849,952	1,703		851,655
TOTAL TIMBER SALE EXPENSES	12,792,991	27,083	428,775	13,248,849
TIMBER PROGRAM EXPENSES				
TRANSPORTATION PLANNING /1	200,589	402		200,991
SILVICULTURAL EXAMINATIONS /2	855,188	1,714		856,902
GENETIC TREE IMPROVEMENT /4	385,200	772		385,972
APPROPRIATED REFORESTATION /4	89,835	180		90,015
KV REFORESTATION /4	80,646	162		80,808
APPROPRIATED STAND IMPROV /4	56,751	114		56,865
KV STAND IMPROVEMENT /4	29,207	59		29,266
DEPRECIATION /3				
FACILITIES DEPRECIATION	51,568	103		51,671
TOTAL TIMBER PROGRAM EXP	1,748,984	3,506		1,752,490
TOTAL DIRECT EXPENSES	14,541,975	30,589	428,775	15,001,339

RUN 5/97 USDA FOREST SERVICE TPIR 02
 RGUN STATEMENT OF TIMBER SALE REVENUES AND EXPENSES
 IDAHO PANHANDLE REPORT 01

PERIOD ENDING SEPTEMBER 30, 1996

ACCOUNT DESCRIPTION	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
INDIRECT EXPENSES				
TIMBER SALE EXPENSES				
APPEALS/LITIGATION /1	9,170	18	529	9,717
R-10 APPROPRIATED RD MTCE /2				
R-10 LAND LINE LOCATION /2				
TOTAL TIMBER SALE INDIRECT	9,170	18	529	9,717
TIMBER PROGRAM EXPENSES				
GENERAL ADMIN PROG /1	1,548,959	3,119	89,290	1,641,368
TOTAL TIMBER PROG INDIRECT	1,548,959	3,119	89,290	1,641,368
TOTAL INDIRECT EXPENSES	1,558,129	3,137	89,819	1,651,085
TOTAL TIMBER EXPENSES	16,100,104	33,726	518,594	16,652,424
GAIN/LOSS BEFORE EXTRAORD. EXP.	8,457,845	7,646	469,952-	7,995,539
EXTRAORDINARY EXPENSES				
NET GAIN OR LOSS	8,457,845	7,646	469,952-	7,995,539
TIMBER VOLUME (MBF) INFORMATION				
	TIMBER COMMODITY	FOREST STEWARDSHIP	PERSONAL USE	TOTAL
VOLUME HARVESTED	76,219	152	4,392	80,763
VOLUME UNDER CONTRACT ENDING	116,348	11	171	116,530
GROWING STOCK INVENTORY				22,412,401
PAYMENTS TO STATES			5,623,831	
RECLASSIFIED ASSETS				
SALE ACTIVITY POOL BALANCE			11,740,574	
GROWTH ACTIVITY POOL BALANCE			71,119,097	
FACILITIES ASSET BALANCE			1,550,140	
ROAD ASSETS BEING DEPRECIATED BALANCE			32,858,979	
ROAD ASSETS CAPITALIZED, NOT DEPRECIATED			131,306,387	
IMMATURE TIMBER ASSETS - APPROPRIATED REFORESTATION				
IMMATURE TIMBER ASSETS - KV REFORESTATION				
IMMATURE TIMBER ASSETS - APPROPRIATED TSI				
IMMATURE TIMBER ASSETS - KV STAND IMPROVEMENT				

/1 ANNUAL EXPENSE

/2 SALE ACTIVITY POOL COST, AMORTIZED ON THE BASIS OF ANNUAL HARVEST

/3 DEPRECIATED ON THE BASIS OF USEFUL LIVES

BACKGROUND STATISTICAL DATA IN RESPONSE TO QUESTIONS
364 - 368

<u>State</u>	Active Allotments			Vacant Allotments		
	<u>No.</u> <u>Allots</u>	<u>Total</u> <u>Acres</u>	<u>NFS</u> <u>Acres</u>	<u>No.</u> <u>Allots</u>	<u>Total</u> <u>Acres</u>	<u>NFS</u> <u>Acres</u>
ALABAMA	2	10,811	9,623	15	126,729	66,599
ARIZONA	544	10,845,278	10,344,877	10	396,587	386,328
ARKANSAS	95	834,683	634,902	54	802,963	635,754
CALIFORNIA	660	11,746,255	9,414,691	93	1,124,013	967,690
COLORADO	1068	10,193,477	9,379,230	136	1,691,236	1,590,180
FLORIDA	4	44,866	44,866	0	0	0
GEORGIA	16	934	934	3	107	107
IDAHO	651	9,376,555	8,792,661	45	820,637	775,334
ILLINOIS	1	106	106	0	0	0
KANSAS	29	109,223	108,423	0	0	0
KENTUCKY	1	260	260	0	0	0
LOUISIANA	18	97,987	97,987	31	97,581	97,541
MICHIGAN	3	1,075	1,075	1	330	330
MINNESOTA	2	275	275	0	0	0
MISSISSIPPI	39	185,733	152,815	0	0	0
MISSOURI	84	40,270	40,270	8	11,055	11,055
MONTANA	810	6,679,186	5,765,804	81	536,615	463,422
NEBRASKA	118	356,611	342,174	3	1,052	902
NEVADA	242	4,455,497	4,214,510	14	718,003	480,795
NEW MEXICO	606	8,801,489	8,252,448	13	173,521	144,056
NEW YORK	1	4,509	4,509	0	0	0
NORTH DAKOTA	504	1,758,733	1,094,274	1	160	160
OHIO	6	363	363	0	0	0
OKLAHOMA	151	107,429	95,703	25	153,183	126,414
OREGON	475	8,084,316	7,216,933	72	1,441,554	1,232,101
SOUTH DAKOTA	463	2,306,928	1,933,852	3	6,237	5,227
TEXAS	166	339,434	283,618	53	107,457	88,360
UTAH	539	7,162,768	6,969,717	12	96,651	96,651
VERMONT	5	223	223	0	0	0
VIRGINIA	17	8,694	8,207	0	0	0
WASHINGTON	154	2,475,140	2,328,261	25	395,091	352,482
WEST VIRGINIA	48	7,002	7,002	6	512	512
WYOMING	657	7,412,403	6,077,067	43	424,071	400,944
Totals	8179	93,448,513	83,617,660	747	9,125,345	7,922,944

Please provide the the following information regarding grazing by Forest and Nationally:

364. Question: How many acres of National Forest System (NFS) lands are actually grazed, the actual amount of AUM's of grazing, and the number of acres per AUM that are required to supply this grazing?

Answer: Approximately 84 million acres of NFS lands were in active allotments in 1996. Of these lands, 41 million acres are considered suitable for domestic livestock grazing. No records are kept as to the amount of "actual" acres grazed in 1996, because it is impossible to track the full extent to which livestock are using all suitable lands. On a yearly basis, climatic conditions can change the productivity of and access to any piece of land by livestock. Additionally, permittee requested non-use varies from year to year, and may change during the grazing season. Also, due to the many grazing systems which require resting portions of allotments annually, the actual grazed acreages will be less than the total suitable grazing acres. Therefore, it is nearly impossible to give anything more than a very rough estimate of the range of acres used yearly. In any one year, the amount grazed may range from around 70% to over 80% of suitable lands in active grazing allotments.

In 1996, approximately 7.95 million AUMs were authorized on NFS lands. Using this figure and dividing it into the total number of suitable acres, the result would be 5.2 suitable acres per AUM. However, as stated above, the total acres used would be less than the suitable acres year to year, therefore the acres per AUM would be decreased proportionately. It should be kept in mind that suitable NFS grazing lands for domestic livestock are very diverse, and range in productivity from .2 acres per AUM on highly productive lands to 15 acres per AUM on minimally productive lands usually associated with very dry areas. Averaging total suitable acres against total AUMs produced does not give a very accurate picture of the productivity of NFS lands.

365. Question: Show the dollars for the grazing fee, allocations to the Range Betterment account, 25% county payments, appropriated fund costs and the remaining dollars after these allocations. Also show each as a "per acre grazed" amount.

Answer: In 1996, the grazing fee for western National Forests and for western National Grasslands was \$1.35. For the National Grasslands generally within the Great Plains, the fee was \$1.42. The fee for eastern states grazing ranged from \$2.24 to \$3.85. A total of \$7.4 million was collected in grazings fees were collected in 1996, approximately \$6.6 million from National Forests and \$0.8 million from National Grasslands, for the production of 7.95 million AUMs. National Forest System lands contain approximately 41 million suitable acres within active allotment in 1996.

Approximately \$3.7 million (50%) will be returned to the Forest Service in the Range Betterment Fund. Approximately \$1.85 million (25%) would go to the counties of origin and an equal amount to the Federal Treasury.

The "per acre grazed" amount for Range Betterment would be approximately \$.18 per suitable acre. For the Forest Service portion, it would be \$.09 per acre grazed and for the county of origin and the federal treasury it would be \$.05 each. In FY 1996, the Forest Service received \$27.012 million for range management. The "per acre

grazed" amount of the appropriated range management funds other than Range Betterment would be approximately \$.66 per acre. Appropriated range management funds are not spent entirely on livestock grazing. These funds are also expended for wild horse and burro management, noxious weed management, and other programs that promote rangeland health.

366. Question: In 1991 grazing fee gross income was \$11,500,000. In 1996 it fell to \$7,560,000, almost 1/3rd. How does this compare with fees charged on State and Private lands for these years?

Answer: The grazing fee for western National Forests and Grasslands is computed using the fee formula established by Congress in the Public Rangelands Improvement Act of 1978 (PRIA) and continued since 1986 under Presidential Executive Order #12548. This order also specifies that the fee can not drop below \$1.35 per animal unit month (AUM) nor can it increase or decrease more than 25% in one year.

The PRIA formula uses a base value of \$1.23 per AUM to calculate the fees on the National Forests in the 16 Western States and National Grasslands in Idaho, California, and Oregon. A base value of \$1.27 per AUM is used for the National Grasslands in the nine Great Plains States. Starting with the base value, the grazing fee is updated annually using a series of indices that measure the change in private land lease rates, the prices paid for beef cattle and the costs for livestock production. The Great Plains National Grasslands fee calculation uses slightly different indices that are based on regional prices and costs. The National Agricultural Statistical Service (NASS) provides the Forest Service with the annual update of the indices for the fee calculation.

The grazing fees for National Forests in the West were \$1.97 in 1991 and \$1.35 in 1996. The grazing fees for the nine Great Plains National Grasslands were \$3.58 in 1991 and \$1.42 in 1996. The difference in the fees reflects the steady to slightly higher private land lease rates, a significant drop in the price of beef, and a significant increase in the cost of livestock production.

According to NASS, the average grazing fee per AUM on State and private lands in the sixteen western states was \$9.78 in 1991 and \$11.40 in 1996. In 1996, fees ranged from a low of \$7.00 per head month in Arizona to \$18.00 per head month in Nebraska. Direct comparisons of the different fees is extremely difficult unless the many variables for leasing are considered. State and private leasing fees are different due to such factors as the quantity and quality of the forage, water availability, transportation and trailing costs, capital investment requirements, ownership of improvements, management restrictions, management control, and competitive bidding.

367. Question: How many permits, with what percentage of AUM's grazed are held by permittees with over 250 AUM, over 500 AUM and over 1,000 AUM permits?

Answer: Information of this type is not collected at the national level. It would take a considerable amount of time and effort to obtain information able to answer this specific question.

368. **Question:** Is it correct that when the actual number of permitted stock are divided into the acres grazed that it takes 11 National Forest acres per cow per month? If this is not the correct figure, what is it?

Answer: In 1996, approximately 7.95 million AUMs were authorized on National Forest System (NFS) lands. There are approximately 91.5 million acres within all grazing allotments on National Forest System lands. There were 83.6 million acres within active allotments during 1996. Further, of the acres within grazing allotments, approximately 41 million are suitable for grazing. A division of total acres by AUMs would result in 11.5 acres for each AUM. However, in any one year, not all allotments nor all acres are grazed. Averaging total acres against total AUMs produced does not give a very accurate picture of the productivity of NFS lands. A division of active use acres by AUMs results in 10.5 acres for each AUM. However, within the allotments there are 51%, on average, of the acres not considered suitable for livestock grazing. A division of suitable acres by AUMs results in 5.2 acres suitable for grazing per AUM. NFS lands are very diverse, and range in productivity from .2 acres per AUM on highly productive lands to 15 acres per AUM on minimally productive lands usually associated with very dry areas. Averaging acres against AUMs does not give a very clear picture of the productivity of NFS lands.

Timber Receipts

369. **Question:** Show for FY 1996 your timber receipts by account, the receipts allocated to timber work by account, the county payments (25 percent and O & C) and the net left to send the Treasury to offset your timber appropriations. Provide these figures by Forest, with regional and national totals.

Answer: The following information has been provided to the Subcommittee:

National Forest timber-related receipts (By Forest);

Timber receipts from Oregon & California Grant Lands (by Forest).

National Forest timber-related payments to States (by Forest);

Timber receipts returned to the General Fund (by Region);

370. **Question:** How did 1996 nationally compare with 1995 and the last 10 years?

Answer: Tables displaying receipts and Payments to States for the period FY 1987 through FY 1996 have been provided to the Subcommittee.

371. **Question:** What accounts for the 1996 outcome?

Answer: The figures for FY 1996 show a continuing trend of decreasing total timber related receipts. Part of this results from declining levels of timber offered, which ultimately results in less volume harvested and fewer total timber receipts. In addition, decreasing receipts are a reflection of lower values received for a different product mix, which includes less sawtimber now than in the past. Another influence is market prices, which have fluctuated up and down. For example, the total timber related receipts in FY 1991-1994 were elevated by higher prices during those years. But since then, market prices have fallen and this has strongly influenced the decline in total timber receipts in the last couple of fiscal years.

372. Question: Is this a situation that should exist, and if not, what are your plans to change it?

Answer: The Forest Service believes that we can partly address the decline in total timber receipts by sustaining the sale of commercial timber at approximately 3.8 billion board feet per year, including salvage. However, our increasing need to emphasize the removal of smaller trees to improve forest health is going to continue to result in lower receipts than if all of this volume were offered as sawtimber. It then remains for the market for timber products to ultimately determine whether current levels of total timber receipts will fall further, remain constant, or increase in the future.

Mt. Graham

373. Question: I remain troubled by the Service's action regarding Mt. Graham in the Coronado National Forest and I was disappointed with the response I received from Franklin Raines at OMB in response to my letter from last December to President Clinton. In his March 10, 1997 letter to me, Mr. Raines asserts that the USDA Office of the General Counsel had issued a legal opinion stating that Mr. Glickman does not have the authority to revoke the Forest Service permit issued to the University of Arizona for construction of telescope on Mt. Graham. I find this legal opinion difficult to believe given the fact that the original permit issued by the Forest Service to the University specifically grants the authority to revoke to the Secretary of Agriculture. Please provide the Committee with a copy of the legal opinion prepared by the General Counsel's office.

Answer: The document referred to was not a formal legal opinion. The Secretary's Office did seek informal guidance from the Office of General Counsel (OGC) concerning the relative risks associated with pursuing revocation of the Mt. Graham permit. This advice was sought in order to respond to Congressional inquiries.

- H374 In the telescope construction permit, the University of Arizona agreed to accept \$10,000 as full coverage of the costs of moving the telescope off of the Mountain and the Coronado whenever the Secretary or Forest Service determines the revocation of the permit to be in the public interest.

374. NO QUESTION:

375. Question: What would it cost to do a more complete biological and environmental assessment of the impacts of the large telescope and alternative locations as well as an ethnographic study of the traditional Apache interest in and use of the Mountain in a manner that complies with the standards issued by the Secretary of the Interior and contained National Register Bulletin #38?

Answer: Estimated costs to do a "more complete biological and environmental assessment" would be \$250,000+ for NEPA and \$150,000+ for biological consultation process. These costs are estimates that would involve an Environmental Impact Statement and biological assessment that required full public involvement and complete inventory of the site. The biological and environmental assessment of the impacts of the large telescope and alternative locations has met all applicable laws and was affirmed by Congress through the passage of the Omnibus Appropriations Bill. They have met the test of litigation in District and Appeal Court.

The ethnographic study of the traditional Apache interest will be answered within the response to question numbered 378.

376. Question: What would it cost the Forest Service to initiate and conduct, over the next few years, a restoration of the site to natural conditions, for example, reseeded cut areas with Aspen or Spruce and Fir?

Answer: The foundation for the telescope has been constructed (with high grade/strength concrete). The massive foundation is resting on hard bedrock. First an analysis would have to be initiated to determine what the best method would be to restore the site to natural conditions. And so, an estimate of cost to restore the site would be difficult to determine without obtaining input from specialized engineering entities. Costs would involve removal of the massive concrete foundations, haul costs to appropriate landfills, and hauling of topsoil to the disturbed sites and planting. Specialized equipment would be needed to break the concrete since the use of explosives could result in additional impacts to the adjacent undisturbed forest. We estimate the total cost could range from \$2 to \$4 million.

377. NO QUESTION:

In July, 1995 and August 1996 respectively, the Forest Service was asked by the Director of the History Program and the San Carlos Apache tribe and the President's Advisory Council on Historic Preservation, to conduct a through ethnographic study to determine whether the Mountain is eligible for listing on the Historic Register. Between those two request, in May, 1996, the President issued Executive Order No. 13007 to protect the physical integrity of Native American sacred sites, while the council cited along with the National Historic Preservation Act as amended in 1992, as specifically applying to Mt. Graham and the proposed observatory, notwithstanding the recently adopted rider. Further, on May 30, 1996, the Vice Chairman of the San

Carlos Apache tribe wrote the President requesting a full review of Mt. Graham as a traditional cultural policy.

378. Question: Where are you in carrying out those reviews and that Executive Order with regard to Mt. Graham?

Answer: Since the mid 1980s, when the University of Arizona first proposed the construction of the Mt. Graham International Observatory, the Forest Service has taken a number of steps to review the potential eligibility of Mt. Graham for listing on the National Register pursuant to the National Historic Preservation Act.* These efforts are described in detail by the district court in Apache Survival Coalition v. United States, No. Civ. 91-1350 (Broomfield, J.) (Memorandum and Order denying injunctive relief, Apr. 10, 1992), and by the Ninth Circuit Court of Appeals in the subsequent appeal. 21 F.3d 895, 898-901 (9th Cir. 1994). Indeed, the district court held that the Forest Service had fully complied with the National Historic preservation Act in issuing permits for construction of the first phase of the observatory project (i.e. the first three telescopes), and that the "relevant agencies put forth an extensive effort over a six year period, soliciting public comments and searching for qualifying [National Register cites]." See Memorandum and Order granting summary judgement, May 29, 1992 (Coppel, J.).

To date, the Forest Service's efforts have included (1) extensive outreach to, and coordination with, the San Carlos Apache and other area tribes regarding historic and cultural resources on Mt. Graham; (2) full coordination with the State Historic Preservation Officer and the Advisory Council on Historic Preservation; (3) multiple reviews of the literature relevant to the prehistory and history of the area (including a comprehensive review of a leading Apache ethnographer's notes of field interviews conducted with dozens of Apaches in the 1930s); and, (4) numerous field surveys designed to locate all tangible cultural resources potentially eligible for the National Register that might be affected by the undertakings. Approximately 350 acres were surveyed; 8.6 acres were ultimately selected for the first phase of the observatory project pursuant to the Arizona-Idaho Conservation Act, Pub. L. No. 100-696, 102 Stat. 4597, and the Omnibus Consolidated Rescissions And Appropriations Act of 1996, Pub. L. No. 104-134, 110 Stat. 1321. Additional National Historic Preservation Act and National Environmental Act ("NEPA") analysis and procedures will be required prior to any construction of the second phase of the observatory project.

The issue of Forest Service compliance with the National Historical Preservation Act in connection with the first phase of the observatory project is again being litigated, in Apache Survival Coalition v. United States of America ("Apache II"), which is currently on appeal before the Ninth Circuit.

Meanwhile, the Coronado National Forest is in the process of preparing a Forest-wide review and synthesis of available information on traditional cultural properties for input to the revised Forest Plan. By September 30, 1997, the Forest will produce reports describing

existing conditions, desired conditions, and possible management practices pertaining to traditional cultural properties (including properties that may be identified on Mt. Graham).

In FY 1998, the Forest plans to develop more detailed information, to be available by March 30, 1999. This will include further examination of primary sources, and some additional field visits with traditional cultural practitioners. Upon completion of the Forest plan in 2001, the Forest will have a prioritized list of traditional cultural properties to be formally evaluated for eligibility for the National Register of Historic Places (including any properties identified on Mount Graham).

In addition to the San Carlos Apache, the White Mountain Apache, Pueblo of Zuni and the Hopi Tribe have indicated that they ascribe traditional cultural importance to Mount Graham. Since Mt. Graham is at the boundary of Chiricahua Apache territory as depicted in the Handbook of North American Indians, and since there are Chiricahua place names associated with Mt. Graham, the Chiricahua Apache may also ascribe traditional value to the mountain. Cultural values are varied between and among the tribes, and can be associated with archaeological sites, natural features such as springs, places which have been visited in visions, and to the natural and cultural landscape of the entire mountain. These circumstances mean that additional review of Mt. Graham as a traditional cultural property will be a complex and expensive undertaking.

*FM/ The Forest Service's response to the August 1996 letter from the Advisory Council on Historic Preservation and the Forest Service's compliance with E.O. No. 13007 are discussed in our response to the following questions.

379. Question: In the seven months since the most recent letter from the Advisory Council, have you submitted any documentation to the Keeper of the National Register, as requested by the Advisory Council?

Answer: No. The Forest responded to the August 16, 1996 letter from Katherine Barns Soffer of the Advisory Council in a Nov. 1, 1996 letter from Forest Supervisor John M. McGee to John Fowler, Executive Director of the Advisory Council. The Forest Service letter responded to the Advisory Council's concern that there was "no evidence" that the Forest Service had evaluated Mt. Graham as a traditional cultural property by describing the efforts taken by the Forest Service, and providing copies of 31 documents from the Forest Service administrative record that are indicative of the Forest Service's consideration of the potential status of Mt. Graham as a traditional cultural property.

380. Question: If not, why? If this has not been done, include a plan for the Record laying out how you will comply with the Council's request.

Answer: Further actions to comply with Section 106 are pending the decision of the Ninth Circuit. If the Ninth Circuit agrees that the Forest Service has fulfilled the requirements of Section 106,

additional compliance will not be undertaken in conjunction with the current phase of observatory construction. However, should the University of Arizona submit a proposal for additional telescopes, as allowed by the Arizona-Idaho Conservation Act, Section 106 compliance will be undertaken, and will include a review of traditional cultural properties on Mt. Graham.

381. **Question:** Please submit your specific plan for compliance with Executive Order 13007 with respect to Mt. Graham.

Answer: Executive Order 13007 requires that Federal agencies, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, accommodate access to and ceremonial use of Indian sacred sites and avoid adversely affecting the physical integrity of such sacred sites. "Sacred sites" are defined as specific, discrete and narrowly delineated locations on Federal land identified by an Indian tribe or authoritative representative of an Indian religion. The Executive Order also requires reasonable notice to tribes of proposed actions or policies that could restrict access or ceremonial use or that could adversely affect the physical integrity of sacred sites.

The Forest Service is currently preparing guidelines for implementing EO 13007 and is participating in a series of national meetings soliciting tribal input. Specifically how EO 13007 applies to the Mt. Graham situation is unclear. As national guidelines are developed they will be applied to this situation and other like it.

Mt. Graham is not a narrowly delineated location as required in the EO. The name "Mt. Graham" is applied both to the highest peak in the Pinaleno mountain range, and to the entire range. Meetings with the San Carlos History Program staff, and statements by the Apache Survival Coalition, make it clear that they consider the entire Pinaleno mountain range a sacred place. The Pinalenos make up the bulk of the 199,000 acre Pinaleno unit of the Safford Ranger District.

The Forest Service has provided reasonable notice of proposed actions on Mt. Graham to Indian tribes and the public. The San Carlos Apache Tribe has not indicated that the construction of the Mt. Graham International Observatory, which so far impacts 8.6 acres, would restrict access to or ceremonial use of any specific (narrowly delineated) sacred site or would adversely affect the physical integrity of any such site.

The Forest and the Observatory have minimized the impacts of construction activities and have provided access for cultural activities within the requirements of the Arizona-Idaho Conservation Act. The current phase of observatory construction directly impacts 8.6 acres. Impact areas were examined for tangible remains prior to construction, and none were found. Permits have been issued to members of the Apache Survival Coalition and others, providing access for religious and traditional activities within the Pinalenos.

382. Question: It has recently come to my attention that about a month before the Mt. Graham rider was signed into law, the Large Binocular Telescope Corporation was prepared to choose another site for the telescope within another month. Among these sites considered were Kitt Peak. Given this and the fact that the mirrors required by the telescope will not be finished for several years, why not issue a stop work order now at least until a review of environmental and cultural impacts and such alternative sites is completed.

Answer: Since the passage of the Arizona-Idaho Conservation Act that originally authorized the construction of the three telescopes and the Omnibus Appropriations Act of 1996, we have no knowledge of alternate sites being considered for the siting of the third telescope. The first two telescopes are in place and operational. The third telescope is under construction. The only reference we know of concerning Kitt Peak is the original sites considered included Kitt Peak and it was quickly dropped from consideration because of not being on NFS lands. There has been extensive review of the environmental effects of siting the Large Binocular Telescope (LBT) on Mt. Graham. The reviews of the site have been upheld by the courts. A stop work order is unwarranted and would not comply with the provisions of laws passed by Congress to establish the site.

ADDITIONAL QUESTIONS FROM CONGRESSMAN DICKS

First of all, let me welcome you Chief Dombeck in your debut appearance before this Subcommittee and congratulations on your appointment. I know that you and I have already discussed a number of relevant matters with regard to your agency, but I believe that it is important to address a number of the key issues for the Record before the Subcommittee.

Northwest Forest Plan

383. Question: I have always been one of the strongest supporters in the Congress in terms of ensuring that adequate resources are available for its implementation. Although I did not originally support the timber levels that were developed and promulgated under the plan, I recognize that it is a scientifically credible and legally defensible framework that will allow timber harvesting in the Northwest.

I am concerned that the Administration needs to continue to improve its effectiveness in implementing the Plan, in order to meet its timber targets. Does the Administration anticipate that it will achieve a 1.1 billion board feet timber target in the Northwest in the current calendar year?

Answer: The USDA Office of Forestry and Economic Assistance recently provided information relevant to this question in the report "The Northwest Forest Plan: A Report to the President and Congress" (issued December, 1996). The 1.1 billion board foot level included the initial probable sale quantity (PSQ) of 958 million board feet plus an additional 10 percent of "other wood" (cull, sub-merchantable size, or other products not normally included as part of allowable sale quantity calculations). As noted in the 1994 Final Supplemental Environmental Impact Statement, "[s]ustainable sale estimates will be made using more refined data and procedures available when Draft Forest and District Plans are completed or current plans are revised." (FSEIS, page 3&4-267). Some individual national forest and BLM district plans have been completed since implementation of the Pacific Northwest Forest Plan and the PSQ has been revised as a result. The December 1996 Report to the President and Congress now sets the PSQ at 868 mmbf, and total projected levels at 954 mmbf if you include "other wood" (page 103). It notes that further adjustments could be made as more plans are revised in the future. The Forest Service intends to fully meet its part of the current PSQ projections in fiscal year 1997.

384. Question: If you achieve at least one billion board feet in the Northwest as anticipated under the President's Forest plan, what is the breakdown of the distribution of the volume between Washington, Oregon, and northern California?

Answer: The following table shows the PSQ and total volume, which includes the 10% other wood, for the Forest Service portion of the PNW Plan. The fiscal year 1997 estimate is also shown.

Volume by State (in million board feet)

State	Estimate in PNW Plan		FY 1997 Allocation
	PSQ	PSQ plus 10% Other wood	
Washington	120	132	156
Oregon	413	454	456
California	<u>161</u>	<u>177</u>	<u>162</u>
Total	694	763	774

Fiscal year 1997 volumes are based on the forest level allocations of the 1997 budget. These estimates include known adjustments for catastrophic events, delays, and program shifts and reflect the most probable final accomplishment for the year. It is typical for programs to shift from year to year to address unforeseen circumstances and the program volumes are more closely identified in the year of budget execution.

385. Question: What will be the distribution of the volume between eastside forests and westside forests?

Answer: The following table shows the fiscal year 1997 estimated volume offered for sale by state and PNW Plan and eastside. Fiscal year 1998 estimates are not available as the regions have not made specific allocations to each forest at this time.

State	<u>FY 1997 Volume by State (in million board feet)</u>		Total
	PNW Plan Forests Westside	Eastside	
Washington	156	88	244
Oregon	456	396	852
California	<u>162</u>	<u>303</u>	<u>465</u>
Total	774	787	1,561

386. Question: What percentage of the volume will be green sales and what amount will be constituted as salvage?

Answer: The following table shows the fiscal year 1997 estimated volume offered for sale by state and by green sales and salvage sales. Percent of the volume that is green is shown in parentheses. Fiscal year 1998 estimates are not available as the regions have not made specific allocations to each forest at this time.

<u>FY 1997 Volume by State (in million board feet)</u>						
State	PNW Plan Forests		Eastside		Total	
	Westside					
	Green	Salvage	Green	Salvage	Green	Salvage
Washington	85 (54)	71	20 (23)	68	105 (43)	139
Oregon	269 (59)	187	93 (23)	303	362 (42)	490
California	<u>86 (53)</u>	<u>76</u>	<u>122 (43)</u>	<u>174</u>	<u>215 (46)</u>	<u>250</u>
Total	440 (57)	334	242 (31)	545	682 (44)	879

387. **Question:** What about the quality of wood that will be offered for sale? I've heard complaints by some industry that often what the Forest Service calls "green sales" under the Forest Plan is lesser quality wood than what the public is led to be offered. Is this the case?

Answer: The PSQ calculation in the Plan, as with allowable sale quantity (ASQ) calculations in other forest plans, does not include a product definition. PSQ volume is based upon calculated wood fiber volume obtainable from trees meeting minimum tree diameter/log top diameter as described in individual Forest Plans. Such material may be sold as several different "products" as specified in the timber sale contract. The Final Supplemental Environmental Impact Statement (FSEIS) for the Pacific Northwest Forest Plan indicates that "PSQ includes only scheduled or regulated yields from the matrix and does not include 'other wood', or volume of cull and other products that are not normally part of ASQ calculation" (Glossary, p. 13). This definition does not limit PSQ to saw logs only. The "other wood" category includes "the volume of cull (wood that is decaying or too crooked for processing), submerchantable size material, or other products not considered as merchantable and not normally part of the allowable sale quantity calculations" (FSEIS, pp. 364-267 through 364-268). The "other wood" also includes all harvest from lands not classified as suitable for timber production, for example, harvest from Late Successional Reserves (LSRs). In simple terms, "other wood" includes; 1. all harvest of material not meeting utilization standards in forest plans, and/or 2. all harvest from lands not classified as suitable for timber management.

The breakdown by product for the total volume offered from the PNW plan forests over the 1994-1996 period is estimated as follows (for FS volume):

- 77% sawtimber
- 14% pulp and other non-sawtimber products (5% posts & poles)
- 7% fuelwood
- 1-2% cull material

388. **Question:** What factors have presented the greatest obstacles to achieving the 1 billion board feet (bbf) target under the Forest Plan, and what Forest Service management actions or interagency response has been taken to eliminate or reduce obstacles?

Answer: We would not characterize any of the factors associated with implementing the forest plan as "obstacles." There have been learning processes that forest personnel have worked their way through in order to increase the efficiency and effectiveness of programs under the plan. The plan initiated changes in management direction for individual forests, established new standards and guidelines, and changed the way we work with our sister agencies and the public. Changes such as these always require a period of adaptation in the way organizations do business. Both Regions 5 and 6 of the Forest Service, as well as the agencies they work with, have done an admirable job of quickly adapting their organizations and management

practices to carry out the plan. The commitment by management to make these changes has led to substantial accomplishments under the plan in all program areas. The collaborative approach by interagency teams at the field level and above has resulted in sound scientific information upon which we can base our project related decisions. We now see better cooperation and fewer challenges to timber projects by the public because of intensified public involvement efforts.

389. Question: Is one billion board feet a sustainable level for the Northwest for the foreseeable future?

Answer: As envisioned by the National Forest Management Act, any forest plan is meant to be a dynamic set of management objectives that will change as the relationships of environmental, social, and economic factors change over time. The Northwest Forest Plan is proving to be adaptable to these changing conditions and the new information that becomes available through scientific study. As you may know, the initial Plan projected a probable sale quantity (PSQ) of 0.958 billion board feet (bbf) per year for the first decade. In addition to PSQ, the plan projected that another 10 percent of "other wood" could be offered for sale for a total annual projection of 1.053 bbf. Both the Bureau of Land Management and Forest Service in California have completed individual forest or district plan revisions that affect the overall PSQ. As a result of this new and more detailed forest level information, the PSQ is now projected at 0.868 bbf per year and total sale offer projections with the "other wood" stand at 0.954 bbf -- this represents the 1 bbf level you cite in your question. Under current projections and plan assumptions, we anticipate that these timber sale levels can be sustained for the foreseeable future. However, the national forest plan revisions for Washington and Oregon have not yet been completed. Those revisions, when complete, could further affect the total projected timber sale level over the Northwest Plan area.

Adaptive Management Areas (AMA's)

Chief, the Record of Decision for the implementation of the standards and guidelines for the Northwest Forest plan states the following: "The overall objective for Adaptive Management Areas (AMA's) is to learn how to manage on an ecosystem basis in terms of both technical and social challenges, and in a manner consistent with applicable laws. It is hoped that localized, idiosyncratic approaches that may achieve the conservation objectives of these standards and guidelines can be pursued. These approaches rely on the experience and ingenuity of resource managers and communities rather than traditionally derived and tightly prescriptive approaches that are generally applied in management of forests."

390. Question: Do you believe that the Adaptive Management Areas (AMA's) are meeting these objectives, because frankly, many people in the Region consider them to be a failure?

Answer: Adaptive Management is an experiment in how to learn more quickly about ecosystems and the responses of ecosystems to various

management actions. Integral to this is trying different approaches to communities and how management interacts with communities. The ten Adaptive Management Areas are as much experiments in how to implement adaptive management as they are experiments in managing ecosystems. The experience and ingenuity of resource managers and communities varies from area to area, and the "success" of the adaptive management area can be expected to vary as well. The areas also vary in size, complexity of resources and management issues, opportunities, management needs (such as watershed analyses), connections to research, and so on. In addition, individual expectations about what adaptive management is and how it will be applied to the ground vary from person to person. There are those who expected that Adaptive Management Areas would produce more timber harvest, for example, while others thought they would produce less.

It is too early to declare the Adaptive Management Areas either successes or failures. Applying adaptive management principles to relatively simple questions with immediate results is one thing; applying those same principles to complex social and biological/physical processes is quite another, especially when we are dealing with the long time frames inherent in forest management. And how success is determined may depend as much on what the evaluator expected from the area as it does on any more objective assessment. Adaptive management is a process and is never really finished. At some point we may be able to make some conclusions such as adaptive management will work on a large scale if some set of community, ecosystem, and organization characteristics are present, but we can only do that if the current experiment continues.

Adaptive Management seeks to speed up the learning process with management of complex ecosystems by planning to learn. Projects are designed to test an hypothesis or learning objective (some more formally than others), implemented, and then monitored and evaluated against the learning objective. The monitoring and evaluation component is critical to the success of the approach. The "plan, implement, monitor, adjust" approach can be applied to numerous problems in ecosystem management as well as in other fields. The Adaptive Management Areas are serving as social laboratories -- working with different models of community involvement -- as well as ecosystem management laboratories.

391. Question: Why do you feel that Adaptive Management Areas have been so slow to realize their potential?

Answer: Adaptive Management is an experiment in how to learn more quickly about ecosystems and the responses of ecosystems to various management actions. Integral to this is trying different approaches to communities and how management interacts with communities. The ten Adaptive Management Areas are as much experiments in how to implement adaptive management as they are experiments in managing ecosystems. The experience and ingenuity of resource managers and communities varies from area to area, and the "success" of the adaptive management area can be expected to vary as well. The areas also vary in size, complexity of resources and management issues, opportunities,

management needs (such as watershed analyses), connections to research, and so on. (See answer to 390 above.)

392. **Question:** Are you aware of Dr. Chad Oliver's Landscape Management strategies, and do you support letting this kind of approach be experimented upon in AMAs?

Answer: The Olympic National Forest is aware of Chad Oliver's approach, and considers his strategy to be one of many potential areas for timber management experimentation within the Olympic AMA. The Forest has been working with Dr. Oliver and his grad students for almost two years, building a model based on Oliver's landscape management ideas from Soleduck District AMA data. Application of Dr. Oliver's silvicultural techniques to a portion of the AMA as a learning exercise will be considered during development of the AMA Guide (due to be completed in September, 1997).

393. **Question:** Given that the Olympic National Forest has no matrix lands, where can additional volume come from in this forest if there is no increased utilization of the Adaptive Management Area?

Answer: Based on the results of watershed analysis and Late Successional Reserve (LSR) assessments, it is becoming clear that there is the potential to both meet Northwest Plan objectives and increase Forest outputs through thinnings in LSR and Riparian Reserve. The Forest currently estimates that its long-term potential harvest level lies between 15 and 25 MMBF. Of this, 10 MMBF represents the PSQ estimated in the Northwest Plan.

Watershed Restoration/Watershed Analysis

394. With \$16 million a year going to the Northwest Region for watershed restoration, and an additional \$20 million annually going for watershed analysis, we are committing significant resources to improving aquatic habitat and restoring the health of major watersheds within the matrix lands managed by the Forest Service.

Question: How would you currently evaluate the watershed restoration and watershed analysis initiative in terms of its value and success?

Answer: Watershed analysis is used to define important physical components of watersheds and how those components are related. These concerns can only be addressed by treating the watershed as a holistic management unit. Because all things biologic are dependent on the physical resources, the information provided by watershed analysis is absolutely necessary for determining forest health, ecosystem health and land use capability. This information is extremely valuable for determining existing and potential watershed condition, and for determining the effects that proposed land management activities might have on the basic soil and water resources. Without this information, it will be difficult to set priorities for watershed improvement projects that maximize the return on money and resources expended. This information is extremely valuable for determining appropriate land management

prescriptions necessary for the protection of the soil and water resources. The full power of watershed analysis can be realized when applied continuously over time. When watersheds are reanalyzed over time, it is possible to determine trends in watershed condition and consequent trends in forest health. This provides for testing the effectiveness of watershed improvement projects, and for testing the assumptions made in design of land management prescriptions.

395. Question: On how many watersheds in the Region has analysis been completed?

Answer:

STATE	FY94	FY95	FY96	TOTAL
Calif.	17	13	18	48
Oregon	27	50	41	118
Wash.	38	35	26	99
Totals	82	98	85	265

396. Question: How does the agency use the data that it obtains from watershed analysis?

Answer: Watershed analysis provides crucial information for determining forest health, ecosystem health, and land use capability. Watershed analysis is used to define important physical components of watersheds and how those components are related. Based on this information, it is possible to determine existing and potential watershed condition, and to determine the effect that proposed land management activities might have on the basic soil and water resources. This information is used to locate problem areas and to determine priorities for watershed improvement funds, and is used in the design of land management practices that can be expected to protect water quality and water dependent resources.

397. Question: How many acres of land under Forest Service control have been improved or restored using watershed restoration funding?

<u>Answer:</u>	STATE	FY94	FY95	FY96	TOTALS
	Calif.	552	2,081	1,378	4,011
	Oregon	3,194	5,585	1,200	9,979
	Wash.	1,228	2,679	998	4,905
	Totals	4,974	10,345	3,576	18,895

Note: In Region 6 over a 1000 miles of roads have been decommissioned and 1,600 miles of stream channel have been improved for water quality and fish habitat.

And in Region 5, 50.5 miles of road have been decommissioned, 38 miles of road surface upgraded, 849.6 miles of road drainage improved and stabilized, and 200.5 miles of stream channels have been improved.

398. Question: Is the most of the watershed restoration money still being directed towards road improvement? Why shouldn't all road work be done through a separate line item rather than coming out of watershed restoration monies?

Answer: In FY 1997 close to one-half of the Jobs-in-the-Woods/Watershed Restoration funding was used for various forms of road restoration. These activities are designed to benefit the ecosystem in a variety of ways. Many of these activities are focused on improving drainage of water from the road system, including drainage dips, taking out or redesigning road culverts, cleanout of clogged ditches, and actual road obliteration. Drainage dips and road culverts prevent erosion of the road surface and ditches, preventing sedimentation of receiving waters. This protects water quality and the riparian ecosystem, and improves fish habitat and passage. Much of this funding is used to obliterate the road, reshaping the landscape and revegetating the site, thus restoring the area more closely to its natural, pre-road environment.

The Jobs-in-the-Woods/Watershed Restoration funding is not a separate budget line item (although it was in its first year--FY 1994). It is an integrated program comprised of many resource areas including recreation, soil & water improvement, forest vegetation, wildlife, road construction, road maintenance, etc. The road work is a critical part of the watershed restoration effort, and, as such it is included in the road maintenance or road construction line item.

399. Question: How are things going with the "jobs" part of "Jobs-in-the-Woods," and are workers participating in the program generally pleased with their relationship with the Forest Service?

Answer: The Forest Service's watershed restoration/Jobs-in-the-Woods program, currently in its fourth year, focuses on completing the highest priority restoration work while creating jobs for workers and communities affected by the reduced timber levels. With respect to the jobs portion, the Agency has been extremely successful in targeting this work to affected workers and communities. Over 95% of the funds provided by the Forest Service for restoration work has been awarded to workers and businesses from affected communities.

While the Forest Service has been relatively successful in meeting the program needs and focus, the program generated expectations regarding creation of thousands of jobs, which have not been met given available funding. The greatest success of this program is not the number of jobs created or restoration work completed, but the collective commitment of all involved to pursue a collaborative approach to assisting communities and managing natural resources.

The agency has and continues to be committed to working with communities to maximize the benefits available under this program and others. The Forest Service helped develop comprehensive training programs, improve the quality of existing jobs, target work to local

communities, and work with local communities to promote and capitalize on additional economic and work opportunities.

Managing for Species Protection

400. **Question:** The Northwest Forest Plan covers the management of 24.4 million acres of BLM and Forest Service land, most of which is within the range of the spotted owl and marbled murrelet. What tools do you have available to monitor the impacts of your activities on listed species such as these?

Answer: Monitoring the habitat and the population dynamics of the northern spotted owl and the marbled murrelet are key concerns of all the agencies participating in the Northwest Forest Plan. The Forest Service is participating in the interagency development and implementation of a significant Effectiveness Monitoring program. Two of the six components focus on the spotted owl and the marbled murrelet. These monitoring programs have undergone scientific peer review, and both will be correlated with monitoring of the condition and extent of late-successional and old-growth forests--a third component in the program.

Funding and personnel from the Forest Service for the interagency Effectiveness Monitoring program are being provided by the Pacific Northwest and the Pacific Southwest Research Stations, as well as the Pacific Northwest and the Pacific Southwest Regions. Other contributing agencies are the Bureau of Land Management, the Fish and Wildlife Service, the Biological Research Division of the US Geological Survey, the Environmental Protection Agency, and the National Park Service.

401. **Question:** Are you concerned that the growing salmon problem in the Region may impede implementation of the Forest Plan?

Answer: A variety of factors have contributed to the decline of salmon stocks within the geographic region encompassed by the Northwest Forest Plan. Habitat condition, both on and off public lands, has been identified as one important factor. The Forest Plan explicitly recognizes the significance of public land waters to healthy salmon runs. It includes a comprehensive "aquatic conservation strategy" to provide watershed and habitat conditions on public lands needed to sustain salmon and other aquatic species. We believe implementation of the Forest Plan will contribute to solving salmon problems in the Region.

402. **Question:** Do you feel that the Fish & Wildlife Service (F&WS) is currently engaging you cooperatively on matters of consultation?

Answer: Yes, coordination with the Fish and Wildlife Service is generally excellent and our agencies are engaged in a number of important joint efforts related to consultation. At the field level, the continued work of the interagency streamlined consultation teams in several regions has reduced timelines for consultation significantly, while assuring better designed projects. The Fish and

Wildlife Service (FWS) has been working very cooperatively with the Forest Service and other agencies in holding interagency workshops to broaden the use of the streamlined consultation process and to improve its use where it already has been adopted. Here in Washington, D.C., an interagency work group is preparing a Memorandum of Agreement for streamlining program level consultations. This will save the agencies time and effort and lessen the need for additional formal consultations on projects such as timber sales and grazing permits.

Mt. St. Helens' Minerals

In 1982 Congress authorized the Mt. Saint Helens National Volcanic Monument. the exchange of surface and minerals with private landowners was to be completed within a year after the act was signed into law. However, approximately 10,000 acres of private minerals remain in an unresolved status in the monument area. It is my understanding that the companies involved, Weyerhaeuser and Burlington Resources, are working with the Forest Service and the B.L.M. to resolve this situation

403. **Question:** Are you aware of these discussions and will you keep me informed on progress towards resolving concerns on the mineral issue?

Answer: Yes, I am aware of the recent discussions with Weyerhaeuser and Burlington Resources representatives which have taken place with both our WO and Regional Lands Staffs on this matter. B.L.M. Representatives have also participated in these discussions.

At our most recent meeting on February 3, 1997, it was agreed by all parties to establish a joint technical team to begin working toward the completion of the final phase of this acquisition involving the 10,750 acres of mineral interest. Team members were given individual tasks to review and we plan to reconvene on April 22, 1997 to discuss the various issues and options.

I will be glad to keep you apprised as to our progress on this matter.

Forest Roads

404. **Question:** What impact will the elimination of Purchaser Road Credits have on the ability to meet the timber sale target under the President's Northwest Forest plan and on your goals to meet your objectives for improving forest health?

Answer: There will be little to no effects on our ability to meet timber sale targets or to meet our objectives for improving forest health, since the amount of road access is not affected.

405. **Question:** Do you have sufficient funding to repair all the forest roads damaged by last year's record rainfall and flooding?

Answer: Funds for emergency repair of Forest Service roads are made available through two sources: the Federal Highway Administration Emergency Relief Federally Owned (ERFO) road program and appropriated

road funds in the Forest Service budget. A preliminary estimate of road damage indicates ERFO needs of \$90 million to repair forest roads to pre-flood condition, non-ERFO road reconstruction needs of \$12 million for road repairs that are not covered by ERFO, and additional maintenance needs of \$10 million. Access to many areas has been limited by deep snow, making it impossible to complete a final survey and estimate of all areas for damages until the snow melts.

Preliminary estimates of ERFO needs have been provided to the Federal Highway Administration and we are waiting for their decision on the funding. There is some question as to annual ERFO funding authority being sufficient to cover the total qualified work. Without approval, we will not be able to perform the work.

Funding for the non-ERFO repair needs are not included in the current year's budget. Without supplemental appropriations we can not complete the additional flood damage repairs without causing major disruptions to our regular program of work. Supplemental appropriations request in the amount of \$38 million to fund repair work, including that associated with roads, has been submitted to Congress for consideration. The amount being requested will cover the highest priority needs.

Funding for our regular road maintenance program is provided through normal FS appropriated funds. Under the current funding levels we are able to maintain forty percent of the forest system roads to the standards established for the current use. Funding the additional road maintenance needs caused by the floods from our regular appropriation would severely impact our already limited routine maintenance program. Correspondingly, there is no way that the road reconstruction/construction budget can be used to make up this shortfall although priorities may have to be shifted.

406. Question: If not, what impact will these un-repaired roads have on salmon habitat, fire prevention and suppression, recreation access and timber sale access?

Answer: Without additional funds, repair of damaged roads will be delayed or left undone. Sediment derived from roads is the single largest source of non-point source pollution in managed forests. Failure to properly maintain roads increases erosion and sediment inputs, particularly fine sands and silts which damage fish spawning and rearing areas for critical salmonids.

Reduced access for fire prevention and suppression could require the expenditure of additional fire fighting funds to open roads for fire access. This will cause delays in response time, resulting in more acres burned by wildfires, unnecessary resource losses, and additional threats to life and property on-site and downstream.

For safety and resource reasons, some roads will be closed until repairs can be made. This will cause lost recreational opportunities, continued erosion and resultant sediment impact on streams, lakes, riparian areas, and related fisheries and wildlife resources.

Quantifying specific impacts is not possible within funding and time constraints provided.

ADDITIONAL QUESTIONS CONGRESSMAN SKAGGS

Questions for Chief Dombeck

407. **Question.** In southwestern Colorado, the Forest Service and BLM are joining in an experiment in cooperative management of the lands under their respective jurisdictions. I understand that this "Trading Post" experiment has been very well received by local residents and land users. But it's been suggested that it would help if the two agencies had greater flexibility in using their funds. Is that correct? If so, could you please provide suggestions for provisions that could be included in the 1998 appropriations bill that would achieve this result.

Answer. Your suggestion is correct. In March 1996, the Chief of the Forest Service and the Director of the BLM chartered field units in southwestern Colorado and in central Oregon to experiment with ways to achieve new levels of collaboration in land management and customer service. The goal is a common-sense approach to sharing people and resources to manage the intermingled federal land resource and to provide one-stop service to land users and customers. In both States, the pilot units have demonstrated that by sharing our limited resources we can improve our stewardship of the land, and that by offering more uniform services we can enhance service to our customers.

As part of this experiment, the field units were instructed to identify any administrative barriers to fully realizing this common-sense approach to managing federal lands. The major barrier they have identified results from our limited authority to duly authorize a single official in either agency to make decisions about or take action on land under the jurisdiction of the other agency. Currently, we must utilize the more limited authorities available through temporary details of employees between the agencies. Throughout the western United States, where our land management units are intermingled, we can enhance our management capability and our level of customer service if we can vest authorities in single individuals who can then act on behalf of both agencies.

The following draft language would enable testing this dual authority on designated pilot units. This draft language is provided as a drafting service only and should not be construed as an indication of the position of the Administration on any legislation which may subsequently be introduced.

"Notwithstanding any other provision of law, for a period of five fiscal years after the date of enactment, the Secretary of the Interior and the Secretary of Agriculture are authorized to use funds made available by this Act and any other Appropriations Act to institute pilot programs to promote customer service and efficiency in the management and protection of public lands. For such programs, the Secretaries are authorized, when deemed appropriate, to delegate their respective authorities, duties and responsibilities under the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1701 et

seq., and the National Forest Management Act, 16 U.S.C. 1600 et seq., and any other applicable Federal law between and among agencies under their jurisdiction. Provided that, except as provided herein, nothing in this Act shall have the effect of altering or limiting the existing applicability of any public law or regulation to lands under the jurisdiction of the Secretaries."

408. Question. At the hearing, it was indicated that the 1998 request would support building some 300 miles of new roads and doing maintenance work on about 2,000 miles of existing roads. How many miles of existing roads do you plan to remove during fiscal 1998? Should we be doing more such removal work?

Answer. The 300 miles of new roads and the 2,000 miles of road reconstruction, not maintenance as referenced above, is the work that we estimate will be required by purchasers of green sales to support that program. We have not requested information from the field on planned obliteration in FY 1998 but expect that it will be between 1,500 and 2,000 miles of road.

Obliteration of unneeded roads will continue as funds and opportunities permit. In practical terms we have found that priorities for limited road maintenance funds available to maintain access and prevent new environmental damage allow us to achieve a balance of about \$1 to \$2 million per year for mitigation of existing environmental impacts thru road obliteration. These funds provide a basis for partnerships with other resource programs, e.g. restore and improve wetlands and wildlife habitats. Greater road maintenance funding would permit greater road obliteration accomplishments.

409. Question: What is the status of negotiations related to acquisition of the Warren Lakes tract in the White River National Forest and the so-called "Wedge" lands in the Arapahoe National Forest? Will the requested funding be adequate to complete acquisition of these areas?

Answer: We have reached agreement with the owners to purchase the Warren Lakes property. Due to limited land acquisition funding, acquisition of the Warren Lakes property is being made in two phases. In FY 1997, \$1,000,000 of the \$1,700,000 property will be purchased. Funding to complete the acquisition of the remaining portion of the property and associated water rights has been identified in the President's FY 1998 Budget request.

The "Wedge" properties originally included six separate land ownerships. We have acquired four of these ownerships in FY 1996 and we are nearing completion of negotiations for one of the remaining ownerships (Fahy property). The President's FY 1998 Budget request of \$350,000 for the "Wedge" properties will be adequate to complete acquisition of the Fahy property. Acquisition of the remaining property (Woods property) is not feasible at this time and funding has not been requested.

410. Question. Are there other high-priority areas in Colorado, such as wilderness inholdings, that the Forest Service would like to acquire

in fiscal 1998 if funding is available? If so, please provide a priority listing of the areas and an estimate of the funding necessary for their acquisition.

Answer. The Regional Forester has been very proactive in acquiring private land inholdings within wilderness areas located in Colorado. Approximately 25 private land inholdings with a high risk of impacting the wilderness resource remain. The risk involves the potential that public access to these areas would be reduced if trails that cross these public lands were closed by landowners in cases where the Forest Service does not have a legal right of way or the potential that landowners with inholdings would make developments inconsistent with wilderness resource criteria. In FY 1998, we expect seven of these properties to be offered for sale to the Agency by the Wilderness Land Trust. Total value of the properties is estimated at \$485,000.

Wilderness properties available in FY 1998

Wilderness Area	Description	Acres	Value
Eagle Nest	Pitkin County (Vail)	31	\$125,000
Eagle Nest	Wichita Mountain (Frisco)	22	\$ 25,000
Holy Cross	East Lake Creek	78	\$125,000
Holy Cross	Cleveland Lake	9	\$ 25,000
Maroon Bells	Conundrum Creek	10	\$100,000
Maroon Bells	Lead King Basin	30	\$ 60,000

Other properties available in FY 1998

Poverty Creek -\$120,000 - 140 acres adjoining the Reggeds Wilderness
 Cascade Creek -\$ 90,000 - 100 acres in the San Miguel Roadless Area

Potentially available in FY 1998

Coomer (Shadow Mtn) -\$3,000,000 - 130 acres within the Arapaho NF
 East Fork -\$12,000,000 - 2,760 acres within the San Juan NF.

Detailed information can be provided for any of these properties.

411. Question. Has the Forest Service encountered difficulties in implementing the demonstration fee program in Colorado or elsewhere? If so, what suggestions would you make?

Answer. The recreation fee demonstration has encountered a few implementation difficulties in Colorado and elsewhere. Major areas of difficulty have been:

- Liability concerns - Charging for recreation use in some States removes the liability protection afforded by many State Recreation Use Statutes. Colorado has a proposed fee demonstration project that may be dropped because of concerns with increased liability. Legislation to provide protection to Federal recreation fees sites would be desirable and expand the potential for fee collection. Another project in Arizona was dropped due to liability concerns.

- Concerns by the fee paying public - We find that local units that have effective communication plans have much better local acceptance of the fee proposals than projects with poor plans. We also have found

that some communities and some parts of the country accept the fee concept much more readily than others. We intend to continue requiring effective up front communication efforts. Congress can help by continuing its support for the test and reviewing results as they come in.

- Concerns of our business partners - Some proposed projects had potentially negative impacts on existing concessions and others that do business on Forest lands. We have found that actively involving our business partners in the early discussions allowed us to reach a solution agreeable to all parties. We have modified our process to ensure we work closely with our partners.

- Concerns about appropriations being reduced, as fee collection begins - Fee offset is a major discussion point at many projects. The public finds it unacceptable to be paying more fees for the same or reduced services.

- Concerns about the continuation of the Fee Demo projects after the test period ends on Sept 30, 1999 - It would be helpful to have permanent legislation and/or additional extensions of the fee demo authority allowing existing fee demo projects to continue as long as they are effective and generally acceptable to the public.

- Concerns about the accounting requirements of the Law - The additional accounting requirements are seen as confusing and overly complex. We would like to work with the committee to develop technical adjustments to reduce the complexity.

- Concerns about involving current fee sites in demonstration - The restriction returning fees from sites that charged in FY 1995 to the general treasury and the surcharge of 4% annually on those fees makes it difficult to include some potential sites in the fee demo project. To make the test representative of the widest fee possibilities would require that all FY 1995 amounts of Fee Demonstration related receipts be made available for on site use.

DEPARTMENT OF ENERGY
Secretary of Energy

TUESDAY, MARCH 18, 1997.

DEPARTMENT OF ENERGY

WITNESSES

FEDERICO F. PEÑA, SECRETARY OF ENERGY

**ROBERT S. KRIPOWICZ, PRINCIPAL DEPUTY ASSISTANT SECRETARY,
OFFICE OF FOSSIL ENERGY**

**JOSEPH J. ROMM, PRINCIPAL DEPUTY ASSISTANT SECRETARY, OF-
FICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY**

(417)

**Federico F. Peña
United States
Secretary of Energy**

Federico F. Peña, the 12th U.S. Secretary of Transportation, compiled an outstanding record of increasing the global competitiveness of the transportation industry; improving the safety of travel; and streamlining the Department of Transportation, while investing more in America's infrastructure than any Secretary in history.

In the area of global competitiveness, the transportation sector is the healthiest it has been in decades. Five hundred thousand of the 10 million jobs created since President Clinton took office are in transportation services.

Secretary Peña helped revitalize the U.S. airline industry and signed aviation agreements with 40 nations opening lucrative markets for American airlines and cargo carriers and promoted easier travel for Americans and tourists to the U.S. At the President's request, he conducted commercial diplomacy efforts around the world, and he was credited with helping American businesses sell billions of dollars in exports to Asia and the Middle East. He also orchestrated for President Clinton the revitalization of shipbuilding, leading to the sale of the first American-made large vessels to foreign countries in 38 years.

He was responsible for bringing airline consumers the same level of safety for all flights -- from jumbo jets to a 10-seater, and he spurred the truck, bus and rail industries to promote safety.

As for streamlining the Department of Transportation, Secretary Peña downsized the work force by 11,000 positions, while upsizing investments in America's infrastructure by 10 percent. He rewrote the rule book on financing highway projects, which encouraged private financing, and sped up construction of more than 75 projects by two or three years at no cost to the federal taxpayer.

He also led the way for cities to use new technologies to manage traffic congestion and set a national goal to cut American's commute time by 15 percent in a decade; and he emphasized consumer protection, by improving an auto safety hotline and ensuring proper airline ticketing and advertising practices.

As the Service Secretary for the U.S. Coast Guard, he provided leadership for the nation's fifth armed service to save lives and protect our environment. On his watch, the Coast Guard rescued 56,000 Haitian and Cuban boat people, and fought devastating floods and hurricanes.

From 1983-1991, he was Mayor of Denver leading an urban and economic renaissance, reversing Denver's mid-1980s decline through a series of bold initiatives. Most notably, he won approval for the construction of one of the largest and most technologically advanced airports in the world, Denver International, which, as Secretary of Transportation, he dedicated in February

1995.

Peña also has served as a Colorado legislator and a civil rights lawyer.

He has received many honors. In 1995, he was named Father of the Year by the National Father's Day Committee. In 1994, the American Subcontractors Association of Colorado named him Man of the Year; and he received the Señor Internacional Award from LULAC Council 12, the American Heritage Award from the Mountain State Anti-Defamation League, the National Leadership and Service award from the Travelers Aid Society of Washington, and the Person of the Year Award from the American Association of Port Authorities.

Secretary Peña did his undergraduate work at the University of Texas, where he also received his law degree. Florida International University awarded him an Honorary Doctor of Public Service degree in 1995.

Born in Laredo, Texas, in 1947, Secretary Peña is the third of six children of a cotton broker. He and his wife, world-class marathon runner and attorney Ellen Hart Peña, live with their two children in Alexandria, Virginia.

1997



U.S. Department of Energy
Office of Public Affairs
Washington, D.C. 20585
202/586-3640

BIOGRAPHY

ROBERT S. KRIPOWICZ

Principal Deputy Assistant Secretary for Fossil Energy

Robert S. Kripowicz was appointed U.S. DOE Principal Deputy Assistant Secretary for Fossil Energy on March 4, 1996. As Principal Deputy Assistant Secretary he is assisting the Assistant Secretary for Fossil Energy with the internal development of a working budget and the external negotiations with appropriators in Congress. Mr. Kripowicz will also help the Assistant Secretary with strategic planning. One of his main duties will be to build a unified focus for the Fossil Energy coal, oil and natural gas programs for the long term.

Mr. Kripowicz previously was appointed Acting Deputy Assistant Secretary for House Liaison in April 1995. As House Liaison he was responsible for coordinating all interactions with members and staff of the House of Representatives on departmental programs. He was also responsible for establishing legislative and budget strategies and for coordination of hearings, floor, and conference action on all legislation in the House affecting the Department.

Previously, he was appointed Deputy Assistant Secretary for Building Technologies in January 1995. The Office of Building Technologies, within the Office of Energy Efficiency and Renewable Energy, is responsible for Department of Energy's (DOE) programs to increase the energy efficiency of the nation's residential and commercial heating and cooling systems; solar systems, high efficiency lighting, windows, and equipment; and advanced building materials.

Prior to joining DOE, Mr. Kripowicz was on the staff of the House Interior and Related Agencies Subcommittee of the Committee on Appropriations. He was responsible for appropriations for DOE programs in energy efficiency, fossil energy, clean coal technology, and Strategic and Naval Petroleum Reserve activities, as well as Interior Department energy, scientific, and land management programs. He also served as Staff Director of the House Energy Subcommittee of the Committee on Science and Technology, responsible for energy efficiency, renewables, fossil energy, high energy and nuclear physics, and basic science programs at DOE.

Mr. Kripowicz began his government career in the early 1970's in program analysis and budgeting activities at the Atomic Energy and Nuclear Energy Commissions and the Energy Research and Development Administration.

In the private sector, Mr. Kripowicz managed research and development programs at Mechanical Technology Inc.; construction contracts for Consolidated Edison of New York; and financial planning and budgeting at NUMEC, a nuclear subsidiary of ARCO; and was a chemist for Dupont. He also served as an officer in the United States Army. Mr. Kripowicz received his B.S. in chemistry (cum laude) from Lafayette College in 1963, and his M.B.A. from the University of Pittsburgh in 1970. A native of Butler, Pennsylvania, Mr. Kripowicz currently resides in Silver Spring, Maryland.

April, 1996



U.S. Department of Energy
Washington, D.C. 20585

BIOGRAPHY

JOSEPH ROMM

Dr. Joseph Romm was named Acting Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy in August 1995. In this capacity, Romm helps the Assistant Secretary, Christine Ervin, manage the \$800 million portfolio of research, development, and deployment of clean industrial, transportation, building, and utility technologies. He is co-author, with Deputy Secretary Charles Curtis, of the April 1996 *Atlantic Monthly* cover story, "Mideast Oil Forever."

From July 1993 to July 1995, Romm was special assistant for policy and planning to the Deputy Secretary of the U.S. Department of Energy, where he advised the Deputy on energy efficiency, renewable energy, pollution prevention, and industrial competitiveness. He served as the Executive Director of the Department's Pollution Prevention and Waste Minimization Executive Board, which works to minimize the Department's own waste stream and to coordinate its pollution prevention R&D.

Romm is author of the recent book *Lean and Clean Management: How to Increase Profits and Productivity by Reducing Pollution* (Kodansha, 1994), a "how to" book for companies that want to improve their energy and environmental performance. The book documents two dozen case studies of companies that have increased productivity through energy-efficient building and office design, industrial energy efficiency, of pollution prevention.

From mid-1991 to mid-1993, Romm worked with Amory Lovins at Rocky Mountain Institute. Romm holds a Ph.D. in physics from M.I.T. and has written about pollution prevention and manufacturing for *Forbes*, *Technology Review*, *Foreign Affairs*, *Industrial*, *the New York Times*, and *USA Today*.

Mr. REGULA [presiding]. Okay, we'll get the committee to order and get started on the hearing.

We're happy to welcome you, Mr. Secretary. Your comments and statements, and those of your colleagues, will be put in the record, and we'll welcome a summary of what you might want to talk about in terms of the Department of Energy.

Secretary PEÑA. Thank you very much, Mr. Chairman. Let me say what a privilege it is to be here, and I would like to ask that my more formal statement be entered into the record.

Mr. REGULA. Yes, it will be a part of the record.

Secretary PEÑA. And I do have a brief opening statement, Mr. Chairman.

Mr. REGULA. Fine.

Secretary PEÑA. I'm going to do that, Mr. Chairman and members of the subcommittee, because, as you know, I have been Secretary of Energy all of, I think, five days. So I wanted to at least present some general views, and I've asked Bob Kripowicz, to my left, who is the Principal Deputy Assistant Secretary for Fossil Energy, and Dr. Joe Romm, to my right, Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy, to be here in the event that there are any technical questions the committee members might ask that—

Mr. REGULA. You used to be on the other end, where we burned it. [Laughter.]

Now you've got to furnish it.

OPENING REMARKS

Secretary PEÑA. That's correct.

Mr. Chairman, this subcommittee, as you know, has been a critical partner in the delivery of the missions of the Department of Energy. The subcommittee is directly concerned with a portion of the Department's missions, but is a key partner in the objective that we put at the very top, and that is enhancement of our national energy security, the development and deployment of clean, affordable energy supplies.

Every day Americans depend on the benefits of energy, but usually are not fully cognizant of the role that it plays in our quality of life—until we have a disruption, and we have had those—in the last 23 years, three major oil disruptions causing both domestic and international difficulties. We predict that in the next 15 years U.S. net oil imports will grow to 60 percent of domestic consumption. We predict that Persian Gulf oil-producing nations will increase their oil exports to surpass their peak of 67 percent of global oil exports in the embargo year of 1974. I believe this is unacceptable.

The budget we're presenting to you today advances national energy objectives in two very broad ways: No. 1, emphasizing energy supply solutions to increase domestic energy production, expanded use of natural gas, diversification of oil supply options, development of alternative transportation fuels, maintenance of the Strategic Petroleum Reserve to ensure economic stability in the event that we have an oil supply disruption. And, secondly, our budget emphasizes energy use solutions to promoting increased efficiency of energy used in all segments of our economy, enhanced competi-

tiveness of the electric utility industry, and other sectors of the energy industry.

For our energy efficiency programs, we're requesting \$707 million, a substantial increase, 24 percent from 1997. Some, I'm sure, will ask why the large increase. Mr. Chairman, we believe that this is a smart investment. Improved efficiency is not only achievable, but it is essential if we are to avoid serious risk in the future. Moreover, it is a proven way to reduce the demand for energy while enhancing our standard of living and our environmental quality.

For example, the Energy Information Agency's 97 Annual Energy Outlook forecast that in the year 2015 the average home will be 4 percent larger and will rely more on electricity-based technologies. We also know, based on my past experience at Transportation, that annual per capita highway and air travel are expected to grow 12 and 76 percent higher, respectively.

Despite that growth, the Energy Information Agency forecast that energy use per capita will remain essentially static, which is remarkable, and the reason for that is that we also anticipate that improvements in energy efficiency will provide higher levels of service without significant increases in energy use per capita. So this notion of energy efficiency is key if we're to simply stay even, to stay where we are today.

Our budget request is part of that energy efficiency strategy; for example, to design and deliver cars of the future, to improve efficiency in energy-intensive industries, to develop energy-efficient buildings and communities of the 21st century, and to increase the use of proven efficiency levels by consumers in both the Federal, the State, and local governments, as well as low-income households. I'm very pleased to bring the committee's attention, if you haven't seen it, today's announcement by Ford Motor Company, announcing that as part of its relationship in the Partnership for New Generation Vehicles, they have announced a new prototype where by the end of the year they'll have 10 to 12 of these new ones processed which will produce or operate 70 miles per gallon—light-weight in stature. And the Ford announcement makes note of the fact that it was because of its relationship with the Federal Government and the PNGV program that it was able to announce they are significantly ahead of where they otherwise would have been without the Federal Government's partnership. So it's a very concrete example of how the PNGV program is working.

Mr. YATES. Where is Ford on the electric car?

Secretary PEÑA. Ford—actually, Chrysler probably is a little more advanced on electric, and Chrysler recently announced, I think a few months ago, a new fuel cell that it will be using for its cars. So each of the three companies are using different strategies as part of its relationship with us, so we can test different approaches, and it so happens that Ford wanted to take this approach.

In terms of fossil energy research, we're requesting \$346 million. That is a slight reduction from 1997, about 5 percent, because many of the gas and coal fuel power system projects are entering their final stages of development, and so we thought at this point we could make that adjustment.

With regard to the Strategic Petroleum Reserve, the Department does not propose to sell any oil from the reserve to finance this operation this year. We are making a recommendation to return about \$153 million to Treasury in Fiscal Year 1998 under the Clean Coal Technology Program, because those are programs or projects that are now being cancelled or restructured. However, I do want to emphasize, Mr. Chairman and members of the subcommittee, that the Clean Coal Technology Program we think is a very good example of the kind of partnership that this committee helped craft years ago.

An example of one very successful component of the Clean Coal Technology Program is the new low NOx burners which are now being used at 25 percent of the utilities throughout the country. We expect that sales have already reached \$750 million, will approach \$4 billion by the year 2000, and the companies are now beginning to pay back some of the investments that were made years ago under the Clean Coal Technology Program. They're modest payments, about \$400,000, but it is the first time that we're going to see those repayments. So I think it's an excellent example of how we can work in partnership with the private sector to produce new clean technologies.

Mr. Chairman and members, let me end my testimony with those very brief opening remarks by simply saying that I'm very pleased to be here. I look forward to working with you and the Members to address these very important issues, even in the context of difficult budget scenarios, and I'd be happy to respond to your questions.

[The prepared statement of Secretary Peña follows:]

Federico Peña
Secretary
U.S. Department of Energy
Testimony before the
Committee on Appropriations
Subcommittee on Interior and Related Agencies
U.S. House of Representatives

March 18, 1997

Mr. Chairman and members of the Subcommittee, I am pleased to appear before you today to discuss the FY 1998 budget request for the Department of Energy.

The President, in his State of the Union message to the Congress, spoke about our nation's responsibility to keep its commitments and to provide for the future. An important commitment he spoke about was fiscal discipline, the duty we have to future generations to balance the budget. He also spoke of our duty to future generations to maintain and refresh our nation's capacity for scientific and technological innovation and thereby shape the future.

These themes, keeping commitments and providing for the future, are at the heart of the Department's missions. Our sense of obligation to continue investments that ensure the nation's security, competitiveness, and improved environmental quality for generations to come drives our program objectives. Science, technology, research, and development are the common threads running throughout the Department's varied missions, providing the tools with which to shape our energy future.

PRIORITIES FOR THE FUTURE

The Department of Energy has four key priorities:

- 1) Enhancing our energy security by improving the energy efficiency of our economy and by developing and deploying clean and affordable energy supplies;
- 2) Ensuring a safe and reliable nuclear weapons stockpile and reducing the global nuclear danger;
- 3) Cleaning up former nuclear weapons sites and finding a more effective and timely path forward for disposing of nuclear waste; and
- 4) Leveraging science and technology to advance fundamental knowledge and our country's economic competitiveness with a stronger partnership with the private sector.

All of these needs present unparalleled opportunities and daunting challenges that will greatly affect the future of our nation and indeed the world. However, first among them is energy.

Each day, Americans depend on the benefits of energy, usually without considering the role it plays in our quality of life. But there have been three major oil disruptions in the past 23 years, each causing substantial domestic and international turmoil. In the next 15 years, U.S. net oil imports will grow to 60 percent of domestic consumption, and Persian Gulf oil producing nations will increase their oil exports to surpass their peak of 67 percent of global oil exports in the embargo year of 1974. The potential of this situation poses serious risks for America's future.

A STRONG ENERGY STRATEGY

We must have a credible energy strategy that provides for our energy security and meets our commitment to be responsible stewards of the environment. Our energy strategy must, at a minimum:

- increase domestic energy production through smarter regulation and technological advances to improve production economics and reduce environmental impacts of both oil and natural gas development;
- expand the use of natural gas;
- diversify our oil supply options in areas such as the Western Hemisphere, Central Asia and the Caspian Sea;
- reduce U.S. dependence on insecure sources of foreign oil by making us more efficient in our use of all energy;
- develop clean, renewable energy supplies, alternative transportation fuels, and clean coal technology;
- maintain our Strategic Petroleum Reserve at levels which meet our international responsibilities and ensure stability in the event of supply disruptions;
- maintain the safety of nuclear power reactors;
- address the challenge of global climate change; and
- enhance the competitiveness of the electric utility industry and other sectors of the energy industry.

The President's energy policies set out to accomplish these objectives in partnership with industry. These innovative partnerships feature: collaboration with industry to identify priorities; cost-sharing of projects; and federal support used as a catalyst to develop innovative research and development (R&D). These partnerships provide the edge that will help achieve our national energy goals.

PARTNERING WITH INDUSTRY TO ACHIEVE ENERGY OBJECTIVES

Recently, government investment in research and development and the appropriate federal role have been the subject of much debate. This budget request supports a strong portfolio of energy R&D which builds on prior year commitments to cutting-edge technologies. FY 1998 is a key year in which to steady our R&D investments because, after ten years of public-private collaboration, dividends are coming to the American people. For example, it is estimated that within two to three years, we will have successfully developed a "next generation" gas turbine that will surpass any competing turbine offered outside the U.S. Advanced gas turbines will provide the capability of generating electric power at efficiencies of over 60 percent, and with NO_x emissions so low as to allow them to be sited in environmentally restricted areas such as California.

We also will have developed an advanced fuel cell that will significantly boost the efficiency and environmental performance of twenty-first century natural gas and coal-fired power plants. When commercially available, these technologies will bring lower electricity costs, more U.S. jobs in the energy industry, and a cleaner environment with lower emissions for all Americans. In the case of both of these technologies, it is federal R&D support which provides the difference needed to develop the "state of the art" in terms of efficiency and environmental quality.

Similarly, the Clean Coal Technology program was begun in 1985 in recognition of the national interest in technologies which promote the environmentally sensitive use of the nation's vast, and relatively inexpensive, coal reserves. Out of 40 projects, the Clean Coal Technology Program has successfully completed its involvement in 20 projects, and the remainder are in operation, construction or design phases. The General Accounting Office now points to the Clean Coal Technology program as a model of public-private partnership. The program has resulted in commercial development of 14 technologies, and the non-federal cost share now averages 66 percent per project. Nevertheless, because there are balances available from previously canceled or restructured projects, the Department proposes to rescind \$153.0 million in FY 1998, and to defer an additional \$133.0 million in balances that will not be required until FY 1999.

In FY 1998 the Clean Coal Technology program will produce the following important results:

- operation of the nation's first three commercial scale coal gasification combined cycle power plants -- at Tampa, FL; Terre Haute, IN; and Reno, NV -- each facility achieving 95 percent or greater sulfur removal, and 90 percent nitrogen oxide reductions;
- startup of a commercial-scale advanced combustor power plant at Healy, AK, which will reduce sulfur dioxide by 90 percent or more, and nitrogen oxides by 70 percent;
- completion of tests at an advanced coal processing facility in Colstrip, MT, producing clean fuel with sulfur content as low as 0.3 percent and heating value up to 12,000Btus/lb.

Research and development is critical if the U.S. is to maintain its technological edge. The question is: how should our national research and development investment be shared between the public and private sectors? U.S. private sector spending for energy research and development is down more than 30 percent since the early 1980s. One reason is that recent changes in domestic energy markets, particularly deregulation of the natural gas industry and the move toward greater competition in the electric power industry, have encouraged general corporate cost-cutting but discouraged research and development, especially if the payoff is beyond one to three years. At the same time, the makeup of the U.S. oil industry is shifting from large, multi-national producers to smaller companies (who drill 85 percent of all new wells) with limited research and development capability and access to advanced technologies. In addition, expectations of continued low oil prices may be discouraging private research and development that could lower the cost of new sources of fuels.

When the result will clearly benefit the public at large -- for example through cleaner air, more affordable energy, or greater energy security -- government involvement is justified and can make the significant difference. This is especially true when the R&D is beyond the private sector's economic capability, or interest. Some R&D has no current "market driver." Some R&D may be vital in the 21st century, but holds no economic incentive today for the private sector. For example, few companies can today justify an aggressive research program aimed at preventing the generation of the greenhouse gas carbon dioxide, much less investing in a means of capturing and disposing of it. There is no immediate "bottom line" payoff. If the public benefits are important -- but research is too fundamental to offer commercial potential, or the advanced technologies pose too great a technical risk or are outside the time frame that would justify industry's investment on its own -- then federal support is justified, and sometimes critical to secure public goals and benefits.

The federal government has unique expertise. Our national laboratories have capabilities developed for defense purposes that can be adapted through R&D to improve domestic energy production. No private sector firm possesses these capabilities. With global markets for new energy technologies offering lucrative opportunities, other countries such as Japan and Germany are using government-industry R&D partnerships to develop innovations that will compete with U.S. technologies.

As Americans we have a duty to discipline government spending and eliminate the deficit in consideration of future generations. However, reducing federal support of energy research and development would place an even higher burden on future generations. Failing to sufficiently invest in energy technology development today sends a signal that we are not willing to work for the future. Affordable heating, cooling, transportation and cleaner supplies of energy will depend on continued innovation that keeps pace with future energy challenges. Industry is a critical partner in this effort.

THE FY 1998 BUDGET -- ENSURING SECURE SUPPLIES OF CLEAN, AFFORDABLE ENERGY

The Department's FY 1998 budget request ties program funding requirements to specific outcomes. This budget was formulated to accomplish strategic objectives which support our national energy goals.

ENERGY EFFICIENCY

According to the 1997 Annual Energy Outlook from the Energy Information Administration (EIA), the average home in 2015 is expected to be 4 percent larger and to rely more heavily on electricity-based technologies. Annual highway travel and air travel per capita in 2015 are expected to be 12 and 76 percent higher, respectively, than their current levels. Despite this expected growth in demand, the EIA report expects that "primary energy intensity on a per capita basis will remain essentially static through 2015." The Outlook attributes this to anticipated improvements in energy efficiency which will "make it possible to provide higher levels of service without significant increases in energy use per capita".

These projections show the importance of energy efficiency technologies. However, these projected gains in efficiency will not be enough. The same forecast projected increased foreign oil reliance which could pose a severe risk to our energy and economic security in the coming years. In consideration of our future, we cannot afford to back away from the investment in energy efficiency technologies.

Reflecting the Administration's commitment to energy efficiency technologies as a key element of the national energy strategy, the Department's total FY 1998 request for Energy Efficiency programs is \$707.7 million, a \$137.9 million increase or 24 percent above the FY 1997 comparable appropriation. We recognize, of course, that this is a bold initiative that may be difficult to achieve in these constrained fiscal times. But we believe the program is well conceived and essential in order to provide for a more secure and environmentally responsible energy future.

The Office of Energy Efficiency and Renewable Energy programs is organized to address the challenges facing the major energy use sectors of the national economy -- industry, buildings, transportation, and utilities. The request for Industry sector efficiency programs is \$139.6 million, Buildings \$302.4 million, and Transportation \$203.2 million. In addition, to directly address the energy efficiency of one of the largest consumers of energy, the federal government, \$31.1 million is requested for the Federal Energy Management Program.

The Department's FY 1998 request continues key initiatives, started at the beginning of the Clinton Administration, designed to accelerate deployment of existing technologies and emphasize research and development technologies for the future. The Department has charted a course to provide energy solutions into the next century. We have outlined major goals and developed this budget request with the aim of achieving the following key objectives.

Designing and delivering cars of the future — The Department of Energy leads the design team of the government-wide *Partnership for a New Generation of Vehicles* (PNGV), a multi-agency/industry collaborative initiative led by the Department of Commerce. The goal of PNGV is to develop an 80 mile-per-gallon family car and demonstrate a prototype car for the future by 2004. In FY 1998 the Department proposes an increase of \$22.1 million for PNGV programs, for a total FY 1998 request of \$128.3 million for PNGV related research and development in the Energy Efficiency program.

The total FY 1998 request for Transportation programs, including PNGV related activities, is \$203.2 million. An increase of \$6.2 million is proposed for Technology Deployment activities which promote the use of alternative fuels through the voluntary *Clean Cities* programs and other activities. The \$2.0 million increase in *Heavy Vehicle Systems R & D* will support increased efficiencies in advanced diesel engines and activities to deploy existing technologies directed at heavy vehicles such as buses, and trucks. Decreases of \$2.9 million are proposed in *Automotive Materials* and \$3.5 million for *Heavy Vehicle Alternative Fuels R & D*.

Improving efficiency in energy intensive industries — The Department is working closely with the most energy-intensive industries to focus cooperative research and improve U.S. competitiveness. Working together with industry to encourage the development and application of energy efficiency and pollution prevention technologies, our goal is to help achieve over \$10.0 billion of industry energy cost savings by the year 2010. The Department's FY 1998 request emphasizes the *Industries of the Future* public-private partnership program and proposes a \$9.4 million increase for a FY 1998 program total of \$55.7 million.

In addition, the Department is requesting increases to support other cost-effective industry pollution prevention partnership programs in FY 1998: *for Motor Challenge*, \$2.1 million, to continue collaboration with the private sector to improve the efficiency of industrial motors; *for Climate Wise*, \$2.8 million, to continue efforts to voluntarily reduce global warming emissions from industrial energy users; *for NICE3 partnerships*, \$6.2 million, to continue the highly leveraged deployment of innovative energy efficiency and pollution prevention technologies in partnership with state, local and other federal agency partners; and *Industrial Assessment Centers*, \$1.1 million, to enhance technical support available to industries seeking to audit the efficiency of their facilities. Proposed for continuation at the FY 1997 comparable level are: *Advanced Turbine Systems*, to continue development of highly energy efficient turbine engines for future use in industrial settings, and *Advanced Materials R & D*, to develop highly efficient industrial materials, such as ceramics, which are able to withstand greater heat and stress demands, thereby, operating more efficiently with lower energy requirements.

Developing buildings and communities for the 21st Century -- By working with the building industry, community leaders and customers, the program's goal is to develop and implement a plan for buildings and communities of the future. The typical American family of four spends \$2,200 each year on energy. The Energy Efficiency program is targeting residential energy consumption with the objectives of cutting builder costs by 10 percent, consumer costs by 20

percent, and pollution by 30 percent, saving 3 quads of energy and reducing environmental emissions by 60 Million Metric Tons Carbon Equivalent by the year 2010.

Public-private deployment partnerships for the buildings sector which are designed to increase energy efficiency are proposed to increase by \$10.0 million in FY 1998. One recent example of the benefits of this partnership approach is the *Rebuild America* program where \$500,000 in federal funds was used to attract nearly \$33.0 million in state, local and private funds to implement energy efficiency technologies in commercial and government buildings at the state and local levels. The \$10.0 million increase in building sector programs will support: *Rebuild America*, as well as promote efficient and affordable residential and industrialized housing; *Energy Star Appliances*, a voluntary incentive program that promotes market demand for energy efficient appliances; and enhanced *Building Codes and Standards* activities with the States. Also supported is research and development funding for advanced building equipment and materials, including windows and lighting.

Transferring proven energy efficiency measures to consumers -- By applying energy efficiency measures to existing buildings and operations, our goal is to increase efficiency and reduce government energy consumption 30 percent by 2005 from a 1985 baseline. Through aggressive deployment of technologies available today, we propose to reduce annual energy consumption by one quad of energy by the turn of the century. To move toward these targets we propose the following program levels in FY 1998:

For the *Federal Energy Management Program* \$31.1 million is requested. This is an \$11.3 million increase to let the program bring a series of new energy technology options to federal facilities managers and support the growth of alternate, non-federal financing options to implement energy cost savings such as up-front capital financing from energy utilities which is to be repaid from the agencies' monthly energy consumption savings.

A \$41.3 million increase is proposed for grants. Federal support through these grants is cost-effective as the money often leverages investments by state, local and private sources to deploy energy related technologies. *State Grants* which support innovative energy efficiency programs of the State Energy Offices and help to generate \$19.0 million in non-federal investments for every appropriated dollar, are proposed to increase \$8.0 million to a total of \$37.0 million in FY 1998. Also proposed is a \$33.3 million increase for the *Weatherization Assistance Program* for a FY 1998 total of \$154.1 million, to deploy existing energy efficiency technologies in households that cannot afford the investment without the program. This level of funding will weatherize close to 78,000 households in FY 1998. Level funding between FY 1997 and FY 1998 of \$1.6 million is requested for the *Municipal Energy Management Program* which works with urban communities, and leverages four non-federal dollars to every federal dollar.

FOSSIL ENERGY RESEARCH AND DEVELOPMENT

The budget request for the Fossil Energy program recognizes that nearly 85 percent of the nation's energy is currently supplied by coal, oil and natural gas. With the use of these fuels projected by the Energy Information Administration to increase to more than 88 percent by 2015, the Department's fossil energy program focuses its funding primarily on ways to enhance our domestic energy security and ensure continued environmental protection.

The Fossil Energy FY 1998 budget addresses these energy concerns. As a near-term response to a potential oil supply disruption, the FY 1998 budget maintains the Strategic Petroleum Reserve at 563 million barrels, respecting our international responsibilities and providing a powerful tool to blunt oil shortages and price fluctuations. For the longer-term, the budget continues research and development into new oil exploration, production and processing technologies that can lower costs and boost domestic oil supplies, particularly from properties owned by smaller independent producers. The budget also maintains research into alternatives to conventional petroleum, including technologies to produce high-quality liquid fuels from natural gas and coal.

The Fossil Energy Research and Development program is committed to new natural gas- and coal-fired electric power technologies that can produce significantly less carbon dioxide and acid rain emissions than current technology, while keeping electricity costs affordable. The FY 1998 budget moves into the final phases of development for several advanced electric power technologies, including low emission boilers, advanced generation fuel cells and ultra-high efficiency gas turbines, culminating a decade or more and several hundred million dollars of prior public and private sector investment. DOE's support for these 21st century technologies is becoming increasingly important as the U.S. industry, confronted by the uncertainties of restructuring, continues to cut back financing of longer-range, higher-risk R&D, while at the same time demand for new and cleaner sources of electricity rapidly increases throughout much of the world.

The FY 1998 budget request also recognizes that U.S. demand for clean-burning natural gas could increase significantly in the next decade, particularly in the electric power generation market. The proposed budget would maintain a major effort to ensure that adequate and affordable gas supplies can continue to be produced to meet this rising demand. New exploration and production technologies, such as innovative imaging and improved fracturing techniques, will help the U.S. expand its natural gas production by several trillion cubic feet over the next 5-10 years, particularly from difficult, low-permeability formations that are currently beyond the capabilities of today's technology.

The FY 1998 request for Fossil Energy Research and Development is \$346.4 million, which is a five percent reduction from the FY 1997 level. This is because many of the Department's supported gas and coal-fueled power systems are entering their final phase of development this fiscal year and will be available to meet market demand close to the turn of the century. We plan to redirect our program to focus on advanced, high payoff research and development. The

proposed budget retains a commitment to technology advancement and, in most cases, is highly leveraged by joint partnerships with the private sector. This budget was developed to address the following strategic objectives:

Develop the Clean, High Efficiency Power Plant for the 21st Century -- The goal is to provide the nation's electric power industry, between 2000 and 2010, with a new generation of natural gas and coal power technologies that progressively lower CO₂ emissions 30 to 50 percent, reduce SO₂ and NO_x emissions to as little as 1/10th the levels mandated by current federal standards, and produce electricity at costs 10 to 20 percent below today's conventional plants.

This request includes \$66.3 million for *Advanced Clean/Efficient Power Systems* under the Coal program. This funding will focus on developing progressively higher efficiency systems that emit significantly less CO₂ than current systems, and exceed environmental compliance requirements through processes that prevent, rather than control, pollutant emissions. In FY 1998, \$5.5 million is proposed for the *Advanced Pulverized Coal-Fired Power Plant* program, which will stretch out the Department's schedule, and require the down selection of contractors to a lead developer.

Also included is \$31.4 million for continuation of the *Advanced Turbine Systems Program* which also will stretch out the Department's schedule and require selection of a lead developer.

Boost the Nation's Production of Natural Gas and Oil -- Through the development and application of advanced energy technologies, the Department's goal is to improve the capability of the nation's petroleum industry to produce additional supplies of secure, clean domestic natural gas and oil, helping to increase U.S. oil production by an average of 0.5 million barrels per day and gas production by 3.7 trillion cubic feet per year by 2010.

The budget includes \$25.3 million for the supply portion of the gas budget to continue to focus on advanced drilling; completion, stimulation, and reservoir characterization technology and resource assessment methodology; storage technologies and engineering techniques; upgrading of low-BTU gas; conversion of natural gas to clean liquid transportation fuels and feedstocks; and environmental research and analysis.

The request for petroleum activities is \$52.2 million, a 14 percent increase from the FY 1997 level of \$45.9 million. This increase will support *Exploration and Production Supporting and Environmental Research* to achieve improvements in locating, processing and delivery of oil and gas resources in a more environmentally sensitive manner. The *Supporting Research* program includes the development of advanced technologies for exploration, drilling, reservoir characterization, and extraction.

Provide a New Option to Supplement the Nation's Liquid Fuels -- The goal is to provide the nation, by 2005, with an alternative source of liquid fuels, costing \$25 per barrel or less, that can be produced from coal and solid wastes.

This request includes \$15.8 million for the *Advanced Clean Fuels* program which demonstrates advanced concepts for the clean production of coal-based transportation fuels, chemicals and other high value products that can compete with petroleum products.

STRATEGIC PETROLEUM RESERVE

Maintenance of the Strategic Petroleum Reserve is a key component of our national energy security policy. No sale of oil is proposed for this fiscal year. At the proposed level of \$209.0 million, the program will maintain operational readiness and facilities maintenance, continue the Drawdown Readiness Program, conduct annual exercises, and continue the environment, safety and health program. The Department will continue its plan to degasify hot and gassy oil in the Strategic Petroleum Reserve. As is, this oil is currently unusable and presents potential safety concerns. In FY 1998, the program will degasify 39 million barrels of gassy oil at Big Hill, Texas, thereby restoring capacity to the ready reserves. In addition, efforts to stabilize Weeks Island will continue as will the Life Extension Program, which will be completed in FY 2000.

CLEAN COAL TECHNOLOGY

In FY 1998, the Department continues current policy and does not propose to start any new domestic Clean Coal Technology projects. Funds available from canceled and restructured projects enable the Department to propose a rescission of \$153 million in FY 1998. In addition, the Department proposes to defer the use of \$133 million which otherwise would have been available until FY 1999. The Department has signed cost-sharing commitments for all projects in the program, and balances available from previous restructuring and cancellation enable a portion of the previously appropriated funds to be returned to the Treasury without endangering the success of this program.

NAVAL PETROLEUM RESERVES AND OIL SHALE RESERVES

The FY 1998 budget request for the Naval Petroleum and Oil Shale Reserves of \$117.0 million provides for continued operation of the reserves until their sale and asset transfer is completed. The National Defense Authorization Act of FY 1996, P.L. 104-106, requires the sale of Elk Hills, Reserve Number 1, located in Bakersfield, California no later than February 10, 1998. Based on this schedule, the budget request provides funding for seven and one-half months of operations for NPR-1, including a transition period and full year funding for NPR-3 and the Naval Oil Shale Reserves. Available current and prior year funds will be invested in the current year to conduct sale activities.

The Department is on track for completion of the Elk Hills sale as set forth by statute. Sufficient safeguards have been put into place to ensure that Elk Hills will not be sold unless the Government receives maximum value for the field. The statute requires the Department to hire five experts in the valuation of oil and gas fields to assess the value of Elk Hills under continued Government ownership. The Department may not sell Elk Hills for an amount less than the

higher of the average of the five assessments, or the average of the middle three assessments (excluding the high and low assessments).

ENERGY INFORMATION ADMINISTRATION

The FY 1998 request for the EIA totals \$67.8 million, comprised of \$62.8 million in direct appropriations and \$5.0 million in activities coordinated through the Office of Energy Efficiency and Renewable Energy. This level of funding will continue to support the data and analysis requirements of EIA's wide variety of customers with a streamlined portfolio of products in comparison to prior years.

In FY 1998, EIA estimates that it will produce approximately 240 reports and analyses covering a wide variety of energy issues. The office anticipates the need to address approximately 300,000 inquiries and requests for energy information in FY 1998 alone. The most significant change to EIA's core activities in the FY 1998 request is the proposed addition of analysis and data collection in response to electric industry restructuring. Several changes are also proposed which will significantly alter the depth and scope of EIA's traditional programs by FY 1998. These include: elimination or scale back of several publications; elimination or reduced frequency of data collections; elimination of the in-house mainframe computer; and release of the Residential Energy Consumption Survey on a quadrennial, rather than triennial basis. The funding proposed as an appropriation from the Office of Energy Efficiency and Renewable Energy will support the core EIA data and modeling activities needed to support energy efficiency program needs and measure program results.

OFFICE OF HEARINGS AND APPEALS

The Department requests level funding of \$2.7 million to continue to process and resolve applications for refund requests and other petroleum overcharge activities required under the Emergency Petroleum Allocation Act of 1973. The request will support personnel compensation and benefits, travel expenses, and support services within the Department's Working Capital Fund for rent, supplies, printing, and information technology.

A BALANCED PORTFOLIO

The Department's FY 1998 budget request represents a balanced portfolio of investments in energy technologies required for the nation's advancement into the 21st century. This budget request stays on course to ensure that America's future includes sufficient supplies of energy needed to fuel a growing economy without sacrificing environmental quality. Now is the time to maintain the government's investment in energy technologies and finally deliver the benefits of these long-term efforts to the American people. These investments are critical, now more than ever.

FOSSIL ENERGY

Mr. REGULA. Well, I'm pleased that you're putting emphasis on energy independence and recognizing the tremendous growth in demand there will be in still maintaining levels of consumption which, of course, reflects a lot of the research that we've been funding over the past several years in natural gas and clean coal technology, and so on. Obviously, the majority of electric power generation will be coal-fired. Do you think that the utility industry has moved aggressively enough in adopting some of the new technology to lower emissions and make their boilers more efficient?

Secretary PEÑA. Mr. Chairman, it is my sense that they have, and the data that I referred to earlier, the fact that 25 percent are now using, for example, the low NOx technology, and that is increasing, and we expect that within a very short period of time even more will be using it. That is one example of how that Clean Coal Technology Program, by developing new technology, was able to apply the products of that research in a very direct and measurable way, and that new technology, obviously, and those low NOx burners are far cleaner than the old traditional technologies we saw in the past.

Mr. REGULA. Has your Department had any input into the decision by EPA to propose new clean air standards?

Secretary PEÑA. Mr. Chairman, the traditional process when EPA issues proposed standards, as they have done, is for all of the departments of the government to interact in some fashion. So we're just in the stages now of devising our responses and our input into those proposed EPA regulations, but we will, obviously, share our thoughts about that.

Mr. REGULA. Well, it's interesting, in our markup in the 1997 bill the DOE had a rather scathing press release about our assault on the environment, because we recommended cuts in the energy conservation programs. Would not your proposed cuts to the fossil energy research program be also an assault on the environment?

Secretary PEÑA. Well, Mr. Chairman, I don't know about that scathing report of last year. [Laughter.]

Mr. REGULA. We shouldn't have told you. [Laughter.]

Secretary PEÑA. I see you have a copy of it in front of you, and I don't really need to see it.

Mr. REGULA. I'm going to let you take a look. [Laughter.]

Secretary PEÑA. Thank you. Mr. Chairman and members, let me say this, we all share the goal of trying to eliminate the deficit. We all understand that we have to cut some programs and do it in a responsible fashion. What we have tried to do in the clean coal technology area, for example, is to look at those projects which were either at their end—we had about 40 of them; 20 have been completed already—so we're down to the last 20—and make adjustments there. Obviously, when these decisions are made, they're worked out with the corresponding companies and others who are partners in those particular projects with the understanding that we will complete them. So even when we make adjustments, as we have in this proposed budget, we are not abandoning those projects, and we have that understanding with the project sponsors.

PARTNERSHIP FOR A NEW GENERATION OF VEHICLES

Mr. REGULA. The Partnership of a New Generation of Vehicles received \$100 million in 1996, 105 in 1997—that is millions. Are you comfortable that this program is being efficient and productive in reaching the goals?

Secretary PEÑA. Yes, I am, Mr. Chairman, and let me tell you why. Fortunately, in my previous position as Secretary of Transportation I was also involved in the PNGV program from Transportation's perspective, and I worked with Mary Goode at Commerce. As you know, the Department of Commerce is the lead on this project, but the Department of Energy is the lead technological part of the government's partnership with the Big Three.

I gave you one example today of a new announcement. There had been a number of milestones that have been met under the PNGV program, which we are very proud of. And so we think this partnership is very important. Let me also add that when I was in Europe last year meeting with my counterparts, they were very concerned that the United States was forming this partnership with our own auto companies to develop this new car of the next century. Now they are trying to replicate the relationship we have with our automakers because they're concerned that we may be making some advances here which may cause some competitive problems for their manufacturers.

Mr. REGULA. How about Japan, because they're the major player in the import market?

Secretary PEÑA. Because they?

Mr. REGULA. In Japan, are they developing natural gas vehicles?

Secretary PEÑA. Well, the Japanese, as you know, Mr. Chairman, have made very significant advances in very fuel-efficient automobiles. We are trying to leap-frog into a new type of car, one that is three times more fuel efficient than the world currently has today. That means looking at a totally different car in terms of its lightweight materials, in terms of whether or not we will use combustion technology, turn to fuel cells, different alternative fuels. We were very pleased that when Chrysler made its announcement about two months ago, the fuel cell technology it is proposing can use either gasoline or other forms of fuel to supply the fuel cells. So we're trying to leap-frog into a new type of revolutionary car for the next century.

NATURAL GAS VEHICLES

Mr. REGULA. Does the PNGV program coordinate—or how does it coordinate with the NGV program?

Secretary PEÑA. Let me turn to one of my associates here and ask. Perhaps they might be able to respond to that.

Mr. ROMM. Well, the Natural Gas Vehicle Program is more focused on specifically developing a longer-range natural gas vehicle and developing the infrastructure for that. It is, I think, more of a near-term program. The PNGV is a 10-year program to develop a triple efficiency car that could run on any of a number of fuels, which would include natural gas. But it's not, I don't believe, coordinated in that sense.

Mr. REGULA. Is there a growing usage of natural gas vehicles for the delivery systems in the cities, because they do have problems with meeting their air emission standards?

Secretary PEÑA. Yes, there are, Mr. Chairman. One of the programs that we have in the Department of Energy is the Clean Cities Program. I'm proud of the fact that my former city of Denver is a member. Let me describe how that program works.

We do provide some funding to the States to help in a number of ways: one, to help communities develop a strategy for the use of, for example, of CNG vehicles. It may also involve helping develop the infrastructure, the refueling stations, for example; encouraging cities and others to convert their fleets into natural gas fleets. When I was at Transportation, we encouraged the transit agencies to begin to use their buses and convert their buses into CNG buses. So there has been a significant amount of progress throughout the country, both at the State level and at the city level, in encouraging States to convert their fleets, the city fleets, but also finally beginning to encourage consumers by having fueling stations that are more convenient to be able to use those for natural gas-powered vehicles.

Mr. REGULA. I have other questions, but Mr. Yates?

Mr. YATES. Thank you.

Let me follow up on that. Are any of the car manufacturers putting out vehicles that use natural gas as a fuel?

Secretary PEÑA. Yes, there are—for example, you can make adjustments. I have a car that has a CNG tank in the back, in the trunk.

Mr. YATES. Your car is adjusted?

Secretary PEÑA. It's adjusted.

Mr. YATES. I wondered whether they have engines in their cars that will burn natural gas.

Secretary PEÑA. Congressman, let me ask Mr. Romm to answer that question specifically.

Mr. YATES. Okay.

Secretary PEÑA. I think there is one manufacturer—

Mr. ROMM. Yes, Ford. Ford has about a dozen models that use natural gas directly.

Mr. YATES. A dozen models? When you say, "a dozen models," how many vehicles are we talking about?

Mr. ROMM. It's just a few thousand.

Mr. YATES. A few thousand. Does that mean that is the sole fuel that the vehicles can use?

Mr. ROMM. I believe that's correct. We can get the exact answer for the record.

[The information follows:]

NATURAL GAS VEHICLES

In the 1997 model year, two of the three U.S. light duty vehicle original equipment manufacturers are offering compressed natural gas vehicles for sale. Ford Motor Company has taken the lead in development of compressed natural gas (CNG) vehicles. The seven CNG models offered by Ford include bi-fuel Contour compact sedans, dedicated Crown Victoria full size sedans, dedicated F-250 pickups, and four versions of dedicated E-series vans. Ford projects total model year 1997 sales of these vehicles will be approximately 2,800. On Wednesday, March 19, 1997, the California Air Resources Board recognized selected Ford F-250 trucks and vans as being the first trucks ever to achieve the Super Ultra-Low Emissions Vehicle

(SULEV) certification—the cleanest non-electric trucks ever manufactured. For model year 1998, Ford plans to continue offering these seven models and add seven models of bi-fuel compressed natural gas/gasoline F-series pickups and E-series vans.

General Motors Corporation, in partnership with IMPCO Technologies, is also selling bi-fuel compressed natural gas/gasoline C/K 2500 trucks that are full-size pickups. Although final model year sales figures are not available, projections are that 1,000 of these pickups will be sold this year. General Motors plans to continue offering this vehicle in model year 1998.

In addition to the alternative fuel vehicles described above, Chrysler Corporation and General Motors offer electric vehicles, and Ford offers flexible-fuel ethanol and methanol Taurus mid-size sedans. For model year 1998, Chrysler will add flexible-fuel ethanol minivans to its offering and Ford will add an electric compact pickup and seven models of bi-fuel liquefied petroleum gas (LPG) F-Series pickups and E-Series vans.

Mr. YATES. Where are they selling these vehicles? Where is natural gas available?

Secretary PEÑA. Congressman, why don't we give you more specific answers—let me answer the question generally. There are a number of communities that have established CNG refueling stations. In Denver, for example, we had one in northwest Denver in a neighborhood. We had one by the old airport. We have one now by the new airport, and we worked closely with a number of companies, oil companies, to set those up, and also with our own fleets. The city had its own CNG fleets, and also for consumers who were interested in buying either a CNG vehicle or, what typically happens, a vehicle that can either be converted—so you have a switch and you can use CNG, and if you run out of the fuel, you can switch over to gasoline.

So more and more communities are beginning to do this. Obviously, we haven't made the in-roads that we would like to see, but I think we're moving in the right direction.

Mr. YATES. Well, how do you fuel your vehicle with natural gas? Where do you get it?

Secretary PEÑA. A tank in the—

Mr. YATES. Yes, that burns natural gas.

Secretary PEÑA. I don't know where to refuel it. I've just been at DOE for five days. [Laughter.]

Mr. YATES. Okay.

Secretary PEÑA. I'm still trying to find my office. [Laughter.]

NAVAL PETROLEUM RESERVES SALE

Mr. YATES. Okay. I want to turn for the moment to the sale of the Naval Petroleum Reserves, and I notice that in your statement you say, "The Department is on track for completion of the Elk Hills sale as set forth by statute. Sufficient safeguards have been put into place to ensure that Elk Hills will not be sold unless the government receives maximum value for the field." What does that mean?

Secretary PEÑA. Congressman, the process that we are using, which I think is specified in the legislation, is to have five independent evaluations done. We would take the average of those five, or eliminate the top and the bottom, and take the average of three other evaluations, and then take the higher of those evaluations for the field.

We also have another company, which I believe has already been hired, to give us an independent evaluation of the reserves remaining in the field.

Mr. YATES. Who is undertaking the five evaluations?

Secretary PEÑA. These are independents that I think we're in the process of hiring.

Mr. YATES. But you just, as I understood you, said you have a sixth that is making an independent evaluation. How does it differ from the other five?

Secretary PEÑA. Congressman, I'll have to get you the details on that. That is my general understanding of the process we're using here. But at some point, when all that data is collected, the Secretary of Energy must make a determination about whether the bids for the field are in excess of the value of the field that we established based on these assessments.

Mr. YATES. Have you received—I'm sorry.

Secretary PEÑA. If we believe that they are not of sufficient amount to make this a beneficial sale for the United States Government, for the American people, then we will not proceed.

Mr. YATES. Do you have to have congressional approval for the sale?

Secretary PEÑA. Let me ask Mr. Kripowicz to answer that question.

Mr. YATES. Okay. We welcome, Mr. Kripowicz.

Mr. KRIPOWICZ. Mr. Yates, the proposed sale, if it's of sufficient value, will come to Congress by January 18, and there's a 31-day "lie-before." The Congress does not have to approve it, but Congress has 31 days to act if they want to disapprove the sale. There's not an active approval that's required by Congress.

Mr. YATES. Do you have any bids on that yet for the purchase?

Mr. KRIPOWICZ. No, sir.

Mr. YATES. No bids as yet? Do you have any idea as to what your minimum bid will be?

Secretary PEÑA. No, Congressman, we do not. We're not at that stage yet.

Mr. YATES. Well, if I remember correctly, the fields are making something like \$100 million a year for the government.

[Mr. Yates confers with staff.]

Three hundred million, is it \$300 million? Well, then, you're going to have to have a pretty substantial bid then, aren't you?

Secretary PEÑA. Congressman, these are the kind of questions that we're going to have all the experts address. Obviously, when all that data is presented to me, I will have to exercise some judgment about whether this is a good deal for the United States.

Mr. YATES. Good luck. Thank you, Mr. Chairman.

Mr. REGULA. Just a follow-up question: I don't believe you've asked for enough money in your budget to operate the field in Fiscal Year 1998 in the event it's not sold and to keep it in first class condition. Do you have a concern about that?

Secretary PEÑA. Mr. Chairman, we do. It was my understanding that we had enough to operate it for 1998, with the assumption that in February of 1998 the report would be done. If we do not have enough, obviously, we will notify the chairman about that and the members of the subcommittee.

Mr. REGULA. Yes, because you may not get the sale consummated in Fiscal Year 1998, and, therefore, I think it would be vitally important to keep this field in first class condition, so that it will bring top dollar when it's sold.

Secretary PEÑA. Absolutely, Mr. Chairman.

Mr. REGULA. I'm not sure that you've requested enough money to do that.

Secretary PEÑA. Why don't we do this: let me go back and evaluate that question.

Mr. REGULA. Okay.

Secretary PEÑA. And, obviously, we will have early warning signals throughout this process.

Mr. REGULA. All right.

Secretary PEÑA. So somewhere along the line if we sense this is not going to work, we will keep very close communication with you.

Mr. YATES. Mr. Chairman?

Mr. REGULA. Yes?

Mr. YATES. One further question, suppose you don't get a bid you consider adequate. Does the basic legislation require you to sell it anyway?

Secretary PEÑA. No, no. This is a judgment made by the Secretary of Energy, and if the Secretary determines that the bids are not adequate and this is not a prudent sale for the American people, then the Secretary is not required to proceed with the sale.

Mr. YATES. Well, then it's more important than ever that the chairman's question be answered in the affirmative, that you'd better take good care of the field.

Secretary PEÑA. Absolutely.

Mr. YATES. Otherwise, you may not get the bid that you think is adequate.

Secretary PEÑA. Absolutely.

Mr. YATES. Thanks, Mr. Chairman.

Mr. REGULA. Mr. Wamp.

Mr. WAMP. Thank you, Mr. Chairman.

I want to congratulate you, Mr. Secretary, for an overwhelming confirmation, and in light of the fact that you have only been on the job officially for a few days, I will submit some detailed questions for the record and ask if you or your staff can respond to those in a timely manner. I actually intend to submit some more questions tomorrow morning when you appear before the Energy and Water Subcommittee.

I think that it is fortuitous that you join Energy at this time, having come from Transportation. We're here today to focus on some obvious linkages between the two. I think you're positioned well to come to the Department of the Energy, and I also want to challenge you that you have a burden on you in a certain sense to help restore some confidence in the position of Secretary of Energy in the coming months. I think that the way you conduct yourself and the efficiency that you seek as the Secretary of Energy will bode well for the Department, and our ability in a bipartisan way to build support for the Department of Energy here in the Congress, which at times in the last two years has been difficult to achieve.

I've tried to build bipartisan support around four major principles. One is the national security mission of the Department of Energy through the Nuclear Weapons Stockpile Stewardship and Management Program, and also now in counterproliferation activities, national security being a real vital part of the Department of Energy's mission; also, long-term investment in science and energy research, which is upstairs at the Energy and Water Subcommittee level; energy efficiency and renewable energy, which is here at this subcommittee, and it's extremely important and I think one of the four key missions of the Department of Energy; and then the responsibility that we have in this country to address the environmental legacy that won the Cold War, that now exists across the DOE complex. And all four of those priorities I think are bipartisan priorities and four principles through which we can build some support for your efforts as you seek to improve the Department of Energy yourself.

I also want to challenge you, just in opening before I ask a specific question, to rise to a challenge that, having served on the Transportation Committee myself for the last two years and the Science Committee, and having been a student for about six years of our national laboratory systems and our long-term commitment to science and energy research, and looking at what drove science policy here for 50 years in this country—really the nuclear legacy drove science policy in many ways—that we have not in the post-Cold War era, as a nation, asked the question and addressed the question: where do we go from here and what is the mission of our national laboratory system in the post-Cold War era? We haven't done that, and I would ask you to every week, as you go about your responsibilities over the next few years, to keep that at the forefront of your thoughts, because I think we can't really establish certain priorities until we address exactly where do we go from here. Is it to keep people alive to be 100 years old? Is it to create materials in an environmentally-responsible way, so we have zero emissions? I don't know, and actually we won the Cold War. We built up the nuclear legacy and scared everybody else to death, and they crumbled, sometimes under their own set of problems, but we won the Cold War. Now where do we go with long-term science and energy research policy in this country? I think it's a legitimate question; I've heard it for two years asked too many times; I think it's time for Congress and the administration to come together behind that. I would challenge you to address the big long-term questions, not just to serve your time out as Secretary of Energy.

On this issue of transportation and next generation vehicles, we actually make in my home district with applied technology in the south end of my district, in Chattanooga, through a company called Advanced Vehicle Systems, we make electric buses. We actually have backed-up orders on making and exporting those electric buses all across the country. The basic research was born in many ways at the Oak Ridge National Laboratory in the north end of my district. So I've actually watched the basic research go to applied and know that there's a legitimate role for both and the support for both.

HYBRID VEHICLES

Mr. REGULA. Would you yield?

Mr. WAMP. Yes, sir.

Mr. REGULA. Your electric buses, are these plug-in charges or do they have a diesel engine that runs them?

Mr. WAMP. No, sir, they are plug-in charges, but now there are problems associated with that, and that takes me to what I wanted to ask, and that is about, frankly, it's going to take a hybrid approach. I mean, you're going to have to have all different sources coming together. Some of the battery problems we need to address are because of the environmental problems that batteries create as we're looking at these hybrid vehicles. But not only do we make a battery to power this bus, but the chassis frame for the bus—everything—They come up here once a year, and I'll take you on a ride down through the Mall here, and show you how well they work. We make the short ones, the long ones, and export them. It's a great business, and it's a growing business.

But I think there's some foundations in this country that now say that maybe our best export market potential is in a small vehicle, which I think you referenced a minute ago, with impeccable gas mileage, incredible gas mileage, and, actually, we could export those little vehicles to developing nations. That may be the No. 1 market opportunity that we have for next generation vehicles. It's going to be a long time before domestically we change people's thinking to the traditional gas-powered cars. Build another road, you know—urban sprawl. The whole notion that we've been involved in as a nation since the turn of the century.

But what do you think about an export market potential for small vehicles that can compete with motor scooters in developing nations and countries, frankly, that can't afford a \$15,000 car, but they might afford a \$4,500 car that's made on a small chassis with a hybrid system. Some of it may be natural gas; some of it may be a turbine; some of it may be battery; it might be a combination of all those.

Secretary PEÑA. Congressman, you've raised an excellent point, and let me say that in my travels in the past to places like Vietnam to Thailand and many Southeast Asian countries, we're beginning to sense—and in a particular place like China—that they are very concerned as they become much more developed about how they can incorporate clean technology, so that they can perhaps avoid the mistakes that we have made because of the natural course of our country's development.

So I agree with you; I think there is a tremendous market opportunity there for that kind of a car in some of those countries. So one of the byproducts of the PNGV partnerships is for our automakers to become the world dominators of this new market of the next century. And, presumably, with many of our companies now opening up factories in other countries around the world, they'll have the capacity then to have those production lines also in those countries. So I think there is great potential there. I agree with your evaluation.

Mr. WAMP. Do you think it's feasible that smaller companies, other than the big automakers in this country, can actually com-

pete? Is there any way that, through grants or some kind of start-up infrastructure development, that other companies might have a remote chance of being competitive in this new production capability?

Secretary PEÑA. Well, it depends. I think there are parts of this where smaller companies can play a role. Last year, for example, we rolled out another bus made of the material that the old Stealth bomber was made of. We called it the Stealth bus. This is a bus you can actually see, however, when it drives past your home. [Laughter.]

But it was a third lighter, and there were a number of smaller companies that built certain parts of that Stealth bus with a large company in California. So I think that, by being creative with our major partners, and perhaps encouraging the use of small companies to develop parts of these new systems, I think we can help small companies be a part of this new technology.

Mr. WAMP. Thank you, Mr. Secretary. Thank you, Mr. Chairman.

Mr. REGULA. Mr. Skaggs.

Mr. SKAGGS. Thank you, Mr. Chairman.

I want to make a special welcome to you, Secretary Peña, and say, congratulations on your confirmation, and all success to you.

Secretary PEÑA. Thank you.

Mr. SKAGGS. We're proud of you at home.

I wanted to get into an area that really isn't within our subcommittee's jurisdiction as far as DOE is concerned, but certainly is of concern to you, having to do with a hearing we had this morning with USGS and their seismic monitoring program, which is an important ingredient in our treaty compliance work. Again, this isn't a DOE function directly, but since you're here and it's close proximity to the conversation I had this morning with Mr. Eaton from USGS, they're facing a problem with the crunch on their budget and not being able to maintain this global seismic monitoring system as well as I think our national security agencies would want to see happen. To date, anyway, they haven't, I gather, tried very much to get anybody at Defense or Intelligence to chip into these costs. It does affect your Department ultimately since it has nuclear weapons consequences down the road. I just wanted to bring it to your attention. I don't expect you to have a response, but it may be something that within the consultations within the administration you might be able to help USGS out, because ultimately it will be helping you all out. They're much more strapped for funding than some of the people that count on the work that they can do in that area.

NAVAL OIL SHALE RESERVES

Along the same lines of just wanting to get onto your already full plate—and maybe you can comment on this, if you're able to—the status of moving the oil shale lands out West into, presumably, Interior/BLM management, where we stand on that and what you see as the timeline. It's of interest, as I'm sure you're aware, to folks at home that want to get into the oil and gas leasing of those properties or use them for grazing, or whatever.

Secretary PEÑA. Congressman Skaggs, my understanding is that we owe the Congress a report, about not only that field in Colo-

rado, but others around the country. I believe that will be available in a couple of months so that we can give you a sense of what options are available.

One of those options is to transfer the responsibility to DOI, Department of Interior, and have Interior, through its normal leasing provisions, help lease some of those properties, but that's not a decision that's been made yet. So we're exploring all those options, and in that report we'll be able to respond to you directly about not only the Colorado field, but I think some of the other fields in the country.

ROLE OF FEDERAL RESEARCH AND DEVELOPMENT

Mr. SKAGGS. Thank you. You are the lucky beneficiary, I think, of a budget proposal that I know was put together before you came onboard, but I'm glad to see the plus-up proposed in energy conservation. I'm sure you'll defend that with vigor.

Implicit in that, I'm sure you are aware, is the ongoing debate around here between those that see a legitimate Federal Government role in development of applied technology and those that sort of say, hey, if it's ready for the market, private industry will take care of this; if it's not, it's nothing that the government ought to be involved with.

And I just wanted to give you a chance, if you'd like to take it, to give us your sense philosophically of why you see a legitimate Federal role in this applied R&D area, particularly as it pertains to energy conservation and alternative energy sources. Why don't we just leave it to the market and get government out of this business?

Secretary PEÑA. Congressman Skaggs, you've asked, I think, a very important question, and let me give you my philosophy about this, my answer is based not just on my philosophy, but I think also on my experience.

There are a certain number of facts that are very clear to us. No. 1, many private sector companies which traditionally had invested large amounts of their dollars on research and development are now cutting back. We have seen that, particularly in the area of industries which are de-regulated, highly competitive, and where they are very focused on, obviously, short-term profit margins. And so we have seen some of these companies begin to cut back on their R&D investments. We as a nation then have to ask the question: will we lose our long-term competitive edge if the Federal Government does not play a part in R&D?

Secondly, we have seen through experience where we have successfully engaged in some of these partnership applied technology ventures, taken them to a point, and then abandoned them because of difficult budget scenarios, only to find that world competitors picked up our initial work, finalized them, developed those products, and then we ended up buying them back.

I can give you a couple of examples, if you'd like, in the area of transportation, for example.

Mr. SKAGGS. Sure.

Secretary PEÑA. Years ago, we as a nation decided to try to develop a magnetic levitation train, a train for the next century. We started to invest in that technology. I think even in Pueblo, at the

test track facility, they started to do some work there. We had budget problems years ago; we abandoned that. The Japanese took our information, our research, perfected, developed a magnetic lev train, and now Germany has one that is going to be built with the goal of becoming the world exporter of mag-lev technology, and someday I would not be surprised if we end up buying that technology back.

I would suggest, as difficult as these decisions are, particularly at a time when we're cutting our budget, that we be mindful of our past experience, that we look to the future and understand that these kinds of applied technology investments are good for the long term; they are good for our country; they are good for our companies; they're good for American workers, and I believe they're sound investments.

So I would encourage us to, as much as possible, continue these partnerships, continue to invest, recognize the change in the private sector, and that we are in a fiercely competitive environment where our competitors worldwide are now investing more in R&D sometimes, compared to GNP, than we are. I think that is a very disturbing possibility if we allow that to happen and we continue to fall behind in the next century.

Mr. SKAGGS. Thank you, Mr. Chairman.

Mr. REGULA. I might add to that comment that I think the low-emission boiler is something that perhaps should have that kind of attention. I don't know that your budget is quite adequate to move in the direction in that particular instance that was suggested by Mr. Skaggs.

Mr. Miller?

CLEAN COAL TECHNOLOGY

Mr. MILLER. I'm new on this committee, too. So I sympathize with your five days on the job.

But Mr. Skaggs was talking about industrial policy, and I have concerns about that, the Federal Government picking winners and losers. I mean, I'm not—high-definition TV is something the Japanese poured all kinds of money in it, and they picked wrong. So, I mean, it's not an easy, clear-cut question.

Let me ask—start with a clean coal technology question and get an understanding of that. This is—I don't know, you may have to turn to your colleagues on either side of you who may know more answers to that, but that was a program that was forward-funded a lot of money years ago—I don't know how many years ago—and there's just—

Mr. KRIPOWICZ. I think 1986.

Mr. MILLER. 1986?

Secretary PEÑA. Two point four—

Mr. MILLER. Is that unusual to do it that way, to have such a huge forward-funding? I mean, we don't—

Secretary PEÑA. It generally is unusual to do it that way, Congressman. You'll notice that in our 1998 budget in other areas we are now suggesting that we revisit that concept of forward-funding. I'd be happy to tell you why.

Mr. MILLER. Well, I would agree with you; I mean, I have concerns about forward-funding too many things, and especially from 1986.

How much money is left in that program to spend? I see where you were rescinding \$286 million this year. If we closed down the whole operation, I mean aside from those that have got commitments, you know, contracts under construction, what would be left there?

Secretary PEÑA. Let me give you a summary while Mr. Kripowicz gives you the details. We had about 40 projects. Twenty of them have been completed. There are 20 others that are now at various stages. The money is committed to a number of those 20 projects, and the rescission proposal is based on the fact that some projects were either completed early or had been readjusted, and the money wasn't necessary. So we returned it to the Treasury. But we want to complete those projects even though we've made those adjustments.

Mr. MILLER. These are new projects that are being committed to?

Secretary PEÑA. I don't think so, Congressman. These are the 20 that are remaining.

Mr. MILLER. That are remaining?

Secretary PEÑA. Let me have Mr. Kripowicz give you the details on it.

Mr. KRIPOWICZ. Yes, sir, there are no new projects contemplated in the Clean Coal Program. The remaining funds are to cover those 20 that are either in operation and construction or in design right now.

Mr. MILLER. How much is being spent right now on those 20?

Mr. KRIPOWICZ. The total amount that will remain in the account after the proposed rescission, if Congress acts on it, is about \$2.3 billion, over half of which has already been spent.

Mr. MILLER. But it's still over a billion dollars sitting out there?

Mr. KRIPOWICZ. To complete these projects, yes, sir.

Mr. MILLER. And we're contractually obligated on those projects?

Mr. KRIPOWICZ. Yes, sir.

Mr. MILLER. Will there be a rescission next year or the year after? Are we making only—is this all that we can have to—

Mr. KRIPOWICZ. At this particular time, the \$153 million is based on projects that we know definitely are not going forward. If any of the existing projects fail for one reason or another, we would then offer the remaining funds from those projects to return to the Treasury.

Mr. MILLER. So you're saying there's no more money available, even if we wanted—unless we stopped the project in the middle of it; is that right?

Mr. KRIPOWICZ. That's correct, sir.

Mr. REGULA. Mr. Miller, if you'll yield—

Mr. MILLER. Yes.

Mr. REGULA. Since I was involved in putting clean coal together, the reason for the large advanced funding is because these are matching funds, which at the time was somewhat of a new approach, and it's big dollars. In order to get confidence on the part of industry to participate, we had to forward-fund; otherwise, we would not have gotten any bids. It's worked out. We anticipated a

50/50 match; we're getting 66 private and 34 Federal. So I think that attests to the efficacy of the program.

You have, I'm not sure it's your district, Tampa Electric, but the Polk plant is a classic example of a very effective project that has resulted from this program, and the technology being demonstrated will be used by many other companies. So there is rationale for the large advanced funding, and without it, I don't think the program would have worked as well as it has.

Mr. MILLER. But 10 years seems like a long time.

Mr. REGULA. Well, I understand that, but it has taken a lot of time because they are big projects.

CHINA PROJECT

Mr. MILLER. What about the China project, the \$50 million?

Secretary PEÑA. Congressman, that is a proposal that is, apparently, the marker in the 1998 budget, but as I understand the suggestion, it would not actually be effective until the 1999 budget. So it's more a marker than anything else.

Mr. MILLER. What do you mean "a marker?"

Secretary PEÑA. In the sense that we wouldn't spend that money in 1998 and don't intend to. It will be in the 1999—

Mr. MILLER. But we're committing to it and forward-funding—why are we doing it?

Secretary PEÑA. As I understand that project—

Mr. MILLER. I don't mean to put you on the spot.

Secretary PEÑA. That's fine. I'll try and explain it. The understanding here is that in discussions with the Chinese Government, given the enormous potential that economy has in the area of coal, this was one way in which we could begin to introduce U.S. companies to be competitive in bidding for some of those projects. The market in China is enormous, I think all of you know. There are a number of U.S. companies and other companies around the world who want to get into that market, and this was one way in which to facilitate that.

Mr. MILLER. There's no reason—it's just to get into the market? It's not—I mean—

Secretary PEÑA. Well, there are obviously other benefits.

Mr. MILLER. Why do we need to do that in here? I'm just—

Secretary PEÑA. Again, I'm doing this based on the information I've been provided, that the kind of technology being used there was going to need some kind of financial assistance. It wouldn't come directly from the Department of Energy. I believe the concept here is that the funds would be provided to one of the financial institutions that are involved in these projects worldwide, and then that would help facilitate the project in China.

Congressman, I know you're aware of the fact that this—

Mr. MILLER. I read about China in the paper a lot right now, but it's not a lot of coal. [Laughter.]

Secretary PEÑA. The point I was going to make was that a number of our competitors around the world have similar kinds of financial techniques to help their companies enter into new emerging markets, and China is probably one of the—

Mr. MILLER. Is this an authorized program? Or does it need to be authorized?

Secretary PEÑA. It is authorized.

Mr. MILLER. So it was authorized like last year or something or—

Secretary PEÑA. Let me have Mr. Kripowicz answer that.

Mr. KRIPOWICZ. It was authorized in the Energy Policy Act, and I believe that was 1992. The international program was authorized—

Mr. MILLER. Oh, the program, but as far as the \$50 million program with China, you all just developed that one now. Okay.

COAL RESEARCH AND DEVELOPMENT

Let me ask one more question, if I can get a little clarification on the fossil energy, the R&D on coal, R&D. That's different from the clean coal. How much do we spend on coal R&D? The total program is \$346 million. How much of it goes for coal R&D?

Secretary PEÑA. Approximately \$100 million.

Mr. MILLER. Do we need to do that all the time? I mean, is that a necessary program? Is that—

Secretary PEÑA. Well, obviously, we are trying to find ways in all of the energy areas, whether it's coal or natural gas or ethanol or methanol or electric or solar or wind, whatever, to try to find a way to advance all of these energies. If we are developing, in my view at least, an energy-independent strategy, we must rely on a diversity of energy sources, and I think it would be a mistake to be relying on only one. So to the extent that we can continue to make coal, for example, a viable energy source, given the fact that we are the world's largest holder of coal reserves perhaps, then we ought to find a way to continue to make it a viable energy option. One of the ways to do that is to make sure that we have clean emissions, that we attend to the environmental issues, and of course the cost issues. So we think these investments are helpful to advance that particular option among a number of options that I think are important.

Mr. MILLER. How much have we invested in coal R&D?

Is my time running out here?

Mr. REGULA. Yes.

Mr. MILLER. Okay, we'll pursue it some other time. Thanks.

Mr. REGULA. If you continue pursuing this, it will get shorter and shorter. [Laughter.]

Do you have any further questions?

Mr. MILLER. No, sir. [Laughter.]

Mr. REGULA. Mr. Dicks?

FAST FLUX TEST FACILITY

Mr. DICKS. Mr. Secretary, welcome to the committee, and I congratulate you on your confirmation and also on the outstanding job you did as Secretary of Transportation. Obviously, as you know, the Department of Energy plays an enormous role in the State of Washington, particularly over in the Hanford area. Obviously, the cleanup program and the work of the contractor there are all very important to the people of our State. On both sides of the State people pay a great deal of attention to it.

I would like to ask you a question on a related subject, Mr. Chairman, and then I will get to a question that's before the juris-

diction of our subcommittee. And that is on the recent decision to keep the Fast Flux Test Facility in a warm standby condition as a potential tritium producer. Our delegation was on a bipartisan basis very supportive of this, as has been our new governor, Gary Loch, and we see this as a potential way to save literally billions of dollars, potentially. If we get to a Start III agreement and the requirement for tritium goes down, you might, just with the FFTF, be able to meet that requirement. We can't get into those details here, obviously; that's classified information.

And so it is my hope that you will seriously look at this option, which is a very safe reactor that sits out there at Hanford, has really never been used, and could be used for this purpose. We're hoping that there will be a reprogramming requested, so that we can move the money in there to keep it in warm standby, as you consider all your alternatives in the tritium area. I know this is—I don't know if you've had a chance to focus on this subject, but I just wanted you to know that we're very interested in pursuing it.

And a lot of people say, well, you know, we've got to be worried about cleanup money. My view is the best way to ensure that there's enough cleanup money in the future for cleaning up the site at Hanford is if we could save, some people estimate, up to \$12 billion that it would cost to build a new facility. So if we've got an existing one that can do the job, for the taxpayers' sake, I think we ought to seriously examine it. It's not that far off in terms of being able to meet the requirement.

The other question I wanted to ask you about—and I'd be willing, if you have anything to say about that—

Secretary PEÑA. Very briefly, Congressman, obviously, Secretary O'Leary chose to keep that option available to support—and I want to be clear about this; it is not a third option to the dual-track option she identified last year—

Mr. DICKS. Right.

Secretary PEÑA [continuing]. But to support the dual-track option for production of tritium.

Sometime later this year, early next year, I'll be making a final decision about how best to proceed with all those approaches, but we do know that we will need a new supply of tritium by about 2005. Tritium, as you know, deteriorates at about 5.5 percent per year.

Mr. DICKS. Right.

Secretary PEÑA. So we need to replace it and have our five-year reserve. So the Fast Flux Test Facility is clearly an option that we want to evaluate very carefully.

Mr. DICKS. Good. Well, I appreciate, and I really do believe, if you have a chance to come out and take a look at it, I think you'll be impressed with it. And there's also another facility out there, the Fuels Material Examination Facility, that also has some other potential possibilities in the disposition of plutonium that we may want to look at as well.

PARTNERSHIP FOR A NEW GENERATION OF VEHICLES

Now on the question of a Partnership for a New Generation of Vehicles, your testimony reflects a priority in developing an R&D

strategy in order to protect our country from another unplanned crisis. The committee, obviously, has an interest in two important areas of energy R&D; namely, fossil energy and energy efficiency. As a former Secretary of Transportation, can you give me an assessment of our transportation research needs as they relate to energy in this country, and is the Partnership for a New Generation Vehicle on schedule? We're very interested in that because there's been some good work done at Battelle with the other companies. By the way, there was actually an article today in USA Today talking about a future car, in which it says, "Ford Motor said it plans to have prototypes of an ultralight, high-mileage car ready to be tested this fall. Ford said that a mid-size family sedan will weigh only 2,000 pounds, will get nearly 70 miles per gallon with diesel fuel, and will produce limited amounts of pollution. The vehicle is part of the Partnership for a New Generation of Vehicles, a joint venture by the Federal Government and the Big Three automakers to develop environmentally-fuel-efficient vehicles."

Can you tell us a little bit—

Secretary PEÑA. Congressman, you're absolutely right. That is another very good example of the success of the PNGV program, and some of the products that are being delivered are actually being delivered ahead of schedule. I think that's a good example of one. But the program is very important, and we want to complete it.

Let me answer your other question, which I think has very significant implications, and that's transportation. It is my view that if we are to develop an energy-independent strategy, we have to address two fundamental forces. One is what I call the consumption line—

Mr. DICKS. Right.

Secretary PEÑA [continuing]. And that is consumption of energy, in particular, the area of transportation, where 67 percent of oil is consumed in transportation, is going way up, and we project it to go way up. Domestic production, particularly of oil, is flat, if not declining. We can't continue those two trends and allow them to remain unabated.

As respects the consumption figure or trend, if we want to make a significant reduction there, we have got to deal with transportation.

Mr. DICKS. Right.

Secretary PEÑA. If we do not address transportation, we will fail. Perhaps the most viable strategy is in the area of a new generation of vehicles, which will be three times more fuel efficient than today's cars, which will be a new generation of cars, hopefully running on fuel cells, alternative energy sources, et cetera. So this has great promise, not only from an environmental perspective, but I would say from a domestic security perspective, to help us bring some sanity to these two lines, where we are becoming less energy-independent. In fact, we are moving in the wrong direction. I testified in my opening statement that our prediction is that within a decade we will probably be 60 percent reliant on foreign oil, and our projections even beyond that are worse, and we simply can't allow that to continue to be the case. So this investment in trans-

portation I think is key to helping us to deal with these energy-independent strategies.

Mr. DICKS. Good. Thank you, Mr. Chairman.

Mr. REGULA. Mr. Nethercutt.

Mr. NETHERCUTT. Thank you, Mr. Chairman.

Mr. Secretary, welcome. Congratulations on your confirmation. I know you have a great challenge ahead of you, and we wish you well.

FUEL CELL PROGRAM

The molten carbonate cell program has been funded by the Department of Energy for the last 16 years. I noticed in your testimony there was reference to the partnership with industry in that regard. My information is that that technology, the fuel cell technology, is close to commercialization—in fact, maybe within the next two or three years.

I can see some great benefit economically and environmentally for this technology. I know that we have—I have some vested interest in it because a consortium, a group in my district, a public-private partnership arrangement, is working to develop fuel cells. Can you describe for the committee whether the Department fully supports the continuation of this research? I understand there was some decrease in fuel cell funding, and I'm wondering if that represents some kind of a stepping-back from your commitment prior to this time?

Secretary PEÑA. No, it does not, Congressman. We had to make some very difficult decisions in this budget and some adjustments, and that was one. The impact of that adjustment in the molten carbonate fuel cell program is delay for pushout of the ultimate product by, I think, one or two years. But we want to complete that technology; we think it's very important, and we think we will have additional money in the next budget cycle to make sure we get that job done. So it is still a priority; we do not want to abandon that project. We think it's very important. And a lot of progress has been made, as you would say. As I understand it, that will be able to be fueled by natural gas, which will be terrific. A fuel cell that will be able to give us that kind of technology would be a wonderful breakthrough.

Mr. NETHERCUTT. And private industry, private utilities, and private entrepreneurs are involved in this—

Secretary PEÑA. That's right.

Mr. NETHERCUTT [continuing]. And I think it's a job-creator. It's got great potential. There was going to be release of some funds to SIRTII in my district. Is there some change or some holdup in connection with distributing funds?

Secretary PEÑA. Congressman, I'm not aware of that. Let me look to my associates. We'd be happy to get back to you in writing.

Mr. NETHERCUTT. That would be great.

[The information follows:]

CONTRACTOR FUNDS IN CONGRESSMAN NETHERCUTT'S CONGRESSIONAL DISTRICT

The Department encourages the award of cooperative agreements through peer reviewed competitive solicitations. This was also required by the passage of the Hydrogen Future Act of 1996. The Department was aware of a joint effort on phosphoric acid fuel cells between International Fuel Cells (IFC) Corporation, Spokane

Intercollegiate Research and Technology Institute (SIRTI), and Washington Water Power. In order to expedite the ability of the Department to proceed with a review of a formal proposal, Spokane Intercollegiate Research and Technology Institute (SIRTI) and International Fuel Cells (IFC) Corporation were informed of a Program Research and Development Announcement to which they could have responded concerning the development of advanced high temperature phosphoric acid fuel cells fueled by hydrogen. The final date for submission of proposals was March 14, 1997, and the funding awards will be announced after the review process is completed.

In addition, the Hydrogen Program has established a mission to work with fuel cell manufacturers to develop hydrogen-based electricity storage and generation systems to enhance the introduction and penetration of distributed renewable-based utility systems. As part of that activity the Hydrogen Program is proceeding with plans to issue a solicitation for a Hydrogen Fuel Cell Project. According to the original plan, that solicitation was scheduled to be released after the completion of a design study of a hydrogen fuel cell by the International Fuel Cell Corporation which is anticipated to be concluded in May. It is expected that IFC and SIRTI will respond to that solicitation. There has been to delay in the Department's plans to move this process forward.

Mr. NETHERCUTT. I also want to follow up, too, on Mr. Dicks' question with regard to the Fast Flux Test Facility. That has great potential medically, too.

Mr. DICKS. Right. I forgot that—

Mr. NETHERCUTT. I appreciate your being willing to consider continuation of it and as to how it fits into the Department's requirements, but it does have great medical benefit for cancer—

Mr. DICKS. Medical isotopes.

Mr. NETHERCUTT. So that's a second reason, it seems to me, that it ought to receive high consideration from your Department. I'll hope you'll do that.

Secretary PEÑA. I'm aware of that, Congressman, and your new governor has been very effective also, in addition to the congressional delegation, in bringing the medical isotope byproduct to my attention.

Mr. NETHERCUTT. Great. Thank you very much, and good luck to you.

Secretary PEÑA. Thank you.

Mr. REGULA. Mr. Skeen.

WASTE ISOLATION PILOT PLANT

Mr. SKEEN. Thank you, Mr. Chairman, and, Mr. Secretary, it's a pleasure to have you before this group. I have a very non-controversial topic I want to talk to you about, but I just want to say to you that you have had a distinguished career, and I hope we can resolve some of these problems we've got before us.

As you know, the Waste Isolation Pilot Plant is located near Carlsbad in my district, and the State began receiving transuranic waste in November of this year. However, it's come to my attention that there are some serious timeline problems within DOE and the EPA. I understand the complexity with obtaining certification from EPA, but I have some difficulty understanding why the DOE is not making a concerted effort at all levels to ensure the compliance process is moving to meet the timeframe, as established by the Federal law which I drafted. Now is the time to protect our children and grandchildren's future by putting that waste where it belongs in WIPP. You've been the mayor of Denver, Colorado, and I know you want the transuranic waste stored at Rocky Flats, in

particular, and all other sites in general, shifted to WIPP for permanent and safe storage as soon as possible.

Second, I understand DOE received a letter from EPA in December requesting further documentation they claim is necessary for application completeness and technical sufficiency, and has DOE replied yet? Right now we're looking at an EPA decision to open next year, and they are essentially blaming DOE for the delay. Yet, the law states that a one-year decision period began upon DOE submittal, which was last October. And what is DOE doing to facilitate EPA obeying the law and meeting its October deadline for decisions?

I also understand there is some indecision within DOE on its timeline for readiness and completion for WIPP's opening. What is the current DOE timeline, and if it's not targeted for November of 1997, why not? I have some more questions concerning adequate funding I will submit for the record, and I would deeply appreciate your reply to these, as well as any further in-depth replies to my previous questions.

Again, I hate throwing this all on you at one time, but this thing has been festering long enough, and it's about time we moved this waste we have above ground and get it in this facility, because it's ready to go and has been for some time.

Secretary PEÑA. Congressman, I agree with you. Let me tell you what we're doing. Let me tell you my position.

No. 1, this is a very high priority. I've already had one conversation with Administrator Carol Browner at EPA about the importance of this facility to the country. I've met with the current mayor and the past mayor of Carlsbad in my office to talk about their very strong support, obviously, and they want to make sure we open that facility on time.

Let me explain the process. There may be a little misunderstanding.

Mr. SKEEN. I'd appreciate it.

Secretary PEÑA. I do not believe that there is a fight between DOE and EPA or that anybody is not obeying the law. What traditionally happens is that the Department will submit its documentation to EPA, and because the application is quite voluminous, EPA will ask questions; and that is what is going on. So this is normal.

Now what I want to make sure is that your concern is met, and that we don't have elongated conversations about documents that have not been provided. So—

Mr. SKEEN. That's correct. We've gone through this exercise with EPA and some of the others.

Secretary PEÑA. I think the fact, Congressman, that there is a likelihood of litigation on this project requires all of us to make sure that the documentation and the record are complete. The last thing we want to do is to be challenged for an incomplete record. So I will do everything I can to make sure that the DOE personnel are responding to EPA, working with EPA according to the law, so that that one-year timeframe can begin to be triggered.

And, by the way, the legislation simply says that EPA, if it wants, may take up to a year from the time the record is officially complete. So it need not take a full year, if the record is complete.

Also, there have been contemporaneous evaluations by EPA of this record while it has been developed. So it's not as if EPA is starting for the first time—

Mr. SKEEN. That's right.

Secretary PEÑA [continuing]. Looking at the record. Having said all that, as you know, at least the target date was November of this year.

Mr. SKEEN. Yes, sir.

Secretary PEÑA. Four things have to happen: EPA has to do its work. The State of New Mexico has to issue a RCRA certificate.

Mr. SKEEN. We understand that, and we're working on that.

Secretary PEÑA. That's right, and we're very pleased with that progress. The Department of Energy has to make two other findings, which we will make according to the law. So we're going to work very, very hard to try to meet that goal and cooperate with EPA, answer all the questions, and finally get that site open. It's important to the country. It's a great success, I think, for the people of Carlsbad, the great work they've done there, and, as you've said, it is important to many sites around the country who want to move their transuranic waste and finally have it disposed in Carlsbad.

Mr. SKEEN. Well, you have to understand the feeling I have and the intensity of it, because I've been with this project for some 20-odd years, and we've had delay, delay, delay by the administrators, and particularly by some of those on the inside who are supposed to be oversight observers of the process. It's a good process. It's a good unit. We need to get on with this because it's been ludicrous. We're letting this stuff pile up, as you know, in Idaho, Colorado, the panhandle of Texas, in 55-gallon drums that are corroding, and they're setting over aquifers and water, and we've had some litigation already in the Idaho area. So I hate to be this intense about something, but the hair stands on the back of my head when I keep thinking of all the fiddle-faddle and folderols we've gone through, particularly with some of the agencies.

I appreciate your response because, with the record you've had at Transportation and being an airplane jockey, I've always appreciated what you did with aviation and the rest of your responsibilities. You've done a great job. The previous Secretary also had an interest in this thing, and we've moved it along, and we'd like to get it done. It's gone on for far too long.

Thank you very much for your responses, and I have some questions I'll submit to you in writing.

Mr. SKEEN. Thank you, Mr. Chairman.

Mr. REGULA. I think what we'll do is go around in the same order for anyone that has an additional question you'd like to ask, before we let the Secretary go. Mr. Wamp?

Mr. YATES. Mr. Chairman, I thought I preceded—Mr. Wamp?

Mr. REGULA. I'm sorry. I'm sorry. [Laughter.]

AIR QUALITY STANDARDS

Mr. YATES. Not that I'm not interested in the questions, but I just have a few of my own.

My city, Chicago, is concerned with the new EPA regulations for air quality. I think every city in the country is. And I have an idea

that most of the pollutants in the air are caused by transportation. At least, if my memory's correct, at least a third of the pollutants are caused by various factors in the transportation industry. Is my memory correct on that?

Secretary PEÑA. In some of them they are. For carbon monoxide, it's largely transportation; particulates, a lot of transportation. So, yes.

Mr. YATES. How close are we—this supplements our previous discussion—how close are we to cutting back those pollutants in the field of transportation in the large cities or the whole country, for that matter?

Secretary PEÑA. Well, Congressman, in many areas we have made remarkable progress. Let me give you an example of Denver again.

Mr. YATES. Okay.

Secretary PEÑA. It was not but a few years ago where Denver violated the carbon monoxide standards 31 days out of the year, and last year I believe it had zero days. And a lot of cities have made significant progress—

Mr. YATES. How did that happen in Denver?

Secretary PEÑA. Through the use of everything from alternative-fuel vehicles to inspection and maintenance programs, a number of strategies that were used. Obviously, the newer cars that are being purchased now are more efficient, are less emitting in terms of CO and other emitters.

The point I want to make is that a number of cities have made great progress in achieving the old targets that EPA had established for carbon monoxide or for particulates, for PM-10, and so it is very understandable that cities like Chicago and others are now asking questions about these new standards, because in some cases cities that perhaps were previously in compliance may be found to be in noncompliance. For that reason, all of us in the administration have been working on this issue with EPA, as we typically do, to make sure that we continue to make advances in cleaning the air, but to do it, I think, in partnership with the communities who I think very much want to clean up the air also, and I know the mayors personally throughout the country are taking great strides in cleaning their air.

ALTERNATIVE FUELED VEHICLES

Mr. YATES. How far away are the alternative-fueled vehicles themselves from conversion? You talked about the use of natural gas.

Secretary PEÑA. Yes.

Mr. YATES. If I remember correctly, Denver was emphasizing ethanol as one of the alternative fuels. But you talk about the PNGV, but that's in the distant future, isn't it?

Secretary PEÑA. We're looking at 2002 and 2003, but, as the announcement today by Ford, they're thinking that the midpoint of the next decade they will have these in almost full production.

Mr. YATES. There's no way of having EPA wait for that happy day, is there, before it puts its regulations into effect?

Secretary PEÑA. Congressman, I think you're asking a difficult question. [Laughter.]

Mr. YATES. Thank you, Mr. Chairman.

Mr. REGULA. In the case of Denver, was there any standard requiring delivery vehicles to use natural gas, for example? Some of the cities are pushing very hard to get fleet vehicles on natural gas as a beginning.

Secretary PEÑA. There were some voluntary efforts, as I recall, with a number of the companies that had large fleets—

Mr. REGULA. Right.

Secretary PEÑA [continuing]. And, in addition to the Federal agencies and State agencies and city agencies to try to use CNG fleets of one kind or another—

Mr. REGULA. Did you have fueling stations in Denver?

Secretary PEÑA. Yes. We had two or three around the city. So if one wanted to have a CNG vehicle, if one wanted to have a CNG fleet, there were stations that were there.

Mr. REGULA. Mr. Wamp?

Mr. WAMP. Thank you, Mr. Chairman.

It's always good to go after Mr. Yates because he brought on a whole new area here that we can talk about. Thank you, Mr. Yates, for bringing up the issue of new air quality standards proposed by Ms. Browner. [Laughter.]

Let me just say, representing Chattanooga, Tennessee, which went from almost the dirtiest air quality city in America to one of the cleanest air quality cities in America, we did that with a great partnership between industry and government, but our private sector manufacturers went beyond the minimum standards, and they did it in a way where they took ownership in the whole process, and it worked because—it worked not through brute force from the Federal Government, but through partnership and through ownership, and I think that the new standards are big time overreach. I'm concerned what it does to our coal-fired power plants in this country because, as you well know, for a variety of reasons, we stopped construction of nuclear power plants. There are no permits that I know of now in process. There are 110 reactors, I think, online. I'm the chairman of the TVA caucus in our seven-State region, and we have now five reactors online, but that's it. At one time they were going after 17. It's now five; that's the end of it; no more nuclear plants, okay?

If Ms. Browner succeeds and we shut down the coal-fired plants, we're going to have to have a lot of dams in this country to generate enough power for the people that live here. And so, I mean, I don't want to oversimplify it, but it's a big-time problem. I think it's an overreach, and I think we ought to all speak with a united voice that we hold off on that for a while and see how things go, as maybe Mr. Yates suggested.

Secondly, on the tritium production, there are going to be parochial pulls for you, sir, from all over the country. So I'd just ask you to keep your powder dry. [Laughter.]

We've got a \$4.5 billion asset in the TVA system that's never been used, a power plant that was built and is sitting there with two reactors, never been used, totally capable of doing the whole deal, triple play, if that's what you determine. So there's inventory and assets all across the country, but I will say don't contaminate a green field site if it's not necessary. There are assets within the

system that we can use where we don't have to contaminate a green field site.

And then, thirdly—and this gets into tomorrow morning's hearing some, but I think everybody's kind of ventured out of the jurisdiction of the Interior Committee in their comments—I think it is, as we learned for six years, all that I could learn in six years, it's absurd to think that we're going to make real progress toward cleaning up the nuclear legacy until we establish some reasonable *di minimis* level of contamination. We can't take all these sites back to their original condition. It's not economically feasible. It's not practical, and some of these buildings, some of these assets, can be put back into productive brown field use unless we establish some reasonable *di minimis* level.

Over the last two years, I've met with literally every one of your Assistant Secretaries—Secretary O'Leary's Assistant Secretaries, some of which you will undoubtedly keep—about this particular issue, because I think we have to do that. The reindustrialization effort, as Secretary Alm has promoted, really I think has been received well on the Hill over here from the Republican Congress because, for the first time, it actually sets budgets and targets and says, let's get on with it and let's get some buildings cleaned up. But how far are we going to take them, and how many of them can be put back into productive use? That's another big issue that you face and big challenge. I look forward to working with you the whole way. We've got to have science drive a *di minimis* level, not mythology, not fear, but science.

Mr. REGULA. Mr. Miller.

OFFICIAL TIME MONITORING

Mr. MILLER. Was there a question? [Laughter.]

I'm new at this. I'm trying to learn a lot of these programs because this was targeted by many Republicans for elimination, the Department of Energy; it was the sugar daddy of corporate welfare located there, and so I'll have a lot of questions as we go through this to find out how much corporate welfare really exists in this program.

But, anyway, let me switch to the question, next question that I have, which is unrelated to the corporate welfare area. Well, I guess in a way it is related. Official time—and since you're starting, it's a good time to raise the question, and maybe there ought to be a policy on it—official time is the paid time off for union activities. And I don't know at the Department of Transportation if you had a policy to keep track of it, but there has been a dramatic increase in the utilization of official paid time off for union activities in those departments or agencies for which there has been—the Social Security Administration has increased like 300 or 400 percent in the past three or four years. I know you're new in this Department, but I don't know if you even kept track of it in the Department of Transportation, but if not—I mean, have you kept track of the official time or do you—

Secretary PEÑA. Congressman, I don't think it was as much of an issue in DOT because we didn't have the extent of union involvement that we have in DOE with the contractors and the contractor workforce, et cetera.

Mr. MILLER. Is there a way to keep track of it or would you check into that?

Secretary PEÑA. I'd be happy to.

Mr. MILLER. Monitoring official time—because, as I say, I know in other areas there's been a dramatic amount of it in some other agencies of the government—

Secretary PEÑA. Let me go back to my team and ask that, Congressman.

Mr. MILLER. Okay.

Secretary PEÑA. In my briefings, I did not have a chance to get briefed on that.

Mr. MILLER. Okay, thank you.

[The information follows.]

TIME KEEPING FOR UNION ACTIVITIES

All DOE employees are required to report to an assigned time keeper on a weekly basis to record all types of leave, including annual leave, sick leave, and administrative leave. Within the administrative leave category are recording codes for mandatory attendance at work-related meetings, snow emergencies, and Union-related activities.

Union representatives are granted official time to perform representational duties, such as negotiations with management officials, attendance at formal discussions with agency officials regarding personnel policy and practices, and the preparation and presentation of grievances.

Matters for which official time is not granted are those dealing with the internal business of a labor organization, such as solicitation of membership, elections, and dues collection.

Mr. REGULA. Mr. Dicks.

Mr. DICKS. Was Mr. Miller ahead of me? He passed?

Mr. REGULA. He just finished.

Mr. DICKS. Oh, excuse me. I'm sorry. [Laughter.]

ENERGY EFFICIENT BUILDINGS

Let me ask you about the Energy Efficiency Program as it relates to buildings and businesses. Are you satisfied with the role the Federal Government is directing in trying to do energy efficiencies in our own buildings and encouraging companies to get out there and do energy efficiency work with various businesses around the country, in terms of the amount of energy they use for lighting and heating and things of that nature? I've been told that that's another way we could save a lot of energy.

Secretary PEÑA. That also is another key program in this area, Congressman, and let me first talk about the government effort. Secretary O'Leary, and the President, frankly, had directed us to begin to make modifications in the various buildings, and I want to continue to remind my associates on the Cabinet and throughout the government of the importance of this. A lot has been done, for example, in the Department of Energy's building. Others have done the same. I know at Transportation we took some measures, too. We can obviously do more.

As respects the private sector, Secretary O'Leary had reached a number of voluntary arrangements with a number of companies in this area. I think that's one thing we can continue to encourage the companies to do. There is lots of new technology available now which will pay back in terms of investment. So that is also a very

important part of the strategy, and I want to focus on that, as I will with other areas, too.

Mr. DICKS. Good. I have no further questions. It's good to see our former colleague, Mr. Kripowicz, here today, and we're glad he's down there working with you.

Mr. REGULA. Mr. Moran.

WEATHERIZATION ASSISTANCE PROGRAM

Mr. MORAN. Thanks, Mr. Chairman, and congratulations and welcome, Mr. Secretary. It's nice to see you.

About a month ago, I went to a trailer off Route 1, and there was an old lady living in that trailer and she was paying over \$120 a month for heating oil. Now a weatherization assistance program, a local company that gets funding to do this came in and they caulked the gaping holes. So it turns out she was paying more than twice what she should be paying, just because of all these holes in the trailer that she was living in, and, yet, we were funding her heating oil assistance and had been doing so for years. So they caulked up the problems, put some insulation underneath, and now her heating oil bill goes down, and since we were subsidizing those bills, we saved far more money than it ever cost to weatherize it.

But I'm wondering, do we generally weatherize these trailers? Because I know we give a substantial amount of fuel assistance to people who are living in trailers, and it takes years to catch up and actually weatherize the thing for a fraction of the cost that we pay out in subsidizing the heating cost.

You have an increase, I guess, in your budget, but it might be useful to address that. It seems a little—

Mr. REGULA. Will you yield?

Mr. MORAN. Yes, sure.

Mr. REGULA. I'd like to piggyback on your question, when you're answering this, and say: should LIHEAP and weatherization be combined, because LIHEAP does some of it; we do some of it, and you're suggesting they ought to be coordinated since they're totally related. So if you'd enlarge on that.

Mr. MORAN. That's the better question: why don't we coordinate LIHEAP because we'd save a lot of money with weatherization?

Secretary PEÑA. They're both excellent questions. Let me try to answer them.

No. 1, yes, the program, the Weatherization Program does also include homes, mobile homes, and trailers. We think that the Weatherization Program is a very good program.

And let me answer the second question by making this point: Let me encourage all of us to look at this differently. Unlike the LIHEAP program, which is more directly a "poverty" program, a direct payment to help someone take care of a bill, this, in my view, is more an energy program for this reason: when that woman, I believe you said lost all that energy, someone paid for it, and that affected our energy elsewhere in the community. And so to the extent that we have lost and wasted energy throughout the country in building the homes and mobile homes, that has an impact on our energy cost as a nation. All of the rest of us as consumers end up paying for that in one way or another. So I would suggest we look at this as an energy strategy. Again to the question I raised earlier

about how we bring the consumption line down if we are to get to a question of energy-independence—so, in that sense, it is different from the focus and the philosophy of the LIHEAP program, which is more directly, I think, a low-income family program. This, I think, is an energy-saving program, and we ought to look at it as such.

It just so happens that we lose most of our benefits in homes that are older, in mobile homes, that have cracks, et cetera, open doors, broken windows, which are owned by people on fixed incomes, senior citizens, for example. I've been to their homes in Denver, and we've seen that, where people seal off part of their home because they can't heat the entire home. They never step into a bedroom, and they only have the kitchen sealed up to conserve heat.

So I think this is an energy program, and, obviously, there has to be coordination with LIHEAP, and there is a connection, but I think it has a different focus.

Mr. MORAN. Yes, it just seems, Mr. Chairman, that it doesn't make sense to be paying out LIHEAP money when, if we've brought in weatherization, we could be saving a substantial amount of money, Federal money, that goes to direct assistance for the people to meet their bills. Their bills would be half what they are now in some cases.

ENERGY EFFICIENT BUILDINGS

Let me ask another question. You've got a 31-percent increase in your Energy Conservation Program for buildings. To what extent do you get the States to modify their building codes, so that they are consistently energy-efficient with what you are trying to do in your Energy Conservation Program? I don't see why the States and localities don't have building codes that are maximally energy-efficient and consistent with what the Department of Energy is recommending.

Secretary PEÑA. Congressman, my understanding is that we do work with the States in providing guidance, explanations as to the benefits of these kinds of programs, et cetera, but the States, then, take final action, but I do believe we have coordination with the States, and perhaps let me have Dr. Romm amplify a little more about the specifics of that relationship.

Mr. ROMM. Yes, we definitely work with the States to help them develop building codes and to be as energy-efficient as possible.

Mr. MORAN. Well, it seems like \$302 million for energy conservation, most of it going to buildings, again, I just hope we're not putting in subsidies where we could solve the problem more directly by having State, and ultimately national, building codes that reflected the most energy-efficient consciousness that you could inform them on. It seems like that should be the first step before we—go ahead.

Secretary PEÑA. We agree.

Mr. MORAN. I'll ask a question and then I'll turn it back to the chairman. But to what extent do we try to put in renewable energy sources in Federal buildings? Are we trying to do that now?

Secretary PEÑA. Yes, we are, Congressman. I know, for example, last year Secretary O'Leary and I dedicated a solar panel that was

used in a park between the FAA building and the DOE building. That's a relatively modest example of how we can work together on these kinds of programs. But, yes, the answer is we do work with other departments, encourage them to look to increased efficiencies, et cetera. Obviously, we can do more, and this is a high priority because if you look at the Federal Government, we are perhaps one of the biggest sectoral consumers of energy in the country.

Mr. MORAN. Well, we sure are. Let me give you an example. You're familiar with that enormous southwest Federal Center that we just built without an occupant, initially at least. Shouldn't we be using buildings like that as models to set a standard for renewable energy? I don't see where they're using sunlight to heat or anything like that. It's just another big concrete building, probably responding more to the contractors that were available and interested in doing the work than in maximizing energy efficiency that we're capable of accomplishing.

Secretary PEÑA. Congressman, it's a good question. Let me—I don't know if Dr. Romm wants to amplify what the relationship is with new construction.

Mr. MORAN. Well, what's the relationship with GSA when they go about building a new building?

Mr. ROMM. Well, we do have a number—through the Federal Energy Management Program, we do have a number of showcase buildings that make use of renewables. I do not believe that we—we do not have renewable energy technologies in every new Federal building, but we do demonstrate and integrate renewables into a number of new Federal buildings.

Mr. MORAN. Well, it's nice to have showcases, but I think it would be even more impressive to actually put it in a major Federal building as a matter of course, and we're building a lot of them here in the Washington area. I don't see any real forward progress in terms of renewable energy sources being used within the construction of these new buildings. We've got a whole bunch of them, and, you know, they're really already outdated in terms of maximizing their energy use.

Secretary PEÑA. Congressman, let me do this: we'll have a conversation with GSA about how we can have a more constructive relationship as respects future construction. I think this is a very good point that you raise.

Mr. MORAN. Thank you, Mr. Secretary. Thank you, Mr. Chairman.

Mr. REGULA. Just to follow up on that, you've asked for a 57 percent increase in your Federal Energy Management Program, which goes to this issue, and it would seem to me that the agencies ought to do that. Maybe you ought to jawbone them about using energy efficiency in their construction, but should not OMB put the pressure on? I don't know that it's the role of DOE to be out there as a watchdog.

Secretary PEÑA. Mr. Chairman, I think it's both. I think we try to encourage, but the departments themselves also use part of their budget. So it's going to have to be, I think, a combination for a while.

Mr. MORAN. Could I just piggyback on that for just a moment?

Mr. REGULA. Yes.

Mr. MORAN. If you'd yield for a moment, Mr. Chairman?

Mr. REGULA. Surely, I'll yield.

Mr. MORAN. Great opportunity, the Pentagon, we're going to rehab the whole Pentagon, one of the biggest office buildings ever, and we're going to do it in stages where we move people out temporarily and then move them back in. Could we see if we could try some of our 20th century know-how before—

Secretary PEÑA. The 21st century comes? [Laughter.]

Mr. MORAN [continuing]. Yes, before the 21st century is upon us at the Pentagon? And I think that would be a wonderful place to show what can be done and should be done.

Secretary PEÑA. Let me, with your permission, invite Dr. Romm to address that. I think he's aware of some issues.

Mr. ROMM. Yes, I mean, in the specific case of the Pentagon, we launched last year a specific program called Greening of the Pentagon, in which we brought together some of the top design architects, renewable energy and energy-efficiency experts, to do a charette, to go through and look at all the opportunities for energy efficiency and renewable energy just because, as he said, there's going to be a major retrofit of the building. So I think that you will see the Pentagon become much more energy-efficient over the next several years and many state-of-the-art technologies introduced.

Mr. MORAN. Well, I'm glad I threw you that soft ball. That's great. [Laughter.]

Excuse me, Mr. Chairman. Thank you.

Mr. REGULA. Mr. Dicks?

ELECTRICITY RESTRUCTURING

Mr. DICKS. One question I forgot to ask when I had the time, and I just want to make just one comment, and that is, those of us who come from the Pacific Northwest remain very committed to the Bonneville Power Administration, and I know you hear all kinds of talk about privatization and everything else.

In our region, on a bipartisan basis, Democrats and Republicans are in favor of the government continuing to own and operate the Bonneville system. We have some very serious problems out there with salmon and the Endangered Species Act, but I'm very confident that we can work with you and with Bonneville, who we feel has played a very constructive role in our regional economy. We have some of the lowest-priced energy in the country.

But the point I wanted to get to is that we're concerned about—and I want to be careful—on deregulation. And I would make this observation: in my district we have a number of hydro-projects in the Northwest, all of which have fish and natural resource problems. And the phenomena we're seeing with deregulation is that, as the relicensing comes up and they have to go before FERC, all the Federal agencies come in and want to add tremendous additional cost to these projects, and some of which I would support in terms of salmon and everything else. But, as you well know, on the other hand, we're going toward energy deregulation, which forces us to be much more competitive. And the concern I have is that you're going to see a lot of people just turning in these licenses on hydroelectric projects in the Pacific Northwest and in the West in general, because of this conflict we have with the agency saying,

Do all these things and not worry about the cost, and, yet, while we're going to de-reg them with these more efficient gas-turbine engines—there's people around who want to provide very low-cost energy, and I think this is going to be an emerging problem. I just want to know if you've had a chance to even consider that, and maybe tell us a little bit how you feel about de-reg.

Secretary PEÑA. Congressman Dicks, I have been involved in these discussions. No. 1, the administration is in the process of circulating a proposed restructuring bill that DOE has been working on for some time, and we will work with the various departments in the government to come to closure on that as quickly as we possibly can.

In that discussion, we are fully aware of the unique status not only of Bonneville, but of some of the power marketing administrations, some of the rural cooperatives which have relationships with the Department of Agriculture in terms of Bonneville, et cetera. And so it might be—and we have not reached a final decision here, but let me throw out some options—it may be that we may want to in this restructuring effort specially treat entities like Bonneville and the power marketing authorities—

Mr. DICKS. Right.

Secretary PEÑA [continuing]. Separate from a de-regulated environment. That is at least an option, but no decision has been made about that yet, and we are still vetting our proposal throughout the administration.

But the points you've raised I think are very good ones. We're aware of the challenges that Bonneville has, and we're also aware of the cost-cutting measures that Bonneville has taken very recently to stay competitive—

Mr. DICKS. Right.

Secretary PEÑA [continuing]. To their credit, and, obviously, we have to be mindful that we don't impose unnecessary requirements to make their situation even more challenging in a more competitive environment.

Mr. DICKS. And I'm not just talking about the dams that Bonneville operates. There are all kinds of small—as you well know—hydroelectric projects, and after 60 or 70 years they come up for relicensing. I'll give you one example. In my district I have Lake Cushman, and, as you well know, you can get gas turbine electricity at about 15 mils in firm, five-year contracts in our area. The cost of this power today probably is at 11 mils, very inexpensive, and the utilities said, well, we'll go up to 24 mils, and do mitigation and other things that the agencies wanted. FERC came in at about 47 mils, or thereabouts. The agency proposal was 134 mils, which would make it completely uncompetitive. So just to give you an example of this—you know, I just think there's a lot of people in these agencies who don't realize that we're in a more competitive de-regulated environment. And what I worry about, if that occurs as all of these relicensings come up, the utilities are going to have to just turn in their license, and there's a big policy question here about who is responsible for this problem, and is there a taking? And you're going to have a lot of litigation.

So I'm just saying, in your new job, there are about 2,000 of these dams in the West that are going to have to be relicensed, and

I think this is a very serious problem, and one that I think some in the Administration would like to avoid. I don't think you're going to be able to avoid it, because you're going to have a number of these. The Administration is going to have to have a policy as it relates to it. There are very major environmental questions about it.

So I just wanted to inform you of that today and I look forward to working with you to see if we can't figure out some way to deal with it.

Thank you, Mr. Chairman.

Mr. REGULA. We have a couple more questions. Will you have a role, will DOE have a role on the deregulation of electricity, which of course is a very hot topic now?

Secretary PEÑA. Yes, Mr. Chairman, DOE is the lead agency here, and we have already developed proposed legislation for electric restructuring or de-regulation, and now we're circulating that throughout the administration to get comments from the other departments, but we are the lead agency here in dealing with this question. We hope to complete our work as quickly as possible. We know that perhaps there may be some hearings in the House fairly soon on this matter. And so we want to be players in this conversation in the Congress.

Mr. REGULA. And you're working with the Commerce Committee; specifically, Mr. Schafer, I think, has a bill in?

Secretary PEÑA. Mr. Schafer had a bill last year. I don't think he's held hearings yet this year, but I think he's proposing to have hearings, I think, next month. He's introduced legislation.

Mr. REGULA. Yes.

Mr. DICKS. Mr. Delay has a bill. There's, I think, several.

Mr. REGULA. Several. Undoubtedly, it's not going to happen this year, but it's a topic that's on everybody's radar screen.

STRATEGIC PETROLEUM RESERVE

If we don't get an increase in this committee on our allocation, we're going to have to again sell SPR oil. Now I know you did not include it in your budget request. Would you, for the record, say why this is a good or a bad idea, to sell SPR oil? And I think I know what the answer might be, but I'd like to have it in the record.

Secretary PEÑA. Well, Mr. Chairman, it's my view that we should not sell any more of the oil out of the Strategic Petroleum Reserve. The reason for that is that we now have a 67-day supply. We are required, or at least our goal was to have, a 90-day—

Mr. REGULA. It was at one time 90, was it not?

Secretary PEÑA. Ninety days, that's correct. And, secondly, given that I am committed to shape an energy-independence strategy, the role of the Strategic Petroleum Reserve will be very important in making that strategy. So our goal and our intention is not to have any more sales out of the Strategic Oil Reserve. I know that three sales occurred in the last two fiscal years. There were so many circumstances about that, but I think as a matter of policy we should try to avoid that in the future.

Mr. REGULA. I'm sure you're aware of this GAO report on energy security, but the essence of it is that we're going to be vulnerable

for many years to come, and probably the greatest challenge your Department faces is how to get the U.S. in a position to at least reduce our vulnerability to oil shock or oil disruption.

Secretary PEÑA. Absolutely, Mr. Chairman, and the strategic petroleum reserve is one part of a multi-pronged strategy to get us more security and more independence.

APPLIANCE STANDARDS

Mr. REGULA. Just one other comment, and you and I have talked about it. It's in the area of appliance standards. These standards ought to be perhaps set on a wholistic approach to the industry. In other words you give them a challenge to meet a certain reduction in energy usage in appliances, and let the various manufacturers, since most of them manufacture a range of appliances, divide how to achieve a goal across their appliance portfolio, just as we do with the auto industry, and also to work closely with EPA to make sure that the standards are consistent in the sense of, if you build a refrigerator box, that you're dealing with the CFCs at the same time you deal with the efficiency standards.

I understand you're going to review that refrigerator standard; is that correct?

Secretary PEÑA. Mr. Chairman, that's correct, the refrigerator rulemaking, and it is a rulemaking. So I have to be careful, though, what I say here. It's still being reviewed, and I'm hopeful that we will address that as soon as possible. It is now under my watch. So I will attempt to address the various points of view that a number of the parties had about the various proposals that are circulating.

Mr. REGULA. Well, thank you, Mr. Secretary. If you do this well in five days, you'll be dynamic next year. [Laughter.]

Mr. MORAN. Mr. Chairman?

Mr. REGULA. Yes?

Mr. MORAN. Can I ask one final question?

Mr. REGULA. Yes.

INDIAN TRIBES AND RENEWABLE ENERGY

Mr. MORAN. There was a Senator from Nevada who tried to develop a solar energy zone for an Indian tribe. Indians have a particular problem in that, as you know, their location is somewhat remote and their insulation is abysmal, but if we could work with the Indian tribes in teaming them up with some companies that wanted to get into renewable energy, it seems like that would be a terrific opportunity, but there's nothing in the budget. Would you look into that? It ties into what this committee is doing in having the responsibility for Indians as well.

Secretary PEÑA. I'd be happy to, Congressman Moran. I was not aware of that particular issue.

Mr. MORAN. Yes, I think that's kind of an exciting thing to explore. So thank you, and excuse me for interrupting. Thank you, Mr. Chairman.

Mr. REGULA. That's perfectly all right.

Also, Mr. Secretary, one of the members, Congresswoman Northrup, has some questions. I'm going to put them in the record

on her behalf. She's not a member of this subcommittee, but I think these are germane to the topic that we are addressing.

Mr. REGULA. So I have a number of questions that will be for the record as well as these from Congresswoman Northrup.

Mr. REGULA. If not—any other comments, questions?

[No response.]

If not, the committee is adjourned.

[The following questions and answers were submitted for the record:]

ADDITIONAL COMMITTEE QUESTIONS

Overview of the Budget Request

The Administration's budget request for the Department of Energy programs in the Interior bill continues the past emphasis on reducing fossil energy and clean coal funding in order to fund large increases in the energy conservation programs.

Question: How does the Administration justify cutting fossil energy research and energy information programs in this bill in order to fund large increases in energy conservation programs?

Answer: The Department did not cut fossil energy R&D in order to increase the energy conservation programs. An attempt was made to develop a portfolio of programs that best responded to the Departmental goals while at the same time being sensitive to fiscal constraints. The process required making some hard choices and resulted in the final budget that was proposed.

Question: The majority of electric power generation in this country, now and for the foreseeable future, is from coal-fired plants and many of these plants are still operating with 1970's technology. Why aren't the exciting new high efficiency and low emission coal technologies worthy of the same support as energy conservation programs?

Answer: The Department is supporting a vigorous program in high efficiency and low emission coal technologies. We believe the FY 1998 budget supports introduction of these technologies when demand for them picks up. Demand for the new coal technologies is low now due to the reduced need for new domestic generating capacity, and market conditions that favor increased use of natural gas and gas-fired systems.

The current Coal RD&D Program is indeed a very important part of the DOE energy portfolio, and we are assigning high priority to coal while taking into consideration our current funding constraints. The Coal RD&D Program includes both coal research and development, as well as an ongoing Clean Coal Technology Demonstration aimed at achieving the commercial introduction of these new high efficiency and low emission technologies. The R&D Program includes a portfolio of technologies that represents a reasonable, balanced investment in these promising technologies. The Clean Coal Demonstration Program is a highly leveraged Government-industry partnership (\$2 dollars of industry investment for every dollar of DOE investment) with a total investment of about \$6 billion that has received strong support.

Question: Would you agree that advanced coal technology is one of this country's best hopes for making major reductions to emissions and for improving energy efficiency? Please explain.

Answer: Improvements in power generation efficiency and end use system efficiency are both excellent ways of improving overall energy efficiency and are in fact complementary. With regard to generation efficiency improvements, DOE developed, in partnership with industry,

advanced technology that greatly extended the efficiency with which electric power is generated from coal. The efficiency of the average coal plant operating today is about 33%. The Clean Coal Technology Program is now demonstrating power plants with efficiencies in the 42-45% range. The R&D program now under way is aimed at extending those efficiencies into the 60% range by 2010, which would almost double the efficiency of current plants which has the effect of reducing CO₂ emissions by almost half.

From an emissions reduction viewpoint, as discussed in a previous answer, Advanced Coal Technology has already greatly reduced emissions from coal power plants as well as the cost of environmental compliance. If we do not continue developing these technologies, we will not be able to use coal as cleanly or cheaply as we could and should. In some cases, such as with mercury emission control, there is no technology available today that can effectively capture all the species of mercury. Research is under way to develop this capability. Technology advances should also provide the capability of cost-effectively reducing SO₂ and NO_x by over 98% and 90%, respectively.

National Energy Strategy

Question: What plan does the Department have for ensuring that the technologies developed through your research and development (R&D) programs are effective in the marketplace with respect to reducing energy consumption and improving the environment?

Answer: The Department's strategic goals for energy R&D have always focused on technologies that will increase energy efficiency and improve the environment. The Department works closely with its stakeholders and private-sector partners in the development of cost-shared energy technologies to leverage significant non-Federal investments. In addition, the design of our research programs and the processes involved from concept to development ensure that our leveraged investments produce high economic, environmental and energy-security benefits, while accelerating the energy of U.S. technologies into the global marketplace.

The delivery of any new technology developed under the Department's program activities to the marketplace is a result of a series of planned research activities designed to test and develop good ideas that would not otherwise be undertaken by business because of high individual risk, difficulty in capturing a return on the initial investment, complex cross-cutting nature of the effort, or the public nature of the benefits is inappropriate to their necessarily near-term market focus. These research stages involve constant collaboration with customers and partners and include: concept development, market and technical feasibility studies, system and component design, research plans, research, prototype construction and testing at many stages, scale-up demonstrations, and an array of deployment activities.

Collectively, these stages constitute the Department's research pathway to energy product markets and have resulted in a high success rate for technologies which serve both public goals and private interests.

Question: How do you work with the Environmental Protection Agency to see that when these technologies are proven and ready for marketing they can be sited easily without a lot of permitting hassles and delays?

Answer: The Environmental Protection Agency has an in-depth knowledge of our new technologies when they reach commercialization because of that Agency's participation in our Environmental Impact Assessment team. Each project in the Clean Coal Technology Program, for example, has an EIA team, and in some cases, EPA actually prepares the EIA for DOE. In addition, it should be noted that many of the technologies developed by DOE, such as low NO_x burners and advanced SO₂ and NO_x control systems, are environmental subsystems which are used to solve permitting problems.

Question: Do you think the Clean Air Act regulations should be amended to emphasize performance based standards which rely on improved efficiency and emissions reductions? Please explain.

Answer: In many ways, the Clean Air Act contains both authority and requirements for setting performance based requirements, and for including energy and production efficiency as considerations in setting emissions levels for categories of sources. For example, in setting national emissions standards for categories of new sources and categories of hazardous pollutant sources, which are performance-based, the Act includes "energy requirements" in its directions on the required basis for emissions standards. For hazardous pollutant sources, this includes an evaluation of the emissions levels achieved by operating sources. Where the statute provides to EPA latitude in setting motor vehicle standards, "energy impacts" may be a consideration. The degree to which energy efficiency is considered by EPA has varied, but is increasing with, for example, integration of national pollution prevention tenets into the emissions standards setting process. The Department of Energy continues to work with EPA to maximize the consideration of energy efficiency and the use of performance based requirements through many EPA program areas; from the more traditional emissions standards rules such as nitrogen oxide emissions standards under the acid rain provision to newer, innovative programs such as the Common Sense Initiative.

Where health-related requirements and goals have been clearly determined, the authority for performance based standards should legitimately be limited to those that can achieve the necessary level of health protection. For example, the flexibility afforded to States in determining the mix of controls to be implemented to achieve health-based primary ambient air quality standards encourages performance based controls, so long as the health standard is achieved.

Assault on the Environment

Question: Last June, in response to the Subcommittee's markup of the fiscal year 1997 bill, the Department of Energy issued a scathing press release accusing this Committee of assaulting the environment because of the recommended cuts to the Energy Conservation program. In particular, the press release objected to cuts to programs geared toward preventing automobile pollution. Why is pollution prevention associated with coal-fired and petroleum-based

technologies in the fossil budget any less important than automobile pollution prevention research in the conservation budget?

Answer: The Department's transportation technology programs are aimed at reducing vehicle emissions and at reducing the nation's dependence on oil—and oil imports in particular. Both of these objectives are highly important at a time when air pollution continues to affect public health and rising oil imports place the nation's economy at increased risk.

The Department does not consider pollution prevention associated with coal-fired and petroleum-based technologies in the fossil budget any less important than pollution prevention associated with petroleum-based technologies (i.e., automobiles) in the conservation budget. In formulating our FY 98 budget request, we did not directly contest the needs for support of our transportation technologies program against our fossil fuel programs. Many programs compete for funding within the Department's budget request, and our energy conservation and fossil energy programs together account for less than 10 percent of the total.

The Department's statement of opposition to Congressional cuts in our energy conservation programs was intended to highlight the importance of these programs to environmental quality. Reduction in funding for clean industrial technologies, energy efficient building technologies, new gas-fired appliances, and fuel-efficient vehicles will impede the Department's efforts to protect the environment and public health for the nation. In addition, it does not make good sense to cut efficiency programs that will provide energy savings in federal facilities, when these savings will lower government costs and reduce the federal deficit, as well as realize environmental benefits.

Question: Should the Committee recommend adding funds to keep fossil energy research projects on schedule, will you consider such adds as environmentally beneficial?

Answer: The Department believes that the fiscal year 1998 fossil energy budget request is balanced and reasonable given the current budget constraints. Although additional funding could make these fossil energy technologies available earlier, and thereby realizing the potential environmental benefits sooner, these factors were considered and balanced with other needs and priorities in the overall budget decision.

Question: The advanced turbine program seems to have some of the best promise for increase efficiency and low emissions in the near future. Why then do you propose to decrease the budget for this program?

Answer: The budget request for the Advanced Turbine Program is the result of budgetary constraints and the reduction in risk to achieving the Fossil Energy mission that results by maintaining a balanced portfolio of promising technologies. Although this budget request would extend the completion of the program by two years, the program objectives are not in jeopardy. The current deregulation of the domestic electrical power industry and its restructuring are delaying the purchase of significant additional capacity and the introduction of advances in technologies that are friendlier to the environment. Although delayed, the Advanced Turbine

Program will still have a significant impact when it is ready.

Clean Coal Technology

Question: How successful has the clean coal program been?

Answer: The Clean Coal Technology Demonstration Program, a joint effort between industry and the government is an unqualified success. The number of complex, capital intensive projects put into place by the Government/Industry Partnership (40) is unprecedented, as is the degree of cost-sharing (\$3.9 billion industry/\$2.0 billion Government). The partnership is important not only for the end objectives it is achieving but for the benefits, tangible and intangible, created by continuing association of the partners. The ten years of association have shown that, with the government serving as a risk-sharing partner, industry funding can be leveraged to improve the environment, reduce the cost of electricity, create jobs and assure technology is available that will enable coal to contribute to the nation's and the world's energy future in an environmentally clean and efficient manner. Some specific measures of success include:

Technology Development: A wide range of technologies have been developed (some of which received awards for technology innovation) that range from low NO_x burners now being used by utilities to meet the emissions control regulations set by the Environmental Protection Agency to the Integrated Gasification Combined Cycle Systems now being demonstrated that are the utility systems needed to meet the Nation's demand for electricity in the post 2010 time frame. On the basis of the CCT Program together with prior R&D:

- DOE developed, in partnership with industry, lower cost and more effective SO₂ scrubbers for coal-fired powerplants. Currently have an installed base of 77 Gigawatts (1/4 of all US capacity). Cumulative costs of building and operating these scrubbers through 1995 were reduced \$40 billion dollars through this research according to a report done by Energetics, Inc. on the benefits/costs of the U.S. DOE Clean Coal RD&D program.
- DOE developed, in partnership with industry, a new generation of low NO_x combustors and post-combustion devices. Burner sales to date exceed \$750 million, and will approach \$4 billion by 2000. Previously available technology would have cost an order of magnitude more to achieve the same NO_x reduction. Sales of post-combustion technology (like Selective Catalytic Reduction) are projected at over \$2.5 billion by 2000. As recently as ten years ago, this technology cost twice as much as today's version.
- DOE developed, in partnership with industry, advanced technology that greatly extended the efficiency with which electric power is generated from coal. The efficiency of the average coal plant operating today is about 33%. The Clean Coal Technology Program is now demonstrating power plants with efficiencies in the 42-45% range. The R&D program now under way is aimed at extending those

efficiencies into the 60% range by 2010, which would almost double the efficiency of current plants while reducing CO₂ emissions by almost half.

Private Participation: Approximately 55 investor-owned utilities, non-utility power generators, municipals and cooperatives, representing approximately 50% of the coal-fired capacity in the United States and almost 70% of the units affected by Phase I under Title IV of the Clean Air Act Amendments of 1990, are participating. Over 60 industry participants, including technology owners and equipment vendors, as well as 7 state agencies and 8 industry and academic research and development organizations also are contributing to the Program.

Recovery of Funds: A significant policy of the Program is to recover, from each commercially successful project, funds in an amount equal to the Government's actual contribution to the project. This objective is accomplished through the terms and conditions of a repayment agreement signed by the industrial participant. Although the program is far from complete, funds are already starting to be recovered -- approximately \$400,000 has been returned to the U.S. Treasury by participants of completed projects.

Question: The clean coal program has had several great successes and several disappointments. Wouldn't you agree that the successes should not be used as an excuse to say the job is done nor should the disappointments be used as an excuse to dramatically cut back on coal research?

Answer: Yes, I do agree. Development activity by its nature is characterized by periodic challenges or setbacks. Either result should not be used by itself as a sufficient reason for dramatically cutting back on research and development programs with clearly defined objectives and documented progress, especially under the circumstances of a rapidly changing marketplace.

Question: As the clean coal program comes to its logical conclusion, how will you continue to emphasize continued coal technology research and development in the fossil energy research program?

Answer: The Clean Coal Technology (CCT) Demonstration Program is but one activity in a broadly based Research and Development Program in coal technology. It has served as an essential step in the continued development to commercialization of numerous clean coal concepts that previously, before the start of the CCT program, had grown in technical maturity as R&D projects either in the Fossil Energy Program or those of the industrial participants. These demonstrations are now establishing the industrial base upon which further technology advances will be made. For example, DOE developed, in partnership with industry, advanced technology that greatly extended the efficiency with which electric power is generated from coal. The efficiency of the average coal plant operating today is about 33%. The Clean Coal Technology Program is now demonstrating power plants with efficiencies in the 42-45% range. The R&D program now under way is aimed at extending those efficiencies into the 60% range by 2010, which would almost double the efficiency of current plants which has the effect of reducing CO₂ emissions by almost half, and cutting fuel costs in half.

Partnership for a New Generation of Vehicles

Question: The Partnership for a New Generation of Vehicles program received about \$100 million in fiscal year 1996 and \$106 million in fiscal year 1997 in the Interior bill. How much are the "big 3" automakers contributing to the program?

Answer: The Partnership for a New Generation of Vehicles (PNGV) work, overall, is cost shared with industry (the Big Three automakers and their suppliers) and the split is 50-50. Most of the industry contracts under PNGV are 50 percent cost-shared by industry. When the work is performed by the "Big Three" automakers, they provide the cost-sharing. When the work is performed by the suppliers, they typically provide the cost-sharing. The "Big Three" are also expending their own funds on current concept cars and on transferring near-term technologies to production cars. In practice, the Department of Energy has covered a greater share of costs for those technologies considered long-range or higher risk (PNGV goal 3), while industry has paid a higher fraction of the development costs for technologies closer to commercialization (PNGV goals 1 and 2). In addition to the direct cost sharing, the auto industry is committing internal funds for vehicle development and other related activities. When all expenditures are taken into account, the automakers are providing substantially more funds than the Department of Energy for work connected with our joint technology programs. Their resources are estimated to be between \$300 and \$400 million annually.

Question: What do you have to show for the investment we've made thus far?

Answer: Many technical accomplishments have been made as a result of pursuing the three goals of PNGV. The following are some sample highlights.

- * The P-2000--a lightweight, mid-size prototype vehicle being developed by Ford will utilize aluminum and other low density materials throughout the vehicle to cut weight and improve automotive fuel economy.
- * Fuel-flexible Fuel Processor for Automotive Fuel Cell--Chrysler has cited this breakthrough as moving fuel cells 10 years closer to powering the family car.
- * Composite Car Structure Crash Test--The front-end section is built from glass fiber-reinforced composites and designed for mass-production manufacturing.
- * Vacuum-Insulated Catalytic Converter--A new catalyst for automobile catalytic converters was developed that substantially reduces emissions of nitrogen oxides. Use of the new catalyst will allow engines to operate with a leaner burn, thus providing improvements in fuel economy.
- * Intelligent Induction Hardening--The new process, which is now producing components for Saturn cars, provides parts with greater quality control and uniformity.
- * Compression-Forming of Cast Aluminum--This breakthrough technology produces cast

aluminum parts with the properties of forged aluminum, but at a fraction of the cost. General Motors plans to use 400,000 of the new parts in its 1998 vehicles.

* Revolutionary New Airbag Design Prototype--Packed volume and weight is about 60% less than conventional airbags, but inflates to the same size. It is expected to begin appearing in European autos in 1997 and in American cars in 1998.

The U.S. Council for Automotive Research (USCAR) issued a publication entitled "*PNGV Technical Accomplishments*" in 1996 which lists 61 accomplishments that they considered significant (index from USCAR Web site information -- www.uscar.com. -- is attached).



[USCAR Home] [About USCAR] [PNGV] [Future Car] [Tech in Action] [Media Center]

TECHNICAL ACCOMPLISHMENTS INDEX

Introduction and Background on PNGV

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Dodge Intrepid ESX

GM EV1 Electric Vehicle

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Chrysler Hybrid Propulsion Systems Development Program

Ford Motor Company Hybrid Propulsion Systems Development Program

General Motors Hybrid Propulsion Systems Development Program

Internal Combustion Engine Technology

Design of Small Compression-Ignition, Direct-Injection (CIDI) Engines

"In-Cylinder" Engine Analysis

Reduction of Nitrogen Oxide Emission for Lean Burn Engine Technology

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30 kW Liquid Methanol-fueled Proton Exchange Membrane (PEM) Fuel Cell Power System

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Onboard Hydrogen Storage Using Lightweight Pressure Vessels

Quick-Start Catalytic Methanol Partial-Oxidation Refomer for Automotive Fuel Cell

Dramatic Lowering of Precious Metal Catalyst Loading in High Performance Proton Exchange Membrane (PEM)

Fuel Cells

Increasing Fuel Cell Tolerance to Fuel Impurities

Development of Effective Fuel Cell Computer Codes and Diagnostics

Advanced Large-Scale PEM Fuel Cell System Test

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Intelligent Welding Of Thin Metal Sections
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Technologies Enabling Agile Manufacturing (TEAM)
Springback Predictability Project (SPP)

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PNGV Simulation Tool
Advanced Modeling Tools for Tire Engineering/Process Analysis
Baseline Systems Analysis Vehicle Simulation Benchmarking
Exponential Improvement of Graphics, Engineering and Networking using Virtual Reality (EIGEN/VR)
Application of High-Performance Computing to Automotive Design and Manufacturing

Question: When do you expect to realize commercialization of these new generation vehicles?

Answer: DOE efforts in PNGV focus primarily on the long-range, high-risk development of enabling technologies for a new generation of vehicles with triple the fuel economy of today's mid-size cars. While decisions on commercialization rest with our industry partners, they have committed to apply those technologies that would significantly increase vehicle fuel efficiency as they become commercially viable. In fact, some PNGV technologies have already been commercialized. An excellent example is intelligent induction hardening of suspension parts, currently employed to make driveshafts for Saturn vehicles. The part is lighter, stronger, and requires less energy to produce than those made using earlier hardening processes. The PNGV's stated goal is to achieve a production prototype of a vehicle with up to three times the fuel efficiency by the year 2004.

Question: It seems that the automakers are announcing their own breakthroughs in alternatively-fueled vehicles. If they are pursuing these alternatives on their own, why do we need PNGV?

Answer: The PNGV research program stresses flexibility of propulsion systems to utilize alternative fuel, as well as, gasoline and petroleum-based diesel fuel, that might be available at the time the new generation of vehicles is commercialized. R&D involving alternative fuels is a component of the PNGV effort, due to potential benefits from both energy security and environmental vantage points. The alternative-fuel vehicles that you see being introduced today, however, are not the result of PNGV.

Recent announcements by Chrysler and Ford refer to efforts cost shared with the Department of Energy as part of PNGV. At the North American Auto Show, on January 6, 1997, Chrysler first announced its concept for a fuel cell vehicle. The Chrysler fuel cell concept vehicle relies on fuel-flexible fuel processing technology developed with DOE support and in cooperation with the Partnership for a New Generation of Vehicles (PNGV). By utilizing on-board fuel processing of gasoline, a major barrier to the introduction of fuel cell vehicles is removed: the lack of a hydrogen fuel infrastructure. In 1992, DOE initiated a cost-shared fuel-flexible fuel processor development program with A.D. Little. This program developed the fuel-flexible fuel processing technology that has been identified by Chrysler for integration into its concept vehicle. The technology is capable of processing a variety of common fuels, including methanol, ethanol, natural gas and gasoline. The concept of fuel-flexibility not only makes use of the existing gasoline fuel infrastructure, but because it can process a variety of fuels, also promises to speed transition to domestic alternative and renewable fuels. Significant challenges remain in the development of this technology, including improved start-up and transient operation.

On March 17, Ford announced the P-2000, a lightweight, mid-size prototype vehicle being developed under the DOE Hybrid Vehicle Program. The P-2000 will utilize aluminum and other low density materials throughout the vehicle to achieve a target weight of 2000 pounds with a conventional propulsion system. Hybridized versions will weigh somewhat more, depending on the propulsion system configuration and specific components used. Modeling predictions indicate

that hybrid versions will approach 70 mpg. The prototype hybrid propulsion system will utilize an advanced direct injected diesel engine, and high power lead acid batteries in a parallel configuration. Developed with support from the DOE hybrid vehicle contract with Ford, the P-2000 is a prototype of the kind of lightweight, advanced vehicle that we believe can lead to significant improvements in automotive fuel economy. The reductions in vehicle mass, tire rolling resistance, and aerodynamic drag make this an ideal platform for evaluating hybrid and other advanced power train technologies. Ford and DOE shared the costs of developing the vehicle.

Thus, automakers' announcements of new vehicle advances, and vehicles which can use alternative fuels, are directly linked to PNGV and other government programs.

Question: The budget request for PNGV in fiscal year 1998 is \$128 million in the Interior bill. How would those funds be used?

Answer: The Department of Energy's fiscal year 1998 PNGV request of \$128, within the Interior bill, is supported by the Office of Energy Efficiency and Renewable Energy (EE). These funds sustain an array of technologies. The following table displays how these funds would be used.

Energy Efficiency and Renewable Energy - PNGV
(dollars in thousands)

<u>Program</u>	<u>FY 1998 Cong. Request</u>
Office of Transportation Tech	
Automotive Alternative Fuels	\$5,000
Systems Optimization	4,000
Student Competitions	1,000
Vehicle Systems R&D	67,700
Hybrid Propulsion Systems	45,000
Heat Engine R&D	3,200
High Power Energy Storage	15,000
Adv. Power Electronics	4,500
Fuel Cell R&D	29,560
Systems Development	6,000
Component R&D	10,000
Reformer & Storage R&D	13,560
Adv. Combustion Engine R&D	7,500
Transportation Materials Tech	
Automotive Materials Tech	17,500
Propulsion System Materials	4,250
Lightweight Vehicle Materials	13,250
Office of Industrial Technologies	
Materials & Metals Processing	1,000
Metals Initiative	<u>1,000</u>
Total EERE PNGV	128,260

Question: Is this increase your highest priority? Please explain.

Answer: The increase in the budget request for PNGV is one of the Department's highest priorities. Since transportation accounts for two thirds of our petroleum consumption, it is a vital element of a complete national energy security strategy. PNGV is an unprecedented initiative designed to strengthen the competitiveness of the U.S. automotive industry, and to significantly decrease the use of energy. Specifically, EE's FY 1998 Congressional Budget Request for PNGV is an increase of approximately 23% over the FY 1997 appropriation. This increase supports the continued development of the major technologies identified by government-industry teams as necessary to achieve the PNGV goals. Furthermore, this increase is necessary to maintain schedules and to reduce risks in achieving the PNGV goals within the time frame established by the partners.

Question: It is likely that our 602(b) allocation will require that any increase above the 1997 level will have to be offset by decreases elsewhere in the program. What would you suggest we decrease below the 1997 level to pay for the PNGV increase?

Answer: At this time, we do not have a specific line-item to offer as a potential offset. If this becomes necessary at a later point in time, any decision to decrease DOE activities to offset an increase in another program would be the subject of review and discussion between various parties. These parties include internal DOE participants such as the affected program offices, and the Chief Financial Officer, as well as external stakeholders such as DOE private sector partners and customers.

Question: If funding for the PNGV program is held to the fiscal year 1997 level, how would you adjust the budget request?

Answer: If funding for the PNGV program is held to the fiscal year 1997 level, the impact in terms of delayed milestones achievement could be severe. The Department of Energy's Interior appropriations is the primary Federal source of targeted funding for the PNGV initiative. This initiative is important to the nation in order to substantially reduce oil consumption, to reduce environmentally damaging emissions from transportation, and to support a strong domestic economy by assuring internationally competitive energy and automotive manufacturing industries.

Holding funding for EE's PNGV program at the FY 1997 level will significantly lower the probability of attaining the goal of a production prototype, 80 mile per gallon, 5 passenger car by 2004. Reduced funding will also stretch out the time needed for complete success of the program. In general, extending the development time usually increases the total cost of a program and delays the program benefits. If our FY 1998 PNGV budget is held to the FY 1997 funding level, we will work with our industry partners to reassess the priorities within the overall PNGV program.

Question: If the PNGV program is funded at only 90% of the fiscal year 1997 level, what changes would you make to the budget to refocus the program to fit within that funding level?

Answer: Funding the PNGV program at only 90% of the fiscal year 1997 level would decrease the probability of achieving the program's objectives. Specific impacts include: (1) possible premature terminations of promising work in progress with the auto industry; (2) likelihood that the intermediate milestone of a production feasible propulsion system, with twice current fuel economy, would not be met by the year 2000; and (3) increased risk that the ultimate PNGV goal of a production prototype with three times the fuel economy by the year 2004 would not be met. Such a funding reduction would stretch out the time needed for complete success of the PNGV program. In general, extending the development time usually increases the total cost of a program.

The Partnership for a New Generation of Vehicles program has made much progress to date. Reduced funding could easily slow both momentum and commitment. In order to keep the PNGV program viable under this funding reduction scenario, some program adjustments would have to be made, including project terminations in some areas. We would work with our industry partners to reassess the priorities within the program.

Low Emissions Boilers

Question: You have \$5.5 million in your budget for low emissions boiler systems in the fossil energy research and development account. I understand that there are three very different and promising approaches under development under the 3 different LEBS contracts. How will you decide which of these 3 will be funded with the \$5.5 million?

Answer: The process for selecting a developer to continue Phase IV of the LEBS will be to form a Federal team of experts who will review and evaluate the Phase II and Phase III results as submitted from each of the three contractors. Selection will be based on an evaluation of the submissions and a ranking against a set of technical and other criteria.

Question: Why do you need to limit the LEBS program to \$5.5 million and a single contract?

Answer: The down selection to a single contractor for Phase IV is in keeping with the original program concept. In addition, the down selection reflects a need to meet current funding constraints, while supporting other promising technologies to maintain a balanced energy portfolio.

Question: Wouldn't it make sense to explore at least two of the three LEBS technologies? Please explain.

Answer: Although exploring multiple technologies reduces the risk of failure in the development process, it has always been the intent of the Department to down select to one technology in the final phase of development.

Weatherization Assistance Program

Question: The Weatherization Assistance Program is funded through the Interior bill. There is also a portion of Low Income Home Energy Assistance Program funds, through the Department of Health and Human Services, which are used for weatherization. How much funding does the weatherization program receive from LIHEAP?

Answer: The DOE Weatherization Assistance Program has long served as the core program for delivering energy conservation services to low-income Americans. The DOE Weatherization Assistance Program has national impact and serves national interests by creating the technological and programmatic foundation for the individual State programs. The benefits of weatherization contribute to achieving national energy and social goals including: cleaner air through reducing emissions of the criteria air pollutants; reduced consumption of imported fuels through reducing residential consumption; reduced demand on other social programs such as fuel assistance, housing, and health care; and implementation of innovative energy efficiency technologies and transfer of this technology into the private marketplace. Over the years, State and local agencies have established a professional delivery system of providing quality energy conservation materials and installation in low-income homes using sophisticated state-of-the-art energy auditing techniques.

Low-income households have an energy payment burden four times that of other households (14 percent of income versus 3.5 percent). Weatherization successfully addresses this inequity. The program's effectiveness is enhanced through the flexibility of core DOE weatherization funding, which enables States and local agencies to leverage additional funding from low-income housing programs, utilities, and, in the case of rental unit weatherization, from property owners.

The success of the DOE Weatherization Assistance program has led the nation's Governors to supplement the weatherization program by designating up to 15 percent of their annual LIHEAP block grant funds, which could amount to as much as \$135 million in the current year.

Question: The weatherization program continues to be one of the Department's highest priorities. Why does weatherizing the existing housing stock receive a higher priority than energy research and development that will, over the long term, permanently reduce our dependence on oil imports?

Answer: The President's budget provides sufficient resources to fund both of these important programs. Research and development programs have brought to the marketplace many new technological advances in energy auditing techniques as well as state-of-the-art products and applications which greatly improve the long term energy savings in residential buildings. The weatherization program serves as a vehicle to bring these technological advances in energy research to the marketplace for millions of low-income Americans who could not otherwise afford to make these energy saving investments in their homes. These new technologies and products have helped to increase the measured energy savings of the weatherization program over the past seven years from 18 percent in 1989 to 32.5 percent in 1996. The program now operates on a favorable benefit-cost ratio of 2.4, as documented in a report State-Level Evaluations of the

Weatherization Program in 1990-1996: A Meta-Evaluation that Estimates National Savings, soon to be published by Oak Ridge National Laboratory (see attachment). The Weatherization Assistance Program provides cost-effective energy efficiency services to constituencies that cannot afford investments in weatherization and who, without the program, would not benefit directly from government and industry energy efficiency technologies.

Question: You've asked for a \$33 million increase in funding for the weatherization program (\$121 million in '97; \$154 million requested for '98). If the weatherization program increase is a high priority, which of your other programs do you suggest we reduce below the fiscal year 1997 level in order to pay for this increase?

Answer: The President's budget strikes a balanced approach and provides adequate resources for all energy programs. The \$33 million increase in funding requested for FY 1998 will help restore some of the large funding cuts the program has experienced over the past two years, while at the same time rebuilding the operational capacity of the program. The Administration request of \$154.1 million for FY 1998 still represents nearly 30 percent less than the FY 1995 level of \$214.9 million.

Weatherization Program - Calculation of National Cost Effectiveness

Summary Comparison of Updated Cost-Effectiveness Data for 1996 in New Report by Oak Ridge National Laboratory, with Cost-Effectiveness Findings based on 1989 Data, as reported by Oak Ridge National Laboratory in 1993.

Installation Perspective -- Gas Heated Dwellings (1989)

\$1,015	National Cost Averaged
\$1,605	National Energy Savings Benefits Averaged
1.58**	Resulting Benefit/Cost Ratio

Installation Perspective -Electrically Heated Dwellings (1989)

\$1,025	Average Expenditures
\$1,728	Energy Savings Benefits
1.69	Resulting Benefit/Cost Ratio

Installation Perspective -Fuel Oil (Primarily in Northeast) (1989)

\$1,192	Average Installation Costs
\$2,694	Energy Savings Benefits
2.26**	Resulting Benefit/Cost Ratio

Installation Perspective - All Fuel Types (1989)

1.61	Resulting Benefit/Cost Ratio

Installation Perspective -- Gas Heated Dwellings (1996)*

\$1,200	National Cost Averaged
\$2,876.7	National Energy Savings Benefits Averaged
2.4**	Resulting Benefit/Cost Ratio

* Only gas-heated dwellings were studied by the 1996 study.

** The cost/benefit ratio is arrived at by dividing energy savings by energy cost.

Federal Energy Management Program

Question: You've asked for a 57 percent increase in the Federal Energy Management program (\$20 million in '97; \$31 million requested for '98). The rationale you give is that other Federal agencies are not funding energy efficiency improvement in their buildings. Why should DOE pick up the slack for the other agencies?

Answer: The 57 percent, or \$11.3 million increase, will leverage private sector financing across all Federal agencies. This is consistent with the FEMP mission of assisting agencies with identifying alternative financing mechanisms for Federal energy efficiency and renewable energy technology investments. This increase is insignificant compared to the investment it will leverage through Energy Savings Performance Contracts (ESPC) and the savings that will accrue to all agencies. The rapid increase in ESPC efforts is essential to capture financing while Federal facility expertise remains at agencies to put financing projects in place. Without this increase, agencies will not see the rapid inflow of private financing and will continue to lose resources to implement energy efficiency cost recovery.

Question: Why can't you work with the Office of Management and Budget to ensure that energy efficiency funding is a mandatory requirement in each agency's annual budget?

Answer: All budget requests are reviewed by the Office of Management and Budget and decisions made by OMB based on agency priorities and recent Congressional action. Even though energy efficiency has the support of energy managers throughout the Federal sector, budget request decisions are made within each Department prior to submitting budgets to OMB. Decisions to fund energy efficiency become more difficult since it reduces the money available for other agency mission priorities.

Sale of Elk Hills

Question: What is the status of the sale of the Naval Petroleum Reserve at Elk Hills in California?

Answer: The Department is on schedule to complete the sale of Elk Hills by the February 1998 date specified in the National Defense Authorization Act for Fiscal Year 1996. All of the intermediate milestones established in the legislation are on schedule. The investment banking firm CS First Boston was hired in June 1996 to administer the sale process. The Department is in the process of finalizing the equity interests between Chevron and the United States in each of the known productive zones of the field. In March 1997, the Department hired five independent experts to separately determine the value of the government's interest in Elk Hills. The evaluations to be prepared by these experts are scheduled to be completed by September 1997. A reserve report is being prepared by Ryder Scott and is scheduled for completion in April 1997. The Department is scheduled to determine the highest offer(s) by the end of calendar year 1997, notify Congress of the sale by January 1998, and complete the sale by the February 1998 statutory deadline.

Question: What are you doing to ensure that the taxpayer gets full value for this valuable asset when it is sold?

Answer: The National Defense Authorization Act for Fiscal Year 1996 establishes a number of safeguards which we believe will ensure that the taxpayer gets full value for Elk Hills when it is sold. The Act requires the Department to hire five independent experts in the valuation of oil and gas fields to conduct separate assessments, in a manner consistent with commercial practices, of the value of the interest of the United States in Elk Hills. The results of the five independent assessments will be used to set the minimum acceptable sale price for Elk Hills. The minimum acceptable sale price may not be set below the higher of the average of the five assessments and the average of three assessments after excluding the high and low assessments. In performing their independent assessments, the five experts must consider the net present value of the anticipated revenue stream that the Department and the Office of Management and Budget jointly determine the Treasury would receive from the reserve if it were not sold, adjusted for any anticipated increases in tax revenues that would result if the reserve were sold. Additionally, the Act contains a provision under which the Secretary may suspend the sale, with appropriate notification to Congress, if the Secretary and the OMB Director determine that the sale will not result in receipt of full value or another course of action is in the best interest of the United States. If this provision is invoked, the Secretary of Energy may not complete the sale unless the sale is authorized by a subsequent Act of Congress.

Question: If the sale does not go through as planned, do you have enough money in this budget request to ensure that you can operate the field in such a way as to ensure the resource is not devalued? Please explain.

Answer: The FY 1998 budget request for Elk Hills provides \$99.5 million for operation of the field, and assumes that the field will be sold in February 1998. Based on estimated cost requirements, we project that this level of funding will allow the field to be operated through mid-May 1998, or seven and one-half months of FY 1998. Included in the FY 1998 request is funding for operations, maintenance, environmental and safety compliance, close-out activities, and about one-half year of remedial well work. The FY 1998 request does not include sufficient funding to operate Elk Hills for the entire fiscal year, but the Department should have sufficient notice in case the proposed sale does not go forward to request additional funds for operations from Congress.

Question: Will you ensure the Committee that the Department will not consummate this sale unless it can be clearly demonstrated that it is a good deal for the American people - not just in the short term but considering future revenues that would have accrued to the government from continued Federal operation?

Answer: Yes. In compliance with the National Defense Authorization Act for Fiscal Year 1996, the Department has hired five independent experts in the valuation of oil and gas fields to conduct separate and independent assessments of the value of the interest of the United States in Elk Hills. In addition the Department, in conjunction with the Office of Management and Budget, will determine the net present value of the anticipated revenue stream that the Treasury would

receive if the reserve were not sold. The government's net present value calculation will be adjusted for any anticipated increases in tax revenues that would result if Elk Hills were sold. The government's net present value calculation will be considered by the five independent assessors in developing their five separate assessments. The minimum acceptable sale price may not be set below the higher of the average of the five independent assessments and the average of three of these assessments after excluding the high and low assessments. This process effectively ensures that, in setting the minimum acceptable sale price for Elk Hills, the Department will be able to consider six separate assessments of the value of the United States interest under continued Federal operation. The statute also provides an additional measure in the suspension of the sale provision described above.

EPA Emissions Regulations

Question: What is the Department of Energy's position on the proposed Environmental Protection Agency standards dealing with particulate emissions?

Answer: The Department of Energy has not taken a position on EPA's proposed new standards for ambient particulate matter levels.

Question: How do you work with EPA as they develop these regulations?

Answer: The process of reviewing existing ambient standards, and the process leading to a decision to revise ambient air quality standard, are prescribed by the Clean Air Act, with administrative refinements instituted over time. The Department of Energy involvement in the development of the proposed particulate matter standards consist of participation with other agencies in the interagency review of the proposal and Regulatory Impact Analysis, led by the Office of Management and Budget, and some technical comments offered by our Fossil Energy program office during the earlier public review period on the Criteria Document.

Our involvement in developing the implementing regulations which are necessary to direct State and regional efforts to achieve the standards is already substantial, and will continue throughout the next two years of phased regulatory development. Unlike the health standards themselves, the design of implementing programs has considerable latitude to include cost-effective and innovative control strategy elements. An example of our involvement is our membership on the Subcommittee on Ozone, Particulate Matter, and Regional Haze Implementation Programs and its many subpanels providing advice to EPA on various issues in implementing these standards as well as possible revised ozone standards and a new regional haze program.

Question: What does your research show with respect to having available and affordable technology for reaching the standards in these new EPA regulations?

Answer: EPA has estimated that states and communities would be required to reach the new particulate matter standards, at the earliest, in mid-2004, or 5 years after non attainment designation. While control strategy regulations for achieving any new standards will not be

promulgated for several years, many of the new non attainment areas will reach attainment by adopting technologies and practices presently used by current non attainment areas to address their air quality problems. Examples of relatively new technologies (developed through federal and industry research efforts) that are available now to reduce secondary particulate matter formation include cleaner fuels, selective catalytic reduction and flue gas desulphurization. The Department of Energy has also been engaged in a number of research and development efforts which should reduce the costs of complying with new standards in the future. Examples in the Office of Fossil Energy include the advanced turbine program for coal and gas and advanced burner/smart combustion systems. Examples in the Office of Energy Efficiency and Renewable Energy include programs supporting energy efficiency and renewable energy technologies in industry, buildings, transportation, and the federal government.

Question: It seems to me that, if the Administration is contemplating stricter regulations on particulate emissions, you need to be increasing fossil energy research and development funding to ensure we have the technology to meet the standards. We shouldn't put new standards in place until we have a reasonable expectation that the technology to meet those standards will be available and affordable in the marketplace. Would you comment on that observation?

Answer: Under Section 109 of the Clean Air Act, the EPA Administrator is charged to set primary standards for criteria pollutants, including particulate matter, at levels that protect public health "allowing an adequate margin of safety" as well as secondary standards which "protect the public welfare from any known or anticipated adverse effects." The law does not require that attainment of the standards be feasible or affordable at the time the standards are set. However, the availability and cost-effectiveness of proposed technologies and practices are considered during the subsequent process of establishing regulations for attainment of new standards. Concepts of availability and cost-effectiveness are recognized in the different technology programs subsequently required for state implementation programs (e.g., Best Available Control Technologies (BACT), Lowest Achievable Emission Rate (LAER), and Reasonably Available Control Technology (RACT) for existing sources, and New Source Performance Standards (NSPS)) and in objectives of "reasonable progress" toward improved visibility in Class I areas. A broad range of options is available to meet standards, including cleaner burning technologies for fossil fuels and use of renewables and more efficient technologies.

DOE's Fossil Energy Research and Development Program has made important contributions to cleaner-burning, more fuel-efficient combustion units with significantly lower sulfur dioxide, nitrogen oxide, and particulate emissions. Current technologies for scrubbing sulfur dioxide and eliminating nitrogen oxide through selective catalytic reduction are both more effective than technologies available only a few years ago, and about one-half the cost of those earlier technologies. The current focus of fossil energy R&D is on developing and demonstrating advanced power facilities with ultra-low nitrogen oxide emissions and increased fuel efficiency, which will mean greater production of power per unit of fuel consumed. In light of the recently proposed regulations, as well as EPA's planned State Implementation Plan call for ozone and expected new rules to address Regional Haze, DOE's Office of Fossil Energy believes there is a need for additional research to focus on more cost-effective retrofitable technologies to address sulfur dioxide and especially nitrogen dioxide from existing combustion processes, like coal-fired

powerplants.

Strategic Petroleum Reserve

Question: Do we need to maintain the Strategic Petroleum Reserve? If so, why?

Answer: This and previous Administrations in cooperation with Congress have determined that it is in the national interest not to artificially increase the cost of petroleum products to the American public. Since the 1973-4 oil embargo by the Arab Organization of Petroleum Exporting Countries, the country has recognized that a high and increasing level of dependence on imports of petroleum poses risks to our economy and constraints on our international diplomacy. In 1975, the country determined to insure itself against petroleum supply disruptions and major price spikes due to instability of oil supplies by the creation of the Strategic Petroleum Reserve and membership in the International Energy Agency.

The United States imports over 8 million barrels of petroleum per day, about 50 percent of our total demand, and all projections are for higher consumption satisfied by more imports. Over time, more and more of the world's available petroleum exports will come from regions of the world which are unstable for political, military or religious reasons. The member countries of the International Energy Agency will work together to prevent any disruption of available imports from disrupting the world's economy, primarily by releasing strategic petroleum stocks. That action will allow time for diplomacy or military action to resolve the supply emergency.

If the United States did not maintain the Strategic Petroleum Reserve, it would have no credible plan for responding to a supply emergency and it would be cut off from the primary forum for international coordination, since membership in the International Energy Agency requires the maintenance of strategic stocks. In addition, we would, in all likelihood, precipitate the liquidation of strategic stocks by other countries, thereby leaving the entire oil importing world vulnerable to pressures from oil exporting countries.

Question: What is the average price per barrel we paid for SPR oil? At what price have you been selling it to pay for SPR operations?

Answer: The average price paid for all SPR oil acquisitions is \$27.14. If the costs of all SPR facilities, maintenance, operations, and management are included through fiscal year 1996, the oil in the Reserve has cost \$35.58 per barrel.

During fiscal year 1996 and 1997 there were three oil sales from the Strategic Petroleum Reserve, two related to the financing of the Strategic Petroleum Reserve, and one unrelated to the Reserve's budget.

The first sale in FY 1996, raised \$97 million to fund decommissioning of the Weeks Island SPR site, at an average price of \$18.92 per barrel.

The second sale in FY 1996, to finance high priority education programs, raised \$228 million at an average price of \$17.77 per barrel.

The third sale in FY 1997, raised \$220 million to fund all SPR activities for the fiscal year at an average price of \$21.62 per barrel.

The average sale price for all three sales was \$18.92 per barrel.

Question: If we continue to sell SPR oil, should we shut down one of the SPR sites? If not, why not? If so, which site would you suggest closing and why?

Answer: The Department of Energy opposes shutting down any further SPR sites.

The Strategic Petroleum Reserve is composed of five sites organized into three complexes, each connected to pipelines serving different regions of the country. The Weeks Island, Louisiana site is in the process of being decommissioned due to geologic instability. The Reserve's capacity will then be reduced from its target size of 750 million barrels to 680 million barrels at four sites. Even if the inventory of the Reserve were reduced below its 563 million barrel current level, the SPR should maintain its configuration with the four remaining sites. Closure of the smallest site, Bayou Choctaw would completely eliminate direct access to the Capline pipeline which services refineries throughout the Midwest. Closure would also mean the loss of 500,000 barrels per day of drawdown capability. Most analysts believe that the ability to draw down and distribute oil quickly adds as much strategic value to the Reserve as additional inventory. Closure of any of the other much larger sites is infeasible at the current inventory level.

There are two additional strategic reasons for not closing any more sites. First, the existence of the extra storage capacity will allow the United States to quickly start acquiring oil if circumstances dictate that the inventory of the Reserve should be increased. If we sell or decommission any of the existing sites, creating a new site would be prohibitively expensive and would take many years. Second, part of the innate security of the Reserve is that the sites are widely separated. If we reduced the Reserve to three sites, we would be much more vulnerable to being crippled by terrorists or hostile nations.

U.S. Vulnerability to Oil Shocks

Just last December the General Accounting Office released a report on U.S. vulnerability to oil supply disruptions. GAO concluded that vulnerability is unlikely to decline substantially over the next 20 years. Although the experts differed on how best to reduce vulnerability in the long-term, there was general agreement that early use of SPR oil during an oil supply disruption is the most effective tool available to mitigate adverse economic effects.

Question: I assume you agree with GAO report. What then is the appropriate course to take with respect to maintaining a Strategic Petroleum Reserve?

Answer: The Department agrees with the General Accounting Office position that early drawdown of the Reserve during a supply emergency is the proper policy, and has advocated that policy to the other member countries of the International Energy Agency. In terms of maintaining the Reserve, the Department of Energy recommends that the four remaining Strategic Petroleum Reserve sites be maintained with the capability to immediately respond to a finding by the President that an energy emergency requires a drawdown of the Strategic Petroleum Reserve. Beyond that, the Department is beginning a complete review of the assumptions and basic composition of the Reserve, with the intent of issuing an Administration Statement of Policy on the Strategic Petroleum Reserve in September 1997.

Question: How long should we maintain the SPR?

Answer: Physically, the Reserve has been designed and rebuilt to last until 2025. However, the Department is initiating a complete review of all major issues associated with the Strategic Petroleum Review, including the overarching issue of whether we should have a Strategic Petroleum Reserve. The public will be given a chance to comment on the issues by responding to a Federal Register Notice that the Department intends to issue by the end of April. The final product of the review will be an Administration Statement of Policy on the Strategic Petroleum Reserve, which is scheduled for issuance in September 1997.

Energy Information Administration

Question: Your prepared statement says that the budget expands the Energy Information Administration's core activities. How does it do that when the budget is declining?

Answer: EIA's core activities are not expanding, but shifts are being made to reflect changes in energy markets and customer requirements. EIA is expanding its services into areas of increased customer interest and contracting in other areas. Resources are being put into making EIA information more accessible and timely through increased electronic dissemination of products, which has expanded our customer base. When EIA's electronic dissemination program was first established, accessions to EIA information averaged less than 100 different users per day. Recently, accessions surpassed 2,200 different users per day downloading 280 megabytes of information. Uses of EIA information by the media have increased by 38% between FY 1995 and 1996. In 1996, telephone inquiries to the National Energy Information Center rose by 4%, while e-mail inquiries rose by 40%. Resources are also being put into analysis of the restructuring of the electric power industry and revisions required in data collection programs to reflect these changes.

Areas of resource expansion are being more than offset by reductions in other areas to accommodate the overall budget decline in fiscal year 1998. Broad-based project reductions and eliminations have been required throughout all programs. This includes the elimination and/or consolidation of publications, reductions in sample size for a number of surveys, and the collection of some information on a less frequent basis; changes in the frequency and sample sizes of the energy consumption surveys is an example. Contractor staff in the EIA computer center has been reduced with commensurate cut-backs in hours of operation and services; the mainframe

computer facility is targeted for elimination by the end of fiscal year 1998. Contractor funds for the maintenance of current data collection and processing systems and required enhancements to keep these systems current have been drastically reduced, consistent with on-going efforts to reengineer data collection, processing, and dissemination activities. Savings are also being achieved through the streamlining of administrative processes, reduction in overhead expenses through staff reductions, and the increase in electronic dissemination efforts which have permitted reductions in paper publication costs.

Office of Hearings and Appeals

Question: When is the Office of Hearings and Appeals going to complete its case workload from the Emergency Petroleum Allocation Act of 1973?

Answer: If OHA receives its requested funding, it expects to substantially complete processing all refund applications by the end of fiscal year 1999. There may, however, be a few cases which cannot be completed by that time because they involve unusually complex issues or are involved in litigation. In addition, if additional refund moneys are available, OHA will make a final supplemental refund payment to approved crude oil applicants. Those payments would extend into fiscal year 2001.

Question: When can we expect to stop funding this function?

Answer: OHA projects Interior funding requirements related to refund proceedings at least through fiscal year 2001, although the amount will decline very substantially. In addition, OHA will continue to process requests for exceptions to Energy Information Administration reporting requirements, and will require funding for that function indefinitely.

ADDITIONAL COMMITTEE QUESTIONS

Government Performance and Results Act (GPRA)

Question: GPRA, known as the Results Act, requires each executive agency to issue, no later than September 30, 1997, a strategic plan covering at least five years. In addition to a mission statement grounded in legislative requirements, the plans are to contain general goals and objectives that are expected to be outcome or results oriented (such as to improve literacy) as opposed to output or activity oriented (such as to increase the number of education grants issued).

- What progress is the agency making in developing its strategic plan, including defining its mission and establishing appropriate goals?
- Has the agency identified conflicting goals for any of its program efforts? If so, what are the performance consequences of these conflicting goals and what actions -- including seeking legislative changes -- is the agency taking to address these conflicts?

Answer: The Department of Energy is committed to full and effective implementation of the Results Act. In fact, the implementation of the Results Act has been a top priority of this Department for several years. Last year, DOE instituted an agency-wide Strategic Management System (SMS) that is fundamentally based on the principles of the Results Act and will be the vehicle for the Department to integrate the Results Act requirements into our day-to-day management and decisionmaking activities. The SMS integrates the interrelated strategic planning, budget, and performance evaluation processes throughout the Department. Performance is the common link throughout the System, and consistent performance measures will be used to connect planning, budgeting, and evaluating. DOE is finalizing the process for updating our department-wide Strategic Plan. The process will allow us to achieve the goal of submitting a strategic plan, that complies with the Results Act, to Congress by September 1997.

The DOE strategic planning process includes a comprehensive situation analysis as part of the process of defining goals and objectives. The purpose of this analysis is to identify weaknesses, external variables and internal conflicts that may result in conflicting goals among program activities. The objective is to address these conflicts as part of our strategy development, including possible proposed legislative actions. At this time, since we have not finished this process, the agency has not identified any conflicting goals.

Question: Strategic plans must be based on realistic assessments of the resources that will be available to the agency to accomplish its goals. As you are developing your strategic plan, how are you taking into account projected resources that likely will be available -- especially as we move to a balanced budget? What assumptions are you making? How are you ensuring that your goals are realistic in light of expected resources?

Answer: A fundamental part of the DOE strategic planning process is a comprehensive situation analysis, or environmental scan, that is designed to assess the strengths, weaknesses, opportunities, threats and external variables, such as likely resource limits, in order to define realistic goals and develop strategies that take optimum advantage of the opportunities and strengths, and mitigate the weaknesses and threats. However, we recognize that in the strategic planning process one must be careful to not be over conservative with respect to resource constraints otherwise the resulting goals and objectives will not be challenging and opportunities for creative strategies may be missed. The Department will develop goals and objectives with the OMB five year budget projections as a basic assumption and the annual performance goals and objectives are further refined in the performance plans that are submitted annually with the budget.

Question: For Congress, the heart of the Results Act is the statutory link between agency plans, budget requests, and the reporting of results. Starting with fiscal year 1999, agencies are to develop annual performance plans that define performance goals and the measures that will be used to assess progress over the coming year. These annual goals are to measure agency progress toward meeting strategic goals and are to be based on the program activities as set forth in the President's budget.

- What progress have you made in establishing clear and direct linkages between the general goals in your strategic plan and the goals to be contained in your annual performance plans? OMB express concern last year that most agencies had not made sufficient progress in this critical area.
- More specifically, how are you progressing in linking your strategic and annual performance goals to program activity structure contained in the President's budget? Do you anticipate the need to change or modify the activity structure to be consistent with the agency's goals?
- Overall, what progress has your agency made -- and what challenges is it experiencing -- defining results-oriented performance measures that will allow the agency and others to determine the extent to which goals are being met?

Answer: Last year, DOE implemented a Strategic Management System (SMS) that integrates the interrelated strategic planning, budgeting, and program evaluation processes throughout the Department. Performance is the common link throughout the System, and consistent performance measures are used to connect strategic planning, budgeting, executing and evaluating. DOE is well out in front of many other Federal Government agencies on implementing the Results Act. We produced the first Departmental Strategic Plan in 1994. We have had a performance agreement with the President for FY 1995 and 1996, and will very soon have one for FY 1997. With our FY 1998 budget submission, we included an annual performance plan, and we recently issued our first Annual Performance Report covering fiscal years 1994 and 1995. Each of these were done well in advance of the actual Results Act requirements. Although each of these products are not perfect, the experience has been invaluable and has positioned the Department to

respond to the Results Act this year with a great deal of confidence that we can not only provide the prescribed products but can achieve the overall intent of the Act-- better management. With this experience, we intend to vastly improve the linkage between the strategic goals and annual performance goals since we now have a well defined, integrated process.

Although our strategic goals and objectives do not align precisely with the program activity structure contained in the President's budget, we have been able to translate the structures and we display the crosswalk from business line to appropriations in our annual Budget Highlights and Performance Plan. At this time we have not determined whether a modification to activity structure would be beneficial.

Defining results-oriented performance measures is a very difficult task because it involves a major cultural change and will take time to perfect. With our experience of developing and publishing an annual Performance Agreement with the President for FY 1995 and FY 1996, and our soon to be published agreement for FY 1997, we feel that we have made significant progress in this area. Our greatest challenge in developing results-oriented measures is in the general area of general science and basic research and development which makes up a very significant part of the DOE budget and program activity. Performance plans required by the Results Act call for performance goals for a particular program activity in an objective, quantifiable, and measurable form. This is frequently not practical for fundamental science programs with their long-term perspective and their explorations into phenomena where specific results are not known or anticipated. Quantitative measures of activity, such as published papers or number of measurements, are not always reliable indicators of research quality, relevance, etc. Consequently, the Department will need to take advantage of an alternative form of describing performance. We are actively working with OMB to develop alternative measures that are acceptable and achieve the basic intent of the Results Act.

Question: If applicable, what lessons did the agency learn from its participation in the Results Act pilot phase and how are those lessons being applied to agency wide Results Act efforts? What steps is the agency taking to build the capacity (information systems, personnel skills, etc.) necessary to implement the Results Act?

Answer: Although DOE participated in several Results Act pilot projects, more importantly, for the last three years we have been implementing the Results Act requirements agency-wide. We produced the first Departmental Strategic Plan in 1994. We have had a performance agreement with the President for FY 1995 and 1996, and will very soon have one for FY 1997. With our FY 1998 budget submission, we included an annual performance plan, and we recently issued our first Annual Performance Report covering fiscal years 1994 and 1995. Each of these were done well in advance of the actual Results Act requirements. Although each of these products are not perfect, the experience has been invaluable and has positioned the Department to respond to the Results Act this year with a great deal of confidence that we can not only provide the prescribed products but can achieve the overall intent of the Act-- better management. Last year, DOE instituted an agency-wide Strategic Management System (SMS) that is fundamentally based on the principles of the Results Act and will be the vehicle for the Department to integrate the Results Act requirements into our day-to-day management and decisionmaking activities.

With regular meetings of an SMS Steering Committee, representing all relevant supporting organizational entities, we have integrated the requirements for Results Act capacity needs, such as information systems, training, and communications, into our systems as a top priority.

Question: The Results Act requires agencies to solicit and consider the views of stakeholders as they develop the strategic plans. Stakeholders can include state and local governments, interest groups, the private sector, and the general public, among others. Who do you consider to be your agency's primary stakeholders and how will you incorporate their views into the strategic plans?

Answer: Customers and stakeholders, including OMB, Congressional committees, other Federal Agencies, state and local governments, interest groups, safety boards, and others participated at various levels in the 1994 Strategic Plan development effort. The Department will update its Strategic Plan beginning in April 1997 and will complete it in time to meet the September 30, 1997 Results Act requirement. The Department recognizes that this next plan will need to include some additional requirements to conform to the Results Act. One of these is to more formally ensure stakeholder and customer consultations, including the Congress, in developing missions, strategic goals, and performance measures for each of the business lines and critical success factors.

Question: For the Results Act to be successful, agencies with similar missions, goals, or strategies will need to ensure that their efforts are coordinated. What other federal agencies are you working with to ensure that your strategic plans are coordinated? What steps have you taken to ensure that your efforts complement and do not unnecessarily duplicate other federal efforts.

Answer: The Department has significant program relationships with the DOD, State, EPA, AID and NASA, among others. Most of the relationships are complementary and not duplicative. As part of our strategic planning process, these stakeholders/customers will be invited to participate in the planning sessions to avoid conflicts with their goals and objectives. In any case, the DOE program managers will be explicitly tasked to address the coordination with other federal agencies as part of their goals, objectives and strategy development.

Question: The Results Act requires agencies to consult with Congress as they develop their strategic plans. Since these plans are due in September, now is the time for agencies to begin the required consultations. What are your plans for Congressional consultation as you develop your strategic plan? Which Committees will you consult with? How will you resolve differing views?

Answer: DOE is finalizing the process for updating our department-wide Strategic Plan. The process will allow us to achieve the goal of submitting a strategic plan, that complies with the Results Act, to Congress by September 1997. The Department of Energy believes that the consultation provision is a very important element in successfully meeting the intentions of the Results Act. Customers and stakeholders, including OMB, Congressional committees, other Federal Agencies, state and local governments, interest groups, safety boards, and others

participated at various levels in the 1994 Strategic Plan development effort. Our 1997 process will continue this approach and will include the required consultations with Congress, as well as other stakeholders, at the proper times throughout the process of the strategic plan's development. We will invite the participation of interested authorization or appropriation committees in the earliest stages of the process. We would expect that some committees would be engaged in consultations this Spring, although the needs and interests of the individual committees may differ and other committees may prefer to engage in the process in later stages. A fundamental part of the strategic planning process is to achieve consensus within the Department on the appropriate goals and objectives that best serve the American public, after considering what may be differing views from our many, diverse stakeholders. A summary of contrary views received will be included as part of the transmittal letter.

Question: In passing the Results Act, Congress sought to fundamentally change the focus of federal management and decisionmaking to be more results-oriented. Organizations that have successfully become result-oriented typically have found that making the transformation envisioned by the Results Act requires significant changes in what they do and how they do it.

- What changes in program policy, organization structure, program content, and work process has the agency made to become more results-oriented?
- How are managers held accountable for implementing the Results Act and improving performance?
- How is the agency using Results Act performance goals and information to drive daily operations?

Answer: As a result of the Department's strategic planning initiatives and the broader Results Act initiative, we have already seen important results. The strategic planning efforts sharpened the Department's mission and vision, focused business priorities, and facilitated budget formulation and decision-making processes. The Strategic Plan was the blueprint for the Strategic Alignment Initiative that served as the basis for reorganizing the Department and reengineering management processes to focus on results, service quality, and customer satisfaction. The progress the Department has made to date is a prelude to what we expect to be even greater returns as we continue the important implementation of the Results Act.

DOE instituted an agency-wide Strategic Management System (SMS) that is fundamentally based on the principles of the Results Act and will be the vehicle for the Department to integrate the Results Act requirements into our day-to-day management, operations, and decisionmaking activities. Performance is the common link throughout the System, and consistent performance measures are used to connect planning, budgeting, executing, and evaluating. This concept of performance is cascaded through all of the Department's organizational levels, i.e., from the DOE Corporate level down to the contractor level. We currently cascade the Performance Agreement commitments to Secretarial Officers by identifying managerial ownership and formally signing the agreement. We also track and report progress on these commitments quarterly, make the information available to the public, and conduct Secretarial Quarterly Reviews to share lessons

learned and set future direction. Ultimately, performance measurement provides a path of accountability between the Department's long-term vision and the day-to-day activities of individual federal and contractor employees.

QUESTIONS FROM CONGRESSMAN RALPH REGULA

General

Question: When we met the other day we discussed the issue of DOE's role in cost shared research partnerships where the industry sees a high degree of commercial success versus high risk research. Could you share with the Committee your view on the appropriate balance between the need for support of near term commercially viable technologies versus high risk long range research?

Answer: Federal and industry definitions of "near term" can vary greatly. Some corporate investment strategies may stress very short term (2-3 years) and low risk returns on investments made. In contrast, near term R&D of the type sponsored by DOE is typically of much higher risk and longer term (5 or more years) than industry is willing to pursue. Many of the Department's near term programs require major technology advances.

Investing in an unproved "quantum leap" energy technology is often a gamble that many CEOs and shareholders would prefer to avoid. In today's climate of uncertainty -- with deregulation and the prospects of cutthroat competition -- even the largest companies shy away from "going it alone" in risky R&D. For example, the advanced turbine we envision developing by 2002 is high risk -- it is unlike anything on the market today. Its commercial prospects -- as attractive as they might be -- are still several years into the future, if the technology is successful.

We note for clarity, that we simply do not know whether restructuring of the electricity industry will reduce or promote innovation in generation technologies in the long run.

Take the government cost-sharing out of the equation, and I suspect you will see many companies take a lower-risk approach -- a "safer" lower-performance turbine, in this case followed by improvements to later attain the performance of the "quantum leap" design. It won't offer the public immediate benefits -- like greatly improved environmental performance -- that we hope to achieve through our R&D partnerships.

Federally funded research and development must first and foremost be in response to a market failure, such as inadequate social investment for a clean and healthy environment. While long term research support is clearly a critical federal role, short term efforts frequently represent the final phase (the Demonstration phase) of a long term research effort. The ideal mix is largely judgmental and would vary from program to program. The nearer term programs should have a high degree of private sector cost sharing, and wherever practical DOE should seek repayment of its investment when projects are commercial successes.

Question: The 1997 *Green Scissors* report which is produced by the consortium of environmental groups and deficit hawks recommends significant cuts in a variety of energy programs including eliminating the Clean Coal Technology program and the coal and petroleum R&D initiatives in the fossil energy program. Could you comment generally on these recommendations?

Answer: The *Green Scissors* report recommendations would virtually eliminate all of the Fossil Energy R&D Programs -- that would be a mistake. I believe it is extremely important to strive for a clean environment. Practically all of the Department's Fossil Energy R&D Programs have a strong environmental component. We need to develop clean Fossil Energy technology if we are to meet our future energy and environmental goals. Today, 85% of the energy we consume is fossil energy. By 2015, EIA forecasts that our dependence on fossil energy will further increase to 87% and total energy consumption will grow by 20%. Coal alone produces over half of our electricity and EIA forecasts show this dependence on coal will continue. China, India, and many other countries of the world are even more dependent on coal than we are, and their coal use is projected to double over the next few years as their economies continue expanding.

The continued use of fossil fuels, particularly our enormous coal reserves, is inevitable. If we don't develop clean, efficient, and economically competitive fossil energy technology we will not be able to use these fuels as we can and should. Technologies under development today are critical to meeting future environmental standards in a cost effective manner. In some cases, such as with mercury emission control, there is no technology available today that can effectively capture all the mercury in coal. Research is under way to develop this capability. If we look at past fossil technology successes, we see tremendous progress in using our fossil fuels not only more cleanly but more cheaply at the same time. For example:

- Between 1970 and 1995 coal use for electric power generation more than doubled in the U.S., but SO₂ and particulate emissions came down 27% and 90%, respectively. In the same time period the average plant emission rate was lowered by 70% for SO₂ and over 90% for particulate matter. Further technology advances should provide the capability of cost-effectively reducing SO₂ and NO_x by over 98% and 90%, respectively.
- DOE developed, in partnership with industry, lower cost and more effective SO₂ scrubbers for coal-fired powerplants. These scrubbers are currently installed on 77 Gigawatts of capacity (1/4 of all US capacity). Cumulative costs of building and operating these scrubbers through 1995 were reduced \$40 billion dollars through this research according to a report done by Energetics, Inc. on the benefits/costs of the U.S. DOE Clean Coal RD&D program.
- DOE developed, in partnership with industry, a new generation of low NO_x combustors and post-combustion devices. Burner sales to date exceed \$750 million, and will approach \$4 billion by 2000. Previously available technology would have cost perhaps ten times more to achieve the same NO_x reduction. Sales of post-combustion technology (like Selective Catalytic Reduction) are projected at over \$2.5 billion by 2000. As recently as ten years ago, this technology cost twice as much as today's version.
- DOE developed, in partnership with industry, advanced technology that greatly extended the efficiency with which electric power is generated from coal. The

efficiency of the average coal plant operating today is about 33%. The Clean Coal Technology Program is now demonstrating power plants with efficiencies in the 42-45% range. The R&D program now under way is aimed at extending those efficiencies into the 60% range by 2010, which is about double the efficiency of current plants and reduces CO₂ emissions by almost half.

With regard to the Petroleum R&D Program, advanced technology being developed contributes to expanding our domestic liquid fuel supply (i.e., enhancing our domestic energy security) in a clean environmentally sound manner.

- As a major contributor to the nation's oil and gas R&D initiatives, DOE contributes state-of-the-art technologies needed for domestic production and for competing in international markets, as well as generating significant economic benefits to the Nation.
- By 2010 DOE's oil and gas program will increase domestic oil and gas production capability by 370 million barrels of oil per year and 3.9 Tcf per year, respectively. This increased industry activity due to the program will, in turn, contribute \$20.8 billion to Federal treasury revenues by 2010 (\$29.2 billion including increases in state revenues), and save 854,000 domestic job years from being lost to foreign producers. These are the high-wage, high-technology jobs that are essential to the nation's drive to compete in international markets.
- Oil imports will also be reduced by 3.6 billion barrels by 2010 due to the program. This translates into a reduction in the nation's balance of trade deficit with foreign countries of \$72 billion during that period (assuming a world oil price of \$20/bbl.).
- One of the most effective areas of work by the oil and gas environmental program is providing unbiased scientific data to regulators and industry to help them make risk-based regulatory, enforcement and compliance decisions. Both states (where the majority of oil and gas regulation resides) and industry must spend their limited funds where the environmental risks are shown to be highest. Data that show areas of high and low environmental risk -- geographically, by type of activity, by environmental setting, by industry segment -- enable regulators to tailor their requirements and enforcement and industry to direct its compliance activities in ways that make the most effective use of scarce resources.

Question: I read an article in The New York Times in which your predecessor, Secretary O'Leary, argued that the price of energy is artificially depressed in the United States. She went on to note that Americans will not be serious about conservation or energy independence until the price goes up or there is another shock. I would tend to agree, but I would note that she made that comment on the eve of her departure, so keeping that in mind what is your reaction to that observation from the former Secretary?

Answer: I do not believe that the price of energy is "artificially depressed" in the United States, but I do agree that our job of reducing the Nation's vulnerability to future oil price shocks through increased energy efficiency or fuel substitution is more difficult during a time of declining real energy prices.

Domestic energy prices are now largely determined by market forces. Over the past twenty years, government controls on oil and natural gas prices have been eliminated, and Federal and state governments are now in the process of instituting substantially greater price competition in the electric sector. With respect to world oil markets, even the ability of the Organization of Petroleum Exporting Countries to control prices has been greatly diminished. These market reforms, combined with a range of other market and technology developments, have contributed greatly to today's stable or declining energy prices. In turn, these comparatively low energy prices have helped spur economic growth, which has brought enumerable benefits to American industry and consumers.

Unfortunately, our success in keeping energy prices comparatively low, also has some undesirable repercussions. Comparatively low oil prices have stimulated increased demand, reduced interest in improved efficiency and further depressed domestic production. The result has been significant increases in oil imports at a time when markets are increasingly relying on the Middle East to meet the increasing world oil demand. Comparatively low energy prices have also stimulated demand for natural gas and coal, and this, combined with increasing oil demand, has resulted in increasing emissions of greenhouse gases and other adverse impacts on the environment. We are also concerned about energy volatility in prices of natural gas and petroleum products, such as home heating oil and propane.

Our challenge is to find ways of countering these undesirable trends, without losing the economic benefits of plentiful and reasonably priced energy.

Question: Another comment I had the opportunity to hear the Secretary make personally when she and I appeared together at the recent Clean Coal technology Conference concerned the fear of the next Secretary to undertake trade missions to foreign governments. What is your view about your role in helping U.S. industries penetrate foreign markets, and is there a way for the Secretary to assist in that goal without creating the controversy that hounded Secretary O'Leary?

Answer: I do believe that the Department of Energy, working closely with industry and with other Departments and Federal agencies as members of the Trade Promotion Coordinating Committee, can play an important role in expanding opportunities for U.S. interests abroad. The Department can effectively promote our fundamental goals in the international marketplace by

encouraging other countries to adopt policies and regulations that will encourage private investment in energy projects, support the free and efficient operation of energy markets, and remove barriers to trade and investment by U.S. firms. Furthermore, I believe the Department can be an effective proponent for U.S. industry abroad in a cost-effective manner.

Clean Air Act

Question: The Administration's proposed new Clean Air Act regulations would impose strict new standards for ozone and particulate matter, despite the fact that the Clean Air Scientific Advisory Committee agrees that the science is imperfect with respect to the effects of these emissions. Could any of the research currently ongoing at DOE help address this research gap and what role should the Department play in the inevitable debate over these regulations?

Answer: The Department of Energy has not taken a position with regard to the new standards. With regard to a possible DOE role in the debate on the regulations, DOE will very likely participate in any inter-agency review process coordinated by OMB. An additional role of the Department of Energy is and should continue to be the support for research and development of clean, domestic sources of energy and ensuring that these technologies are given a chance to compete fairly with other sources of energy to round out our national energy portfolio.

The Department recognizes the environmental benefits of clean energy and believes that wide-spread applications of our RD&D in fossil energy and energy efficiency and renewable energy over the past two decades have produced a number of technologies which have helped reduce the cost of meeting new air quality regulations, including both National Ambient Air Quality Standards (NAAQS) as well as other Clean Air Act requirements.

Just a few of the technologies that have been developed in part with DOE funding (either R&D or demonstration, or both) include low NOx burners and advanced scrubbers (for fossil power plants), energy efficiency technologies (which reduce emission reduction requirements by cost-effectively reducing electricity demand), and various renewable technologies that prevent pollution in the transportation, manufacturing, building and utility sectors. These technologies will significantly reduce emissions while reducing energy bills of consumers and business and new technologies emerging from ongoing research will provide additional cost-saving benefits to consumers and enhance our environmental quality.

Strategic Petroleum Reserve

Question: It has become a tempting target on both sides of the aisle to sell Strategic Petroleum Reserve oil to make our bottom line work in last minute budget negotiations. What is your view of this policy if continued and what are the long term implications for our energy security?

Answer: The consumption of oil in the United States is increasing and imports are growing rapidly. The Strategic Petroleum Reserve, which in 1985 provided the equivalent of 118 days of net import protection, now is equal to only 67 days of imports and is projected to weaken

further even if no Reserve oil is sold.

While the United States maintains the largest stockpile of petroleum among the members of the International Energy Agency, our security against import disruptions and unacceptable price spikes depends upon the coordinated response of all the industrialized importing countries to an emergency. The United States has been the foremost champion of accumulating strategic stocks and drawing down those stocks early in an emergency. Our non-emergency sales of 28 million barrels of oil in 1996, have drawn criticism from the other member countries, and they are questioning our commitment to a coordinated storage and distribution strategy.

Both Members of Congress and members of the Administration are concerned with this trend and the recent directives to sell Reserve oil for non-emergency purposes. In response, the Department has agreed to prepare for the Administration a Statement of Policy on the Strategic Petroleum Reserve which will address critical issues such as the need for a Strategic Petroleum Reserve, its size, inventory level, and policy for using the Reserve in non-emergency circumstances. The Department will request public comment on these issues in a Federal Register Notice to be issued shortly, and intends to publish its Statement of Policy in September 1997.

Question: If we continue to not budget for SPR operations short of selling oil what is your view about selling or otherwise disposing of SPR sites?

Answer: The Department recommends continuance of all storage sites. The Strategic Petroleum Reserve is composed of five sites organized into three complexes, each connected to pipelines serving different regions of the country. The Weeks Island, Louisiana site is in the process of being decommissioned due to geologic instability. The Reserve's capacity will then be reduced from its target size of 750 million barrels to 680 million barrels at four sites. Even if the inventory of the Reserve were reduced below its 563 million barrel current level, the SPR should maintain its configuration with the four remaining sites. Closure of the smallest site, Bayou Choctaw, would completely eliminate direct access to the Capline pipeline which services refineries throughout the Midwest. Closure would also mean the loss of 500,000 barrels per day of drawdown capability. Most analysts believe that the ability to draw down and distribute oil quickly significantly increases the strategic value of the Reserve.

There are two additional strategic reasons for not closing any more sites. First, the existence of the extra storage capacity will allow the United States to quickly start acquiring oil if circumstances dictate that the inventory of the Reserve should be increased. If we sell or decommission any of the existing sites, creating a new site would be prohibitively expensive and would take many years. Second, part of the intrinsic security of the Reserve is that the sites are widely separated. If we reduced the Reserve to three sites, we would be more vulnerable to being crippled by terrorists or hostile nations.

Eliminating the Department of Energy

Question: You are new to this job although not new to the Cabinet and the government. I would be interested in your reaction as somewhat of an outsider, why would you tell opponents

we should not eliminate the Department of Energy or would you tell them that? You have sat in Cabinet meetings in other chairs and based on your experiences including your short time at the Department why do we need a Department of Energy?

Answer: It is my belief, and the President agrees, that the Department of Energy's missions are critical to the well-being of the Nation. The Department's missions and its R&D programs are rooted in the broad public interests of national security, economic security, economic productivity and environmental protection. These enduring public interests are the proper role of government, transcending the special interests of any single constituency. Dismantling the Department of Energy would adversely affect the Nation's scientific leadership in fundamental research, energy and environmental technology, and nuclear security, since the network of National Laboratories and universities that support these national efforts—and the synergies among them—would be adversely affected as well.

The Department of Energy is entrusted with conducting a major portion of the Nation's basic research, in fields as critical to future generations as high energy physics, biological and environmental sciences, mathematics, computing, and engineering. Our National Laboratories represent a scientific capability that for decades has delivered technological advances and discoveries that improve the well-being of the American people. No other agency or collection of institutions can readily provide this same research capability. To eliminate these capabilities, or scatter them among different federal agencies, would be to waste many valuable resources, losing both time and productive intellectual resources.

The research conducted by the Department of Energy relies on many synergies that could be destroyed if the agency were to be abolished. Moving the "energy resources" business line to another agency, for example, would disrupt cooperative work among programs that deal with energy. Our fundamental research in materials sciences at our national laboratories, directed by our Office of Energy Research (ER), contributes directly to our Office of Energy Efficiency and Renewable Energy's (EE) efforts to develop a more efficient next generation vehicle. ER's research in chemical sciences helps us understand how our EE and Fossil Energy programs can best work to improve the efficiency of coal conversion in power plants and industry. ER works with EE and the Office of Policy on global climate change research. Dividing these efforts among different agencies would consume time and other resources to no productive purpose.

The Department of Energy was created, in part, because of the recognition that National Energy Policy affects each American every day. Our Nation's progress depends on our ability to use energy resources in ways that help the economy grow, protect the environment, and keep our Nation secure. It is just as important today that we maintain a singular focal point for promoting a sustainable energy policy that continues to improve our standard of living and expands future opportunities by maximizing energy productivity, preventing pollution, and reducing our vulnerability to global energy disruptions.

I also know from my own personal experience -- as Secretary of Transportation -- that there is no substitute for representation at the Cabinet level. Our competitors worldwide shape energy issues at the highest levels of their governments. So should the United States. I believe

that these important missions should be advanced with diligence, as well as high-level attention and priority, and that they should be the primary responsibilities of a Cabinet-level officer.

Alternative Energy

Question: According to an Arthur D. Little study commissioned by the Department, the energy savings from renewable sources and advanced technologies have been significantly overestimated. If that is accurate why then is your budget so tilted toward energy efficiency and renewable energy technologies and away from ways to use traditional fossil fuels more cleanly and efficiently?

Answer: The Arthur D. Little (ADL) analysis was used by DOE in formulating the FY98 request. DOE used the most conservative estimates of energy savings at hand while formulating the budget, and these estimates were very close to the final numbers arrived at by DOE with ADL review and assistance. While the final numbers in many cases were smaller than the preliminary estimates of energy savings, the final analysis of the benefits to the nation in energy productivity improvements, pollution prevention, and national security still demonstrate that energy efficiency and renewable energy technology programs are important to the nation. ADL stated "Overall...the selection of technologies in the DOE (Energy Efficiency) portfolio are very reasonable. They are in line with R&D programs of other industrialized countries and have gained a high level of industry support in the U.S. The portfolio mix in the post 2000 time frame will place the U.S. in a highly competitive position in the coming decades."

Question: According to the article I read on this study, DOE officials indicated these results would be used in future budget decisions. How did these results affect the current priority setting process and were they even taken into account when your FY 1998 budget was developed?

Answer: The analysis of the expected energy savings in the future allowed DOE management to gain an understanding of how these programs related to DOE's strategic goals of maximizing energy productivity, preventing pollution, and enhancing our energy and national security. The analytical information from the study informed the decision making process in DOE as the FY98 budget was developed, although other considerations also drive the Department's investment decisions, including legislated mandates, priorities of the Administration, and stakeholder assessments of market opportunity, as well as the desire to capture benefits that are not easily monetized such as environmental or national security benefits.

Electric Utility Deregulation

Question: What role is the Department to play in the debate over utility restructuring?

Answer: The transition to a more competitive electric industry raises many important regulatory and policy issues. The Department participates in key regulatory proceedings on these issues at the Federal Energy Regulatory Commission and has also participated in proceedings before state public utility commissions. Many of the policy issues pertaining to the restructuring of the industry could fruitfully be addressed through "comprehensive" federal legislation designed to establish a statutory framework for the industry better suited to competition. We think that this legislation could be designed to facilitate and enable the transition to competition, while still affording ample latitude to state authorities to exercise a key role. The Department has drafted a set of legislative options for the purpose of focusing discussion among the executive branch departments and agencies interested in electricity matters. We hope that in due course the Administration will send a legislative proposal to the Congress for its consideration.

Question: Has the Administration expressed any opinions on this topic?

Answer: The Administration as a whole has not taken a position on the restructuring issue. However, Deputy Secretary Charles Curtis has addressed restructuring issues in testimony before the Congress and in other public statements. We believe that taken together, these statements are a good expression of the Department's preliminary views, which are subject to review and revision by Secretary Peña and the Administration as a whole. The main elements of this position are:

- Support for increased reliance on competition in wholesale and retail electric markets. More competition can benefit all consumers through lower electricity prices and increased productivity in the electric sector of the economy.
- Each State should have the authority to determine the kind of retail service it wants and Congress should refrain from requiring that States implement retail competition.
- The transition to competition in retail markets is especially complex and affects many federal and state public policy concerns, such as the continuation of energy efficiency investments, increased reliance on renewable generation, assistance to low-income consumers, and investment in electricity-related R&D. These are enduring concerns that must be considered in the context of steps taken at the federal or state level to promote competition in retail markets.
- Competition can be compatible with maintaining the reliability of regional bulk power systems, but that combination of results will not be automatic. The institutional infrastructure for maintaining reliability could be strengthened to ensure that all parties engaged in physical transactions on the power grids are members of the appropriate regional reliability organizations, and that they comply with the reliability standards developed by these organizations. Changes in federal law may be needed to strengthen this infrastructure. We think this could be done while maintaining the self-regulatory character of the existing reliability organizations.
- Support for affording electric utilities the opportunity to recover prudent and verifiable

stranded costs, after the utilities have made appropriate efforts to mitigate those costs. However, the bulk of the potential stranded costs pertain to investments that were made for the purpose of serving retail customers. Responsibility for addressing these costs is best left with state regulatory authorities, because they are most likely to be familiar with the terms and conditions under which the investments were made.

- Current federal law is ambiguous on several significant questions concerning the allocation of jurisdiction between federal and state regulatory authorities over a more competitive electric industry. It would be best to clarify these uncertainties through federal law, as opposed to protracted and piecemeal litigation.
- “Comprehensive” federal electricity legislation is needed, as opposed to one or several stand-alone bills. We are dealing with a set of interlocking issues, and unless we take a holistic, integrated approach, there is a considerable risk of inadvertently making some problems worse while we address others.

Question: What impact do you believe competition will have on research and development?

Answer: There will be near-term and long-term impacts. For the near term, utilities are already anticipating the transition to competition. Many companies are focusing intensively on reducing their costs and are making deep cuts, including cuts in research. R&D is often seen as a non-vital expenditure, except for projects that promise immediate cost savings for the company. As a result, corporate commitments to internal R&D and to joint efforts with the Electric Power Research Institute (EPRI) are declining. Virtually all research sectors have been adversely affected, but some have been hit harder than others. R&D pertaining to program areas such as energy efficiency and renewable generation have been cut severely.

For the long term, we also think that the nature of the R&D that is supported by the private sector will change. Utilities may emphasize R&D on consumer products and marketing, and less on basic technologies. Utilities will be reluctant to commit funds to R&D that could benefit a competitor just as much as themselves. The industry may rely more on generating technology R&D funded by equipment suppliers in the future than today. R&D related to “public goods,” such as environmental protection and reliability, may be more difficult to support in a competitive industry.

Question: Will research and development no longer be supported in a deregulated, competitive environment and if so, what pressures will that put on your programs? Will this necessarily put more pressure on your Department to pick up the slack?

Answer: The changes discussed above mean that the Department should work with the Congress, the industry, and organizations such as EPRI to find new ways to finance and conduct R&D, with special attention to R&D involving public goods and innovations likely to benefit companies other than the sponsor. This is a matter of some urgency because the market for new generating capacity and other electric facilities is burgeoning, while foreign companies are maintaining their commitments to electricity-related R&D. Over time, these firms might gain a distinct technological advantage in the worldwide market for electric facilities and systems.

QUESTION FROM CONGRESSMAN JOE SKEEN

Waste Isolation Pilot Plan

Question: Does the Carlsbad Area Office have adequate funding to open the Waste Isolation Pilot Plant in November, 1997, as directed by Congress in the WIPP Land Withdrawal Act Amendments of 1996?

Answer: The Carlsbad Area Office has adequate funding to begin disposal operations at WIPP. Prior to WIPP opening, the Environmental Protection Agency must certify WIPP compliance with the applicable regulations. A compliance certification application was submitted to EPA on October 29, 1996. In addition, the state of New Mexico must grant a RCRA Part B operating permit prior to the opening of WIPP. The permit application was submitted on January 17, 1996.

Question: Is the Carlsbad Area Office's projected budget adequate to optimize future DOE-wide transuranic waste disposal operations in accordance with the proposed Site Ten-Year Plan for environmental cleanup?

Answer: The WIPP Program will have adequate funds to accomplish all necessary activities in FY 1998. The Environmental Management Program is conducting efficiency reviews of its sites. Once the efficiency reviews are completed, the Department will ensure that sufficient funds will be available to meet all commitments in an optimized manner for transferring transuranic waste to WIPP for disposal.

Question: Is the Carlsbad Area Office's FY 1998 and FY 1999 funding adequate to assist the DOE generator sites with current plans for readying and shipping transuranic waste to the WIPP in accordance with the National Transuranic Waste Management Plan, which was issued September 30, 1996.

Answer: The Carlsbad Area Office's FY 1998 funding request, as currently shown in the President's budget, will support readying and shipping transuranic waste from Idaho National Engineering and Environmental Laboratory, Los Alamos National Laboratory, and Rocky Flats Environmental Technology Site to WIPP. The National Transuranic Waste Management Plan presents current strategies for shipping transuranic waste to WIPP. However, final decisions will need to be consistent with the Waste Management Programmatic Environmental Impact Statement. Among other requests, the President's budget contains a \$29.2 million request to privatize transportation activities. The FY 1999 funding requirements are currently being developed. Once the Environmental Management Program has completed its FY 1999 budget and efficiency reviews at its sites, the Department will ensure that sufficient funds are available to meet all its commitments.

Question: Do the DOE generator/storage sites also have adequate funding available to initiate and sustain the rates of transuranic waste shipments to the WIPP as stipulated in the

National Transuranic Waste Management Plan beginning in November 1997?

Answer: Idaho National Engineering and Environmental Laboratory, Los Alamos National Laboratory, and Rocky Flats Environmental Technology Site are the first three sites scheduled to ship transuranic waste to WIPP and have adequate funding to initiate shipments beginning in FY 1998. The National Transuranic Waste Management Plan presents current strategies for shipping transuranic waste to WIPP. However, final decisions will need to be consistent with the Waste Management Programmatic Environmental Impact Statement. Among other requests, the President's budget contains a \$29.2 million request to privatize transportation activities. To address the needs of the other generator/storage sites, the Environmental Management Program is conducting program and efficiency reviews. Once the reviews have been completed, the Department will ensure that sufficient funds are available to sustain optimum rates of transuranic waste shipments to WIPP.

Question: Is adequate current and future funding available to prepare and open in a timely manner the necessary interstate shipping corridors to the WIPP?

Answer: The FY 1998 funding request in the President's budget supports readying and shipping transuranic waste from Idaho National Engineering and Environmental Laboratory, Los Alamos National Laboratory, and Rocky Flats Environmental Technology Site to WIPP. Among other requests, the President's budget contains a \$29.2 million request to privatize transportation activities. The FY 1999 funding requirements are currently being developed. Once the Environmental Management Program has completed reviews of its sites, the Department will ensure that sufficient funds are available to open additional interstate shipping corridors as needed.

Question: Are any transuranic waste-related compliance agreements with generator/storage site host states not going to be met under the current FY 1998 budget request?

Answer: The Department fully intends to meet all transuranic waste-related compliance agreements with the States.

Question: EPA's stated reason for current delays in the need to obtain more information from DOE. What has DOE done to insure that EPA does not delay issuance of the completeness determination through additional [requests] for technical sufficiency data? Specifically, EPA's last completeness request was for the grid convergence data which has been supplied to EPA by DOE. Yet, EPA continues to delay the completeness determination based on request related to the spalling model which EPA agrees is a technical sufficiency issue?

Answer: It is DOE's position that EPA received a complete compliance certification application when DOE submitted the application in October 1996. DOE has responded in a timely manner to all EPA requests for information. For example, DOE and EPA staff meet weekly and have had numerous technical exchange meetings. The Department is working cooperatively with EPA to resolve all outstanding issues as quickly as possible with the goal of opening WIPP by the end of the year.

QUESTIONS FROM CONGRESSMAN ZACH WAMP

Question: DOE has been active in developing CRADAs and partnerships with industry for developing technologies such as new high temperature materials, new coatings, and electronic components. Will this process and re-industrialization be a major theme in your administration?

Answer: Yes. In the Office of Industrial Technologies (OIT), materials research has been a high priority in the Industries of the Future program. Over the past three years, the OIT has been working with industry groups as they define their goals and research priorities for the next twenty plus years. Within OIT, the Advanced Industrial Materials program has been a dominant force in bringing forward industry solutions which are developed by the national laboratories. Led by the Oak Ridge National Laboratory, this program has provided solutions to problems in multiple industries including steel, Forest products, aluminum and metal casting. A new center for metals, the Metals Processing Laboratory User Center (MPLUs), is supported by the OIT program and has been highly successful in delivering quick solutions to industrial manufacturing problems. In addition, the ORNL runs supporting programs in materials for the Continuous Fiber Ceramic Composite Program and for the advanced turbine systems program. All three OIT programs will continue to help industry through CRADAs and other mechanisms.

Question: Will you be developing a detailed strategic plan to accomplish these goals?

Answer: No. We are not developing strategic plans for the crosscutting technologies discussed above. Instead, we are working with industry to try to forecast where we could have the highest impact. This information is then used to decide where to invest our funds and is referred to as the "vision process."

Question: If so, what is the time frame and will it be shared with this committee?

Answer: Six of the seven industry visions are complete and it is expected that the seventh, for the Petroleum industry, will be completed this summer.

Question: Many Communities are recipients of payments in lieu of taxes (PILT). Many communities have asked that the methodology be re-evaluated to reflect present worth. Does your administration plan to maintain support of this valuable program?

Answer: The Department of Energy and its predecessor agencies, the Atomic Energy Commission and the Energy Research and Development Administration, have been supporting the Payments in Lieu of Taxes assistance program since 1950 and will continue to provide assistance to communities subject to conditions specified in section 168 of the Atomic Energy Act of 1946 (as amended) and availability of funds.

Under the previous administration, the Department had been involved in a re-evaluation of its policy on PILT and Special Burdens. Over the next few months we will be reviewing our PILT policy. The Department remains committed to equitably compensating local governments for loss of property tax revenues, in accordance with the Atomic Energy Act. In addition, the

Department's PILT policy - whether established by rulemaking or any other vehicle - must be sensitive to DOE's budget realities.

Question: Energy conservation and efficiencies offer promise in helping the nation to reduce its dependence on foreign oil imports. What is your plan for supporting advanced in new materials for energy conservation and non-passive new technologies such as photovoltaics, advanced heat pumps, and light and heavy transportation vehicle technologies?

Answer: The Office of Energy Efficiency and Renewable Energy supports the development of advanced new materials, non-passive new technologies, advanced heat pumps and light and heavy transportation vehicle technologies as part of its sector missions. For example, within the Office of Utility Technologies, for photovoltaics and other renewable technologies, three strategies are identified to help carry out the mission in partnership with the private sector and the national laboratories; a strong technology base that supports future developments; early pre-commercial deployments to provide field validation of and experience with emerging technologies; and support for related technologies that will also be important in a sustainable economy.

The Office of Transportation Technologies has drafted comprehensive R&D to help accelerate the development of both automobiles and heavier vehicles. The focal point for our work on light vehicles will continue to be technology advancement in the context of the Partnership for a New Generation of Vehicles (PNGV).

During the past year, we have also worked to develop a more integrated strategy for improving the energy efficiency of heavy vehicles, ranging from the popular sport utility vehicles to heavy busses and large freight haulers. The strategy is centered on taking advantage of the fuel efficiency characteristics of the diesel engine, by successfully developing technology which enables that engine to be successfully employed while concurrently achieving stringent emissions requirements.

Advances in materials technology are vital for achieving our goals in both light and heavy transportation vehicles. Technology development is aimed at reducing parasitic losses in vehicle operation and reducing vehicle weight, primarily by reducing the cost of new materials such as ceramics. For example DOE, through projects at the Oak Ridge National Laboratory, is: (1) developing, with Alcoa, rapid, cost-effective, high reliability methods for casting ultra-large lightweight castings; (2) developing a lightweight alloy process for producing high reliability, cost-effective components based on Thompson Aluminum Casting's new metal compression forming process; (3) investigating engineered micro-porous carbons for economic, safe storage and retrieval of various gaseous fuels; and (4) investigating, with Cummins Engine Company at the High Temperature Materials Lab, the structural and property enhancements that may be produced in metal matrix composites based on lightweight alloys.

The Office of Industrial Technologies supports research in the following program areas: Alternative Feedstock and the Advanced Industrial Materials program. The Alternative Feedstock Program, a coordinated effort by five national laboratories such as the Oak Ridge

National Laboratory, target biological feedstocks to produce chemicals instead of imported oil. These projects are targeted at making competitive chemicals for ultimate use in plastics and other organic chemicals.

The Advanced Industrial Materials program develops materials for multiple industry needs and has been highly recognized for critical industrial work. For example, in a 1997 publication entitled Intermetallic alloy development, the National Materials Advisory Board of the National Research Council, praised the ORNL led development of this new class of materials and its integration into industry.

Question: Please tell us about the future of the clean coal technology program and its impact on air pollutant reduction and increases in BTU efficiencies?

Answer: The Department plans to complete the ongoing projects in the Clean Coal Technology Program as follows:

- Half (20) of the projects have been completed to date.
- U.S. Industry participants remain committed to the program, putting up almost \$2 for every \$1 of federal funding.
- Several of the projects have received awards for technical innovation.
- Commercial sales have started to occur and repayment of the federal investment is starting to be received.

The technologies being demonstrated include those for low emission steel production, for clean coal fuels & products, for low-cost control of emissions from power plants, and new clean, efficient power plants.

The clean coal projects, in partnership with industry and with the support of the on-going R&D program, have demonstrated or are demonstrating the following:

- A new generation of clean and efficient power plants that will have efficiencies in the 42-45% in early versions (compared to today's average coal plant efficiency of 33%) and with continued R&D can reach 60% while reducing emissions by 90% compared to a modern regulated plant.
- Lower cost and more effective SO₂ scrubbers for coal-fired powerplants. The U.S. currently has an installed base of 77 Gigawatts (1/4 of all US capacity). Cumulative costs of building and operating these scrubbers through 1995 were reduced \$40 billion dollars through this research according to a report done by Energetics, Inc. on the benefits/costs of the U.S. DOE Clean Coal RD&D program.
- A new generation of low NO_x combustors and post-combustion devices. Burner sales to date exceed \$750 million, and will approach \$4 billion by 2000. Previously available technology would have cost perhaps ten times more to achieve the same NO_x reduction. Sales of post-combustion technology (like Selective Catalytic Reduction) are projected at over \$2.5 billion by 2000. Previously, this technology cost twice as much as today's version.

Thanks largely to the technology advances of the Clean Coal Technology Demonstration Program and preceding DOE sponsored R&D, the utilization of coal has become progressively cleaner over time. For example, between 1970 and 1995 coal use for electric power generation more than doubled, but SO₂ and particulate emissions came down by 27% and 90% respectively. In the same time period, the average plant emission rate was lowered by 70% for SO₂ and 90% for particulate matter. In the early 1970's there was no technology for controlling NO_x emissions; today 1/4 of U.S. boilers are equipped with low NO_x burners.

Termination of the domestic Clean Coal Technology program, after completion of projects now underway, is part of the President's realignment of the Department of Energy. The Administration's policy calls for limiting the program's projects to those which have been selected and are now under contract.

Question: Are these technologies to be demonstrated at TVA steam plants or at other fossil fueled facilities?

Answer: TVA is not participating on any of the clean coal technology projects which are located in 21 different U.S. states.

Question: Will this administration support industrial co-generation and waste heat use from thermal effluents?

Answer: Yes. Many of the technologies already being developed in separate phases of other projects are directly applicable to systems suitable for industrial co-generation and utilization of waste heat from thermal effluents. In this way, through component integration, there are studies already in progress that support the development of these concepts.

Question: At what level will your administration support biomass and other renewable forms of fuel for alternative energy sources?

Answer: The Administration, through the Energy and Water Development Subcommittee, has requested \$76,540,000 total for biofuels energy systems in Fiscal Year 1998. This total includes \$40,040,000 for Biofuels Transportation Programs, and \$36,500,000 for Biopower Energy Systems. Within the Biofuels Transportation request, the administration has requested \$6,000,000 for biomass feedstock development research activities. The biomass feedstock request represents an increase of \$1,400,000 above the Fiscal Year 1997 funding level.

Within the Office of Industrial Technologies, there are major studies underway to utilize biomass gasification systems. Working with the Forest Products industry, the gas turbine industry and the DOE renewable community, program efforts are being synchronized to reach multiple industries. Data from existing test sites are being used to predict economical projects within the Forest Products industry. These projects can improve the process efficiency of the paper process, self-generate electricity, and utilize wastes which are currently land filled.

OIT also works with the Forest Products industry and the chemical industry on bioproducts and sustainable forestry. ORNL has been a strong supporter in OIT's efforts to meet industry needs for biomass activities.

Question: How will Oak Ridge National Laboratory (ORNL) be affected?

Answer: The Laboratory has been, and will continue to be, a partner with the Department in these ongoing efforts.

Question: The system of DOE national laboratories has proven to be a bastion for the progress of science and an active partner with industry in advancing the development and growth of proven technologies. In that these national trusts are in the initial stages of defining their niche in transitioning American technology into the twenty first century, what is your vision for the future role of these assets?

Answer: The National Laboratories are an essential part of the Office of Energy Efficiency and Renewable Energy program and I anticipate that they will remain so.

Question: Will DOE develop a national strategy for optimizing their use as a technical resource?

Answer: The Laboratory Operating Board released a report in July 1996 entitled the Strategic Laboratory Mission Plan, Phase I, which discusses the Department of Energy's utilization of the National Laboratories.

Question: A new generation of energy efficient technologies such as gas cooled heat pumps are being developed Oak Ridge and other research facilities. However, I understand that TVA and other utilities have had difficulty in completing agreements to demonstrate and evaluate these technologies because of administrative concerns such as independent audits by the DOE Inspector General. Can the elements of such agreements be studied and made more flexible so that the benefits of such contractual agreements can be realized?

Answer: For the past several years, there has been an ongoing effort by personnel at the Oak Ridge National Laboratory to establish mutually beneficial R&D collaborations between ORNL and TVA. The energy R&D expertise at ORNL could help TVA meet a wide range of technology and engineering challenges to (1) reduce the cost of electricity to ratepayers in this region, (2) enhance the quality and reliability of TVA's power, and (3) postpone the need for additional power plants through plant-extension and demand-side management technologies.

Two notable recent collaborations with ORNL and the University of Tennessee as co-sponsors are the Joint Institute for Energy and Environment and the National Center for Environmental Decision-Making Research. Other instances of R&D collaboration have taken place in the environmental sciences area, where for more than a decade, several TVA scientists and technicians have worked at ORNL's facilities to conduct jointly funded investigations of forest ecosystems.

Ongoing negotiations between ORNL and TVA personnel are working to resolve Administrative barriers that, hopefully, will lay the foundation for both organizations to take advantage of the regional coexistence of a major power marketing agency with energy R&D needs and a national laboratory with exceptional R&D capabilities.

Question: Do you support the Corps of Engineers' proposal to transfer operation of the Southeastern Power Administration hydro plants on the Cumberland River to the TVA?

Answer: Neither the Southeastern Power Administration (Southeastern) nor the Department of Energy have participated in discussions on this proposal. The Corps of Engineers is the agency that operates the Federal hydropower plants on the Cumberland River system. Southeastern markets the power from the Cumberland River system and collects revenues from the sale of the power for deposit into the U.S. Treasury. Southeastern's major concern with the proposal is that any change in the management of the Cumberland river system not transfer power system benefits presently received by Southeastern-customers under their power sales contracts to other parties.

QUESTIONS FROM CONGRESSWOMAN ANNE M. NORTHRUP

Efficiency Standards

Question: I commend you for your decision to assume responsibility for the pending rule to establish new energy efficiency standards for refrigerators. I understand that you will be taking a fresh look at the rulemaking, and as you do so, I would suggest several specific areas for your attention.

How will you address the need to coordinate DOE's new regulations with the existing requirements imposed by EPA to phase out ozone depleting substances used in refrigerator insulation in 2003?

Answer: The Department is committed to considering the interrelationship of the DOE and EPA regulations and their effective dates. The Department has been in communication with Allied Signal (which has indicated its intention to produce the most likely substitute for HCFC141b) and the Environmental Protection Agency regarding the availability of substitutes for HCFC141b. This information has been considered by the Department along with burdens and benefits of different standard levels and dates.

Question: How will you account for the uncertainty regarding the availability, cost, energy usage and potential toxicity of replacement for HCFCs in this rulemaking?

Answer: In the rulemaking process, the Department considers future costs and benefits to determine whether standards are economically justified. There is always a degree of uncertainty when working with such projections. The additional uncertainty relating to the replacement for HCFC141b and the impact of that uncertainty on the analysis of DOE standards is being considered. The Department has obtained much information on this important issue. Although there are several available substitutes, HFC-245fa is the most likely replacement. While there are still some uncertainties associated with HFC-245fa, based on the favorable test results, Allied Signal has indicated that they expect to begin commercial production of HFC-245fa in 2000 and expect to achieve full capacity well before the 2003 phaseout of HCFC-141b. Information on these products is being explicitly considered. I plan to review these data as well as comments received during the rulemaking process.

Question: Will you make certain that the Department of Justice provides and publishes in the Federal Register an assessment of the competitive impacts of the new regulation, as required under the statute, and that this analysis is considered in determining what the final rule will be?

Answer: The Department of Justice reviewed the Notice of Proposed Rulemaking for revised refrigerator product energy efficiency standards and provided a letter from the Assistant Attorney General on April 19, 1996. This letter fully satisfies DOJ's obligations under the Energy Policy and Conservation Act (EPCA). The Act requires the Attorney General to make a determination of the impact on competition of a proposed rule.

Question: I understand that a recent analysis by DOE's contractor, Lawrence Berkeley Laboratories, demonstrates that standards which take effect in 2003, but are set at a more stringent level than DOE has previously proposed, would save more energy than less stringent standards that take effect earlier. How has this analysis been incorporated into the decision making record and how will it bear on your final decision?

Answer: This analysis compared the energy savings likely to result from a standard that takes effect in 2000 with those that might result from a standard that takes effect in 2003. This analysis concluded that a proposed 2003 standard, which would be set at a more stringent level, is likely to produce energy savings over the next 30 years that would exceed those of the 2000 standard. However, this analysis also indicates that an earlier standard would produce greater consumer and economic benefits, and would save more energy, over the 2000-2010 and 2000-2020 time frames. This contractor analysis was considered by the Department in developing the final rule and was provided to Office of Management and Budget.

DEPARTMENT OF ENERGY
Office of Fossil Energy

WEDNESDAY, APRIL 9, 1997.

**DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY**

WITNESSES

**PATRICIA FRY GODLEY, ASSISTANT SECRETARY, OFFICE OF FOSSIL
ENERGY
ROBERT S. KRIPOWICZ, PRINCIPAL DEPUTY ASSISTANT SECRETARY,
OFFICE OF FOSSIL ENERGY**

(521)



U.S. Department of Energy
Office of Public Affairs
Washington, D.C. 20585
202/586-3640

BIOGRAPHY

PATRICIA FRY GODLEY Assistant Secretary for Fossil Energy

Patricia Godley became the U.S. Department of Energy's 7th Assistant Secretary for Fossil Energy on July 25, 1994. The President had announced his intent to nominate her to the position on April 18, 1994, and she was confirmed by the U.S. Senate on July 21, 1994.

As Assistant Secretary, Ms. Godley oversees the national program to develop and demonstrate advanced natural gas, petroleum, and coal technologies. She is responsible for the Federal fossil fuel research and development program. She also oversees the Clean Coal Technology Demonstration Program, a multi-billion dollar government-industry partnership that is constructing and testing environmentally superior, first-of-a-kind coal-based energy facilities in the U.S. Similarly, she is responsible for managing the nationwide Reservoir Class Oil Recovery Program, a joint effort with the petroleum industry to demonstrate improved oil recovery technologies.

Ms. Godley also has the responsibility for overseeing the Strategic Petroleum Reserve, the nation's emergency crude oil stockpile, and the Naval Petroleum and Oil Shale Reserves, which include government-owned, commercially-producing oil fields in California and Wyoming.

Ms. Godley joined the Department of Energy in September 1993. Prior to becoming Assistant Secretary, Ms. Godley served as Special Assistant to William H. White, the Department's Deputy Secretary. In this capacity, she coordinated the Department's oil and gas initiatives in the Russian Federation under the Gore-Chernomyrdin Joint Commission on Energy and Space. She also participated in the Department's contract reform efforts and other domestic energy matters.

Ms. Godley practiced energy law for nearly fifteen years in Houston, TX, and Washington, DC. She joined the federal energy regulatory section of the Bracewell & Patterson law firm's Washington office in 1979. She transferred to the firm's Houston office in 1985 to expand her practice to energy transactions and litigation. She became a partner in the firm in 1986 and returned to the firm's Washington office in July 1992.

She has represented a wide variety of clients in the oil, gas, and electric utility industries in matters including asset sales and acquisitions, contract drafting and negotiation, business planning, Canadian and Mexican import and export matters and litigation on behalf of state and royalty owners, producers, marketers, pipeline companies, and end-users, as well as cogenerators and electric utility companies.

As a consultant for the World Bank, Ms. Godley drafted privatization legislation relating to natural gas transportation and distribution in Bolivia, Argentina, and the Russian Federation. She served as one of two reporters in the transportation group of the University of Houston Russian Petroleum Legislation Project in 1992. In this capacity she participated in the preparation of a draft treaty regulating the transportation of oil, oil products, and natural gas by pipeline among the Soviet republics.

Her recent publications include "Natural Gas Gathering Systems," Chapter 84, *Energy Law and Transactions* (Matthew Bender) and "Russian Energy Legislation: Regulating State Monopolies to Allow the Development of Competitive Markets," 13 *Energy Law Journal* 1 (1992). Both of these articles were published under her former name, Patricia Fry Eldridge.

Ms. Godley received a Bachelor of Arts degree from Trinity University in 1970, a Masters degree from Memphis State University in 1973, and a Juris Doctorate degree from the University of Texas in 1979, where she was managing editor of the *Texas Law Review*. She is admitted to practice before the United States Court of Appeals for the Fifth, Tenth, Eleventh and District of Columbia Circuits and the United States Courts in the Northern, Eastern, and Southern Districts of Texas. She is a member of the American, District of Columbia, Texas, and Federal Bar Associations.

Born in Illinois, Ms. Godley resides in Washington, DC.

August 1994



U.S. Department of Energy
Office of Public Affairs
Washington, D.C. 20585
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BIOGRAPHY

ROBERT S. KRIPOWICZ

Principal Deputy Assistant Secretary for Fossil Energy

Robert S. Kripowicz was appointed U.S. DOE Principal Deputy Assistant Secretary for Fossil Energy on March 4, 1996. As Principal Deputy Assistant Secretary he is assisting the Assistant Secretary for Fossil Energy with the internal development of a working budget and the external negotiations with appropriators in Congress. Mr. Kripowicz will also help the Assistant Secretary with strategic planning. One of his main duties will be to build a unified focus for the Fossil Energy coal, oil and natural gas programs for the long term.

Mr. Kripowicz previously was appointed Acting Deputy Assistant Secretary for House Liaison in April 1995. As House Liaison he was responsible for coordinating all interactions with members and staff of the House of Representatives on departmental programs. He was also responsible for establishing legislative and budget strategies and for coordination of hearings, floor, and conference action on all legislation in the House affecting the Department.

Previously, he was appointed Deputy Assistant Secretary for Building Technologies in January 1995. The Office of Building Technologies, within the Office of Energy Efficiency and Renewable Energy, is responsible for Department of Energy (DOE) programs to increase the energy efficiency of the nation's residential and commercial heating and cooling systems; solar systems; high efficiency lighting, windows, and equipment; and advanced building materials.

Prior to joining DOE, Mr. Kripowicz was on the staff of the House Interior and Related Agencies Subcommittee of the Committee on Appropriations. He was responsible for appropriations for DOE programs in energy efficiency, fossil energy, clean coal technology, and Strategic and Naval Petroleum Reserve activities, as well as Interior Department energy, scientific, and land management programs. He also served as Staff Director of the House Energy Subcommittee of the Committee on Science and Technology, responsible for energy efficiency, renewables, fossil energy, high energy and nuclear physics, and basic science programs at DOE.

Mr. Kripowicz began his government career in the early 1970's in program analysis and budgeting activities at the Atomic Energy and Nuclear Energy Commissions and the Energy Research and Development Administration.

In the private sector, Mr. Kripowicz managed research and development programs at Mechanical Technology Inc.; construction contracts for Consolidated Edison of New York; and financial planning and budgeting at NUMEC, a nuclear subsidiary of ARCO, and was a chemist for Dupont. He also served as an officer in the United States Army. Mr. Kripowicz received his B.S. in chemistry (cum laude) from Lafayette College in 1963, and his M.B.A. from the University of Pittsburgh in 1970. A native of Butler, Pennsylvania, Mr. Kripowicz currently resides in Frederick, Maryland.

March 1997

Mr. REGULA [presiding] We'll call the committee to order and we've got a lot of time constraints, so we're going to move this morning.

We're happy to welcome you, Ms. Godley, and we're going to put your statement in the record, and also you, Bob. It's nice to be on the other side of the table, huh? [Laughter.]

Your statement will be made part of the record and we'd appreciate it if you'd summarize.

Ms. GODLEY. Thank you, Mr. Chairman. In fact, I'd like to limit my opening remarks to just a few brief comments that will emphasize not only the importance of the budget that we are presenting to you, but also the importance of energy, and particularly fossil energy in a larger context. Most of us don't think about the fact that we rely on energy for every single thing that we do from the moment we get up in the morning and pour that glass of refrigerated orange juice; pop the toast in the toaster; and adjust our heat or airconditioning; hop in the car and drive to work, turn on our computers; get on an airplane to go to those important meetings; cash our paychecks that result from the manufacture, sale, and export of the products of our work and our industries, products we could not have made or consumed or exported without energy; enjoy the protection of our armed forces whose weapons, communications systems, global mobility would not be possible without energy.

In fact, Americans spend more than a half a trillion dollars each year on energy. Just over \$200 billion of that is for electricity, another \$200 billion for oil. Energy is not just another commodity. It is imperative to our economy, our quality of life, and our national security.

Mr. Chairman, another fact that you know well is that fossil fuels supply 85 percent of the energy Americans consume. Fossil fuels are the reason why we have the strongest economy in the world. They are why we enjoy a standard of living that is the envy of the world. And it is important to recognize that even as energy consumption grows in this country, perhaps by as much as 20 percent over the next 15 years, the contribution of fossil fuels will grow. Even with the significant progress in the efficiency with which we use energy and the increase in affordability of renewable energy resources that Assistant Secretary Ervin will be discussing, our Energy Information Administration forecasts that coal, oil and natural gas will be supplying 88 percent of the energy this Nation will require by the year 2015.

But the increase in the use of fossil fuels brings with it two very significant challenges. First, the increased use of fossil fuels results in increased environmental impact and pollution resulting from the combustion of those fuels. We're not alone in this regard. World energy use is projected to increase by 33 percent by the year 2010 and most of that growth will be supplied by fossil fuels.

China, just as one example, will double its coal use over the next ten years, much of it fueling its huge increase in demand for electricity which will require the addition of between 30 and 50 new 330megawatt power plants a year over this period, providing a huge new potential market for U.S. technologies and an opportunity to create thousands of new U.S. jobs.

China's cities, just as an example, now suffer the emission of two times the legal limits of sulphur dioxide that we require in this country and ten times our legal limits of smogcausing nitrogen oxide. These pollutants are why in many of China's cities, as in other cities in the East, residents literally see and taste the air that they breathe. China's greenhouse gas emissions will triple by early next century with global as well as local impact.

The second challenge from increased fossil fuel use in this country comes from our heavy reliance on imported oil and petroleum products which supply about 98 percent of the fuel consumed in our transportation sector. That reliance requires us to import nearly 50 percent of our oil supplies today, which at \$50 billion a year creates the largest component of our trade deficit and a projected 60 percent of imports by 2015. And by 2015 it is projected that more than 50 percent of the oil we import will come from the Persian Gulf.

Mr. Chairman, the budget that we are presenting to you provides Americans with the tools to effectively address both the environmental and the energy security challenges of fossil fuel use. The funds that we are requesting for research and development will develop technologies that will produce more domestic oil and gas at lower costs and cut our oil imports by up to a million barrels per day by the year 2010 and increase our natural gas production in the United States by 3.7 trillion cubic feet per year—technologies that, when developed, will allow us to use our vast domestic coal resources, and we have more proven reserves of coal in this country than the rest of the world has proven reserves of oil, in ways that are ten times cleaner than today's standards, virtually eliminating the common pollutants associated with coal in electric power generation. We have concepts that can cut the release of carbon dioxide in half from power generation, buying us decades of time to develop permanent solutions to global climate concerns.

With advanced technology we can continue to rely on America's true energy strengths—coal, oil and natural gas—without compromising our commitment to a cleaner environment, our commitment to a stronger economy, and our commitment to a more secure energy future.

In short, our program focuses on cutting edge R&D concepts, concepts that are well beyond the technological timetables of corporate research and development, but they are not overnight wonders. Their success depends on sustained commitment to R&D by the government at a time when private sector R&D is being severely curtailed.

With that, I think I'll conclude my comments this morning and welcome your questions and those of the other members.

[The prepared statement of Patricia Godley follows:]

Statement of
Patricia Fry Godley
Assistant Secretary for Fossil Energy
U.S. Department of Energy
to the
Subcommittee on Interior and Related Agencies
Committee on Appropriations
U.S. House of Representatives
April 9, 1997

Fossil fuels are fundamental to this country's future. We cannot expect to heat our homes, fuel our factories, power our automobiles or grow the economy without these fuels. In fact, in both the 1996 and 1997 editions of the Energy Information Administration's *Annual Energy Outlook*, one projection remains constant:

Fossil fuels, which supply 85% of our nation's energy today, will increase their energy contribution in the 21st century. By 2010, the United States will likely rely on coal, petroleum and natural gas for up to 88% of its energy.

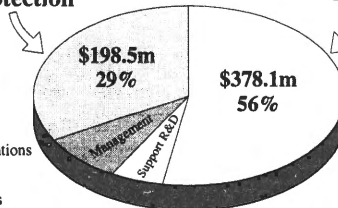
A future in which fossil fuels continue as the nation's energy mainstays can offer significant benefits – affordable prices, abundant supplies, reliable delivery, increased employment, and enhanced environmental quality – *if* we are willing to invest today in research and development and in the readiness of our Strategic Petroleum Reserve.

The Administration's FY 1998 budget request continues to make these investments. Traditionally we have presented our budget according to *where* funding would go: coal, oil, natural gas, petroleum reserves, etc. This diagram presents a better picture of *why* we invest tax dollars in fossil fuel programs:

**21st Century
Environmental Protection**

- Cleaner, higher-efficiency electric power generation
- Expanded availability and use of natural gas
- Improved environmental compliance in oil/gas operations
- Cleanup and stewardship of DOE fossil energy assets

\$672.4 Million¹



Domestic Oil Security

- Full readiness of the Strategic Petroleum Reserve
- Maximum value from the Naval Petroleum & Oil Shale Reserves
- Advanced technologies to sustain domestic oil production
- Longer-range option to produce affordable liquids from coal and natural gas

Over 85% of the \$672.4 million¹ we are requesting would be directed at the two highest priority national needs for the future use of fossil fuels: *environmental protection* and *domestic oil security*.

¹ This figure would be offset by \$286 million in funding reductions in the Clean Coal Technology Program and \$1.5 million in interest from the Great Plains Project Trust.

Protecting the 21st Century Environment

Americans are more environmentally conscious today than ever before. And America's leaders face a fundamental choice in responding to the public's demand for a cleaner, healthier environment: invest a relatively small amount today in new technologies that will be environmentally superior and affordable, or risk adding billions of dollars in additional consumer and ratepayer costs from more stringent regulatory strategies being proposed today and in the future. Our FY 1998 budget reflects our view that an investment in R&D today is the most cost-effective way to address future environmental concerns

Almost the entire budget in this category would go for research into new technologies that can dramatically reduce sulfur, nitrogen oxide and particulate pollutants, cut carbon dioxide in half, and minimize liquid and solid wastes from energy facilities. Our R&D program also has the goal of reducing electricity costs by up to 20% and lowering oil/gas environmental compliance costs by up to 40%. Our budget for this priority area is:

FY 1998 Investments in 21st Century Environmental Protection

Program/Activity (Budget Authority in millions of dollars)	FY 1997 Approps.	FY 1998 Request
Coal-Based Electric Power Technologies	\$ 69.27	\$ 66.34
- Advanced Pulverized Coal (Low-Emission Boiler) Power Plant	9.50	5.46
- High-Efficiency Pressurized Fluidized Bed Combustion	17.85	17.88
- High-Efficiency Integrated Gasification Combined Cycle	22.50	22.34
- Indirectly Fired Cycle Technology	10.01	10.93
- Advanced Research and Environmental Technology	9.41	9.73
Coal Preparation (Pre-combustion Cleaning)	\$ 5.10	\$ 5.06
Natural Gas-Based Power Technologies	\$ 96.72	\$ 77.67
- Advanced Gas Turbines	46.60	31.38
- Next Generation Fuel Cells	50.12	46.29
Natural Gas Supply Technologies	\$ 19.38	\$ 21.99
- Exploration & Production	14.12	14.90
- Delivery & Storage	1.00	0.99
- Utilization (except for Gas-to-Liquids in <i>Oil Security</i> , see p. 14)	1.61	1.48
- Environmental & Regulatory	2.65	4.62
Petroleum - Environmental Efforts	\$ 10.82	\$ 12.33
- Environmental Research for Exploration & Production	5.46	6.41
- Processing (Improved, Cleaner Refining Technologies)	5.36	5.92
Environmental Restoration (DOE-Fossil Energy Sites)	\$ 13.03	\$ 12.94
Fuels Programs (Natural Gas/Electricity Authorizations)	\$ 2.19	\$ 2.17
TOTAL	\$216.51	\$198.50

Cleaner Technologies for 21st Century Coal Plants - We believe our confidence in technological approaches to environmental protection is well-founded. Since 1970, for example, advances in power plant pollution control technology have reduced annual sulfur dioxide (SO₂) emissions from U.S. coal power plants by 25% and lowered particulate emissions by 90% while coal use has increased by 140%. The typical 500 MWe coal-fired power plant emitted more than 60,000 tons per year of SO₂ in 1970; today the same size plant emits only 20,000 tons per year. It once cost nearly \$600 per ton to remove SO₂ from a power plant's flue gas; since 1970 technological advances have lowered the cost to \$350 per ton, saving consumers nearly \$25 billion.

More recently, low-NO_x burners developed in DOE's R&D program and tested in our Clean Coal Technology Program have dramatically lowered the cost of complying with more stringent ozone and smog regulations. Nearly one-fourth of the coal-fired capacity in the U.S. now uses these advanced burners, and twice that number will be retrofitted over the next three years. Without this investment in R&D, previously available technology would have cost 10 times more to achieve the same air quality standards.

The next major advance in cleaner coal combustion is likely to be the *low-emission boiler system*, a redesigned coal boiler that incorporates innovations in combustion and pollution control. Our FY 1998 program moves into this boiler's final stage of development with one lead developer selected to build and test a prototype. If successful, this technology could reduce emissions to 1/6th of today's regulated levels,² boost power plant efficiencies to at least 42% (compared to current levels of 33-35%), and be particularly attractive in a growing international market for coal-fired power plants as well as in the United States.

Efficiency improvements are especially important for 21st century environmental protection. Most people view energy efficiency in terms of how we use energy -- the fuel efficiency of automobiles, the energy consumption of household appliances, the energy used in making industrial products, etc. But energy efficiency also can be applied at the power plant with equally dramatic fuel savings and pollution prevention benefits.

Moreover, improving "front end" power plant efficiency is one of the most effective ways to reduce carbon dioxide emissions. We continue to believe that the United States can achieve substantial greenhouse gas reductions through a combination of "front-end" and "end-use" efficiency improvements. A 50%-efficient coal plant would emit 1/3rd less carbon dioxide as today's typical 33%-efficient plants. Given the likelihood that coal will continue to generate more than half the nation's electric power well into the next century, boosting average power plant efficiency is one of the best ways to meet greenhouse emission reduction goals while keeping energy costs affordable.

² Based on current New Source Performance Standards

Our FY 1998 program continues to fund R&D to improve “front-end” efficiency. Our *advanced pressurized fluidized bed combustion* and *integrated gasification combined cycle* R&D efforts are pushing power plant efficiencies to 50% or greater while reducing emissions to 1/10th of today’s permitted levels and lowering the cost of electricity.

In FY 1998 we will begin testing an advanced pressurized fluid bed module at our Wilsonville (AL) Power Systems Development Facility. This is a key test series that will feed data to the design of a 2nd-generation pressurized fluidized bed power plant to be built at Lakeland, FL, in our Clean Coal Technology Program. The Wilsonville facility will also be used in FY 1998 to test hot gas filters that will be needed for the next generation of fluidized bed and gasification combined cycle plants.

Filter development is still a major technological challenge. If we cannot develop reliable, long-lasting filters suited to the high-temperature environments of advanced fluidized bed and gasification based power systems, we cannot achieve the full efficiency potential of these technologies. While recent progress in hot gas filters has shown promise, we believe it is prudent to continue investing in an alternative to pressurized fluid bed and gasification-based technologies. In FY 1998 we propose to continue developing the *indirectly fired cycle technology*, a distinctly different approach to coal-based power generation. In an indirectly fired cycle, innovative high-temperature heat exchangers prevent the hot coal combustion gases from contacting downstream power equipment.

We also believe it is prudent to continue investing in technologies that can reduce the trace elements that form hazardous air pollutants. Our *coal preparation* and *advanced environmental technology programs* continue to emphasize research that can minimize the release of mercury and other air toxic precursors from power plants. Since no commercial technology exists today that can effectively reduce these emissions, our R&D program can provide important data and technological options should the Environmental Protection Agency issue future regulations governing these trace elements.

It may be possible in the long-term to eliminate emissions from a coal plant entirely. Through R&D, we are achieving 99% or greater reductions of the pollutants that cause acid rain and smog. The longer-range challenge is greenhouse gas reduction, especially carbon dioxide. Our FY 1998 budget supports a small program of fundamental research in ways to capture and sequester carbon dioxide from power plants. If one day it becomes possible to do this affordably, the global benefits could be enormous.

21st Century Innovations for Clean, Natural Gas-Fueled Power Plants. Natural gas is our cleanest fossil fuel. Increasing its use is an integral component of our 21st century environmental protection strategy. One of the largest growth markets for natural gas is in the electric power sector; therefore, our FY 1998 program continues major efforts to develop two technologies -- the advanced gas turbine and the next-generation fuel cell -- that could expand the use of natural gas to generate electricity.

Our FY 1998 budget was prepared with the intention to select one of the two current developers in our *advanced gas turbine* program to design, fabricate and test the prototype of a 21st century, ultra-clean, high efficiency turbine. We are currently examining options for restructuring the program's final phase to permit both development efforts to continue within planned federal budget levels.

The gas turbine we envision will be unlike anything on the market today. It will incorporate innovations in gas cooling, combustion, pollution controls and materials that are well beyond the incremental improvements that private companies -- even the largest companies -- would make on their own. If the R&D is successful -- and the technological risks are still very high -- the United States can maintain its lead in low-NOx, high-efficiency turbine technology. We are in a global contest, and it is important that we give our domestic developers the same advantages offered by highly-leveraged, government-industry R&D partnerships that other governments are giving their developers.

A high-efficiency, low-polluting natural gas turbine can also bring electricity generation to regions where stringent air quality standards might otherwise block new generating facilities. We have set a target of 9 parts per million or less for nitrogen oxide (NOx) emissions from the advanced gas turbine with power generating efficiencies of 60% or more (13-15% higher than today's best technology). At this ultra-clean performance level, an advanced turbine could be sited in such environmentally-constrained areas as the urban corridors of the Northeast and southern California. Without Government cost-sharing, U.S. developers would likely pursue a lower risk approach and opt for a less environmentally-effective turbine. Such a turbine would be marketable overseas but probably not capable of achieving its full potential in the United States for many years to come.

The advanced gas turbine also will be critical to other long-range, high-risk technologies in our R&D program. For example, advanced turbine technology will be necessary to achieve our efficiency goals for future gasification-combined cycle plants or for advanced configurations of pressurized fluidized bed technologies.

Likewise, our next-generation *fuel cell* program is also "pushing the envelope" of efficiency and environmental performance. Fuel cells are a radically different power technology, operating like a battery rather than using combustion. They offer the highest potential efficiencies and environmental cleanliness of any fossil fuel technology.

Moreover, like the gas turbine, fuel cells can operate as standalone power sources fueled by natural gas, or they can be integrated with advanced coal-based technologies. The first commercial fuel cells are being fueled by natural gas - a less expensive fuel source today than gas made from coal. As R&D advances, however, fuel cells could become part of an "ultimate coal plant"-- a plant with unprecedented levels of power generating efficiency and dramatically lower levels of CO₂ emissions.

In FY 1998 we have chosen to retain all three contractors in our fuel cell R&D program. To stay within the Administration's budget targets, however, we have had to stretch out development schedules by up to 2 years (from 2000 to 2002). Our decision to keep all three contractors in our program is based largely on the fact that two are small, entrepreneurial businesses,³ formed for the purpose of developing this new energy option. A government decision to withdraw from their cost-shared programs would likely result in their collapse or perhaps the entry of foreign investors to fill the gap. The third developer is pursuing a different type of fuel cell technology - an all-solid-state concept - which, if successful, could offer several advantages, particularly when integrated into a future gasification plant. We believe it is important to retain this option in our program.

In FY 1998, therefore, we propose to continue cost-shared projects with two developers to reduce the costs of molten carbonate fuel cells. For the third, we propose to share the cost of a small (100-kilowatt) solid oxide fuel cell power plant, the first time that all of the components of a complete fuel cell system of this type will be integrated.

Assuring Future Supplies of Natural Gas. If the United States is to take full advantage of the environmental and economic benefits of increased natural gas use, it must also invest in R&D that can assure long-term, competitively-priced natural gas supplies.

Since 1985, because of advanced drilling technologies, 3-dimensional seismic imaging and improved fracturing techniques, U.S. producers have been able to increase gas production by 14% despite a 50% decline in wellhead prices. It took only 9,000 wells in 1994 to find and produce what 14,250 wells found and produced in 1985. Today, because of technology, U.S. producers locate and produce more gas with fewer dry holes and at less cost than ever before.

In the 21st century, the need for technological advances will be even greater. U.S. demand for natural gas is expected to increase by more than 30% by 2015 (the equivalent of approximately 4 million barrels per day of oil). These projections assume that advanced technologies will be ready in time to keep gas prices affordable. If they aren't, the nation will lose many of the environmental benefits of increased natural gas use and will likely become even more dependent on imported oil.

Cost reduction is a critical R&D goal. Future gas supplies will have to come from deeper (greater than 15,000 feet), and more geologically complex formations. In coming years the vast, mostly untapped basins in the West, the mature reservoirs in Appalachia, and the large remaining deposits in the South and Southwest will become important sources of domestic natural gas. These gas resources are more difficult and therefore more expensive

³ Energy Research Corporation and M-C Power are the two companies developing molten carbonate fuel cell technology; Westinghouse Electric Corporation is developing the solid oxide concept.

to produce. To keep costs down, exploratory drilling will have to become even more accurate, and gas extraction techniques even more effective. And unless more cost-effective environmental protection strategies and technologies are available, environmental compliance requirements could place an enormous burden on producers and put some natural gas resources out of economic reach.

To reduce costs and boost the economical production of natural gas, our FY 1998 program continues to invest in a new generation of drilling, completion and stimulation technologies. By 2010, our goal is to develop a more advanced array of key tools to help industry (1) reduce drilling costs by 13%, (2) lower operating costs by almost 20%, and (3) produce natural gas from formations that are beyond the reach of current technology and economics. If these technologies are deployed by industry, we believe it will be possible to boost domestic natural gas production by 3.7 trillion cubic feet per year⁴ in 2010.

We plan to extend the highly successful "secondary gas recovery" project into the Appalachian Basin. This project, which applies new technologies and methods to locate natural gas bypassed in older gas fields, already has revealed the potential for nearly 4 trillion cubic feet of additional reserves in Southwest Texas with an economic value that could approach \$1.4 billion. We propose to continue our collaborative work with industry to test and accelerate the market acceptance of new drilling systems, such as lower-cost slimhole and underbalanced drilling technology, and new reservoir stimulation technologies such as CO₂/sand fracturing which has been shown in an Appalachian Basin test to produce two to five times more natural gas than other methods. We are currently testing jet-assisted drilling technologies applicable to deeper, harder formations and steerable air percussion drilling systems for drilling slant or horizontal wells (which intersect a greater cross-section of a gas-bearing formation than a traditional vertical well).

The relatively small increase we are proposing for natural gas supply R&D funding in FY 1998 will be used for small demonstrations of innovative ways to collect and use waste methane released from coal mining. Only a few (about a dozen) of the nation's large, gassy mines profitably collect methane for sale to nearby pipelines. At most mines, it is vented to the atmosphere. Methane is 25 times more potent than carbon dioxide as a greenhouse gas, therefore finding ways to collect and use it can help alleviate greenhouse gas concerns as well as add to the nation's domestic energy sources.

Improving natural gas storage can also lower costs and increase the use of natural gas. Many advanced drilling and stimulation technologies being developed for gas production will also be applied to improve reservoir storage well deliverability and reliability. For example, we have shown that horizontal drilling can improve gas deliverability that could not be sustained by present vertical wells. We have also supported the CO₂/sand fracture technology can boost deliverability from storage field wells by 600%.

⁴ Current natural gas production in the United States is 18.5 trillion cubic feet per year.

Better Environmental Compliance in Oil/Gas Fields. The nation's increased environmental consciousness has led to numerous Federal and State regulations being imposed on oil and gas operations in the United States. While these regulations have led to many environmental improvements by the petroleum industry, compliance has been costly and is becoming increasingly complex.

Currently, the petroleum industry, including the refining sector, spends as much on environmental protection as it spends on searching for new domestic supplies of oil and natural gas -- nearly \$10.6 billion per year. By investing in better compliance strategies and technologies, however, it may be possible to reduce the cumulative price tag by as much as \$16 billion between now and 2010. This will permit more dollars to be invested by the private sector into actual oil and gas production without compromising environmental protection.

These huge benefits -- in cost-savings, environmental protection, and future domestic energy supplies -- are the reason why we propose to increase our funding in FY 1998 for environmental compliance research and regulatory improvements. Our independent industry advisory council agrees. This effort was singled out by the National Petroleum Council as the highest priority government initiative that could benefit the domestic oil and gas industry.

Some of the funding would go to improved environmental compliance technologies, including the development of remote sensing technology for natural gas leaks, and techniques for treating and disposing of naturally occurring radioactive materials (NORM) and waste water produced by gas and oil operations. We intend to apply some of the unique capabilities of our national laboratories to assist in developing better environmental compliance methods.

The majority of our program, however, is not concentrated on new technologies but rather on more "common sense" regulations. We believe that environmental protection in oil and gas operations can be made more affordable without decreasing its effectiveness. Much of our work in FY 1998 will be in the area of risk assessment -- ensuring that problems posing the greatest risks to the environment are being addressed while, at the same time, giving Federal and State agencies the analytical tools to evaluate whether costs of new regulations are commensurate with the environmental risks. We will complete work in four States⁵ to determine where variances for oil and gas injection wells can be granted in areas of low environmental risk, and implement risk-based data management systems for improved regulatory decision making in 10 States.⁶

⁵ Texas, Oklahoma, Kansas and California

⁶ Florida, Alabama, Alaska, Montana, Ohio, North Dakota, Oklahoma, Texas, Kansas and California

We also propose to continue research in FY 1998 that will provide new tools and techniques for petroleum refiners to identify and reduce pollutants from their operations. By improving refineries' yields of high value transportation fuels and petrochemicals, we are not only providing industry with the capability to produce more refined products domestically, we are also developing the means to reduce the amount of low-value products and waste materials that must be disposed of. This is an important environmental benefit, particularly in areas where land use and waste disposal are becoming major environmental concerns.

Between 2000 and 2010, U.S. refineries are expected to spend \$152 billion for facilities and programs to meet air, water, waste, health and safety regulations. Even a small improvement in the cost of technology that reduces air emissions, treats waste water and makes effective use of residues and spent catalysts can make the difference in whether the United States has a vigorous refining industry in the 21st century.

Increasing Domestic Oil Security

The United States continues to import record rates of foreign oil. Currently the United States relies on imports for about half of its petroleum needs. By 2010 U.S. oil imports could grow to 60% of domestic consumption, and the Persian Gulf nations, with 2/3rds of the world's oil reserves, could be providing more than 70% of the world's oil exports, surpassing their peak of 67% in the embargo year of 1974. Most Americans today fill their gasoline tanks without remembering the long lines of the 1970s; yet, there have been three major oil disruptions in the past 23 years, each causing domestic and international turmoil.

The seriousness we assign to oil security requires our strategy to be both immediate and long term.

The "immediate" element is our commitment to a fully capable Strategic Petroleum Reserve. Also in the near term, we want to maximize the value and production of one of the nation's largest oil fields -- the Elk Hills Naval Petroleum Reserve -- by offering it for sale to the private sector.

The longer-term component is research and development to increase the recovery of domestic oil and to develop alternative liquid fuel resources that reduce our dependence on conventional petroleum.

Our proposed FY 1998 investment in these three Domestic Oil Security priorities is:

FY 1998 Domestic Oil Security Investments

Program/Activity (Budget Authority in millions of dollars)	FY 1997 Approps.	FY 1998 Request
Strategic Petroleum Reserve	\$ 0	\$ 209.00
- Storage Facilities Development and Operations	204.00	193.00
- Management	16.00	16.00
- Receipts from Crude Oil Sales	-220.00	0
Naval Petroleum & Oil Shale Reserves	\$ 143.79	\$ 117.00
- Reserves Nos. 1 (Elk Hills) and 2 (Buena Vista Hills)	119.05	99.50
- Reserve No. 3 (Teapot Dome)	8.40	8.50
- Naval Oil Shale Reserves	1.40	1.20
- Program Direction	14.94	7.80
Oil Technology R&D (Exploration & Production)	\$ 35.12	\$ 39.84
- Recovery Field Demonstrations	5.60	6.05
- Exploration & Production - Supporting Research	29.52	33.79
(Note: E&P Environmental and Oil Processing Research are described in the "21st Century Environmental Protection" section.)		
Alternative Liquid Fuels R&D	\$ 15.29	\$ 14.11
- Coal-to-Liquids R&D (Direct, Indirect, Advanced Research)	11.06	10.78
- Natural Gas-to-Liquids R&D	4.23	3.33
Transfer to Cooperative R&D	--	-\$1.86
TOTAL	\$194.20	\$378.09

Maintaining a Fully Capable Strategic Petroleum Reserve. The Strategic Petroleum Reserve is the centerpiece of our nation's energy security program. The Reserve embodies a commitment to energy security which is just as relevant in today's world as it was over 20 years ago when the program was first created:

"to reduce vulnerability to economic, national security, and foreign policy consequences of supply interruptions by discouraging supply disruptions as a tool of other nations, and by adding to crude oil supplies in the United States, in the event of a disruption due either to political, military, or natural causes."⁷

As a member of the International Energy Agency, the United States is obligated to maintain strategic inventories, including private stocks, equivalent to 90 days of net imports. The peak of protection provided by the Strategic Petroleum Reserve alone occurred in 1985, when its inventory equaled 118 days of net imports. Since then oil imports have increased, fill of the Reserve ceased in 1994, and 28 million barrels of the Reserve's inventory have been sold. As a result, the protection afforded by the Reserve has been reduced to 67 days

⁷ Energy Policy and Conservation Act, 1976

of net imports. When private inventories are counted, the total current import coverage is 156 days. As widely reported, however, private stock levels declined sharply in 1996. Based on recent EIA import estimates, the days of import protection from the Strategic Petroleum Reserve will decrease to 46 days in 2002, implying a significantly increased dependence on private stocks, over which the federal government has no control, to meet our international obligations.

Consequently, our budget proposes no further oil sales from the Strategic Petroleum Reserve in FY 1998. We recognize that the Administration's "outyear" budget forecasts continue to include a proposal to sell oil in the year 2002 to complete the President's balanced budget commitment. All things being equal, we would prefer to have more crude oil in the Reserve, not less. But fiscal conditions require that we make this proposal. As we move closer to FY 2002, the need for this sale may change. Additionally, if the Reserve drops below 500 million barrels, legislative statute further limits the President's authority to use the Reserve to respond to supply shortages.

We share the concerns of many Members of Congress that oil sales from the Reserve have occurred without a consensus on a minimum acceptable inventory. The Department expects to issue a *Federal Register* notice near the end of April, requesting comments on various aspects of Strategic Petroleum Reserve policy including its size, use, and future financing. Public input will be used to develop an Administration Statement of Policy, which is expected to include, among other things, a minimum acceptable inventory for the Reserve. The goal is to complete the policy statement by the end of the year.

Meanwhile, as part of our oil security investment, one of our major goals is to complete a life extension program by the year 2000 which will ensure the readiness of the Strategic Petroleum Reserve through the year 2025. In FY 1998, we will bring the life extension program to the 84% completion mark. Also, we will degas the final 39 million barrels of oil (that had been rendered temporarily unusable because of the slow intrusion of gas from surrounding geologic formations), and finish the decommissioning of the geologically-unsound Weeks Island storage site. By the end of FY 1998 all of the Reserve's current 563 million barrel inventory will be available with an initial maximum drawdown rate of 3.9 million barrels per day.

Maximizing the Value of the Naval Petroleum and Oil Shale Reserves. The Department remains on schedule to place the government's portion of the Elk Hills field on the market and determine if its market value exceeds the value of the field under continued government ownership. If such a higher value can be achieved through the sale, the Department intends to complete the divestiture by the Congressionally-directed date of February 10, 1998.

We have taken several steps recently to ensure that the best interests of U.S. taxpayers are met in the divestiture. We have retained world-class experts to prepare an updated reserve

report for the field. We have hired an investment banking team that is among the best in the business, and it has devised a sales strategy that will maximize competition among potential purchasers and get top-dollar offers for the field. Finally, as required by the authorizing legislation, we have contracted with five experts in the valuation of oil and gas fields who will independently assess the value of the United States' interest in the field under continued Government ownership. Their assessments will provide the basis for establishing a minimum price. Together, these steps will maximize the market value of Elk Hills.

Given the divestiture schedule, the FY 1998 budget request provides sufficient funds to continue operations of the Elk Hills field for 7 ½ months. Included in this is a 3-month transition to a new owner.

Also, as specified by the 1996 National Defense Authorization Act, the Administration is preparing a study of options, or combinations of options, for maximizing the value of other naval petroleum reserves (other than Elk Hills). A preliminary report is currently undergoing Administration review, and we expect to submit it to Congress shortly.

Boosting Domestic Oil Production Through R&D. A key element of our domestic oil security strategy is to develop the tools and techniques that can slow, or perhaps reverse, the downward slide of oil production in this country. Past operations have recovered only one-third of the U.S. oil resource -- just over 150 billion of the estimated 533 billion barrels thought to exist in domestic fields. Yet high operating costs cause more than 16,000 wells to become unprofitable each year. As these wells are abandoned, U.S. oil production continues to decline, and imports continue to increase.

This situation, however, does not have to portend the future. Much of the remaining oil in U.S. reservoirs could be produced if more effective, lower cost technologies can be developed. The problem, however, is that smaller independents are increasingly becoming the principal operators of U.S. fields. Already, they drill 85% of the new wells and produce 50% of the crude oil and 60% of the natural gas in the lower 48 states. The smaller, independent operators have neither the staffs nor the budgets for R&D. Often they must depend on service companies for innovative technology, and even then, many smaller companies are reluctant to invest in new advances without a proven record of success.

The days of "Big Oil" dominating the U.S. oil industry are fast fading, and our R&D program reflects the growing importance of the smaller producer. More than 95% of the research performers in our petroleum R&D program are non-major oil companies. They are independents, service companies, universities, state agencies and research institutions.

Our oil technology R&D program has one central goal: reducing costs of domestic oil operations. Lower exploration, production and environmental compliance costs will lead

to greater domestic production. Already our program has produced valuable knowledge that is maintaining -- and in some cases, increasing -- the flow of oil from U.S. fields. The success of one project alone in our field demonstration program has stimulated enough new commercial activity to offset the entire Federal investment (\$118 million) in the demonstration program.

In FY 1998 we propose to capitalize on the progress made to date. Half of the 32 projects in our field program will be producing data or will have been completed by next year. Many of the "Class I"⁸ projects -- the first to be funded -- have shown that modern-day improvements in hydrocarbon detection, well logging and production can add millions of barrels of additional oil reserves from fields that otherwise would have been abandoned.

We now have a demonstrated track record. We have shown that Federal cost-sharing -- coupled with a requirement for aggressive technology transfer -- can revitalize many endangered oil fields in this country. Based on this success, we are proposing a follow-on effort in FY 1998. We propose to target specific technology demonstrations in reservoir groups with the largest potential. If we can replicate prior successes in additional settings, we can keep oil flowing from literally thousands of domestic reservoirs and displace oil that otherwise would be imported.

We also propose to increase funding for the National Laboratory-Industry Partnership Program. This program has produced revolutionary advances -- such as downhole well-to-well tomography -- that offer greater resolution and accuracy than was believed possible just a few years ago. Guided by industry's input, one of the key partnership efforts we propose in FY 1998 will be to apply lab expertise in developing single-well seismic imaging technology. Our target is the 60% of Gulf of Mexico hydrocarbon resources that are in sub-salt or salt flank reservoirs. This huge potential find -- perhaps larger than Prudhoe Bay -- is virtually impossible to image accurately with conventional methods because of interference from the salt formations. But using technology and computer codes first developed for the nation's defense, we may be able to provide a key for unlocking billions of barrels of new oil resources from this frontier. We will also continue industry-laboratory partnerships in drilling and completion technology and in advanced oil recovery processes.

We also propose to increase funding in our exploration and drilling program. Our goal is to provide new subsurface geologic information and decision-making software to help small producers locate potentially productive zones in unexplored basins. We estimate that these new exploration tools could save operators \$25 million per year in dry hole costs while expanding production in such areas as the Black Mesa Basin of Arizona and in the

⁸ Class I was the first of three series of joint government-industry field tests of improved oil recovery technologies. Each class focused on a particular type of reservoir that had significant quantities of producible oil remaining but because of lack of technology, was on the verge of being abandoned.

mid-continental portion of the United States. These regions may contain undiscovered resources of 140 million barrels of oil and 0.7 trillion cubic feet of natural gas.

Preserving the Option of Alternative Liquid Fuels. The final element of our "Domestic Oil Security" strategy offers a longer-range alternative to conventional crude oil. Today there is no technological reason why our abundant, indigenous supplies of coal and natural gas cannot be a source of high-value petroleum substitutes. The challenge is cost. And we are bringing costs down with R&D.

In the last five years, we have made remarkable progress in converting natural gas and coal to high-grade liquid fuels and chemicals that greatly exceed the best petroleum-derived diesel fuels in emission and engine performance. Recent technology advancements in natural gas-to-liquids conversion technology offer prospects for producing transportation-grade fuels at costs of \$18-20 per barrel. New coal-to-liquid concepts that differ greatly from the old synfuel processes of the 1970s and 80s today show potential for producing liquids at \$25 per barrel, or perhaps even lower when the coal is mixed with waste plastics, scrap rubber or low-value petroleum resid.

New markets could also be opening for these processes. With the tightening of motor vehicle emission requirements in environmentally-sensitive locations, market demands for high-quality fuel blending stocks are increasing. Both coal and natural gas can serve as the feedstocks for such high-grade additives. In addition, one or more gas-to-liquid conversion processes could be ready for economical application in Alaska's North Slope in the next several years when Prudhoe Bay's vast gas reserves will no longer be needed to aid oil production. This technology would make use of Prudhoe Bay's vast gas reserves to provide a vital supplement to declining oil production that will be needed to prolong the economic viability of the Trans-Alaska Pipeline.

Federal involvement remains essential if the nation is to benefit from these longer-range technologies. In FY 1998, we propose to continue the scaleup and process testing of new gas-to-liquid concepts: the development of a ceramic membrane that can convert methane to a syngas "building block" for conversion into liquids without the need for costly pure oxygen; the development of a process to produce methyl chloride compounds which can subsequently be converted into liquids, and the development of a "plasma quenching" process to make acetylene from natural gas which can also be further processed into liquid fuels and chemicals.

In the coal-to-liquids area, we will continue bench- and lab-scale development of both direct and indirect liquefaction.⁹ In addition, we plan to coordinate both our coal- and gas-to-liquids research with the DOE Office of Energy Efficiency and Renewable Energy

⁹ In direct liquefaction, coal is converted directly into a liquid; in indirect liquefaction, coal is first gasified and the gases are chemically recombined to form liquids.

program to develop more efficient engine technologies for heavy vehicles. The superb environmental and power characteristics of converted coal and gas liquid transportation fuels makes the linkage of these two research programs mutually beneficial.

Supporting our Goals

Two other funding categories support our primary objectives:

Supporting Research. We propose to spend \$30.5 million in FY 1998 on crosscutting research and analytical support that provides the scientific knowledge and information to guide our main priorities. The elements that make up this effort are:

Program/Activity (Budget Authority in millions of dollars)	FY 1997 Approps.	FY 1998 Request
Advanced Research and Technology Development	\$ 17.62	\$19.73
Coal-Specific Research and Support		
- Coal Utilization Science	3.15	3.03
- Coal Technology Export Activities	0.85	1.05
- Bioprocessing of Coal	1.00	0.99
- University Coal Research	3.00	3.97
Fossil Energy-Wide Research and Support		
- Materials Research	5.07	5.23
- Crosscutting Analytical Support	3.60	4.35
- Minority Institutions Research	0.94	1.13
Cooperative R&D at University of North Dakota, Western Research Institute	\$ 5.57	\$ 5.84
Materials Research at Albany (OR) Research Center	\$ 5.00	\$ 4.97
TOTAL	\$28.19	\$30.54

These programs provide the fundamental knowledge, analytical background, and insights into new concepts that guide our R&D efforts. This research provides a bridge between the fundamental research supported in our national laboratories and the development of specific components that make up the advanced energy systems being developed by the Office of Fossil Energy. Projects in this area also identify the potential breakthrough advances and revolutionary innovations that could open new technology paths for clean and efficient fossil fuel use in the 21st century.

Program Management. We continue to improve our management efficiency, doing more with less, and working to ensure that more funding goes to vital programs and less to administrative overhead. For example, since FY 1995 in our R&D program, we have:

- Reduced federal personnel by 148 full-time equivalents, an 18% reduction;
- Reduced support service expenses by 21%;

- Merged the management of two of our major field R&D centers;
- Begun privatizing our national oil research laboratory in Oklahoma.

These actions will save an estimated \$153 million between 1995 and 2000.

We have completed similar streamlining and management improvements in our other programs. Since 1995 in our Naval Petroleum and Oil Shale Reserves, we have:

- Reduced operating personnel by 209 full-time equivalents, a 24% reduction;
- Reduced electricity costs by cogenerating electric power in the field (and selling excess production to the local grid);
- Reduced federal oversight personnel and implemented new management processes.

The result is a \$64 million savings from 1995-1998 in our Naval Petroleum and Oil Shale Reserves program.

In our Strategic Petroleum Reserve program, we have since 1995:

- Reduced contractor personnel by 150 full-time equivalents;
- Reduced federal personnel by 30 full-time equivalents;
- Begun turning idle/underused facilities into a source of federal revenues.¹⁰

The combination of these Strategic Petroleum Reserve initiatives will save or return to taxpayers nearly \$138 million through the year 2000.

In total, our management initiatives in the Office of Fossil Energy will save taxpayers nearly \$355 million over the 1995-2000 period. We are serious about doing our part to reinvent a government that works smarter and costs less.

The Clean Coal Technology Program - An Investment Paying Off

The FY 1998 budget proposal described in the preceding pages totals \$672.4 million. We propose offsetting a significant portion of this funding by returning to the Treasury and deferring a total of \$286 million from the Clean Coal Technology Program. This proposal does not affect our commitment to ongoing projects; rather, the funding will be available because some Clean Coal Technology projects have been cancelled or restructured, or are being restructured this year.

¹⁰ The sale of the Weeks Island pipeline will bring in \$22 million in fiscal 1997 while the lease of the Bayou Choctaw pipeline and St. James marine terminal could provide revenue and cost savings of as much as \$16 million per year.

The funding profile for the Clean Coal Technology Program is as follows:

Clean Coal Technology Program (dollars in millions)	FY 1997 Approps.	FY 1998 Request
Previously Appropriated Funding	\$137.88	\$ 0
- Rescission (Returned to Treasury)	-123.00	-153.00
- Deferral to Future Years	0	-133.00
TOTAL	\$14.88	-\$286.00

As the chart shows, the Clean Coal Technology Program requires no additional funding to complete the demonstration program. In fact, it has already returned \$323 million to the Treasury in prior rescissions (\$123 million in FY 1997 and \$200 million in FY 1995). With the proposed rescission of \$153 million in FY 1998, the total Clean Coal funding returned to the Treasury will be \$476 million. DOE is also proposing a deferral of \$133 million from FY 1998 to FY 1999.

At the end of FY 1998, 26 of the 40 projects in the Clean Coal Technology Program will be completed or finalizing their reporting requirements, 7 projects will be operating, and 7 will be either in design or construction. Already 14 technologies demonstrated in the Clean Coal program are in commercial use, and repayment¹¹ of the Federal cost-sharing has begun. In FY 1998 this program, which the General Accounting Office described as a "model" for government-industry collaboration, will produce important data from:

- operation of the nation's first three commercial-scale coal gasification combined cycle power plants -- at Tampa, FL; Terre Haute, IN; and Reno, NV -- each facility achieving 95% or greater sulfur removal and 90% nitrogen oxide reductions;
- operation of the world's first commercial-scale liquid phase methanol facility at Kingsport, TN, capable of producing 260 tons/day of clean-burning, 97%-pure methanol from coal;
- startup of a commercial-scale advanced combustor power plant at Healy, AK, which will reduce sulfur dioxide by 90% or more and nitrogen oxides by 70%;
- completion of tests at an advanced coal processing facility in Colstrip, MT, that produces a clean fuel with a sulfur content as low as 0.3% and a heating value of up to 12,000 Btus/lb; and
- initial design of an advanced pressurized fluidized bed power plant at Lakeland, FL,

¹¹ Each Clean Coal Technology project agreement contains a recoupment clause obligating the industrial partner to repay the government's investment if the technology is successfully commercialized and marketed.

which will test two configurations that can reduce sulfur dioxide by at least 95% and nitrogen oxides by at least 80%.

We are requesting an advance appropriation for FY 1999 of \$50 million to support an international clean coal technology project in China. The funding would be used as an incentive for an integrated gasification combined cycle power generation project to be built in China using U.S. technology as a model for future plants in this large, emerging market.

Conclusion

Our FY 1998 budget request maintains our commitment to a balanced fossil energy program while reducing funding requirements. We have made hard choices in this budget, reducing the number of contractors in some projects, stretching schedules in others. Nonetheless we believe this budget will produce results. The investments we are proposing will help us deliver to the nation:

- Superior electricity generating technologies that can dramatically reduce air pollution from power stations in the 21st century and give us an affordable way to reduce greenhouse gases;
- Technologies that release new supplies of clean-burning natural gas from formations that are beyond today's capability, assuring that this abundant domestic resource remains affordable;
- The technological tools that will give our domestic oil producers -- primarily smaller independent companies -- the capability to slow the decline of oil production in this country without expensive government subsidies;
- The maximum value for the giant Elk Hills oil field -- the nation's 11th largest -- that has the best chance of reaching its full production potential under the ownership and operation of the private sector; and
- A fully capable Strategic Petroleum Reserve, large enough to effectively counter the economic disruptions of an energy emergency.

We look forward to working with this Subcommittee to achieve these goals. We ask your support for investments that will provide the environmental protection and domestic oil security the American public expects from its government in the 21st century.

Mr. REGULA. Thank you very much. We'll go right to the member questions. I have a couple, then we'll go with the other members.

CLEAN COAL TECHNOLOGY PROGRAM

You mentioned, of course, the importance of coal in our energy picture, and yet the budget proposes rescinding \$153 million and shifting that, and then I notice a supplemental proposes to rescind an additional \$10 million. How can you absorb all of this and still keep the Clean Coal Program on track, recognizing the importance of this both in terms of clean air, as well as in being able to use a fuel that's in an abundance in this country?

Ms. GODLEY. Sure, and you know that we have a continued commitment to the Clean Coal Technology Program. As from the beginning of the program we have always contemplated that not all of the demonstration projects would go to completion, and in fact what we've found is a number of our partners in these projects have withdrawn the projects.

The rescissions that we're proposing for the 1998 budget, as well as the rescission for 1997, is going to bring us to the edge of the funding commitments that we have. It will severely constrain our ability to meet cost growth in these projects, but, nevertheless, we believe we can meet the base project requirements with those rescissions.

And I might end by saying that we still have several projects that are still in the design phase and they may have a possibility of not going either. So while we don't know that, we're not making the judgments now. I think this is at the margin what we can do with rescissions.

Mr. REGULA. Well, as you know, we've rescinded over \$323 million. Has this resulted in projects being terminated?

Ms. GODLEY. No, sir.

STRATEGIC PETROLEUM RESERVES

Mr. REGULA. SPR—again, it's a matter of energy security—do you think we should sell more oil out of SPR to fund operations in the Fiscal Year 1998 budget?

Ms. GODLEY. No, sir. I don't believe that to be true. I think that we need to continue to fund—to get the request for funding that we've made for continued operations for SPR and not sell anymore oil in Fiscal Year 1998. That's an important oil security and energy security device for us, our insurance policy against interruptions in oil imports, and I believe we need to maintain it at its current level.

Mr. REGULA. Well, I notice the Administration is proposing to sell a billion dollars worth of SPR oil in 2002 and this is a little gamesmanship on getting a balanced budget. I fail to see the difference between selling 200 million a year for five years or selling a billion dollars of SPR oil in 2002, which would create a huge glut on the market, an overhang. I don't know if you had a voice in preparing this, quote, "balanced budget," but isn't that a bit of gamesmanship?

Ms. GODLEY. I think, from the beginning, what the Department has said with respect to that proposed sale has been that it is a budget holding device, a number in the budget, and that we're

hopeful that between now and the year 2002 that the economy will be such that we won't be required to sell that oil in order to meet a balanced budget. It is a placeholder, however, between now and then is how we're viewing it.

Mr. REGULA. It may be a leap of faith.

Ms. GODLEY. Excuse me?

EPA REGULATIONS

Mr. REGULA. It may be a leap of faith instead of a placeholder. As you know, EPA has proposed stringent new standards for regulating ozone and particulate matter. I've learned more about this issue. One thing that's clear—there's a dearth of science and there's not even an air monitoring system with the ability to track the levels of particulate that EPA has proposed regulating.

In fact, as I understand, they've asked for \$27 million to do more research. It's kind of like having a hanging and then you get the jury sequestered after you've hung the defendant. We get the science after the fact. What, if anything, has your agency done with respect to research on these pollutants and should more be done by your agency with respect to improving the science in this question of clean air and particulates and ozone?

Ms. GODLEY. My understanding of where the rulemaking is at this moment is, if or when issued, that the states would have a year and a half basically to develop their state implementation plans. I would imagine that those plans would require some amount of monitoring done at the state levels that would determine both the source and the amount of particulates that need to be addressed in those states.

We don't have currently any programs at DOE that would assist in that monitoring effort, but we have in the past teamed up with EPRI and with members of industry to monitor air toxics, pollutants emitted from power plants, in advance of a previous EPA rulemaking. We have some experience in that, but we don't have any ongoing research in the area of monitoring for particulates.

With respect to compliance with the standards, we, of course, have had significant successes in reducing SO₂ and NO_x reductions from power generation. We have currently a number of programs that would reduce NO_x emissions even further. So we have those in-house and there are some other efforts, other programs we could undertake with sufficient funding.

Mr. REGULA. Do you think there's adequate coordination between your agency and EPA?

Ms. GODLEY. We have a close working relationship with EPA. To my knowledge, we have had higher level consultation with EPA on this rulemaking, but we have not in the Office of Fossil Energy been involved in any.

Mr. REGULA. Who would get the \$27 million for research that they're proposing to expand?

Ms. GODLEY. I don't know, sir.

Mr. REGULA. Mr. Yates?

Mr. YATES. Yes, Mr. Chairman. I suggest, for your thrust about not knowing where they're going, the third chapter of "Alice in Wonderland." Do you remember the quatrain? "I'll be judge, I'll be

jury,' said cunning old Fury. 'I'll give them a trial and I'll put them to death.'"

Mr. REGULA. There you go. Always glad I have a great historian and a scholar in our midst. [Laughter.]

CLEAN COAL TECHNOLOGY

Mr. YATES. I'm as disturbed, I think, as the chairman is because Illinois is a coal-producing State and we do have sulfur coal. I was particularly struck by the statement where you said that you are committed to clean coal technology, and the elimination of particulates and the other pollutants. Yet you say your budget is adequate, even with this massive reduction this year. How can that be reconciled?

Ms. GODLEY. Are you speaking about the rescission in the Clean Coal—

Mr. YATES. That's only \$10 million, but there's also the failure to make available—what is it?—\$120 million that was originally called for?

Ms. GODLEY. Right. And then the rescission in the Clean Coal Program. Again, of the 40 projects in the Clean Coal Technology Program, a number of those projects have already dropped out through the decision of the project sponsors.

Again, the money that we proposed to rescind in 1998 is within the amount of money that we have as a result of some of those projects being terminated. Again, where we are somewhat at risk is we may not be able to fund any cost growth or additional cost growth in those projects if any should come in as a result of those—

Mr. YATES. What will you do if that happens?

Ms. GODLEY. Well, as you'll recall, in the Clean Coal Technology legislation, the Federal Government was authorized to fund up to 25 percent of the base project in cost overrun—authorized, but not required to. And that's been an understanding of the program from the beginning. So if the Federal Government, if we did not have the funds available to meet the cost growth requirements, those requirements would have to be met by the project sponsors.

Mr. YATES. Well, will you be on track? When do you anticipate that your statement will reach fruition? When are we going to say to the producers of coal in Illinois we have this available to make your coal clean? What's your timing on that?

Ms. GODLEY. Our advanced research in the area of clean coal technology, in addition to the Clean Coal Technology Program, is projecting that we can—especially if we combine some of our combustion technologies with, for example, fuel cells—can reach efficiency levels in excess of 60 percent while reducing SO_x and NO_x and those sorts of pollutants by less than one-tenth of the currently applicable new source performance standards and lower the cost of electricity—

Mr. YATES. When will you achieve this?

Ms. GODLEY. That high of standards is in the 2010–2015 time range under current program projections.

Mr. YATES. I want to yield.

Mr. REGULA. I wish you could see the Tampa Electric Greenfield plant. They're getting close to accomplishing the goals that we're talking about.

Mr. YATES. What does their research do at the Tampa Electric plant?

Ms. GODLEY. The Tampa plant is a demonstration of integrated gasification, combined cycle power generation technology. And those efficiencies in that plant are expected to be up at the 45-48 percent efficiencies. As you know, about 35-37 percent——

Mr. YATES. Well, I have the impression that there's a relationship between the progress of your research programs and the amount of money that's available.

Ms. GODLEY. Absolutely.

Mr. YATES. Okay. And if the amount of money is reduced, doesn't that have an effect on your research? Now, as I understand what you're saying is the amount of money that you have set aside for programs that have dropped out will permit you to absorb whatever reduction the committee recommends.

Ms. GODLEY. Yes, sir.

Mr. YATES. Well, let's take the contrary. Suppose the committee makes more funds available to you. Will that speed up your program?

Ms. GODLEY. Yes, sir, it would. I will add the caveat that under the Energy Information Administration's projections of when new baseload power plants, either coal-fired or natural gas-fired power plants, will be required in this country, that those power plants will not be required until after the year 2005 in any large number. So that our technology window is aimed at that new market or new requirements for baseload power plants.

Mr. YATES. Well, suppose the committee were to recommend more money than the budget calls for. Would that help you?

Ms. GODLEY. It would accelerate the completion of the research and development and, in some cases, demonstration that we're working on, yes, sir.

Mr. YATES. And how much money do you think you would need for that?

Ms. GODLEY. I can't give you a number off the top of my head. Again, I don't believe we need additional money in the Clean Coal Technology Program because we think we can fully fund the projects in those programs even with the rescissions we're requesting.

Other areas, we might take it on a project-by-project basis. For example, in the Low Emission Boiler Systems Program, if we had an additional \$15-20 million in that program, we could keep it on its current time track which is to be completed in the year 2000. Our request is lower than that requirement and extends the program to the year 2002.

So on a program-by-program basis we do have numbers that would keep us on a 2000 year time track instead of a 2002 time track. That's the same thing in the Advanced Gas Turbines Program, the LEBS program, and the fuel cells program.

Mr. YATES. Would you amplify your answer for the record——

Ms. GODLEY. Yes, sir.

Mr. YATES [continuing]. Where the funds could be used and how beneficial the additional funds would be?

Ms. GODLEY. Yes, sir. I will.

[The information follows:]

COAL R&D PROGRAM

In order to keep Coal R&D programs on their present, year 2000 completion schedules, additional funding would be needed in the following programs:

<u>Program</u>	<u>Additional Funding</u>
Low Emission Boiler Systems	\$15 - \$20 M
Advanced Turbine Systems	\$15 M
Fuel Cells	\$12 M

Benefits of maintaining the completion schedules by the year 2000 for these technologies include:

- **Low Emission Boiler Systems (LEBS):** Completion of this program on schedule will allow the timely development of advanced pulverized coal power technology for near term repowering of aging coal power plants nearing their end of life. The EIA forecasts about 39 gigawatts (that is about a \$39 billion investment or 390 100-MW plants) of domestic coal based capacity additions/replacements by 2015. Repowering with LEBS can improve overall power plant efficiency (up to 49 %), thereby reducing CO₂ emissions in the near term, while significantly reducing overall emissions of SO₂, NO_x, and particulates to meet more stringent environmental emission standards at competitive costs of electricity.
- **Advanced Turbine Systems:** Restoring the schedule to year 2000 will allow the new class of turbines of high efficiency (over 60 %) gas turbines to be available in time to address the projected domestic electricity generation demand over the next ten years with ultra-clean (less than 9 parts per million on NO_x and extremely low SO₂ emissions). The EIA forecasts indicate a 100 gigawatt (or about 1,000 plants of 100-MW size) of domestic gas base capacity additions by 2015. Deployment of these turbines in this time frame can also enable U.S. industry to capture a larger share of the overall world market while creating thousands of high value jobs at home. International competition for this market is very intense from the Japanese and European manufacturers who are also receiving financial assistance from their respective governments. In addition, the timely development of these turbines allows the lead time needed in their subsequent adaptation to the other high efficiency coal power systems being developed for the mid term. These systems depend on the availability of these turbines as part of their power cycles to achieve the high efficiency, low emissions performance at lower costs.
- **Fuel Cells:** The benefits of restoring the schedule to the year 2000 will provide the necessary lead time to establish a new domestic fuel cell industry that can provide the cleanest (virtually immeasurable emissions), highly efficient (60%), portable power for distributed and on-site cogeneration in time to compete in a deregulated domestic electricity generation market. The early deployment of fuel cells will contribute to the long term reduction in CO₂ emission rates as well as the reduction in environmental

emissions as power demand grows. The establishment of a strong domestic industry will also create thousand of high value jobs based in industrial estimates of sales into the billions of dollars. Fuel cells will offer clean and affordable power to those areas that presently have difficulty attaining the regional emissions standards. Intense international competition exists in fuel cells development from industries in Japan and Europe which recognize the potential market opportunities in being the leader in the commercialization of this technology. This is especially pronounced in high growth, emerging countries with a desire for rapid electrification and which would otherwise have to make huge investments in an electricity transmission infrastructure in order to serve their needs. The foreign competitors also receive funding assistance for fuel cells R&D from their respective governments. Currently the U.S. is maintaining a slim lead, but the foreign competitors are continuing to out spend the U.S. in fuel cells technology development.

Also, additional funding could be applied to the development of low-cost emission reduction technologies to meet new EPA regulations on ozone and small particulate, as well as expand current R&D on developing technology (none exists now) for cost-effectively capturing mercury from plant emissions. Approximately \$20 - \$30 M would be required to pursue a comprehensive program in this area.

Additional funds for R&D to address emissions from existing coal-fired powerplants would offer the following benefits. First, although the standards have not yet been established, mercury compliance costs could be as high as \$7 billion per year. Targeted research funds in this area could reduce this cost by half or more, as has been the case with advanced technology improvements for SO_2 and NO_x controls. Second, it is likely that focused effort, conducted in partnership with industry, would develop a combustion-modification approach to controlling NO_x from cyclone-fired boilers. These boilers operate at high temperature and emit much more NO_x per unit of power than other designs, but are not amenable to traditional combustion-modification approaches, like low NO_x burners. Therefore, rather costly post-combustion systems, like Selective Catalytic Reduction (SCR) technology are needed to meet recent standards, and those likely to be implemented under pending regulations. The research could cut compliance costs by 80%, or over \$5 billion for the 20 years life of the systems. Third, additional funds would allow DOE to consider the potential of simultaneous control of multiple pollutants from a facility, an idea which intuitively seems economically attractive. Finally, DOE could work with a network of affected private sector parties to establish a network of fine particle monitors which would establish both the concentration of this pollutant and likely sources of the collected particles. This would greatly assist States in development of cost-effective mitigation strategies, as well as clarify where further technology R&D would be most prudently invested.

Mr. REGULA. Mr. Nethercutt?

Mr. NETHERCUTT. Thank you, Mr. Chairman. Welcome to you both.

Madam Secretary, I took particular interest, as the other members of the subcommittee did, in your comments about clean coal and coal technology. As you know, the President made the declaration under the Antiquities Act to name a national monument in Utah. The declaration really frustrates the development of low-sulphur, low-ash coal deposits, perhaps some of the richest in the world. My information is that the development would have covered about forty surface acres of land out of about 1.8 million acres.

First of all, do you support that decision?

Ms. GODLEY. Yes, sir, I do support it.

Mr. NETHERCUTT. Even though it can clearly be perceived as contrary to your argument that we need to look at clean coal as an alternative to other fossil fuels that we're currently using?

Also, I assume you consider in your answer the fact that we have low-sulphur, low-ash deposits in—where?—Indonesia. We are effectively shipping our energy development—at least for low-sulphur, low-ash coal—overseas. I guess I'll ask you how you can reconcile that, and the second question is, were you consulted with regard to that decision? And if so, what was your decision?

Ms. GODLEY. With respect to your first question, I think that the good news about coal in this country is that we have an abundance of it. Again, we have more proven reserves of coal in the United States than the rest of the world has proven reserves of oil. Again, coal provides in our country, again, the good fortune of being a huge export for us, helping with our balance of payments, our export payments in this country. So coal is a good resource.

With respect to the decision in Utah, I personally did not have involvement with that. It would fall into the area of the Office of Policy in our Department. I believe there were interagency discussions with respect to that decision as well.

I don't know how to balance the interests of—and I know the Administration did balance the interests in their judgment—of the value of that as a monument versus the other potential uses of that land. So I think, again, to answer your question, that we have significant reserves of coal in this country. We are fortunate to be able to export those and continue and not have it affect our energy security in this country and to the benefit of the economy as a whole.

Mr. NETHERCUTT. Wouldn't you agree that the richness of the deposits in Utah are not available in other parts of the United States for easy development?

Ms. GODLEY. I'm not that familiar with coal as a resource state-to-state, but I know it is a rich resource in Utah.

FUEL CELLS

Mr. NETHERCUTT. Well, for what it's worth, I think that was a shortsighted decision, clearly unbalanced, notwithstanding my commitment and everybody else's commitment at this table to a clean environment and to wilderness areas, and so on. But to make the unilateral decision as the President did I think was very shortsighted and will likely have consequences to your department and your commitment to clean fuel development in the future.

I also heard you talk about, or testify about, fuel cells. You've requested a decrease of money in the Fuel Cell Program in your agency, yet they're apparently going to retain all three contractors involved in that Fuel Cell Program. Will this reduction not put the Fuel Cell Program and the relationship with the contractors behind schedule?

Ms. GODLEY. As with the Advanced Gas Turbines Program and with the LEBS program, the request in the area of fuel cells will stretch out that program so that its completion date will be extended I believe it is two years. Again, that really is an effort to meet the bipartisan commitment to a balanced budget and it takes some budget reductions where we thought we could without severely injuring any programs. We are committed to fuel cells as a unique, new energy resource for this country and believe that that commitment of funds will continue the development of fuel cells.

Mr. NETHERCUTT. I understand. I have some parochial interest because there is a fuel cell program project out in the east side of the State of Washington involving a public-private relationship, and I think you, we, your agency has to be concerned about the contractors who are the participants in those programs losing confidence in the integrity of the program if it's stretched out and if the deadlines and the commitments that have been previously made are not met.

One final question, if I may.

Mr. REGULA. Sure, no problem.

BUREAU OF MINES HEALTH AND SAFETY RESEARCH

Mr. NETHERCUTT. The health and safety research functions of the Bureau of Mines, former Bureau of Mines, have now been transferred to the Department of Health and Human Services under NIOSH. In the testimony that appeared last year there were statements that the work of NIOSH was consistent with the functions of your office, but that the Bureau of Mines health and safety research functions had some synergy with NIOSH. Do you feel that that transfer was appropriate now, looking back from the last Congress?

Ms. GODLEY. It's hard for me to judge that. There's so many different factors involved in it. I do know that the portions of the Bureau of Mines that were transferred into the Office of Fossil Energy have synergy with our office. The research, for example, in Albany is material to related research that we can use and fit in to the strategic plan for fossil energy, including our full work.

We are able to integrate the folks who are already at the Bruceton site in Pennsylvania with our work in the Federal Energy Technology Center. Those pieces work for us and I, frankly, am not familiar enough with the other programs really to provide an opinion on the others.

Mr. NETHERCUTT. Thank you. Thank you both.

Mr. REGULA. Mr. Miller?

Mr. MILLER. Thank you for being here today. And this is my first year on the committee, so I look forward to learning a lot more as we go through these hearings.

Yesterday, I had the pleasure of testifying before a committee of Congress. It's always fun to be on the other side of the table. I was

testifying, basically, on the elimination of the LIHEAP Program, a low-income energy program, feeling that the need for that program is passed. Now, maybe there was a need back in the late seventies and early eighties, but today this should be a state responsibility. The Federal Government should step aside on that one.

CORPORATE WELFARE

One of the arguments for the program, they said, well, we should go after corporate welfare, not just welfare for the poor. Well, I agree. The Energy Department is a lot of times targeted as one of the leaders of corporate welfare. And your department is identified in that area.

Let me discuss and explain what corporate welfare means to me. I'm a big believer in basic research. I sit on the Corporation Committee for NIH. I'm a strong proponent of NIH basic biomedical research. When you get into applied research and applied research monies that flow to huge, multi-billion dollar corporations, why would that not be considered corporate welfare and how do you define corporate welfare and how do you defend some of these programs?

Ms. GODLEY. That's a very fair question and it's one that we've asked ourselves in reducing the Office of Fossil Energy's R&D budget by 21 percent in the last two years. So we've taken the scalpel to the programs that we have, but not really for reasons of corporate welfare. The definition that I hear most frequently of corporate welfare is the use of Federal funds to benefit corporations in a manner that doesn't have broad public benefit. And the work in our programs does not fit within that definition of corporate welfare.

In the area, for example, of oil and gas exploration and production technologies that we're developing, 95 percent of our partners in those programs are small companies, not major oil companies. Ninety-five percent are small companies.

Mr. MILLER. What's the definition of small?

Ms. GODLEY. Small companies?

Mr. MILLER. Approximately.

Ms. GODLEY. Less than \$50 million in revenues a year, I would think, something in that area. But, to focus on another piece of that, that program is mostly directed towards independent oil and gas producers in this country. Those oil and gas producers produce 40 percent of the oil, 70 percent of the gas, and yet they have—90 percent of the independents have fewer than 20 employees in their companies. So these companies don't have R&D programs where they're developing technologies to develop our domestic oil and gas resource base.

All of our programs in the oil and gas area also require—have a technology transfer requirement. So when we partner with a 50 percent cost-share with our oil and gas producers, for example, if that technology is successful and it's successfully applied to their programs, they have a requirement to then transfer that technology to other producers. It doesn't just benefit that one company.

Finally, I think that—this is on the oil and gas side—that when you look at, for example, our industry laboratory partnership program where we put producers together with our national labora-

tories, we're turning unique Federal capabilities or expertises that were developed—for example, in our weapons laboratories, underground weapons testing generated incredibly advanced seismic and computational technologies that we can now turn to use in finding oil and gas supplies. And that computational technology, I think, is a unique Federal capability that wouldn't be available to the public of truly turning swords into plowshares in that example.

And I can give you other examples, but, again, each of the programs that we have, even on the power generation side where there are large corporations involved, each of those projects have a broader public benefit that is transferred into the public. It doesn't just rest with those companies.

BASIC VERSUS APPLIED RESEARCH

Mr. MILLER. How do you differentiate basic versus applied research? And then when you get to the applied research issue, the CBO made a comment that Federal agencies typically lack market feedback for determining when a new technology is too expensive or esoteric for commercial purposes. When you get into applied, how do you know that you're not just throwing money away?

Ms. GODLEY. Exactly. And that is another good question. The primary reason we know that is virtually all of our programs are cost-shared with industry, up to 60 percent in some cases. The Clean Coal Technology Program, for example, one-third of that program is Federal dollars. Two-thirds of that 7 billion ten-year program—

Mr. MILLER. The light program is only 25 percent. Do you have a minimum percentage? Should you?

Ms. GODLEY. We don't have a minimum percentage—well, let me just rephrase it another way. The percentage that we require differs according to where on the technology development chain that project is. So, for example, in areas that are higher risk, more basic than applied, we require less cost-sharing on that end of the scale than we do, for example, closer to the market. You know, pre-commercial R&D, close to the demonstration phase, could be 50–60 percent cost-sharing. So the closer you get to the market, the much heavier the cost-sharing for industry.

FUNDING TO HISTORICALLY BLACK COLLEGES AND UNIVERSITIES

Mr. MILLER. One more question. I know this is over in NIH and other areas, but under the Advanced Research and Technology Development Program there's a preference for historically black colleges and universities. Is that a quota? I mean, basic research should be basic research. But do you have a quota operational?

Ms. GODLEY. We don't have a requirement—

Mr. MILLER. How does that work, historically favored—I mean, do you automatically give a certain amount of grants to them or is there a guarantee? Or how does that—

Ms. GODLEY. It's not a guarantee. We issue—we try to identify universities that have expertise in the area in which we're doing work, and where there is a match between the work that is ongoing, typically in the basic end of the research cycle, we'll match up our commitments to the historically black colleges and universities according to expertise. It's not just an automatic commitment.

Mr. MILLER. So they get favored grants?

Ms. GODLEY. They're identified as a performer of R&D that we want to provide money to support that institution if—provided that the work that they have, the expertise that they have, is supporting the programs that we have ongoing.

Mr. MILLER. Thank you, Mr. Chairman.

Mr. REGULA. Thank you. Just to advise the committee members, what I hope we can do is complete this hearing by about five after 11:00 or so, and then do energy conservation and wind up this morning and save us all some time. So we'll move from one right into the other. Mr. Moran?

Mr. MORAN. Fine, Mr. Chairman. Thank you. I have three areas of inquiry. The first is a quickie.

STRATEGIC PETROLEUM RESERVE

You justify the Strategic Petroleum Reserve on the basis of national security and foreign policy. Has the request been made to put this under the Defense 602(b) allocation, even within the Defense budget?

It seems to me that the chairman has had that concern in prior years and I don't know—I wouldn't be surprised if Mr. Yates hasn't wondered about that as well. And it sure would help us, and I think it would be a more appropriate allocation to put the SPR under Defense. What do you think?

Ms. GODLEY. I think that whatever methodology is used to fund this program, that's what we need to do. The point from my perspective, or our perspective, is that the program should be funded. We should continue to support the Strategic Petroleum Reserve. How that gets funded, I don't really have anything—I don't know how to value that judgment.

Mr. REGULA. Will you yield?

Mr. MORAN. I'd be happy to yield.

Mr. REGULA. I've been trying for two years to get that to happen because \$200 million a year out of Defense is just a blip, and out of our budget it is significant. So I welcome your help in trying to move that over to Defense. It's really a national security issue, and I agree with your line of questioning.

Mr. MORAN. Absolutely. They could include that just in a little bit of rounding. [Laughter.]

Ms. GODLEY. In that case, I think it's a great idea. [Laughter.]

Mr. MORAN. That would be a win-win. So we ought to talk to Jack Murtha about that, and Mr. Young.

INTERAGENCY PANEL FOR ENVIRONMENTAL AND ENERGY POLICY

Okay, now, the second one: Mr. Chairman, I'm going to suggest that we set aside whatever money is required, and I doubt that it's going to be much money, but I ought to at least have some language that the Executive Branch put together an interagency panel to develop an organic environmental and energy act. We are nickel and diming this thing. Here we come out with regulations on ozone—I've had this discussion with Ms. Godley and our subsequent witness previously, but, you know, we come up with ozone regulations that are going to be much more difficult than most states are going to be able to, and certainly willing to, comply with.

Yet greenhouse gas emissions are far more important than that, really on a relative scale. We've got the Department of Transportation doing some of the most important energy stuff. We've got Interior, we've got Energy, we've got DOT, and we've even got—we ought to get foreign policy perspective.

When you consider the fact, if we could get some of these other countries, China being first and foremost, using some of our advanced technology, that would reduce greenhouse gas emissions and the threat of global warming far more than all of the cumulative actions we take individually and collectively as citizens of the United States. And yet we're not pushing this adequately with China. And we ought to. It ought to be a foremost objective of our foreign policy.

But while we had a comprehensive energy policy about a decade ago, I don't know that there is such an organic, comprehensive policy now. It ought to at least be updated, if not reinvented, and I think there's a lot of merit to having an interagency panel to come up with one organic environment/energy policy for the executive and legislative branches to implement. And so, I'm going to ask that we have the executive branch sit down and see if we can't do something like that.

Mr. REGULA. Well, would you yield?

Mr. MORAN. Yes.

Mr. REGULA. Would you contemplate putting energy and environment in one agency, or something like that?

Mr. MORAN. I think there's some merit to that, but I'm not going that far. If there's going to be that kind of a recommendation, it would be more helpful that it come from the Administration. I think EPA does good work. I think DOE does good work, and, of course, I have about 30,000 employees that are employed by both of those agencies, Mr. Chairman.

Mr. REGULA. So they must do good work. [Laughter.]

Mr. MORAN. Yes, they must. But that's not my ultimate objective, to find ways of downsizing. My ultimate objective is to maximize our efficiency and integrate our policy, and I don't think our energy and environmental policy is sufficiently integrated. And we have a golden opportunity, where the former Secretary of Transportation is now the Secretary of Energy and understands both perspectives. So I would hope that this subcommittee might consider some language that would get that ball rolling.

/ GREENHOUSE GAS EMISSIONS

And let me just ask you the third area, specifically on ozone vis-a-vis greenhouse gas emissions, your perspective, where we have some really tough ozone regulations coming out. A lot of us are going to be trying to get our States to comply; we're going to be running interference for the Administration on this. But knowing that a far more serious problem is greenhouse gas emissions and the global warming it's causing, and most people have no idea of the difference. Would you give us some comment on that, Ms. Godley?

Ms. GODLEY. Oh—I'm sorry?

Mr. MORAN. Well, on our fossil fuel; greenhouse gas is primarily a fossil fuel issue.

Ms. GODLEY. Right.

Mr. MORAN. In fact, I'm becoming more and more inclined towards nuclear power the more we look at this issue. But you've got a problem with greenhouse gas, and I think your ability to implement that policy is undercut by ozone regulations which are going to be extremely stringent and not necessarily targeted where we need the special effort.

Ms. GODLEY. And I think that the answer in the short and mid-term to all of those issues is going to be the development of technologies that will allow us to minimize the environmental impact of energy use—production and use—whether it's fossil fuels or other energy resources.

And that is in fact why—and I think that the Administration has come up with what I believe is a balanced investment in both the energy efficiency—in cutting down the energy that we require in this country—as well as to increased domestic production, and minimizing the environmental impact, for example, of the use of fossil fuels. I think that's an appropriately-balanced portfolio.

I think that we require additional technology development to meet these more stringent requirements over time in a way that's affordable to this country and to other countries. And in my view it's going to be the technology advances, advanced technology, that will allow us to get there.

Mr. MORAN. Thank you, and thank you, Mr. Chairman.

Mr. REGULA. I advise the members that I think we have enough time for another round of questions, so we'll go ahead, and if you have additional questions, you'll have an opportunity as well to have those submitted for the record.

FOSSIL ENERGY RESEARCH FUNDING

I notice the Administration is supporting huge funding increases for energy conservation research, while fossil energy research funding is declining. It seems to me that, long term, that's the reverse of the way it ought to be. The real key is to do the fossil research to be more efficient in the use of our resources and perhaps make the resources less polluting. Conservation is nice for one year—a band-aid approach—but it doesn't address the long-term national security problem.

How do you comment on that?

Ms. GODLEY. Well, again, I think that, like all investments, it's a matter of judging where you want to put your resources and where the ultimate biggest bang-for-the-buck is going to come. I think that when we look at the projections for the increase in energy use in this country of 20 to 21 percent between now and the year 2015, half of the equation of energy security is reducing our requirements for energy. And the other half, of course, is making sure we have enough available to meet the resulting requirements. So, I think the Administration's judgment on where to put money to achieve energy security, whether it's through reducing our energy use, or investing in our existing fossil fuel technologies to reduce the environmental impact of those, or investing in long-term energy resources and the renewable energy resources; again, it's a judgment on just how to divvy up the amount of money we have

for that. So, I agree with the judgment that the Administration has made in that regard.

Mr. REGULA. Well, I would expect that, but it doesn't necessarily mean that we do. [Laughter.]

At least we did get your take on it.

I notice that the oil research program is the big winner in the fossil energy budget; other items are decreasing. Why would oil research get an increase in your budget and others are less?

Ms. GODLEY. I think when you—again, we tried to present our budget in a slightly different way this year to show where we're emphasizing technologies or work that contributes to reducing the environmental impact of our fuels, as well as investments that are intended to increase energy or oil security in this country.

So, I think that any increase in the area of the oil budget is targeted towards decreasing the cost, for example, in areas of environmental compliance, so that we can bring down the cost of producing domestic oil and help our producers compete in the world marketplace so that we don't shut in those—what is it? How many thousand wells a year?

Mr. KRIPOWICZ. Fifteen thousand.

Ms. GODLEY. Fifteen thousand wells a year now that we're shutting in and abandoning prematurely.

Mr. REGULA. And you're doing research for enhanced production?

Ms. GODLEY. Correct, absolutely. In fact, our oil budget is primarily directed towards enhancing domestic exploration, lowering costs, and enhancing production.

Just as an aside, I think that as you know, historically, we have differentiated between the coal R&D new budget authority requests versus the expenditures that we make each year on clean coal technology programs. And if you add in what we expect to expend in 1998 in the clean coal program to our new budget authority request for coal, coal still comprises 58 percent of the monies we are projecting to expend on R&D in 1998, so it's still a hefty portion of our budget.

ADVANCED TURBINE SYSTEMS

Mr. REGULA. What's the status of the advanced turbine systems program?

Ms. GODLEY. The status is it's currently in phase III. We have, as you know, projected in our 1998 budget, consistent with the program plans from the beginning, to down-select from two contractors to one in the phase IV actual component in integrated system construction, but at a reduced funding level, which, as we talked about earlier, would extend the program completion from the year 2000 to the year 2002.

We're currently in discussions with the contractors to perhaps modify phase III so that we would basically extend phase III, which is components development, and eliminate phase IV, which is closer to the market types of work, and keep the two contractors in the program.

Mr. REGULA. When would that get you to the marketplace?

Ms. GODLEY. I believe it's still 2002.

Mr. REGULA. So you have a stretch-out?

Ms. GODLEY. Right, but we maintain the work in two different technologies, having two different contractors.

SALE OF ELK HILLS

Mr. REGULA. What are you doing to make sure the American taxpayers get the best possible return from the sale of Elk Hills?

Ms. GODLEY. Well, Congress helped us along in that regard in a number of respects. As you know, we had some very specific milestones that we had to walk through in the sale of Elk Hills, including, I think, the biggest safeguard, which is the statute that requires us to determine a minimum price below which we will not sell Elk Hills. And that minimum price is to be determined based on the estimate of the value of Elk Hills under continued Government ownership by five independent experts in petroleum properties evaluation.

So, DOE, or the Administration, in fact, is not free just to set any minimum price. It will be set by five market experts, and then the bids that we get on the property have to exceed that minimum price or the property won't be sold.

Mr. REGULA. If you don't sell it, do you have the adequate funds to continue operations?

Ms. GODLEY. We have requested funding that, I believe, provides for the sale in February and then a three-month transition period after that. I think if we do not sell Elk Hills, we'll have to address funding requirements at that time.

Mr. REGULA. So it would require a supplemental?

Ms. GODLEY. Yes, sir.

Mr. REGULA. Mr. Yates?

Mr. YATES. Mr. Chairman, thank you.

LOW EMISSION BOILER SYSTEM

My home state of Illinois has committed to spend more than \$2 million in support of the Low Emission Boiler System Prairie Energy project. Private industry, including the Chicago company, Sargent & Lundy, is going to invest millions of dollars in research, development, and demonstration programs. Federal support is critical to go along with the efforts that are being made by both the State and private companies.

Does DOE have plans for this project? And what type of support can you give this project?

Ms. GODLEY. Sir, I'm not sure I'm familiar with the project that you're talking about. Is it the D.B. Riley?

Mr. KRIPOWICZ. That's the one they're talking about.

Ms. GODLEY. I'm sorry; now I'm with you. That is, of course, one of the three contractors—I believe the project that you're talking about—in our LEBS program. And again, under our Fiscal Year 1998 budget request, we would implement that program as it was originally designed to down-select from three to one contractors in Fiscal Year 1998. This is what the program originally contemplated.

The way we make that down-select judgment is based on where these folks are in the development of their technologies, the performance of the technology, and, of course, on a qualitative basis, which one do we think is the one that should proceed with the Fed-

eral funding. So we're continuing with the program as it was designed, and the project that you're talking about will be part of that consideration on the down-select judgment.

Mr. YATES. How much money is in the budget for that?

Ms. GODLEY. \$5.4 million, and, again, that is not the amount of money that was requested by any of the project participants.

Mr. YATES. How much did they request?

Ms. GODLEY. I believe we would need an additional \$20 million to fund fully that program in 1998 as originally contemplated. Our funding request now would stretch that program completion out to 2000 or 2002, but it would still be completed.

Mr. YATES. Well, would failure to provide the funds requested mean that the State and the private contractors would have to put up more money?

Ms. GODLEY. No, sir. Again, I think that the consequence would be stretching it out—

Mr. YATES. Stretching it out.

Ms. GODLEY [continuing]. Not requiring additional funding.

Mr. YATES. Well, that's not good. Suppose you made available \$10 million instead of the \$5 million; would that help speed it up?

Ms. GODLEY. Yes, sir.

Mr. YATES. And they really need \$20 million. Okay; thank you.

CLEAN COAL TECHNOLOGY

Now you've got a clean coal technology demonstration proposed for China. Would you, in the record, indicate just how you propose to go ahead with this?

Ms. GODLEY. Yes, sir.

[The information follows:]

CLEAN COAL TECHNOLOGY PROJECT IN CHINA

An advanced appropriation of \$50 million is requested to initiate support of an international clean coal technology program. The funds appropriated would become available at the start of fiscal year 1999. The project will apply U.S. integrated, coal gasification combined cycle technology in the People's Republic of China to introduce advanced, high efficiency, clean coal technology in the production of much needed electricity. China's rapidly expanding economy depends on coal to supply about three-quarters of its total energy needs. The IGCC technology that would be utilized for this initiative must be adapted for the Chinese environment. Adaptations would be made to achieve lower capital costs, performance with Chinese coals, and lower operating costs. Modifications would also be made to the technology to allow for less stringent performance standards than those imposed for the American market. This would strengthen the competitiveness of U.S. power equipment manufacturers in the largest global market for power generator equipment.

Mr. YATES. Okay.

SALE OF ELK HILLS

You spoke about the sale of the Naval Petroleum Reserve, and that there will be five experts who will evaluate its value. Have those experts been selected yet?

Ms. GODLEY. Yes, sir, they have.

Mr. YATES. Are they doing any work on it?

Ms. GODLEY. Yes, sir; they were selected in February, contracted, I believe, by the middle of March or so, and they've begun their work.

Mr. YATES. When are they expected to complete it?

Ms. GODLEY. In the fall, probably in the middle to the latter part of September.

Mr. YATES. The latter part of September—what happens after they complete their work? Does their report go to the President?

Ms. GODLEY. Under the statutory requirements of the 1996 Defense Authorization Act, each of the five experts estimate of the value of Elk Hills under continued Government ownership comes to the Secretary of Energy. And the Secretary of Energy is required to take the average of the five, or the average of the three if we could kick out the high and the low, and of those two averages the higher shall be the minimum price for Elk Hills.

Now the Secretary does have the authority to actually set a higher minimum price; the Secretary may not set a minimum price lower than the higher of those two averages.

Mr. YATES. Do you have any minimum price that has been established for that sale?

Ms. GODLEY. No, sir.

Mr. YATES. You don't at this time?

Thank you, Mr. Chairman.

Mr. REGULA. Mr. Miller.

RESEARCH FUNDING TO MINORITY INSTITUTIONS

Mr. MILLER. I have a couple of things to clarify, like in the advanced research and technology development area, which is \$30 million. Does that money go to universities?

Ms. GODLEY. Universities and national laboratories.

Mr. MILLER. Now there's "Minority Institutions" of \$1 million set-aside; do you have a set-aside besides minority? A set-aside is not a peer-reviewed type of research, is it? I mean, there's a limited group that can bid on it. Is that right?

Ms. GODLEY. Let me introduce Bob Kripowicz, who is our Principal Deputy. He can, I think, provide a more complete answer to that question?

Mr. KRIPOWICZ. Although a specific amount of money is set aside, all of the proposals are still peer-reviewed so that you only choose the best proposals out of the total package.

Mr. MILLER. Of only that limited number that can apply?

Mr. KRIPOWICZ. Yes, that's correct.

Mr. MILLER. Are there any other set-asides besides that one that you know of off-hand?

Mr. KRIPOWICZ. We have set-asides by technology, but not specifically by other different SBIR programs—

Mr. MILLER. Oh, yes; what is that?

Mr. KRIPOWICZ [continuing]. Which covers the whole Department, which is not run by Fossil Energy; it's run by our Energy Research organization—

Mr. MILLER. I have a problem with that, too.

Mr. KRIPOWICZ [continuing]. And that is a percentage set aside by law.

Mr. MILLER. Again, not based necessarily on—

Mr. KRIPOWICZ. It is based on—

Mr. MORAN. Competitive—it's only limited to those that can qualify under that classification, right?

Mr. KRIPOWICZ. But again, those are also peer-reviewed.

TECHNOLOGY TRANSFER WITH CHINA

Mr. MILLER. As for the China issue, one of the potentials is the export market. China is very wise as far as the technology transfer issue. How do you protect technology transfer as we do these joint ventures and such? What protections do we have there?

Ms. GODLEY. The protection of the technology would be one of the provisions of the transaction as we would contemplate it. How that would be protected would be subject to our broader relationships across the Government with China.

Mr. MILLER. Would that have been a problem in the past, that you are aware of?

Ms. GODLEY. Not in this area; I don't really know.

Mr. MILLER. We were talking briefly before about the issue of basic versus applied research, and I'm just trying to get a better understanding. As I say, I go through that in the bio-medical research debate, also. How do you differentiate between the two?

Ms. GODLEY. I think basic research and applied research is in the eye of the beholder in many cases. And as I understand it, although my background is not technology, the timeframe for the development of technologies, historically, has been 20-plus years from an idea to the time of market entry, and that depending on your area of research now, that timeframe has been substantially reduced by more efficient research techniques; for example, high speed computational capabilities that we didn't have before in the area of technology development.

So, I think that my understanding is, that a general view is, that the timeframe that it requires to develop a technology is perhaps less than it used to be so that the timeframe between basic, applied, and market-entry research is perhaps compressed. Now exactly where applied research falls in that continuum, I think, can differ depending on your definition.

One thing that I use in my head is that if the work actually produces a product—a piece of hardware, something that you can see and touch and look at—that to me is applied. Whether it can be used to accomplish its purpose is part of the research that's undertaken. Basic, in my mind, for what it's worth, tends to be more in the idea laboratory-level kind of work.

But in any event, applied research is not market-ready research. You're not working on something that's ready for the market, that's commercializable. It's still high-risk; it still requires research and work to make it, hopefully, acceptable.

Mr. MILLER. And the philosophy—again, this goes back to bio-medical research—is that you start the basic research, as at NIH or such, and then at some stage the Government steps aside and lets the pharmaceutical companies take over, follow-up, pursue it, and get it to market. Do you have a policy along those lines as to when you kind of step back and let the market drive it, let the private sector drive it, rather than continue to fund it? Or do you keep funding it all the way to market?

Ms. GODLEY. There is no hard and fast rule. Again, our general rule is the closer it gets to market, the greater degree of cost-sharing is required.

Mr. MILLER. Right.

Ms. GODLEY. But specifically how much will depend on the technology, depend, for example, on the broader public benefits that might be available to that particular technology, so there's no hard and fast rule.

One thing that I would throw in to this mix, though, that I think that we often overlook in trying to draw those kinds of formulas or create those kinds of formulas, is that the companies, the United States companies, are having to meet stiff competition internationally, particularly in the area of power generation or energy resource-related technologies. And we're not really playing on an even playing field; our companies are not.

And I'll take as an example, Japan, which has just announced that it has plans to double its R&D investment; the Government will double its R&D investment in their energy area by the year 2000. It has nearly tripled the funding of advanced coal combustion technology over the last five years, and it currently spends three times what the United States Government does on fuel cells alone, just on that one technology.

So, when we're looking ahead—again, as our world gets smaller and global trade becomes significant, and, really, we may be facing national security issues on the economic front now that we haven't faced before—assisting our companies in very basic and relatively small investments in technology development, where there's a broader public benefit, can also put them at least on a more even playing field internationally.

Mr. MILLER. Thank you.

Mr. REGULA. Mr. Moran?

Mr. MORAN. Thank you, Mr. Chairman.

Two areas of inquiry—you can drink the water while I talk if you want to; I'll filibuster for another few seconds. [Laughter.]

This is a good segue, when we talk about Japan. I want to talk about Asia, particularly.

You said in your testimony that we are going to meet our energy demands with these fossil fuels, that that's a foregone conclusion. But that also means that it's a foregone conclusion that global warming is inevitably going to drown entire populations of people. There are the Seashells Islands; there are a whole number of islands that they're organizing a caucus for in the United Nations, and it is a fairly apocalyptic prediction, and I'm afraid an accurate one, that they are going to lose their land.

Now that doesn't bother you, Joe?

Mr. SKEEN. Nothing bothers me. [Laughter.]

Mr. MORAN. Nothing bothers you. [Laughter.]

Mr. REGULA. New Mexico is high enough that they won't be bothered.

Mr. MORAN. That's right; that's high enough. You don't have the problem.

But that's got to be a real concern. And yet, even if we were able to mobilize our population to do all the right things in terms of energy conservation and efficiency of fossil fuels, it's a drop in the bucket given the carbon emissions that other countries are going to be producing.

Now what I want to know is, to what extent are you coordinating your policy and their priorities with the Department of State and

the Department of Commerce, who really have the ability to influence other countries, particularly in terms of getting them to purchase some of our technology which would produce tremendous gains in terms of reducing the global warming effect?

Ms. GODLEY. I cannot tell you that there is an absolutely developed and coordinated strategic plan to get there. I can tell you that the Department of Energy, including folks in the Office of Fossil Energy, participate daily, almost, in interagency work to look at greenhouse gas emissions and technologies that are available or could be made available to address those emissions, in what time-frame, and that we're including that cost information as well as effective technology information in the models that are being done in support of the Administration's efforts in that regard.

So, we are very heavily involved at the technological level, as well as in the Deputy's meetings on the policy level.

Mr. MORAN. Well, I'm glad to hear that, and I don't doubt that that's the case, but I'm not sure the White House is giving adequate priority or focus on this. And if they don't, everything we do, with all the political downside it takes to try to get our constituents to do the right thing, all it is is a bunch of feel-good measures because the reality is that we're not really going to gain any ground unless we can get some international policy implemented. We have the ability, and I don't think we're using much leverage to try to get those policy changes effected in other countries.

China is the best example because they're going to eclipse so many other economies in Asia, and despite the fact that we're doing some stuff on clean coal technology, the reality is that their emissions are just going to dwarf—it's going to mean that all of our collective efforts are a drop in the bucket. They are going to undo all of our good efforts.

The second thing; let me ask you since—I know you do fossil fuels—but it's intricately related to our policy on nuclear power, because nuclear power is really the only realistic alternative to dependence upon fossil fuels.

Is it true that other countries, like France and Germany, are using our technology to recycle uranium and plutonium so that they don't have to go through all of the political and economic problems we're going through in terms of finding places to dump spent fuel rods and so on, that they have an alternative way of doing that, which is really American technology in large part that we are not implementing, but that they are purchasing and implementing with the security of their constituencies?

Ms. GODLEY. Certainly that's true, and certainly countries like France, of course, are heavily dependent on nuclear energy, and that remains an option for this country as well. I think, though, that you've put your finger on it, that the political opposition, the people of our country opposition to the use of nuclear fuel, or the increased use of it, is very strong.

I think we have in this country the issues that we read about in the press almost every day, with respect to the disposal of spent fuel, that are serious issues and that are difficult ones. And I think that, again, that is a policy judgment, a political judgment, a response to the citizens of this country that that's not a choice that's a viable one to pursue at this time.

Mr. MORAN. I don't want to put words in your mouth, but if I could just follow up on a quick one, Mr. Chairman.

Would you say that it is more a matter of educating the American public than it is a matter of the real threat to the American public from the use of nuclear power?

Ms. GODLEY. That's a hard question.

Mr. REGULA. You can answer that.

Mr. MORAN. That's why I asked. [Laughter.]

Ms. GODLEY. And, you know, I can certainly supplement for the record.

Mr. YATES. That's no quickie; that's a longie.

Ms. GODLEY. I think the answer to that is not a simple one, and it involves a number of issues that pertain to national security and the use of—that can't be addressed in a short answer.

Mr. MORAN. So you've ducked the question. Okay.

Well, thank you, Mr. Chairman.

Mr. REGULA. It's not unusual. [Laughter.]

Mr. MORAN. No, I appreciate your concerns; I don't mean to be critical of the witness.

ELECTRICITY DEREGULATION

Mr. REGULA. One last one. We're talking a lot about deregulating electricity. Do you think this will have an impact on the investment in conservation technology, fossil research, et cetera, because of the competitive forces that will be unleashed by deregulation?

Ms. GODLEY. I think there's no doubt about that. In fact, an anecdote that I like to tell is that I'm the chairman of the International Energy Agency's working party on fossil fuels, and one of the warnings that the representative to that committee from the United Kingdom gave to us was, "Boy, one of the biggest mistakes we made was not addressing the fact that as competition increased in electric power generation, that our utilities and related industries stopped investing in research almost altogether in the U.K. in that area by requirements."

In fact, we see now that the energy industries are investing about 30 percent less currently than they did as recently as three and four years ago in energy research and development. We're expecting that trend to continue, and that's on top of the fact that the Department of Energy has reduced its investment in energy research by 75 percent since the late seventies.

So, I think Dan Yergin, who, as you know, reviewed for Secretary O'Leary the energy research programs in the Department of Energy, questioned whether we are facing an R&D crisis in this country with respect to energy research.

Mr. REGULA. Joe, I didn't want to overlook you, but I understood you didn't have any questions, and if you do—

Mr. SKEEN. No, but I'd like to make a comment.

Mr. REGULA. Okay.

Mr. SKEEN. And I want to apologize to my friend, Mr. Moran, over there, for interrupting him. I didn't mean to do that.

Mr. MORAN. Oh, no; you can interrupt me anytime, Joe.

Mr. SKEEN. Anytime it's global warming—well, okay, thank you. I would. [Laughter.]

Any time global warming presents a threat of flooding, we'll take it in New Mexico. Any excess water is welcome. [Laughter.]

I want to compliment the Department and you, in your role, and for the technology that I think helped us develop further the domestic supply of fossil fuels, particularly in the oil and gas reserves, and the new mapping technology for subterranean deposits. That's been an outstanding event, and my favorite.

WASTE ISOLATION PILOT PROJECT

Let's go to nuclear energy. We have a repository called the Waste Isolation Pilot Project, and if we can get all the damn fools in the departments around here—if you'll excuse the expression—and get off of this diamond and start putting this stuff underground. It's sitting on asphalt pads in Idaho, the panhandle of Texas, Colorado, and other places, rotting in an open stand. And when we get it underground, the quicker the better.

This constant delay of the opening date for the Waste Isolation Pilot Project is really causing my ear to itch. It's been 20 years since we developed this thing. We have a repository. The Europeans have been operating with repositories of this kind with no threat, no danger to the population. We have a community that's willing to accept it. You've got another community that's not willing to accept it—high level deposits and so on—but let's get on with this business and open WIPP.

We're a great technological Nation, but we've got so many dog-gone people, self-appointed saviors, running around scaring the heck out of people. I think probably the basic objective of that is their own personal coffers, from revenue from people who donate to some of these causes. But let's get on with the business of being the technologists that we really are, and taking care of the problems that we are all so cognitive of.

I want to thank you for the work that your Department has done and done very well.

Ms. GODLEY. Thank you.

Mr. REGULA. Thank you very much for coming, and all the members, I'm sure, will have some questions for the record. We'll appreciate some prompt responses.

Ms. GODLEY. You bet.

Mr. REGULA. Thank you.

Ms. GODLEY. Mr. Chairman, if I could take one more second, and this really may respond to Mr. Miller's questions as well.

Mr. REGULA. Sure.

Ms. GODLEY. We have been asked, appropriately so, what have we gotten for the investment of taxpayer dollars in the Office of Fossil Energy programs? And we have developed a concise summary of some of our major successes, and I would like to make that available to you as well as to other members of the committee.

Mr. REGULA. Okay, send one to each of the committee members—

Ms. GODLEY. Will do.

Mr. REGULA [continuing]. And to Senator Grams also—[laughter]—because he is reported in Roll Call as saying the Department of Energy should be abolished.

Mr. SKEEN. Who?

Mr. REGULA. Rod Grams from the Senate.

Thank you very much for coming.

Ms. GODLEY. Thank you, sir.

Mr. REGULA. This will complete this hearing, and we'll start the new one.

[The following questions and answers were submitted to be included in the record:]

ADDITIONAL COMMITTEE QUESTIONS

Clean Coal Technology/Overview of Budget Request

Question: The budget request for Clean Coal Technology proposes rescinding \$153,000,000 and shifting \$133,000,000 into fiscal year 1999. An additional \$50,000,000 in advance appropriations for an international clean coal program is also requested for fiscal year 1999. Please explain the rationale for your clean coal funding proposal.

Answer: The proposed \$153,000,000 rescission in the FY 1998 budget request represents excess funds that became available in FY 1996 and early FY 1997 from approved project restructurings and projects that officially ended prior to completion. These funds are in excess of the requirements needed to fully fund the active Cooperative Agreements currently in the Clean Coal Technology inventory. The proposed \$133,000,000 deferral of funds in the FY 1998 budget request reflects known and acknowledged schedule stretch outs in several projects. The additional \$50,000,000 request in advance appropriations for FY 1999 is for an Integrated Gasification Combined Cycle (IGCC) system to produce electricity in the Peoples Republic of China. These funds will be used to reduce the cost differential between a U.S. IGCC plant and a less clean, less efficient conventional plant.

Question: Over the past two years, the Congress has rescinded \$323 million in clean coal funding. What projects have been terminated and what savings have been realized toward achieving those rescissions?

Answer: Since the beginning of the Clean Coal Program, the following projects with Cooperative Agreements have ended or are ending prior to completion:

- Underground Coal Gasification Demonstration Project (Energy International, Inc.)
- The Appalachian IGCC Demonstration Project (The M.W. Kellogg Company)
- Prototype Commercial Coal/Oil Coprocessing Project (Ohio Ontario Clean Fuels, Inc.)
- Advanced Slagging Coal Combustor Utility Demonstration Project (TRW, Inc.)
- Low NOx/SOx Burner Retrofit for Utility Cyclone Boilers (Transalta Resources Investment Corp.)
- Innovative Coke Oven Gas Cleaning System for Retrofit Applications (Bethlehem Steel Corporation)
- Combustion Engineering IGCC Repowering Project (ABB Combustion Engineering)
- PFBC Utility Demonstration Project (The Appalachian Power Company)
- Toms Creek IGCC Demonstration Project (TAMCO Power Partners)
- Demonstration of Pulse Combustion in an Application for Steam Gasification of Coal (Thermochem, Inc.)

Under current law, there is a surplus of funds in the program that have resulted from approved project restructuring activities and projects that ended prior to completion. The savings related to the \$323 million rescinded were realized based on these activities. Even after the proposed \$153

million rescission for FY 1998, adequate funds would remain to fulfill current commitments on all projects remaining in the pipeline assuming no unforeseen cost growth in these projects.

Question: The Administration has proposed rescinding \$153 million for fiscal year 1998 and, just recently, sent up a proposal to rescind an additional \$10 million in fiscal year 1997 to help offset the emergency supplemental request for Yosemite National Park. How can you absorb this additional \$10 million rescission on top of the \$153 million rescission proposed for 1998?

Answer: After allowing for the \$153 million rescission proposed for fiscal year 1998, a small amount of uncommitted funds exist beyond the commitments to fully fund all remaining projects. The supplemental proposal to rescind an additional \$10 million would be covered by uncommitted funds and would not impact current project commitments.

Question: How many clean coal projects are currently in process and how many of those do you expect to be carried through to completion? Please explain.

Answer: There are currently a total of 40 projects in the Clean Coal Technology program and 20 projects have completed all operational commitments. Of the remaining 20 projects, seven projects are in design and 13 projects are in construction or operation. At this time, the Department expects the remaining 20 projects to be carried through to completion, with the possible exception of one project. The Department recognizes that, as projects develop through the design phase and beyond, a number of issues can arise for a variety of reasons that can ultimately influence project success. It is difficult to anticipate how many of the remaining projects, if any, will end prior to successful completion.

Question: Which projects are currently awaiting decisions from the Department on proceeding to a new phase? When will those decisions be made?

Answer: The following table summarizes the pending decision milestones for projects in the Clean Coal Technology program:

	PROJECT	MILESTONE	DATE	DESCRIPTION
1	TAMPA (Lakeland, FL)	Cost Growth	4/30/97	Target date for HQ decision.
2	PENELEC (Warren Stn., PA)	Restructuring	5/31/97	Target date for HQ decision on proceeding.
3	COAL DIESEL (Fairbanks, AK)	End of BP1-Project Definition	6/30/97	Target date for HQ decision on proceeding.
4	YORK (York, PA)	Restructuring	11/30/97	Target date for HQ decision on proceeding.
5	CLEAN ENERGY (Baltimore, MD)	Restructuring	12/31/97	Target date for HQ decision on proceeding.
6	CPICOR™ (Vineyard, UT)	End of BP1-Project Definition	4/15/97	HQ approval of BP2 for construction.

Question: How many projects have been completed to date?

Answer: A total of 20 projects have completed all operational commitments. Of these, five projects have yet to fulfill final reporting requirements.

Question: What are those projects?

Answer: The 20 projects that have completed all operational commitments include:

1. Tidd PFBC Demonstration Project
2. Nucla CFB Demonstration Project
3. LIMB Demonstration Project Extension and Coolside Demonstration
4. Enhancing the Use of Coals by Gas Reburning and Sorbent Injection
5. SOX-NOX-ROX Box Flue Gas Cleanup Demonstration Project
6. SNOX Flue Gas Cleaning Demonstration Project
7. Demonstration of Innovative Applications of Technology for the CT-121 FGD Process
8. Advanced Flue Gas Desulfurization Demonstration Project
9. Demonstration of Coal Reburning for Cyclone Boiler NOx Control
10. 10 MWe Demonstration of Gas Suspension Absorption
11. Full-Scale Demonstration of Low-NOx Cell Burner Retrofit
12. Confined Zone Dispersion Flue Gas Desulfurization Demonstration
13. Evaluation of Gas Reburning and Low-NOx Burners on a Wall-Fired Boiler
14. LIFAC Sorbent Injection Desulfurization Demonstration Project
15. Integrated Dry NOx/SO2 Emissions Control System
16. Development of the Coal Quality Expert
17. Advanced Cyclone Combustor with Internal Sulfur, Nitrogen, and Ash Control
18. Cement Kiln Flue Gas Recovery Scrubber
19. Demonstration of Selective Catalytic Reduction Technology for the Control of NOx Emissions from High-Sulfur-Coal-Fired Boilers
20. 180 MWe Demonstration of Advanced Tangentially Fired Combustion Techniques for the Reduction of NOx Emissions for Coal-Fired Boilers

Question: Why do you need \$15,866,000 in 1998 for program direction in the clean coal technology program?

Answer: The Department based the program direction needs for fiscal year 1998 on the activities associated with ongoing projects, completed projects, and projects undergoing restructuring. The Department estimates the level of activity for fiscal year 1998 to be similar to fiscal year 1997. While there are fewer but much larger projects requiring monitoring of ongoing activities, a significant effort is needed for analysis of data, review and dissemination of final project reports, and other post-project activities. Currently, there are five projects that have completed operational requirements but have yet to complete final reporting requirements. Often, resource requirements for projects that have recently completed operations are greater than during earlier phases of the project. Further, a notable level of effort is often required for projects

that end prior to completion and this requirement can continue for several years after a project ends.

There are also significant requirements for projects undergoing restructuring activities, and following restructuring, the requirements of the National Environmental Policy Act (NEPA) must be satisfied. The majority of the projects remaining in the design phase are anticipated to require an Environmental Impact Statement to satisfy NEPA, whereas, many of the earlier projects only required Environmental Assessments. However, the Department will continue to cover costs related to monitoring of recoupment agreements to ensure the appropriate repayment of the significant federal investment in the program.

Question: As you have fewer and fewer projects, why aren't your administrative costs declining more rapidly?

Answer: While there are fewer projects in the program in active operation, the projects (primarily power systems) are much larger and more complex than those already completed. Also, the Department has yet to complete all administrative, analytical, and reporting requirements for many of the completed projects and projects that ended prior to completion. The program direction costs for the program are declining and following the completion of post-project activities, the Department expects administrative costs to decline more rapidly.

Question: What is the ratio between Federal and industry funding for the clean coal program?

Answer: Based on the current cooperative agreements for the 40 ongoing and completed projects in the Clean Coal Technology program, the private sector is contributing about 66% cost sharing on average for projects. On a total program funding basis of \$2,424,595,000, which includes program direction and contributions to the SBIR and STTR programs, participant cost sharing is 61%.

Question: To what extent has the Federal funding contribution toward clean coal technology projects been recouped?

Answer: Currently, \$385,953 has been repaid to the government from the Clean Coal Technology program. Repayments from most projects will be derived from future commercial sales of the technology after completion of the demonstration project.

Project Level Information

Question: How successful have the completed clean coal projects been with respect to having the technology adopted in the marketplace?

Answer: Fifteen of the forty Clean Coal Technology projects are in "commercial use" by either achieving commercial sales or continued operations of the demonstration project as a commercial, revenue producing facility. Total sales of Clean Coal Technology are now estimated at \$1.1 billion with another \$3 billion in pending sales (letters of intent). It should be noted that

the large and more expensive power projects, which are currently in design, construction and operation, are not expected to achieve commercial sales until after 2000. An additional \$8 billion in Atmospheric Fluidized Bed (AFB) sales has also taken place, which benefitted from both Clean Coal Program demonstrations as well as earlier private sector and government R&D.

Question: Please give the Committee a few examples of how this technology is being used?

Answer: Fifteen of the Clean Coal Technologies are being "used commercially." These projects are shown in the following table:

	PROJECT	TECHNOLOGY	REMARKS
1	NUCLA	Atmospheric Fluidized Bed	Operating as a revenue producing facility.
2	SNOX	Flue Gas Cleaning	Ohio Edison retained unit for commercial use.
3	CHIYODA	Flue Gas Cleaning	GA Power retained unit for commercial use. Canadian firm purchased commercial unit.
4	PURE AIR	Advance Flue Gas Desulfurization	Florida Power & Light purchased 1,600 MWe capacity. Demo unit in commercial use.
5	B&W Reburn	Coal Reburn for NO _x Control	Project retained by Wisconsin Power and Light for commercial use.
6	AIRPOL	SO ₂ Control	Hamilton, OH has purchased a 50 MWe unit. Three international sales.
7	B&W-Cell Burners	NO _x Control	Obtained seven commercial sales (172 burners) through 12/95.
8	PUBLIC SERVICE	SO _x and NO _x Control	85 sales contracts for the DRB-XCL low NO _x burner involving 1,515 burners
9	CE-EXPERT	Computer Model	Two sales of Acid Rain Advisor.
10	PASSAMA-QUODDY	Cement Kiln Flue Gas Recovery Scrubber	Demonstration retained for commercial use.
11	SCS -WALL FIRED	NO _x Control	Low NO _x burners being retained for commercial use. \$20 Million in commercial sales.
12	ROSEBUD	Adv. Coal Cleaning & Drying	Four letters of intent for commercial sales.
13	ENCOAL	Mild Gasification for coal up-grading	Three letters of intent for commercial sales.
14	CUSTOM COALS	Adv. Coal Cleaning	Two commercial contracts and several letters of intent for commercial sales.
15	BETHLEHEM STEEL	Coal Injection	Demonstration unit operating commercially. One commercial sale.

Question: What energy savings have been achieved as a result of clean coal technology?

Answer: The main programmatic benefits of global deployment of clean coal technology is still being realized and is in the future. In addition to the benefit of energy savings, it will also manifest much lower emissions of CO₂, NO_x, SO₂, particulates and will lower electricity costs.

Examples vary from advances in power plant technology to new component development to new materials development.

- Thanks largely to the technology advances of the Clean Coal Technology Demonstration Program and preceding DOE sponsored R&D, the utilization of coal has been progressively cleaner over time. For example, between 1970 and 1995 coal use for electric power generation more than doubled, but SO₂ and particulate emissions came down by 27% and 90% respectively. In the same time period, the average plant emission rate was lowered by 70% for SO₂ and 90% for particulate matter. In the early 1970's there was no technology for controlling NO_x emissions; today 1/4 of U.S. boilers are equipped with low-NO_x burners.
- During the 1980's, a new metal alloy was developed that gave engineers a way to increase efficiency of power plants into the 38% range. For example, a 500-MWe power plant operating at 38 percent efficiency will burn nearly 111,000 tons of coal less each year than the same plant operating at 35 percent efficiency. That translates into a cost savings of \$1.8 million per year in fuel costs, an energy savings of 2.5 trillion Btus, and a reduction of carbon emissions of 69,000 metric tons per year per power plant.
- Atmospheric Fluidized Bed (AFB) power plants developed in the 1980s are now being commercially deployed. Over \$8 billion in commercial sales have been reported. AFB Systems operate at about 10% higher efficiencies than the average installed coal powerplants resulting in a savings of over 45 trillion Btus per year.
- Lower cost and more effective SO₂ scrubbers for coal-fired power plants have been commercialized. Cumulative costs of building and operating these scrubbers through 1995 were reduced by \$40 billion dollars through this research.
- A new generation of low NO_x combustors and post-combustion devices have been developed. Burner sales to date exceed \$750 million, and will approach \$4 billion by 2000. Previously available technology would have cost an order of magnitude more to achieve the same NO_x reduction. Sales of post-combustion technology (like Selective Catalytic Reduction) are projected at over \$2.5 billion by 2000. Previously, this technology costed twice as much as today's version.
- Power plant technology now being commercially demonstrated in the Clean Coal Program are demonstrating power plant efficiencies in the 42-45% range (compared to 33% for today's average operating coal power plant). Ongoing coal R&D will further increase coal plant efficiencies into the 60% range, almost doubling existing plant efficiencies and

thereby resulting in an almost 50% savings in energy and similar reductions in CO₂ on a per plant basis. If the average efficiency of all U.S. coal fired power plants were increased to just 50%, that would result in an energy savings equivalent to weatherizing five times the total number of homes in the U.S.

Question: What environmental benefits can be attributed to clean coal technology?

Answer: Thanks largely to the technology advances of the Clean Coal Technology Demonstration Program and preceding DOE sponsored R&D, the utilization of coal has been progressively cleaner over time. For example, between 1970 and 1995 coal use for electric power generation more than doubled, but SO₂ and particulate emissions came down by 27% and 90% respectively. In the same time period, the average plant emission rate was lowered by 70% for SO₂ and 90% for particulate matter. In the early 1970's there was no technology for controlling NO_x emissions; today 1/4 of all U.S. boilers are equipped with low NO_x burners which reduce NO_x emissions by approximately 40%. Clean Coal Technologies for today's power plant applications are offering efficiencies of 42-45% compared to 33% for conventional coal fired plants while reducing CO₂ emissions up to 30%. These emission reductions and environmental benefits are expected to continue to improve as more Clean Coal Technologies reach commercialization and are accepted in the market.

Question: For the record please submit a summary of the remaining clean coal projects, the decision milestones for each of those projects; and the projected completion date for each project.

Answer: Of the forty projects currently in the Clean Coal Technology program, twenty projects have yet to complete operational requirements under the terms of the Cooperative Agreements. Of these twenty projects, only six projects currently have decision milestones. Fourteen projects have no scheduled decision milestones. Projects that are being restructured may have additional decision milestones based on the outcome of the restructuring activities. The following table summarizes the projects with decision milestones remaining, the target milestone date, description of the milestone, and projected completion date for the project.

PROJECT	DECISION MILESTONE	DATE	MILESTONE DESCRIPTION	PROJECTED COMPLETION
TAMPA (Lakeland, FL)	Cost Growth	4/30/97	Target date for HQ decision on cost growth.	Oct 2001
PENELEC (Warren Stn, PA)	Restructuring	5/31/97	Target date for HQ decision on proceeding.	To be determined based on restructured project.
COAL DIESEL (Fairbanks, AK)	End of BP1-Project Definition	6/30/97	Target date for HQ decision on proceeding.	To be determined based on restructured project.
YORK (York, PA)	Restructuring	11/30/97	Target date for HQ decision on restructuring.	To be determined based on restructured project.
CLEAN ENERGY (Baltimore, MD)	Restructuring	12/31/97	Target date for HQ decision on restructuring.	To be determined based on restructured project.
CPICOR™ (Vineyard, UT)	End of BP1-Project Definition	4/15/98	HQ approval of BP2 for construction.	Jan 2003

The following table summarizes the fourteen projects with no scheduled decision milestones remaining and the projected completion date for each project.

PROJECT	PROJECTED COMPLETION
CUSTOM COALS (Central City, PA)	June 1997
ENCOAL (Gillette, WY)	July 1997
SCS-WALL FIRED (Coosa, GA)	Sept 1997
ROSEBUD (Colestrip, MT)	Nov 1997
NYSEG (Lansing, NY)	Aug 1998
BETHLEHEM STEEL (Burns Harbor, IN)	Sept 1998
WABASH RIVER (West Terre Haute, IN)	Feb 1999
MICRO REBURN (Lansing and Rochester, NY)	Mar 1999
AIDEA (Healy, AK)	Jun 1999
SIERRA PACIFIC (Reno, NV)	July 2000
NOXSO (Newburgh, IN)	Sept 2000
TAMPA ELECTRIC (Mulberry, FL)	Oct 2001
LPMEOH (Kingsport, TN)	Dec 2001
McINTOSH 4A (Lakeland, FL)	Nov 2002
McINTOSH 4B (Lakeland, FL)	Nov 2004

Concluding the Clean Coal Program

Question: What is the timing for concluding the clean coal program?

Answer: Currently, 20 of the 40 projects in the program have completed all operational commitments. Fifteen projects have successfully completed all final reporting requirement under the terms of the Cooperative Agreements. By the end of fiscal year 1998, five additional projects are expected to complete operational commitments. At the start of fiscal year 1999, the remaining 15 projects will be in various stages of final design, construction, or operation. These projects account for a significant portion of program funding and represent advanced electric power generation technologies, coal processing for clean fuels, and the generation of electricity in conjunction with steel production. While the schedules are uncertain for several projects that are being restructured, at least two projects have operating periods that extend into the year 2003.

Question: As the clean coal program comes to a conclusion, what will become of the staff that work on the program?

Answer: As part of the approved Fossil Energy restructuring, the headquarters staff are now organized along product lines as opposed to program lines. A similar management structure is now in place with the Federal Energy Technology Center located in Morgantown, WV and Pittsburgh, PA. The traditional Clean Coal staff have become integrated with the staff from other fossil energy programs and the Department believes the interests of the individual fossil energy programs will be better served under the new management approach.

As the clean coal program comes to a conclusion, the administrative and management activities associated with the program will decline. However, a discernable staff solely devoted to the Clean Coal program will not be readily identifiable under the product line management approach. For example, a staff member of the advanced power generation product line may perform tasks associated with both clean coal projects and coal R&D projects. The Department intends to manage the overall staffing levels in accordance with the Strategic Alignment Initiative that specifies a reduced federal staffing level. The Department anticipates that certain clean coal related activities, such as those associated with recoupment, will continue for some time beyond the end of the program.

Question: Are there certain activities that need to continue to support the basic coal research program?

Answer: There are Clean Coal Technology activities which need to continue as part of a broad-based coal technology R&D program. These activities include data collection and dissemination, analysis of commercial deployment of technology, and other related activities. These activities are an essential step in continued development and commercialization of coal R&D concepts.

Question: If so, what are they and what funding and staffing will be required to support them? Please provide details for the record.

Answer: The funding and staffing required to support these activities is included in the overall out year budget and staffing allocations for Fossil Energy for the fiscal year 2002 and beyond. These allocations do not specifically identify Clean Coal Technology activities, since they will be integrated into the total Fossil Energy R&D budget, however, the total Fossil Energy staffing level for FY 2002 is targeted for 818 for all locations and Fossil Energy programs. The FY 1998 budget request for Clean Coal Technology was based on 68 FTE's and \$15.9 million for program direction. This represents about 8% of the total Fossil Energy staffing for FY 1998, however, it is anticipated that this percentage would decline in the post fiscal year 2002 time frame.

Fossil Energy Research and Development

Question: The Administration is supporting huge funding increases for energy conservation research programs while fossil energy research funding is declining. Isn't your research just as important for conserving energy and reducing emissions? Please explain.

Answer: Continued research and development on advanced coal and gas power systems can make important contributions to energy conservation and emissions reduction. Our program has the goal of achieving major improvements in the thermal efficiency of these technologies by 2010 - 60% efficiency for coal power plants and 70% efficiency for natural gas power plants. If all new fossil power plants deployed after 2015 met these efficiency goals and national demand for electricity continued to grow beyond 2010 at 0.75% per year, carbon emissions in 2050 could be reduced over 230 million metric tonnes per year compared with emissions from plants assuming no advances of today's technology in the future. This emissions reduction represents an annual savings of more than 7.3 quads of coal and 3.2 quads of natural gas. In this example, this reduction in fuel consumption occurs while the amount of electricity generated by these fuels increased. Emissions of SO_2 , NO_x and particulates would also be substantially below New Source Performance Standards.

Question: For the benefit of the record, would you provide some examples of fossil energy technology which has resulted in energy savings and emission reduction?

Answer: Examples vary from advances in power plant technology to new component development to new materials development.

- Thanks largely to the technology advances of the Clean Coal Technology Demonstration Program and preceding DOE sponsored R&D, the utilization of coal has been progressively cleaner over time. For example, between 1970 and 1995 coal use for electric power generation more than doubled, but SO_2 and particulate emissions came down by 27% and 90% respectively. In the same time period, the average plant emission rate was lowered by 70% for SO_2 and 90% for particulate matter. In the early 1970's there was no technology for controlling NO_x emissions; today 1/4 of U.S. boilers are equipped with low NO_x burners.
- During the 1980's, a new metal alloy was developed that gave engineers a way to increase efficiency of power plants. Today, Super 9 Chrome, a super-strong steel alloy, is the worldwide industry standard for safer, more reliable and higher efficiency coal-fired power plants into the 38% range. For example, a 500-MWe power plant operating at 38 percent efficiency will burn nearly 111,000 tons of coal less each year than the same plant operating at 35 percent efficiency. That translates into a cost savings of \$1.8 million per year in fuel costs, an energy savings of 2.5 trillion Btus, and a reduction of carbon emissions of 69,000 metric tons per year per power plant.
- Atmospheric Fluidized Bed (AFB) power plants developed in the 1980s are now being commercially deployed. Over \$8 billion in commercial sales have been reported. AFB

Systems operate at about 10% higher efficiencies than the average installed coal power plants resulting in a savings of over 45 trillion Btus per year.

- Lower cost and more effective SO₂ scrubbers for coal-fired power plants have been commercialized. Cumulative costs of building and operating these scrubbers through 1995 were reduced \$40 billion dollars through this research.
- A new generation of low NO_x combustors and post-combustion devices have been developed. Burner sales to date exceed \$750 million, and will approach \$4 billion by 2000. Previously available technology would have cost an order of magnitude more to achieve the same NO_x reduction. Sales of post-combustion technology (like Selective Catalytic Reduction) are projected at over \$2.5 billion by 2000. Previously, this technology costed twice as much as today's version.
- Power plant technology now being commercially demonstrated in the Clean Coal Program are demonstrating power plant efficiencies in the 42-45% range (compared to 33% for today's average operating coal power plant). Our goal is to further increase coal plant efficiencies into the 60% range, almost doubling existing plant efficiencies and thereby resulting in an almost 50% savings in energy and similar reduction in CO₂ on a per plant basis.

If the average efficiency of all coal fired power plants were increased to just 50%, that would result in an energy savings equivalent to weatherizing five times the total number of homes in the U.S.

Coal Research

Consortium for Fossil Fuel Liquefaction Science

Question: Describe the work of the Consortium for Fossil Fuel Liquefaction Science.

Answer: The Consortium for Fossil Fuel Liquefaction Science is formed by the Auburn University, University of Kentucky, University of West Virginia, University of Pittsburgh, and University of Utah with the objectives of investigating means for the pre-treatment and treating coal with municipal solid wastes, plastics, paper wastes, tires for high valued commercial chemicals and transportation fuel production. The consortium did the original pioneering research that identified the potential for and the feasibility of using waste products together with coal to produce high quality fuels at a much lower cost.

Question: No funds are included to continue this project in fiscal year 1998. What would it cost to continue this work in 1998?

Answer: The consortium is funded at a level of \$1 million in FY 1997. To continue the work, the Consortium will require \$1.7 million in FY 1998.

Low Emission Boiler Systems

Question: You have requested \$5,407,000 for the low emission boiler systems program (LEBS) in 1998 as compared with \$9.5 million in 1996 and \$9.2 million in 1997. Why is there such a large decrease?

Answer: The funding requested for FY 1998 is consistent with Administration funding requests in prior years. In those prior years the Congress added funding to the Administration's request. The FY 1998 funding request reflects current budget constraints, the baseline program plan for a downselection to one contract for Phase IV, the need to support a balanced portfolio of promising energy technologies, and the widening of the protected market window.

Question: With whom are you contracting for LEBS work in fiscal year 1997?

Answer: The three contractors currently in Phases II and III of the LEBS program are ABB-Combustion Engineering, Windsor, Connecticut; Babcock and Wilcox, Alliance, Ohio; and DB Riley, Worcester, Massachusetts.

Question: The three current LEBS contractors appear to have very different and very promising approaches. Please describe each of these approaches.

Answer: ABB-Combustion Engineering uses a Kalina cycle, their proprietary Tangential Firing System 2000, and their proprietary New Integrated Desulfurization (NID) dry flue gas clean up system. For the proof-of-concept facility in Phase IV they propose to re-power an existing commercial plant, at 50 MWe, owned by Richmond Power and Light in Richmond, Indiana. This technology has the highest efficiency potential, but also being revolutionary in nature, it also has the highest risk.

Babcock and Wilcox uses a Rankine cycle, their proprietary advanced low NO_x burner design (DRB-4Z), and their proprietary limestone injection dry scrubbing system (E-LIDS). For the proof-of-concept facility in Phase IV they propose to conduct integrated operations of this system at an existing facility, at a 10 MWe equivalent scale, in Alliance, Ohio.

DB Riley uses a Rankine cycle, their proprietary low NO_x U-fired slagging combustor, their proprietary copper oxide flue gas clean up system having a regenerable agent and no waste products, and low temperature heat recovery. For the proof-of-concept facility in Phase IV they propose to construct a new 70 MWe mine-mouth plant for Ziegler Coal Company in Elkhart, Illinois.

Question: Wouldn't it make sense to continue at least 2 of these contracts in fiscal year 1998?

Answer: While we have considered some alternatives, the down-selection to a single contractor for Phase IV is in keeping with the program's goals and objectives. The program objectives—plant efficiency, emissions levels and cost—are the same for each contractor.

Although each contractor uses different technologies, based on the results to date it appears each will meet the objectives. The process for selecting a developer to continue in Phase IV of the LEBS program will be to form a Federal team of experts who will review and evaluate the Phase II and Phase III results as submitted by each of the three contractors. Selection will be based on an evaluation of the submissions and arrived at by a ranking grounded on a set of technical and other criteria. While there is always benefit to continue more than one in terms of risk reduction and increased probability in achieving program goals, the downselection to one represents a reasonable, cost-effective approach to the program.

Question: What additional funding would be needed to continue each of the LEBS contracts on schedule in fiscal year 1998?

Answer: Based on the current program structure, we plan to down-select one contractor for Phase IV. We believe the request for \$5,462,000 allows us to begin Phase IV in FY 1998. It is estimated that the additional funding needed in FY 1998 to continue the LEBS contract on schedule is an additional \$10 million if the DB Riley concept is selected, and an additional \$20 million if the ABB-CE concept is selected.

Question: What would be the associated outyear requirements? Please provide details by contract.

Answer: The DOE share of Phase IV funding needed in the out-years (including FY 1998) as currently estimated by each of the contractors is:

(in \$ million)	FY 1998	FY 1999	FY 2000	TOTAL
ABB-CE	25	15	5	45
B&W	5	5	5	15
DB Riley	15	10	5	30

We have no estimates of outyear funding requirements at this time. These are contractor estimates only. We expect to negotiate a cost, a cost sharing and a schedule for the project acceptable to both DOE and the contractor.

Question: What amount would you need if you were to continue two contracts on schedule in fiscal year 1998?

Answer: Until the submission of the results for Phase II and Phase III there is no basis to conclude which of the three technologies would rank in the top two. The amount needed, if two contractors were to be fully funded and continued on schedule in fiscal year 1998, would range from \$20 million to \$40 million depending on the contractors selected.

Question: When will LEBS technology be commercially available?

Answer: The duration of Phase IV was always anticipated to be approximately three years or as now planned to end by the year 2001. Phase IV, with a proof-of-concept facility, would be

followed by a first-of-a-kind commercial plant. If successful, the LEBS technology could be commercially available in the 2001-2005 time frame (nominally 2002).

High Performance Power Systems

Question: What is the high performance power systems (HIPPS) project and how does it differ from LEBS?

Answer: The objective of the Indirectly Fired Cycle (IFC) program is to develop the technology needed to commercialize a plant of the future having the highest efficiency and lowest emissions of any combined cycle coal-fired power plant. This plant, referred to as the High Performance Power System (HIPPS), will have a net plant efficiency of 47-52%, with SO_2 , NO_x and particulate emissions less than 1/10 of current NSPS and a cost of electricity 10% less than that of a conventional coal-fired plant. Two technology concepts are currently being pursued through Phase II; one by Foster Wheeler Development Corporation and one by United Technology Research Center. The program has three (3) phases. Phase I involved the selection of engineering concepts, making technology choices, modeling and engineering analysis, and small-scale testing to support the modeling. Phase II involves pilot-scale testing of individual subsystems and integrated system tests to provide data to support the design of a large-scale plant. Phase III involves the detailed design, construction, and operation of a small commercial-scale prototype power plant.

The objective of the advanced PC (advanced pulverized coal-fired power plant) program is to develop the technology needed to commercialize a highly advanced (single cycle) pulverized coal-fired power plant having significantly improved efficiency and environmental performance compared to today's coal-fired plants. This plant, the Low Emission Boiler System (LEBS), will have a net plant efficiency of 42% to 48%, SO_2 and NO_x emissions less than 1/6 of current NSPS and particulate emissions less than 1/3 of current NSPS. It will also have a cost of electricity equal to or less than a conventional coal-fired plant. Three technology concepts are currently being pursued; one by ABB-CE, one by Babcock and Wilcox and one by DB Riley. These three teams were awarded contracts in FY 1992 to independently pursue a four-phase technology development effort that culminates in a three-year proof-of-concept (POC) test at a scale sufficient to provide performance guarantees for a commercial scale system. Phase I involved the selection of engineering concepts and technologies. Phase II, to be completed by July 1997, involves pilot-scale testing to provide data to support larger scale design. Phase III involves the design of a POC test facility and a 400 MWe commercial plant. Each team's development effort incorporates unique and different technologies (see below) that have been tested successfully and are being integrated into preliminary designs for both their POC facilities and the commercial plants. At the conclusion of Phase III, also in July 1997, DOE will evaluate the POC designs and then determine which team is most likely to meet or exceed the program goals and offer a fully integrated coal-fired LEBS plant to the power generation industry. Phase IV involves detailed design, construction, and operation of the POC facility. It is scheduled to begin in early FY 1998.

Question: Who is the target audience for HIPPS and how does that differ from LEBS?

Answer: HIPPS and LEBS have the same target audience, the power producers, for example, utilities, independent power producers, etc. The time frame for the commercial availability of the two technologies and their performance potentials differ. Commercial availability of HIPPS technology follows LEBS technology by approximately five to ten years.

Question: What will you do with the \$11 million requested for the HIPPS program in fiscal year 1998?

Answer: Two contractors will continue Phase II of the HIPPS program in FY 1998. Phase II involves pilot-scale testing of individual subsystems and integrated system tests to provide data to support the design of a large-scale plant. Phase II began in FY 1995.

Question: What is the industry cost share in this program?

Answer: The industry cost sharing in Phase II of the HIPPS program is 25%. Cost sharing in Phase III of the HIPPS program is a minimum of 50% by industry.

Question: At what stage are you in the HIPPS program?

Answer: Both contractors are currently in Phase II of the HIPPS program. Phase II involves pilot-scale testing of individual subsystems and integrated system tests to provide data to support the design of a large-scale plant.

Question: What remains to be done?

Answer: Assuming level funding of \$11 million per year, Phase II will be complete in FY 2002. Phase III would begin shortly afterwards. Phase III involves the detailed design, construction, and operation of a small commercial-scale prototype power plant.

Question: When will this technology be commercially available?

Answer: Assuming current funding level, \$11 million per year, HIPPS technology is expected to offer the first of its kind commercial plant within the next decade.

Question: What are the outyear costs by year associated with HIPPS?

Answer: Assuming level funding of \$11 million per year, Phase II would end in FY 2002. Phase III will be cost shared at a minimum of 50%. The size of the plant proposed will determine the funds required, but will likely be in the same cost range discussed in previous questions on LEBS.

Advanced Research and Environmental Technology

Question: You have requested \$200,000 for field monitoring of advanced technology wastes at Clean Coal disposal sites. What does this program entail?

Answer: This activity entails obtaining samples of wastes produced by advanced technologies at representative commercial scale facilities and characterizing them to determine the use possibilities to minimize waste.

Question: What specific sites are you monitoring?

Answer: The TIDD Project is the only site being monitored. Ash samples from the TIDD Project have been obtained and are being characterized.

Question: Why is this program funded under the coal research program rather than the clean coal program?

Answer: The advanced technology wastes program is a research program which is part of the Advanced Research & Environmental Technology Program. The research activity is to characterize wastes and develop uses. Since the Clean Coal Technology (CCT) Program is a demonstration program such research was not deemed appropriate for funding there. It was also not included in the original Clean Coal Project proposals.

Advanced Research and Technology Development

Question: As the fossil energy research budget continues to decline how do you justify a \$1 million increase to the University coal research program?

Answer: The University Coal Research Program accesses the talents of world class researchers at U.S. universities to address this nation's highest priority fossil energy technology needs. This human resource base, supported by the unique research capabilities at these institutions, has led to important new discoveries and technical progress which have contributed directly to the development of coal power systems.

The program had been supported at about \$5 million through FY 1995. It was reduced to about \$4 million in FY 1996, and further reduced by Congress to about \$3 million in FY 1997. So the FY 1998 request is not an increase, but is merely a partial restoration of the historic funding level needed to adequately address the broad spectrum of research and the novel and innovative concepts that will spawn this nation's next generation of advanced, cleaner and more efficient coal conversion and utilization technologies.

Question: You have proposed to start a new undergraduate intern program with initial funding of \$50,000. What do you hope to achieve through this program?

Answer: The Undergraduate Intern Program is not a new program, but has been a part of the University Coal Research (UCR) Program since FY 1992. It supports one of the primary objectives of the UCR Program; to prepare the next generation of U.S. research scientists and engineers while strengthening and enhancing the research facilities and capabilities of U.S. colleges and universities.

The Internship program helps support this objective in a very cost efficient manner. Internships are offered to high achieving undergraduate science and engineering students finishing their junior year, and who are attending institutions where no graduate degrees are offered. They are therefore provided their only opportunity to perform graduate-level fossil-related research while earning their undergraduate degree. The interns receive technical direction from principal investigators of active UCR grants during the 10 summer weeks. Through this experience, the program encourages these undergraduates to pursue graduate degrees in energy-related fields.

To date, a total of 55 students have received graduate level research experience who ordinarily would not have had such an opportunity. Fifteen additional students have accepted an upcoming appointment. Many of the 55 students who finished their research appointments now intend to continue their education in majors which are directly related to the experience they received during their internship appointment.

Question: Why is this a Federal responsibility?

Answer: A stated goal of the University Coal Research (UCR) Program is to sustain U.S. preeminence in global competitiveness in the areas of fossil fuel science and engineering by enhancing student research to maintain and upgrade fossil energy educational research capabilities at U.S. universities.

A recent National Research Council has cautioned that, "The decline in the number of universities with programs related to coal... is a serious problem which threatens the future of coal technology." "In addition to the current need for research, there will be a related need for trained personnel with expertise in coal technologies to design and manage the advanced coal utilization facilities of the future." There has been, and must continue to be, a Federal responsibility in this area.

Since the UCR Program was established by Congress in 1980, many of the 1300 students who have been educated with the help of these research grants have returned as teaching professors and principal investigators. They now constitute a significant portion of this nation's technological expertise in fossil energy advanced research.

Question: What program expansion and funding assumptions do you have with respect to this new program in fiscal year 1999 and beyond?

Answer: No program expansions are planned in this part of the UCR program for FY 1999.

International Program Support

Question: Why do you need an international program support component in the coal research program?

Answer: The market for clean and efficient coal technologies is both national and international. U.S. taxpayers benefit economically and environmentally from such sales. U.S. companies are looking more to the international marketplace for its near-term sales. The international program support provides assessment of coal technology developments and opportunities in Big Emerging Markets of Asia, South East Asia, and Western Hemisphere; and also provides input and feedback to the coal RD&D program to assist in commercial deployment of emerging technologies. Further, international program support allows for leveraging of U.S. dollars to obtain unique scientific information and obtain up-to-date information, data, and reports.

One of the important activities supported by the international program is work done under the International Energy Agency Coal Research (IEACR) Implementing Agreement. The work program for this international organization is established and guided in large part by key U.S. constituents from both industry and government. U.S. constituents setting the direction for this work include the National Mining Association, Edison Electric Institute, Electric Power Research Institute, state governments, the Department of Commerce, and the Department of Energy. U.S. funding support of IEACR, combined with funding support of a number of other nations, allows the U.S. to leverage the use of its R&D dollars to undertake more key studies than would otherwise be possible. This leveraging is particularly true since U.S. views prevail in a majority of cases involving the setting of priorities for the IEACR work program. Funding provided in FY 1998 for the IEACR work program will support research and provide additional new reports to the U.S. and U.S. constituents on the following important subjects:

- Coal-fired independent power productions
- Economic instruments for pollution control
- Nitrogen oxides control systems handbook (on CD-ROM)
- Computers and air pollution control
- Climatic change: the issue in the 1990s
- Experience of co-firing coal and waste
- Trends in coal-fired power generation in non-OECD countries
- Power station survey in India and China

Question: In fiscal 1997 \$609,000 was provided for the international program. You have requested \$1,151,000 in fiscal year 1998. How do you justify nearly doubling this program when the rest of your budget is decreasing?

Answer: The \$1,151,000 request for FY 1998 was proposed prior to FY 1997 appropriations levels were decided by Congress and represents essentially a level-funded program request. In FY 1997, FE requested \$1,159,000 and Congress appropriated \$609,000, a \$550,000 reduction. It should also be noted that the U.S. government has a \$750,000 yearly commitment to the

International Energy Agency to provide partial support for the coal research service discussed in previous answer. FY 1997 appropriation of \$609,000 created a funding shortfall that prevented us from meeting our international commitments.

To summarize, the FY 1998 request is essentially the same as the FY 1997 request for this budget line-item. The funding is used to support the following.

- 1.) \$750,000 Fund activities of the International Energy Agency (IEA). The U.S. as a member of the IEA, is required by international agreements to pay yearly a portion of the International Energy Agency Coal Research (IEACR) budget. The work program for the IEACR is guided in large part by the National Mining Association, Edison Electric Institute, Electric Power Research Institute, state governments and the Departments of Energy and Commerce.
- 2.) \$135,000 Tuskegee University Southern African Initiative. Support governmental initiatives by involving non-governmental organizations to work with their counterparts to exchange information on coal technology, research and development information which will provide opportunities for African economic development and US sales and services to that region.
- 3.) \$ 75,000 Continue assessment of coal international research and technology development and commercial deployment of emerging technologies to provide feedback into the coal RD&D program and to assist in the assessment of US technology competition.
- 4.) \$100,000 Execute an international outreach program to take advantage of the results from 20 completed CCT program projects and to assure the technical, economic, and environmental performance information is readily available to international governments, industry and financial institutions.
- 5.) \$ 91,000 Support Coal and Power Systems collaboration with international organizations such as the International Committee on Coal Research, International Energy Agency, and the World Energy Council to assure visibility for US CCT and to obtain information on opportunities for US CCT worldwide.

Question: For the record please provide a list in priority order of the projects that are included in the budget request for international program support in fiscal year 1998.

Answer: The following projects are planned, in priority order, for FY 1998:

- 1.) \$750,000 Fund activities of the International Energy Agency (IEA). The U.S. as a member of the IEA, is required by international agreements to pay yearly a portion of the International Energy Agency Coal Research (IEACR) budget. The work program for the IEACR is guided in large part by the National

Mining Association, Edison Electric Institute, Electric Power Research Institute, state governments and the Departments of Energy and Commerce.

- 2.) \$135,000 Tuskegee University, Southern African Initiative. Support governmental initiatives by involving non-governmental organizations to work with their counterparts to exchange information on coal technology, research and development information which will provide opportunities for African economic development and US sales and services to that region.
- 3.) \$ 75,000 Continue assessment of coal international research and technology development and commercial deployment of emerging technologies to provide feedback into the coal RD&D program and to assist in the assessment of US technology competition.
- 4.) \$100,000 Execute an aggressive outreach program to take advantage of the results from 20 completed CCT program projects and to assure the technical, economic, and environmental performance information is readily available to international governments, industry and financial institutions.
- 5.) \$ 91,000 Support Coal and Power Systems collaboration with international organizations such as the International Committee on Coal Research, International Energy Agency, and the World Energy Council to assure visibility for US CCT and to obtain information on opportunities for US CCT worldwide.

Natural Gas Research

Climate Change Action Plan/Coal Mine Methane

Question: The Committee has rejected your proposed \$1 million coal mine methane project each of the last two years. You have included this new start again in the fiscal year 1998 request. What new information do you have for the Committee to make this proposal any more acceptable this year?

Answer: The coal mine methane efforts have been ongoing at DOE since 1995. Five DOE-industry projects are ongoing under the Climate Challenge Program which began in 1993, as a result of the Energy Policy Act of 1992. Ten Phase I awards were made in FY 1995 for feasibility studies in response to a competitive solicitation that sought proposals for cost-shared demonstrations of alternative ways by which recoverable methane released in the course of underground coal mining could be economically utilized. Based on FETC assessment of these studies, five of the proposers were selected for Phase II engineering design preparation. These five projects are partnerships with industry (coal, gas, electric, and engine companies) and are presently in the detailed design phase of field demonstrations, which will test the applicability of various technologies (internal combustion engines, fuel cells, and gas turbines along with

upgrading technologies for natural gas use). In all five projects, industry participation is part of each company's emission reduction goal for greenhouse gases.

Three of these projects are scheduled to be in the field demonstration phase during FY 1998, assuming successful completion of the design phase during the remainder of FY 1997 and early FY 1998 time frame. Based on results to date, each of the 5 projects is feasible to move into demonstration and commercialization. The coal mining companies, who are providing the host sites for the field demonstrations, are greatly encouraged at the prospects for success.

Question: What other projects are you funding as part of the climate change action plan?

Answer: There are no other projects that we are funding in the Natural Gas Program as part of the climate change action plan.

Advanced Turbine Systems

Question: What is the status of the advanced turbine systems program?

Answer: The ATS Program is currently in Phase III (Technology Readiness and Validation Testing) and remains on schedule to date. Several promising technological advances have been made in the program. Both General Electric and Westinghouse, the two utility-scale turbine developers, have performed tests and collected data to verify that their advanced gas turbine designs can be successfully manufactured and operated. During the past year, General Electric and Westinghouse have made significant progress in advanced turbine engine design and technology validation testing. GE successfully completed heat transfer testing on full-scale, first-stage nozzle cascades at their laboratory in Evendale, Ohio. Results of the test showed that steam cooling is as effective as predicted with pre-test calculations. Steam cooling is a revolutionary technique which has not yet been used to enable gas turbine operation at ultra-high efficiencies. The GE Advanced Technology Combined Cycle promises improved economics of electric power generation with outstanding environmental performance in natural gas and coal-fired applications. Under the first year of Phase III, Westinghouse successfully developed and tested the piloted-ring combustor for ultra-low NO_x emissions with excellent stability, advanced seals for increased turbine efficiency, new thermal barrier coatings (TBC), and a new inspection tool to spot TBC defects before they become a problem. Promising technologies developed during Phase III merit further investigations in FY 1998.

Question: Why is this program important?

Answer: The program responds to key public needs. The Advanced Turbine Systems (ATS) Program is important from a global perspective of current and future power generation needs, environmental benefits (less than 8 parts per million in NO_x emissions) including global climate challenges, and domestic economic growth. Power generation world markets could exceed 1,000 gigawatts between now and the year 2010. With growing concerns over emissions levels and global climate change, new capacity must have low pollutant emissions, as well as be cost-effective. The ATS Program is aimed at addressing these issues and concerns by commercializing

clean, highly efficient, low cost power generation technology. Under the program, advanced gas turbine technology is being developed for commercialization with the support of major manufacturers, U.S. universities, national laboratories, and with the participation of a multitude of U.S. small businesses.

The ATS Program is an innovative partnership between the U.S. Federal/State Governments, gas turbine manufacturers, end-users, universities, national laboratories, and nonprofit organizations to jointly address long-term research and development (R&D) issues. R&D performed under the ATS program provides also the key technology needed to achieve the goals of other power system technologies in our portfolio with reduced emissions, increased energy efficiency, fuel flexibility, and reduced cost. ATS will help meet future national and worldwide power generation requirements, provide a cleaner global environment, and maintain a strong U.S. economy. Intense global competition is expected for this market by foreign manufacturers with the assistance of their respective governments.

Question: Why is funding for the turbine program decreasing in fiscal year 1998? (\$46.6 million in 1997; \$31.4 million requested for 1998)

Answer: The proposed funding decrease for turbines in FY 1998 relative to FY 1997 is a result of expanded market windows from a timing perspective and having to make hard choices to meet budget constraints and to support a balanced portfolio of promising energy technologies.

Question: What level of funding is required to continue the two turbine contracts on schedule in fiscal year 1998?

Answer: The level of funding to continue two contractors on schedule in FY 1998 is \$58.6 million as given in the February 1994 Report to Congress.

Question: The funding in your request is sufficient for a single contractor. Should we downselect in fiscal year 1998? Please explain.

Answer: The original program was structured to include a down select to one contractor for Phase IV--a full systems integrated demonstration. The funding request for FY 1998 reflects the baseline program. However, the Department is considering the option of restructuring the Phase III portion of the program to retain both developers to perform prototype testing on two turbine generators. This restructuring could enable the DOE to attain the goals of the program with two domestic gas turbine manufacturers. Under this restructured program, projected total government costs should remain consistent with the February 1994 Report to Congress (in the \$304 to \$308 million range, which is lower than the current baseline of \$319 million based on a 2002 completion date), but with added benefits. Technology risks would be reduced with two manufacturers and competitiveness would be enhanced in the global market for U.S. turbine products.

Question: For the record please provide a year by year funding analysis of the originally envisioned turbine program and a funding comparison of the program as currently envisioned.

Answer: A comparison of the programs as originally envisioned (O.E.) and currently underway (C.U.) is shown below in millions of dollars:

	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02
O.E.	0.7	9.8	20.7	44.4	52.5	52.5	58.6	35.2	29.7	0.0	0.0
C.U.	0.7	9.8	20.6	37.7	36.0	46.6	31.5	See Note #1			

O.E. Total = \$304.1 million

C.U. Total = \$318.9 million (Baseline program with down selection for Phase IV)

Note #1 - \$136.0 million total

We are also discussing program restructuring options with the two turbine manufacturers in the program which could reduce current program cost estimates back to the original cost range (\$304 - \$308M). However, we have not yet completed these discussions.

Technology Development

Question: In fiscal year 1997 we provided \$500,000 for technology development in the natural gas program. How are you using these funds?

Answer: Three projects are being funded in this key activity in FY 1997:

1. Sandia National Laboratory is developing a methane leak detection system using a novel combination of laser and video technology. This project is jointly funded with the Gas Research Institute (GRI), although recent budget cuts at GRI have forced them to reduce their funding, making DOE support of this project all the more vital. In the past year, Sandia has been able to increase the range of this system from about 40 meters to 100 meters and has increased its sensitivity to methane flow.
2. A request for proposals was issued for cooperative National Laboratory/industry projects in two high priority environmental areas: produced water reduction and treatment and stationary source air emission control. These priority areas were selected by a panel of industry advisors who will also advise DOE on proposal ranking. These projects will apply National Laboratory technologies and expertise to industry needs in these areas. It is expected that two to three projects will be funded. Funds from the oil environmental R&D budget are also being used for this solicitation.
3. A feasibility study and field demonstration of the use of drill cuttings for wetlands restoration is being performed by Southeast Louisiana University and Greenhill Petroleum. This project is both collecting data needed by regulators on the environmental impacts of this technology, in the university's mesocosm wetland restoration lab, and demonstrating the field application.

The benefits of a successful demonstration include both increasing the acreage of valuable wetlands and decreasing costs for producers.

Question: You have requested \$2.3 million for technology development in the fiscal year 1998 budget. How do you justify this large increase?

Answer: This increase will expand the technical component of the environmental R&D program to bring environmental technologies and expertise available at the National Laboratories, universities, and other research organizations to industry in collaborative projects. This will build on the initial FY 1997 effort in the high priority areas of produced water reduction and treatment, and stationary source emission control, and add other priority research areas such as tank bottom treatment, NORM treatment and disposal, and soil remediation.

The need for this increase is justified by the threat to domestic gas production posed by increasingly costly and complex environmental requirements. While these requirements provide the framework for effective environmental protection by the industry, the high costs can make many natural gas exploration and production projects uneconomic and also cause premature abandonment of marginal gas fields, wasting valuable gas resources. As the Administration and the Nation look to clean-burning natural gas to help solve environmental problems, including global climate change, we must also face the fact that many thousands of additional gas wells will have to be drilled and operated each year to produce the desired increased supply. The Federal Government has an important role in keeping costs down to secure economic supplies while attaining environmental goals.

DOE's role is focused in areas where there is a unique technical capability at our labs or field centers; where technology development is done to aid future regulatory development by providing information on performance and impacts for regulators; where technical data are needed to remove regulatory barriers to using advanced, innovative technologies; where improved technology can result in increased recovery of oil and gas from Federal lands; and where DOE can be a catalyst for cooperative efforts that would not otherwise have taken place for reasons such as antitrust concerns, or because DOE's participation adds needed credibility.

Question: For the record please provide a list of projects in priority order which comprise the \$2.3 million request for technology development.

Answer: Approximately \$1 million will be used to issue a Program Research and Development Announcement (PRDA) for research by universities and private research organizations in the high priority areas of produced water reduction and treatment, stationary source emission control (i.e., Clean Air Act concerns, such as ozone and particulates), tank bottom treatment, treatment and disposal of naturally occurring radioactive materials (NORM), and soil remediation. Projects will be required to have an industry partner and a minimum 20 percent cost sharing to demonstrate industry support for the research.

Another \$800,000 will be used for cooperative projects in the high priority areas listed above involving National Laboratories with university and industry partners. These projects will take

advantage of environmental expertise and technology at the laboratories to develop lower cost, more effective compliance methods and to develop sound scientific grounding for regulations under the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, the Safe Drinking Water Act, and other environmental legislation.

\$200,000 will fund the continuation of the Sandia methane leak detection project to increase the technology's range and sensitivity using a new, more powerful laser power source and to test a truck mounted system.

\$300,000 will fund the continuation of the wetlands restoration project described above.

Fuel Cells

Question: There are currently 3 fuel cell contracts in the fossil energy program. Two deal with molten carbonate fuel cell technology and the third uses solid oxide fuel cell technology. Describe the difference between these two fuel cell approaches.

Answer: The difference between the molten carbonate fuel cell and solid oxide fuel cell approaches is significant and exists both in power system applications and in technology. In the area of power system market-entry applications, one molten carbonate fuel cell developer is focused on on-site cogeneration, the second on megawatt class distributed generation, while the solid oxide fuel cell developer is aiming toward multi megawatt fuel cell/gas turbine combined cycle power systems for central stations. In the area of technology, the major differences include: (1) molten carbonate technology uses flat plates operating at 1,200°F, while the solid oxide technology being developed uses solid-state ceramic operating at 1,800°F; (2) each fuel cell type employs electrolyte materials that conduct ions at much different temperatures; (3) operating conditions and, therefore, development challenges for the two technologies are different; (4) each type system reforms hydrocarbon fuels in a fundamentally different manner; (5) reactant flow techniques are unique to each type of cell module; and (6) overall design of each type fuel cell power system is entirely different from the other.

Question: The budget for fiscal year 1998 does not have sufficient funds to continue all three fuel cell contracts on schedule. What additional funds would you need to continue all three contracts on schedule? Please provide details by contract.

Answer: It is our understanding that the amount estimated to be required for all three developers to continue effort on the original schedules totals \$12 million in FY 1998, roughly evenly distributed to conduct the product improvement/cost reduction phase of development in each contract.

Question: What is the industry cost share on each of these contracts?

Answer: The industry cost share for molten carbonate fuel cells is about 30 percent of the total project cost for each developer. Industry cost share for the tubular solid oxide fuel cell work is about 50 percent of the total project cost.

Question: When will these technologies be commercially available?

Answer: The molten carbonate fuel cell technology is expected to result in a system that is commercially ready in 2002 assuming outyear funding is level with the fiscal year 1998 request. Solid oxide fuel cell technology is expected to be commercially ready in about 2002, with future funding level with the fiscal year 1998 request.

Question: What are the pros and cons of downselecting from 3 to 2 fuel cell contracts in fiscal year 1998?

Answer: The advantage of downselecting from three to two fuel cell contracts in fiscal year 1998 is the ability to fully fund the remaining contractors within the current budget, thus allowing restoration of those contractors' development schedules as originally planned. Disadvantages of downselection of a contract in fiscal year 1998 include the following: (1) The technology is not yet sufficiently developed to make a clear choice between the three systems; a premature downselection decision, increases the risk that the best technology is not selected. (2) it would likely result in collapse of the downselected developer or entry of foreign investors to fill the gap; (3) since each developer is targeting a different power system application, it would leave that application unfilled; (4) it would not protect the taxpayers' investment in this highly beneficial technology; (5) the establishment of a strong, diverse, domestic fuel cell industry could be jeopardized; and (6) clean, highly efficient energy benefits, high value jobs, and other economic benefits to the United States would be limited.

Question: Phosphoric acid fuel cells have been in the marketplace for the past few years with limited commercial success. Why do you believe molten carbonate fuel cells and solid oxide fuel cells will have any greater success?

Answer: It is expected that, in time, all fuel cells will realize commercial success and user benefits. Phosphoric acid fuel cells are just beginning to penetrate the market with financial assistance from the government and will pave the way for the next generation improvements, including molten carbonate and solid oxide fuel cells. Molten carbonate fuel cells and solid oxide fuel cells are expected to offer enhanced benefits to users. Among those benefits are high efficiency (50 to 60 percent; compared to about 40% for phosphoric acid systems); cell and stack materials and manufacturing processes are expected to be low cost; the elevated operating temperatures and the ability to provide bottoming cycles with their systems promise to provide wide applications; and as environmental emission standards become more stringent, fuel cells are expected to have broadened use (in some states, fuel cells have received siting permit exemptions). For future applications, current studies show that molten carbonate fuel cells and solid oxide fuel cells with gas turbines in combined cycle power plants offer enhanced efficiencies greater than any other type power plant known.

Question: For the record, please provide information by year on the cost of each fuel cell program, including past costs and estimated outyear costs.

Answer: Historical costs of each fuel cell program by year are given in the table on the following page.

Estimated out-year costs (\$ millions) of each Fuel Cell Program, with a completion date of 2002, are given in the following table:

Molten Carbonate \$32.7/yr. FY 1999 - FY 2002

Solid Oxide \$12.4/yr. FY 1999 - FY 2002

ENACTED APPROPRIATIONS DOE/FE FUEL CELLS **(\$ IN THOUSANDS)**

	FY 76	FY 77	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86	FY 87
AR & TD	0	0	0	0	0	0	0	2,000	4,000	1,910	1,272	1,350
Phosphoric Acid	3,700	18,050	30,800	19,500	23,500 ⁽¹⁾	21,000	20,640	17,550	28,800	28,912	20,355	15,500
Molten Carbonate	0	1,450	2,200	17,000	12,000	9,000	9,600	7,500	9,200	8,851	9,932	7,621
Advanced Concepts (Solid Oxide)	0	1,500	2,200	4,000	0	2,000	4,224	5,000	4,600	3,048	3,770	4,963
Total	3,700	21,000	35,200	40,500	35,500	32,000	34,464	32,050	46,600	42,721	35,329	29,434
	FY 88	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97	FY 97	FY 76-97
AR & TD	1,547	1,597	1,458	1,444	1,564	1,462	1,428	1,430	1,289	1,186		24,937
Phosphoric Acid	13,200	9,500	8,291	8,843	3,909	0	0	0	0	0		292,050
Molten Carbonate	11,100	7,069	16,777	18,413	28,628	30,531	31,868	29,434	37,146	35,446		340,766
Advanced Concepts (Solid Oxide)	8,353	8,368	11,473	14,160	16,671	18,451	17,793	16,091	12,802	12,172		171,639
Total	34,200	26,534	37,999	42,860 ⁽²⁾	50,772 ⁽²⁾	50,444 ⁽³⁾	51,089 ⁽³⁾	46,955 ⁽³⁾	51,237 ⁽³⁾	48,804 ⁽³⁾		829,392

(1) Includes 9,500 transfer of fuel cell appropriations from Conservation

(2) After reprogramming of 30 in FY 91

(3) Adjusted appropriations after SBIR & STTR reductions

Oil Technology

Question: The oil research program is the big winner in the fossil energy budget. While the budget overall is decreasing, oil research is targeted for a 14% increase (\$46 million in 1997; \$52.2 million requested for 1998). Please explain why oil research funding is increasing in fiscal year 1998?

Answer: The requested FY 1998 oil research budget increase reflects the Department's realization that the budget was cut excessively in past years. The FY 1998 budget, although up from last year, is still 36% lower than the FY 1995 budget. The FY 1998 budget also reflects the importance of the oil research program in addressing the two highest priority national needs relative to the future use of fossil fuels, environmental protection and domestic energy security.

Question: Why is this research more important than funding your existing commitments to programs like low emission boilers, advanced turbines and fuel cells?

Answer: Oil supplies over 35% of our national energy needs, a larger share than coal or natural gas. The U.S. currently imports about half of the oil it uses and EIA projects that we will import 60% of our needs by 2010, much of it from politically unstable regions, increasing the risk that our economy will be disrupted by oil import interruptions. The oil research program addresses the two highest priority national needs relative to the future use of fossil fuels, environmental protection and domestic energy security. Improved environmental compliance technologies can lower compliance costs by up to 40%, and increased recovery of domestic oil can cut our reliance on insecure foreign sources.

The increase in the oil program budget will not result in a degradation of other Fossil Energy program goals. Planned budget reductions in low emission boilers (LEB's), advanced turbines, and fuel cells are not expected to impact the ultimate program benefits in these areas, but rather reflect lower funding requirements as LEB's and advanced turbine technologies approach pilot scale, and fuel cell research schedules are stretched out by two years.

Question: For the record please provide a list in priority order of all the projects which comprise your increase for oil technology research.

Answer: Below are the priorities of the increases requested for oil technology research (highest priority first):

<u>Priority</u>		<u>Requested Increase</u>
1	Field Demonstrations (Revisit Classes 1, 2, and 3)	+\$500,000
2	Petroleum Technology Transfer Council	+\$600,000
3	National Lab Partnership	+\$2,000,000
4	Environmental Regulatory Streamlining (on-line electronic permitting)	+\$500,000
5	Environmental Technology Development	+\$300,000
6	Planning and Analysis (TORIS modeling improvements)	+\$500,000
7	Science for Environmental Protection (Particulate Matter)	+\$300,000
8	California Heavy Oil Upgrading Research	+\$300,000
9	Exploration and Drilling (Advanced Drilling Fluids)	+\$700,000
10	Exploration and Drilling (Non-invasive basin analysis on Tribal and Federal lands)	+\$1,000,000

Cooperative Research and Development

Question: What programs are currently funded at the University of North Dakota Energy and Environmental Research Center and the Western Research Institute and how will those efforts be impacted at the reduced funding level proposed for fiscal year 1998? (\$5.5 million in 1997 and \$3.9 million in 1998) (p. 99)

Answer: In FY 1997 the University of North Dakota Energy and Environmental Research Center (EERC) has received \$2,030,000 for its jointly sponsored research program. The EERC proposal to the Department of Energy identified ten current projects and twenty two new projects for potential funding. Since these projects required more funding than was available in the budget, the EERC has been required to prioritize their projects and narrow the list of proposals. Some of the areas of research include: enhanced air toxics control, groundwater cleanup, hot gas filter ash characterization, flue gas chemical measurement methods, coal combustion byproduct database systems and various other coal projects and environmental characterization projects.

The FY 1998 Budget provides \$1,966,000 to support these and similar efforts as well as \$1,864,000 for coal related research as directed by the Department and designed to assist the program in overcoming technological barriers that may hamper the scheduled completion of advanced clean efficient power systems and fuel projects.

The FY 1998 funding will not significantly impact the EERC, but will focus research efforts in high priority areas that support the mission of the Fossil Energy Program.

The FY 1997 funding for the Western Research Institute has been \$2,530,000 and includes funding for projects in the areas of downhole steam generation, containment recovery of oily wastes, shale analyses, validation of new soil samplers, wetting behavior of selected crude oils, enhanced recovery of coalbed methane, and the development and demonstration of a wood-fired gas turbine system.

Many of these projects will continue in FY 1998 with the available funding of \$1,966,000.

As noted by both the Western Research Institute and the Energy and Environmental Research Center, there are many more projects submitted than available funding can support, so these centers must prioritize and choose the best projects of all the proposals developed.

Question: You have proposed to shift \$1.9 million from the coal research program to the University of North Dakota in fiscal year 1998. Please explain this proposal.

Answer: The FY 1998 Budget Request for Fossil Energy R&D provides \$1.864 million for cost shared, coal related research that is approved by the Department and is consistent with the Fossil Energy mission.

Question: What are the advantages of shifting this work to the University of North Dakota?

Answer: The main advantages to assigning these tasks to the EERC are the ability to cost share at a 50% level or greater through an existing Cooperative Agreement.

Question: Why as the University of North Dakota chosen to do this work?

Answer: As previously mentioned, during the past 2-3 years EERC has developed an organization that is recognized nationally for Air Toxic Metals research. The Center has become one of the expert laboratories in the measurement and characterization, and in the development of control strategies for mercury, other air toxics, and fine particulates. The draft EPA report submitted to Congress indicates the possibility that air toxics, especially mercury, may require control strategies. EERC has developed the technical expertise to assist Fossil Energy to effectively address this potential problem. The existing Cooperative Agreement is an appropriate vehicle for accomplishing the work and provides cost sharing on the projects.

Question: What research will be conducted with this funding? Please provide details for the record.

Answer: At the present time, the specific research has not been determined, but it is hoped that the EERC can provide expertise in areas where the FE program has technical problems to overcome. The EERC has been helpful in the past in providing assistance in the Indirect Fired Cycle Systems program area and it is envisioned that this expertise can be expanded to cover other critical areas of the Advanced Clean Efficient Power Systems activity. EERC has several projects under discussion with commercial sponsors to develop Joint Venture tasks that will

address these and other technical questions and environmental concerns surrounding coal utilization.

Materials Research

Question: What are you doing to integrate the materials research transferred from the former Bureau of Mines into the fossil energy research program?

Answer: The Bureau of Mines materials research determines the factors that limit service life of materials in industrial, structural, or engineering applications and to provide solutions to service-life problems through new materials technology. The program also seeks to establish and maintain mutually beneficial partnerships with industry and other agencies to share the costs, tasks, and national benefits of research. The essential nature of the research provides knowledge and understanding which has the potential to benefit a broad base of interests. The approach taken to integrate the Bureau of Mines' program requires identification of the necessary capabilities and expertise at the Albany Center which complement the Department of Energy's programs. For FY 96, all projects identified were either continuations of FY 95 projects or new starts which were selected via the standard operating procedure (SOP for the Research Directorate in the U.S. Bureau of Mines) for program planning and evaluation during FY 95. The Materials program for FY 1997 focuses on identifying partners and establishing research activities related to Fossil Energy, continuing essential research directed toward National priorities, and continuing Partnership activities. Towards this end, visits and program discussions occurred during the Spring of 1996 at the Pittsburgh Energy Technology Center, the Morgantown Energy Technology Center, the Bartlesville Project Office, and Oak Ridge National Laboratory. In addition, discussions with Headquarters Staff began the process to shape the future program content for Albany. This approach towards the future includes a focused effort in establishing partnerships.

The Materials Program at Albany will directly contribute to FE objectives by formulating partnerships to determine or develop materials for use in current and future power systems. Efforts will focus on research which provides data on the performance characteristics of materials being specified, on developing cost-effective materials for construction of new and enhanced power systems, and for solving potential environmental emission problems of such energy producing systems. An emphasis is also being placed in Albany's Research Program on resolving near-term materials problems associated with the retrofitting of existing coal-burning power plants. A significant portion of the Center's budget has been and must continue to be obtained through cooperative research efforts. This ongoing process of refocus and redirection is expected to continue into FY 1998.

Question: Please provide a list of the materials research projects being conducted, the cost of each project and how each relates to the fossil energy program.

Answer: The following table provides the listing of projects directly related to Fossil Energy products.

Project	FY 1998 Funding	Relationship to FE
Corrosion & Wear - Corrosion	\$350,000	Fundamental studies are being conducted on the passivity of engineering materials; also under study are elevated temperature aqueous corrosion and dry oxidation; general corrosion, galvanic corrosion, and combined effects of wear and corrosion. The studies are related to the long term performance of engineering materials in severe operating environments, such as those typically found in fossil energy generating plants and in structures and supporting facilities associated with oil and gas production.
Fracture & Wear	\$800,000	Develop an accurate understanding of the service wear mechanism to develop new equipment and to select materials for improved service life in existing equipment such as those typically found in fossil energy generating plants. The <i>Fracture and Wear</i> area is aimed at addressing these deficiencies in current knowledge, leading to an improved understanding of the factors causing wear of equipment. This knowledge will allow the "engineering" of the material microstructure to resist a particular wear environment, that is, when to use a ceramic rather than a metal or a composite. As the basic understanding of how to develop wear resistant microstructures increases, it will be possible to more effectively utilize existing natural resources, thereby extending the lifetime of wear materials and reducing wastage.
Infrastructure	\$700,000	The long term evaluation of engineered materials for infrastructure applications, such as those found in marine environments; the assessment of degradation mechanisms of infrastructure materials in macro- and micro-climates; the development of protection and remediation strategies for infrastructure materials; and the construction of empirical models for the estimation of material/structure lifetimes constitutes the basis for research in this area.

Processing	\$1,300,000	Many new materials, such as intermetallic alloys and composites, have been recently developed for use in aerospace/defense applications. The nature of these applications allows for relatively expensive processing routes. However, the properties of many of these newly developed advanced materials (high melting points, high strengths, high moduli, low density and environmental stability) make them attractive for use in many other applications where cost is frequently a major factor in materials selection. Hence, the ultimate utilization of these materials in non-aerospace applications such as power generation systems (combustion power plants as well as fuel cells) will require novel and innovative low cost processing techniques.
Refractories	\$250,000	The Albany Research Center has directed its refractory research at improving material performance and at recycling spent refractory materials. Industries such as those involved in power generation need new/improved refractory containment materials for the higher operating temperatures, lower grade coals, and technological innovations involved with cleaner air and improved operating efficiency.
Casting Tech.	\$400,000	World-class reactive metal processing expertise, in particular titanium, has resided at the Center for over 50 years with most of the equipment and processes currently in industrial use developed here. The major research thrust now is in developing a process to continuously cast titanium for industry and to design and produce low-cost titanium prototypes for automotive, military and fossil energy applications.
Melting Tech.	\$1,200,000	Melting technology consists of melting expertise that has been divided into two areas, cupola melting and electric arc furnaces (EAF). The core competencies of melting technology is centered in two unique pieces of equipment, 1) a fully instrumented, 1MW, 18-in. inside diameter cupola furnace; and 2) a 1 MW, water-cooled, one ton per hour thermal waste treatment facility; and a state-of-the-art shared air pollution control system. Research focus is on feed preparation/agglomeration and glass formulation methods for a variety of waste materials including wastes from power plants.

Naval Petroleum and Oil Shale Reserves

Question: The budget request for the Naval Petroleum and Oil Shale Reserves is \$117,000,000, a decrease of \$26,786,000 below the fiscal year 1997 level. You have requested enough funding to operate Elk Hills for 7 ½ months. What happens if the sale is not completed on time?

Answer: If the sale is not completed on time, additional funds will be sought to operate NPR-1 until such time as the sale is completed to avoid loss of production, loss of revenue, and future reservoir and facility damage.

Question: If the sale is delayed, how will you ensure the field is not devalued because you've run out of operational funding?

Answer: If the sale is delayed, the Department assumes that it will be aware of this in sufficient time to request from Congress additional funding either through a reprogramming, transfer, or supplemental.

Question: No funding is requested for development drilling. What are the consequences of eliminating funding for development drilling if the sale does not proceed?

Answer: Although vast reserves of crude oil and natural gas remain available at Elk Hills for future exploitation, production of these resources is on a natural decline as the reservoirs become depleted. The rate of this decline is significantly influenced by the amount of development drilling that is undertaken, as has been demonstrated in the past when the historic annual decline rate of approximately 8 percent was not only halted but reversed, in large part due to an aggressive development drilling program that emphasized high-production horizontal wells. Any prolonged interruption to development drilling will result in an increase in the decline rate of crude oil production and a consequent loss of production volumes and sales revenues, with the ultimate effect heavily dependent upon the length of the interruption.

Question: What level of funding will be required for development drilling if the sale is not completed in fiscal year 1998?

Answer: If the sale of Elk Hills is merely delayed by a few months beyond the statutory deadline of February 1998, no additional funds for development drilling will be required because there will not be enough lead time to properly plan for and execute any development drilling projects prior to the completion of the divestment that will materially enhance the value of the field or benefit the Federal government with increased revenues.

Question: Why isn't the cost for management and administration of Elk Hills declining? (\$20 million in appropriations plus \$2.2 million in prior year funds for 1998 compared with \$20.5 million and \$1.3 million in prior year funds for 1997).

Answer: The request for this activity was reduced to reflect the sale and estimated operating time for FY 1998. However, these reductions were offset by one-time cost increases for M&O contractor severance and contract close-out activity.

Question: For the record, please provide a detailed breakout of the management and administration budget, including a side by side analysis of 1997 and 1998 funding.

Answer: The following table provides a breakout of the FY 1997 and FY 1998 budgets (including prior year funds) by activity for the Management and Administration category:

Management and Administration (dollars in millions)		
	<u>FY 1997</u>	<u>FY 1998</u>
Drilling management	\$.7	\$.1
General Management	4.3	2.7
Finance and administration	11.6	7.2
Miscellaneous	.2	
Operator fee	5.0	3.1
M&O severance		4.6
Contract close-out		4.5
Total	\$ 21.8	\$ 22.2

Naval Petroleum Reserve No. 3 in Wyoming and Oil Shale Reserves

Question: What options are you pursuing with respect to the sale or transfer of NPR-3 and the Oil Shale Reserves?

Answer: DOE's recommendation is that the United States retain its interest in NPR-3 (Teapot Dome). DOE would continue to operate the field under the Naval Petroleum Reserves law to the end of the field's economic life (projected to be in 2003). At such time, DOE would be authorized to sell or otherwise dispose of the United States' interest in NPR-3 in a manner that would maximize its value.

DOE recommends that, with the exception of certain lots located within Ford City, California, NPR-2 be transferred to the Department of the Interior for leasing and surface management in accordance with the Mineral Leasing Act, Federal Land Policy and Management Act, and other applicable statutes. To maximize the economic value of the property, such transfer would be subject to the existing mineral leasing agreements in effect on the property. The transfer would also be subject to a prior determination of the appropriate allocation of responsibility for environmental restoration and remediation. Pending such determination, DOE would retain and continue to operate the property under the Naval Petroleum Reserve law. With regard to the 16.7

acres of town lots within Ford City, DOE recommends that it be authorized to undertake the sale or other appropriate disposition of the lots.

DOE recommends that the three NOSRs be transferred to the Department of Interior for leasing and surface management in accordance with the Mineral Leasing Act, Federal Land Policy and Management Act, and other applicable statutes. DOE believes that the potential long-term benefits, both economic and noneconomic, of the transfer of these properties to the Department of the Interior significantly outweigh any near-term economic benefits that might be realized by the outright sale of these properties.

With respect to the transfer of NOSR-3, however, because of issues of possible environmental contamination relating to portions of NOSR-3, the transfer of NOSR-3 to the Department of the Interior would be subject to a determination of the appropriate allocation of responsibility for environmental restoration and remediation. Pending such determination, DOE would retain and continue to operate NOSR-3 under the Naval Petroleum Reserve law. In addition, to expedite the development of the potential value of the acreage from which natural gas currently is produced on NOSR-3, after a transfer to the Department of the Interior, DOE recommends that the Department of the Interior conduct a lease sale of the mineral interests underlying such acreage within one year from the effective date of legislation authorizing the transfer and leasing of NOSR-3 property. DOE would continue to manage and operate the producing acreage until the completion of the lease sale.

Question: How do your recommendations differ from the independent consultant's study on this issue?

Answer: DOE concurs with the independent consultant's recommendation that the United States retain its interest in NPR-3 (Teapot Dome). However, with respect to the remaining four Reserves, DOE's recommendations are different than those recommended by the independent consultant. The independent consultant recommended the outright sale of the other four Reserves, whereas the DOE recommendation for their disposition is primarily through transfer to the Department of the Interior for leasing, pending prior determination of the appropriate allocation of responsibility for environmental restoration and remediation.

Question: Why have you decided to retain all the remaining reserves and transfer them to the Department of the Interior rather than selling those reserves recommended by the independent consultant's study?

Answer: With the exception of NPR-3, DOE does not recommend that it retain any of the other Reserves. The DOE recommendation is to transfer those properties to the Department of the Interior for leasing. The DOE rationale for transfer for leasing rather than outright sale as recommended by the independent consultant is explained for each property in the following paragraphs.

NPR-2

DOE does not concur with the independent consultant's recommendation to sell all of the United States' interest in NPR-2. The difference in the net present value estimated by the independent consultant for sale as compared either to retention by DOE or transfer to the Department of the Interior is about \$1 million. The estimated sale value, however, assumed that the sale of NPR-2 would cost only \$300,000, based on costs that would be typical in a private sector sales transaction. Based on its experience in conducting the sale of NPR-1 (Elk Hills), the DOE estimates that the actual transaction cost would more likely be in the range of \$500,000 to \$800,000, depending on the costs of environmental assessments, reserve report requirements, and other sale preparation activities. DOE therefore is unconvinced that the sale of NPR-2 would result in a significantly greater economic benefit to the United States than would continued Government ownership.

Furthermore, NPR-2 is a significant habitat for a number of endangered or threatened animal and plant species protected under the Endangered Species Act (ESA). A transfer of ownership of the property to a private sector buyer would carry with it the responsibility of compliance with the ESA and consultation with the U.S. Fish and Wildlife Service for the continued protection and management of endangered and threatened species at NPR-2. However, the Department of the Interior has expressed its deep concern that ESA values would be lost if NPR-2 were sold, noting that ESA obligations incurred by a Federal agency are of a higher magnitude than those incurred by private owners. Continued Government ownership of NPR-2 would provide for the continued rigorous protection of endangered species on the property.

DOE does, however, recommend the sale of the United States' interest in the 16.7 acres of town lots within Ford City. The independent consultant assigned no value to any mineral interests underlying the town lots, but assigned a fair market value of \$288,000 to them if sold for residential or commercial use. These lots hold no uniquely Federal value, and should be divested. DOE therefore recommends that it be authorized to undertake the sale or other appropriate disposition of these properties.

NOSR-1 and NOSR-2

With respect to NOSR-1 and NOSR-2, DOE does not concur with the independent consultant's recommendation. DOE believes that NOSR-1 and NOSR-2 have intrinsic value to the Nation which, together with their potentially large, long-term economic value, outweighs any near-term financial gain that may be realized through a sale of these properties. DOE therefore recommends the transfer of NOSR-1 and NOSR-2 to the Department of the Interior for leasing under the Mineral Leasing Act and surface management under the Federal Land Policy and Management Act.

There are unproved yet potentially substantial natural gas deposits within both NOSR-1 and NOSR-2. And although the independent consultant assigns little or no value to that resource under continued Government ownership, DOE believes sale of NOSR-1 and NOSR-2 should not be considered until more information and a fuller understanding of the potential mineral resources

is obtained. The Department of the Interior could develop that information and understanding through leasing and other activities under the Mineral Leasing Act.

Additionally, although sale of the NOSR-1 and NOSR-2 properties might produce the greatest immediate fiscal benefit, DOE believes that benefit is not substantial enough to outweigh the value of public access to the substantial recreational, scenic, and biological values associated with public surface management opportunities at these sites. The transfer of NOSR-1 and NOSR-2 to the Department of the Interior for surface management under the Federal Land Policy and Management Act would retain the properties in the public domain for multi-purpose usage.

Furthermore, with respect to NOSR-2 only, DOE recommends, in particular, consideration of the inclusion of the Green River Area within the national wild and scenic river system. Transfer of NOSR-2 to the Department of the Interior would also allow full consideration of the claims and requests of the Ute Indian Tribe. Protection of Native American petroglyphs and burial sites on the Reserve is a real concern. Claims of the Ute Indian Tribe, which already maintains surface ownership of 40 percent of the reserve, need to be resolved. All of these issues can be addressed in a systematic manner, if the Reserve is maintained in the public domain for the foreseeable future under management by the Department of the Interior. Transfer of NOSR-1 and NOSR-2 to the Department of the Interior therefore would ensure public access to the properties and secure the opportunity for the United States to maximize the full value of their mineral rights in the future, as mineral prospects are further explored and evaluated.

NOSR-3

In regard to NOSR-3, DOE disagrees with the independent consultant's recommendation to sell the United States' interest. The independent consultant estimated the net present value of the option of transferring NOSR-3 to the Department of Interior for leasing under the Mineral Leasing Act to be only \$2.8 million, as compared to \$5.5 million under sale option. The difference was attributed primarily to the fact that, under the provisions of the Mineral Leasing Act, half of the revenues resulting from leasing activities would be paid to the State of Colorado. The independent consultant therefore concluded that an outright sale of the property would generate the greatest revenues to the Federal Government.

However, the Mineral Leasing Act's requirement of payment of 50 percent of leasing revenues to the State in which the Federal land is located is based on the apparent determination by Congress that such assignment carries value to the Nation as a whole. DOE therefore believes that the total estimated value of the leasing option, including the share that would go to the State of Colorado, should be considered in determining the disposition of NOSR-3. According to the independent consultant, the market value of a bonus that would be paid to lease the developed acreage of NOSR-3 would be close to what the property would sell for outright (royalty burden considered), or approximately \$4.2 million. Other revenues generated by leasing, after cost offsets, totaled about \$5.46 million, an amount nearly the same as the estimated sales value of \$5.54 million. As estimated by the independent consultant, therefore, the total value that the United States and Colorado, together, would realize under the lease option is nearly equal to the estimated sale value.

In addition, as with NOSR-1 and NOSR-2, the sale of NOSR-3 would forfeit significant potential value in future, currently unknown minerals development potential. In this connection, the independent consultant heavily discounted the value of the potentially large, but as yet undeveloped, natural gas reserves. DOE believes that, after transfer of the undeveloped acreage to the Department of the Interior for leasing in accordance with the Mineral Leasing Act, even a marginal leasing program on the undeveloped acreage would ultimately ensure royalty revenues to the United States that would exceed the independent consultant's estimated difference between sale and transfer to the Department of the Interior. Minerals leasing on NOSR-3 property also would eliminate Government operation of a purely commercial activity, and return this property to the private sector for commercial development of the minerals.

Finally, and again similar to NOSR-1 and NOSR-2, there is significant intrinsic value in maintaining public access to the recreational, scenic, and biological values associated with public surface management opportunities at NOSR-3. The transfer of NOSR-3 to the Department of the Interior would retain the property in the public domain for multi-purpose usage.

Accordingly, DOE recommends the transfer of NOSR-3 to the Department of the Interior for leasing and surface management in accordance with the Mineral Leasing Act, Federal Land Policy and Management Act, and other applicable statutes. DOE's recommendation would result in nearly the same net present value as the sale option as estimated by the independent consultant; secure the opportunity for the United States to maximize the full value of the mineral rights in the undeveloped acreage in the future, as mineral prospects are further explored and evaluated; and ensure public access to the property. Because the Department of the Interior has expressed concern about possible environmental contamination on portions of NOSR-3, however, the transfer of NOSR-3 would be subject to a prior determination of the appropriate allocation of responsibility for environmental restoration and remediation. Pending such determination, DOE would retain and continue to operate NOSR-3 under the Naval Petroleum Reserve law.

To expedite the development of the potential value of the acreage from which natural gas currently is produced after a transfer to the Department of the Interior, DOE recommends that the Department of the Interior conduct a lease sale of the mineral interests underlying such acreage within one year from the effective date of legislation authorizing the transfer and leasing of NOSR-3 property. The lease sale would include the 56 wells, the gathering lines, and related equipment owned by the United States and suitable for use in the exploration, development, or production of hydrocarbons on such acreage.

To ensure that the operation and generation of revenues from the natural gas wells on NOSR-3 continues uninterrupted pending the lease sale, and to avoid costs and administrative burdens associated with transferring management of the operation of the producing properties twice (once to the Department of the Interior and then to the lessees after leasing occurs), DOE would propose to continue to manage and operate this portion of NOSR-3 in accordance with the provisions of the Naval Petroleum Reserve law until such time as the property is leased.

Question: What have the legislative committees of jurisdiction told you with respect to your proposal?

Answer: To DOE's knowledge, none of the legislative committees of jurisdiction have formally commented on DOE's proposal.

Question: What would need to be done to implement your proposal?

Answer: In order to implement DOE's recommendations, legislation would be required to:

- Authorize the transfer of NPR-2 (Buena Vista) to the Department of the Interior for leasing and surface management under the Mineral Leasing Act, Federal Land Policy and Management Act, and other applicable statutes, subject to the terms and conditions of the existing mineral leasing agreements, and subject further to a prior determination of the appropriate allocation of responsibility for environmental remediation and restoration. Pending such determination, DOE would retain and continue to operate the property under the Naval Petroleum Reserve law.
- Authorize DOE to undertake to sell or otherwise dispose of the United States' interest in certain lots in Ford City within NPR-2 (Buena Vista).
- Authorize the transfer of NOSR-1 (Colorado) and NOSR-2 (Utah) to the Department of the Interior for leasing and surface management in accordance with the Mineral Leasing Act, Federal Land Policy and Management Act, and other applicable statutes.
- Authorize the transfer of NOSR-3 (Colorado) to the Department of the Interior for leasing and surface management in accordance with the Mineral Leasing Act, Federal Land Policy and Management Act, and other applicable statutes, subject to a prior determination of the appropriate allocation of responsibility for environmental remediation and restoration, provided that pending such determination, DOE would retain and continue to operate NOSR-3 under the Naval Petroleum Reserve law. Following such determination, DOE would continue to operate the developed tracts of NOSR-3 in accordance with the Naval Petroleum Reserves law until such tracts are leased.
- Authorize DOE to abandon production on NPR-3 (Teapot Dome) upon depletion of the field, and then to sell or otherwise dispose of the United States' interest in NPR-3 in a manner that will maximize its value.

Several conforming amendments to existing laws would also be necessary. DOE plans to submit the necessary implementing legislation to Congress.

Question: What do you assume regarding continued production in these fields, and with respect to the disposition of these properties at the end of their productive lives?

Answer: The independent consultant has estimated that NPR-3 will produce economically through FY 2003. The DOE concurs with this estimate of field life. At such time, DOE would be authorized to sell or otherwise dispose of the United States' interest in NPR-3 in a manner that would maximize its value.

With regard to the other four Reserves, DOE has made no assumptions as to the ultimate disposition of these properties at the end of their productive lives. DOE believes that the disposition in the far-distant future by the Department of the Interior would be in accordance to that Department's regulations for public domain lands which no longer have a mineral leasing value.

Strategic Petroleum Reserve Rescission

Question: Please explain the proposal to rescind \$11 million in SPR funding? Why do you have an excess of \$11 million?

Answer: The Strategic Petroleum Reserve is now in the fourth year of its seven year Life Extension Program. That program is designed to replace and streamline all of the drawdown critical systems and extend the life expectancy of the Reserve to the year 2025. As the streamlining occurs, we are completely eliminating and standardizing large numbers of valves, pumps and motors, which have all required a great deal of maintenance. The success of the Life Extension Program is producing the desired benefits more quickly than had been anticipated and the savings are the tangible benefit.

Question: Why have you proposed a separate rescission rather than lowering your budget request for fiscal year 1998?

Answer: The Strategic Petroleum Reserve would be affected equally by an amendment of the fiscal year 1998 budget or a rescission of funds from the fiscal year 1997 budget. However, the rescission option allows the Congress and Administration the flexibility to reappropriate the funds for urgently needed purposes without increasing the overall budget deficit for fiscal year 1997.

Need for the Strategic Petroleum Reserve

Question: Why do we still need the Strategic Petroleum Reserve?

Answer: The Strategic Petroleum Reserve is the centerpiece of our Nation's energy security program. The existence of the Strategic Petroleum Reserve is just as important to our national energy security today as it was when the program was first authorized over twenty years ago. Today, our dependence on foreign oil is projected to increase in both absolute volume and as a percentage of our total consumption. The Reserve serves as insurance against supply interruptions in an emergency, deters embargoes and threats of embargoes, and can be used to prevent an extreme price spike. Furthermore, strategic inventories equivalent to 90 days of net imports are a condition of U.S. membership in the International Energy Agency, a membership that allows for international coordination and cooperation in responding to emergencies. If the U.S. eliminated its stocks, other importing nations might follow our lead, putting oil consuming nations at risk of politically motivated supply disruptions such as the oil embargoes of the early and late 1970's and the attendant world wide recessions.

Question: What is the current capacity of the SPR?

Answer: Between 1976 and 1991, the Strategic Petroleum Reserve developed five underground storage facilities capable of stockpiling 750 million barrels of crude oil. The five storage sites are grouped into three distribution systems--Seaway, Texoma and Capline. In 1994, the Department announced plans to drawdown and decommission one of the five sites, Weeks Island, due to geotechnical problems. Decommissioning of the Weeks Island site is underway and will be completed in July 1999. With removal of the oil and commencement of filling Weeks Island with salt brine, the effective storage capacity of the Reserve has been reduced from 750 million barrels to 680 million barrels, and the maximum drawdown and distribution rate has been reduced from 4.5 million barrels to 3.9 million barrels per day.

Question: How many barrels of oil are currently in the reserve?

Answer: As of April 10, 1997, the crude oil inventory is 563.5 million barrels.

Question: How many days of oil import supply protection does that represent?

Answer: This provides an import protection level of 67 days, based on the U.S. net import rate for crude and petroleum products during 1996.

Question: How much excess capacity is there now?

Answer: The reconfiguration of the Reserve, after the decommissioning of Weeks Island, will be 680 million barrels. At the current oil inventory level of 563.5 million barrels, there will be underutilized capacity of 116.5 million barrels.

Petroleum Account

Question: How much money is left in the SPR petroleum account and how are you using the money?

Answer: At the end of fiscal year 1996, \$33.3 million remained unobligated in the SPR petroleum account. This account acquires and transports crude oil for the Reserve, supports drawdown readiness by paying for standby terminaling services and Defense Fuel Supply Center oil purchasing and sales services, and finances the incremental costs of drawing down and distributing the Reserve when directed by the President to respond to an energy supply emergency. Currently, with no active oil acquisition program, this account supports a small level of activity for drawdown readiness, with annual costs of less than \$1 million. The balance is held to finance the initial incremental costs of drawing down the Reserve. Assuring available financing for drawdown operations is a critical factor in SPR operational readiness planning. The Energy Policy and Conservation Act provides for the use of oil sales receipts to finance drawdown activities but financing must be kept available sufficient to pay for three to six months of drawdown related expenses before the receipts can be made available to the Strategic Petroleum Reserve to continue drawdown operations.

Question: You have proposed to eliminate the outlay limitation of \$5 million for the SPR Petroleum Account in fiscal year 1998. Why do you need this limitation removed?

Answer: The purpose of the SPR Petroleum Account's outlay limitation was to carefully control the rate of outlay of over \$900 million of unobligated balances held in the account after the war related oil sales of 1990 and 1991. After the transfers of \$420.4 million from the account since fiscal year 1993 and limited oil purchases in fiscal years 1992-94, the remaining balance of \$33.3 million is too small for any purpose other than the incremental costs of a declared energy emergency related drawdown. The Department recommends deleting the outlay limitation, because if the funds in the Account are needed in the event of an emergency drawdown, access to the funds will require legislation, which may not occur on a timely basis. The Strategic Petroleum Reserve is eliminating a potential administrative issue that would arise if an energy emergency were to be declared.

Question: What would be the impact of leaving the outlay limitation in place in fiscal year 1998?

Answer: By eliminating the outlay limitation, the SPR is avoiding a potentially very distracting legislative issue during a declared energy emergency. Otherwise, a continued outlay cap of \$5 million would have no impact on the program during normal stand-by operations.

Commercialization

Question: What are you doing to commercialize under used SPR facilities?

Answer: The Department initiated its efforts to commercialize the under used Strategic Petroleum Reserve's distribution facilities (i.e., the St. James Marine Terminal and crude oil pipelines) in 1994. During FY 1996, the Department issued solicitations for leasing (or sale in the case of the Weeks Island pipeline) its distribution facilities in the Seaway, Capline and Texoma complexes. This will result in both lower operational costs for the Reserve and generation of lease/sale revenues for the Government, without compromising the readiness of the Reserve.

In October 1996, the Department signed contractual agreements for the lease of the St. James Marine Terminal and Bayou Choctaw pipeline, and the sale of the Weeks Island pipeline. On January 31, 1997, the Department finalized its contract for the lease of the St. James Marine Terminal and transferred operations to Shell Pipeline Company. In May 1997, the Department will finalize its contracts for the lease of the Bayou Choctaw pipeline to Shell Pipe Line Company and the sale of the Weeks Island pipeline to Louisiana Intrastate Gas Company.

During 1996, the Department also executed an interim six-month lease of a segment of the Big Hill-to-Sun Terminal pipeline to Texas Pipeline Company while a longer term lease was being pursued.

Question: What revenues have been generated from these commercialization efforts?

Answer: During 1996, the Department received a total of \$472,809 from its interim lease of the Big Hill-to-Sun Terminal pipeline. During 1997, the Department will receive revenues based on commercial use from its lease of the St. James Terminal which started on January 31, 1997, and its lease of the Bayou Choctaw Pipeline which will start in May 1997. Because these lease revenues depend upon the profitability of the leases, the payment to the Government is unknown at this time. Also in May 1997, the Department will finalize its sale of the Weeks Island pipeline which will provide additional revenue of \$22 million.

Question: What new commercialization opportunities will you explore in fiscal year 1998 and what revenues do you expect to achieve through these opportunities?

Answer: In FY 1997 and FY 1998, the Department hopes to award contracts for the leasing of its remaining pipelines, i.e. the Big Hill-to-Sun Terminal pipeline, the West Hackberry-to-Sun Terminal pipeline, the West Hackberry-to-Lake Charles pipeline, the Bryan Mound-to-Texas City pipeline.

Question: How do you ensure, in pursuing these commercialization efforts, that they do not interfere with your main purpose of maintaining readiness to respond to an oil import supply disruption?

Answer: Lease agreements for SPR facilities are designed to ensure continued operation of these facilities in crude oil service and that they will be accessible to the SPR for drawdown operations. Maintaining the SPR's readiness and mission capability remains our highest priority. The one pipeline which was sold outright, i.e., the Weeks Island pipeline, is no longer critical since the Weeks Island mine has been virtually emptied of its oil inventory in preparation for its decommissioning.

Foreign Storage

Question: Part of the Administration's plan to balance the budget is through the receipt of revenues from foreign oil storage in the SPR. Over \$200 million in receipts are expected by 2002! How did you arrive at these estimates?

Answer: The Administration's budget assumes that the first contract for storage services will become effective in fiscal year 1999 for 10 million barrels of oil, and that the volume under contract will grow to 55 million barrels by the year 2002. The average price per barrel stored is assumed to be about \$1.50 per year. The revenue assumption is \$14.4 million in FY 99, \$36.6 million in FY 2000, \$67.0 million in FY 2001, and \$82.6 million in FY 2002.

Question: What foreign countries have expressed an interest in storing foreign-owned oil in SPR?

Answer: The proposal to store foreign-owned oil in the Strategic Petroleum Reserve was sent to IEA countries and candidates for IEA membership. Departmental staff had discussions with representatives from Korea, Japan, and the Czech Republic. The Czech Republic eventually told the Department that they were pursuing their program domestically and were not interested in the concept. We see Korea and Japan as natural partners for an agreement, but we are not in negotiations. We plan to approach other Asian countries as candidates.

Question: Why would foreign countries want to store oil in the SPR?

Answer: On a per barrel basis, U.S. salt dome storage is the least expensive to develop, operate and maintain in the world. Underground salt dome storage minimizes losses from theft or sabotage, is easier to protect, and losses due to oil deterioration are minimal. Risk of damage to the storage facility from oil spills, explosions and fire also is minimal. Foreign oil stored in the SPR can be sold into the high value U.S. market or exchanged for oil at a closer location to the country itself.

Question: What commitments do you have to date for storing oil in the SPR?

Answer: The Department does not have any commitments to date to store foreign-owned oil in the SPR. We are continuing to pursue this proposal and have been developing relationships with candidate countries.

Life Extension

Question: The SPR has a 7 year life extension program to replace or upgrade major systems which are reaching the end of their design life. This program should extend the life of the facilities to the year 2025. Please describe what you have done to date on the life extension program for the Strategic Petroleum Reserve.

Answer: The life extension program has been underway at four(4) Strategic Petroleum Reserve (SPR) storage sites since 1994: West Hackberry and Bayou Choctaw in Louisiana, and Bryan Mound and Big Hill in Texas. To date, construction activities have been concentrated at the two largest sites, Bryan Mound and West Hackberry, which stand at about 70 percent complete. Bayou Choctaw and Big Hill, approximately 25 percent and 10 percent complete respectively, will see major construction begin during the latter part of 1997.

Cavern piping, control systems and crude oil heat exchangers have been installed at West Hackberry and Bryan Mound, and the upgrading of site header piping and electrical systems are underway at these sites. Heat exchanger installation and site piping upgrades have been completed at Bayou Choctaw, with control system upgrades underway. At Big Hill, control system equipment and heat exchangers are being procured for installation later on this fiscal year. Overall, of the program's \$351 million total estimated cost, about \$170 million has been obligated.

Question: Fiscal year 1998 is the 5th year of the 7-year SPR life extension program. What remains to be done?

Answer: Life extension work remaining to be done varies from site to site as follows:

Bryan Mound- Crude oil and brine system upgrades, installation of new pumps at the water intake structure.

West Hackberry- Crude oil system and raw water intake structure upgrades.

Bayou Choctaw- Upgrades to cavern piping, crude oil and brine systems, control system and electrical system.

Big Hill- Upgrades to cavern piping, crude oil and brine systems, control system and electrical system, installation of heat exchangers, and drilling brine disposal wells.

Question: How much money is in the request for the SPR life extension program in fiscal year 1998? How does that compare with fiscal year 1997?

Answer: The fiscal year 1998 request for the life extension program is \$40.8 million as compared with the fiscal 1997 appropriation of \$25.7 million. The fiscal year 1997 program, however, is financed at \$95 million due to the application of \$69.3 million carried over unobligated from fiscal year 1996. Fiscal year 1996's funding history included a delayed oil sale to provide \$100 million and a delayed appropriation to transfer \$187 million from the SPR petroleum account; full receipt of fiscal year 1996 funding occurred in June 1996.

Question: For the record, please provide a brief description by year of the life extension program at each SPR facility, along with cost estimates.

Answer: The following lists indicate life extension projects, by year and by site, which support the FY 1998 budget request.

LIFE EXTENSION PROGRAM PROJECTS

Bryan Mound Life Extension Projects

- 1994 - Procurement & installation of heat exchangers (20 units)
- Procurement of flow control valves
- Procurement of new site control system
- 1995 - Installation of new site control system
- Procurement of new pumps/motors, cavern instrumentation & isolation valves
- Installation of new cavern piping and instrumentation
- Installation & reconfiguration of pipe racks and cable trays

- 1996 - Replacement of drawdown pumps/motors
 - Replacement & reconfiguration of site piping
 - Upgrading of site electrical systems
 - Replacement of brine pond (with steel tank)
- 1997 - Modification of crude oil pump systems
 - Automate seal flush / bearing cooling system
 - Installation of new raw water intake pumps
- 1998 - Installation of new slop oil system
 - Close existing brine pond

West Hackberry Life Extension Projects

- 1994 - Procurement & installation of heat exchangers (6 units)
 - Procurement of flow control valves
 - Procurement of new site control system
- 1995 - Installation of new site control system
 - Procurement of new pumps/motors, cavern instrumentation & isolation valves
 - Installation of new cavern piping and instrumentation
 - Installation & reconfiguration of pipe racks and cable trays
 - Lining of brine disposal pipeline to disposal wells
- 1996 - Replacement of drawdown pumps/motors
 - Replacement & reconfiguration of site piping
 - Upgrading of site electrical systems
 - Upgrading of RWIS pumps and motors
 - Replacement of brine pond (with steel tank) & flush water system
- 1997 - Modification of crude oil pump systems
 - Replacement of electrical system to RWIS
 - Automate seal flush / bearing cooling system
- 1998 - Construct subsidence mitigation
 - Close existing brine pond

Bayou Choctaw Life Extension Projects

- 1994 - Procurement & installation of heat exchangers (2 units)
 - Procurement of flow control valves
 - Installation of cable trays and duct bank system (A)
- 1995 - Replacement of deteriorated on-site piping
 - Lining of brine disposal pipeline to disposal wells

- Installation of cable trays and duct bank system (B)

- 1996 - Procurement of new site control system
 - Procurement of new cavern instrumentation & isolation valves

- 1997 - Installation of new site control system
 - Replacement of uninterruptable power supply
 - Automate seal flush / bearing cooling system
 - Modification of crude oil pumping system
 - Upgrading of site electrical systems
 - Replacement of raw water intake pumps
 - Replacement and reconfiguration of cavern piping
 - Upgrading of raw water injection pumps
 - Upgrading of brine disposal system

- 1998 - Demolish leach and alum injection systems

Big Hill Life Extension Projects

- 1995 - Procurement of flow control valves

- 1996 - Procurement of new site control system
 - Procurement of new cavern instrumentation & isolation valves

- 1997 - Installation of new site control system
 - Installation of new cavern piping and instrumentation
 - Upgrading of site electrical systems
 - Replacement of uninterruptable power supply
 - Automate seal flush / bearing cooling system
 - Installation of brine disposal injection wells
 - Installation of heat exchangers
 - Modification of crude oil pumping system
 - Upgrading of raw water injection pumps
 - Upgrading of brine disposal system
 - Installation of new cavern flush system

- 1998 - Installation of piping for brine injection wells
 - Installation of automatic monitoring system on Big Hill-Sun Terminal pipeline

GOVERNMENT PERFORMANCE AND RESULTS ACT (GPRA)

Office of Fossil Energy

GPRA, known as the Results Act, requires each executive agency to issue, no later than September 30, 1997, a strategic plan covering at least five years. In addition to a mission statement grounded in legislative requirements, the plans are to contain general goals and objectives that are expected to be outcome or results oriented (such as to improve literacy) as opposed to output or activity oriented (such as to increase the number of education grants issued).

Question: What progress is the agency making in developing its strategic plan, including defining its mission and establishing appropriate goals?

Answer: The Office of Fossil Energy (FE) has engaged in a significant level of strategic planning over the last few years, in the process providing numerous opportunities for stakeholder input, and is currently finalizing a strategic plan that includes a mission, vision, analysis of strategic issues, and goals/objectives/strategies that integrate the key FE business lines. Particular care has been taken to develop objectives, where possible, that are outcome-oriented and measurable.

Question: Has the agency identified conflicting goals for any of its program efforts? If so, what are the performance consequences of these conflicting goals and what actions -- including seeking legislative changes -- is the agency taking to address these conflicts?

Answer: We have not found goals within FE or with FE and other Federal energy programs that conflict, although in many cases there are strategies associated with goals that compete. For example, FE activities to develop improved natural gas power systems and increase the economic domestic gas resource compete with R&D to develop advanced coal power systems in that these activities, along with many others in the DOE energy resources portfolio, compete for similar markets. This competition is by design since a limited number of "winners" will result from high-risk R&D, and it is not possible to determine in advance which activities will be successful.

Question: Strategic plans must be based on realistic assessments of the resources that will be available to the agency to accomplish its goals. As you are developing your strategic plan, how are you taking into account projected resources that likely will be available -- especially as we move to a balanced budget?

Answer: FE has attempted in its strategic planning efforts to ensure that the activities encompassed in the plan are credible given anticipated budget constraints.

Question: What assumptions are you making?

Answer: We are not assuming budget increases, but since strategic plans do not include

the level of detail that permits direct translation into budgets (as would be the case for program implementation plans), a strategic plan could potentially lead to a wide range of budgets depending on Administration priorities. For example, if some goal were a high Administration priority, multiple approaches could be funded to increase the likelihood of success. If it were a lower priority but still considered worth doing, fewer approaches might be appropriate. Another source of budget uncertainty occurs because strategic goals and objectives should be challenging, and it is often difficult to accurately estimate the level of resources that will ultimately be needed for success, especially if R&D breakthroughs are needed.

Question: How are you ensuring that your goals are realistic in light of expected resources?

Answer: Goals were developed based on the judgement that there was a reasonable chance of success without requiring increased budgets (subject to the uncertainties cited in the previous answer).

For Congress, the heart of the Results Act is the statutory link between agency plans, budget requests, and the reporting of results. Starting with fiscal year 1999, agencies are to develop annual performance plans that define performance goals and the measures that will be used to assess progress over the coming year. These annual goals are to measure agency progress toward meeting strategic goals and are to be based on the program activities as set forth in the President's budget.

Question: What progress have you made in establishing clear and direct linkages between the general goals in your strategic plan and the goals to be contained in your annual performance plans? OMB expressed concern last year that most agencies had not made sufficient progress in this critical area.

Answer: During the April 2 Government-wide satellite broadcast on GPRA, a question was posed regarding how performance measures should be developed for long-term programs, such as R&D, where there are often no significant results in a particular year. The reply from the OMB spokesperson was that this kind of situation is one of the most challenging for meeting GPRA requirements, and there is not an easy answer. FE sponsored a GPRA pilot that attempted to link annual performance goals to longer-term strategic R&D goals, and a team is reviewing this experience to determine if the approach is suitable for GPRA compliance. In the past several years FE has used significant milestones, such as those in the Secretary of Energy's Performance Agreement with the President, to track progress toward major goals. This approach may ultimately be used for GPRA, although it is often difficult to determine how much closer one is to meeting a broad goal based on accomplishing one of many milestones.

Question: More specifically, how are you progressing in linking your strategic and annual performance goals to program activity structure contained in the President's budget?

Answer: Provisions in strategic and annual performance goals can be crosswalked

relatively easily to the activity structure.

Question: Do you anticipate the need to change or modify the activity structure to be consistent with the agency's goals?

Answer: Changing the activity structure might facilitate an understanding of how strategic drivers relate to certain activities, but may make it more difficult for some stakeholder groups to determine the breadth of activities in their areas of interest. This question is currently under consideration.

Question: Overall, what progress has your agency made -- and what challenges is it experiencing -- defining results-oriented performance measures that will allow the agency and others to determine the extent to which goals are being met?

Answer: We have made significant progress the past few years, due in part to our improved ability to measure activity outcomes, as well as attempts to link performance and goals in the Secretary of Energy's Performance Agreement with the President. We will continue to face the challenge, however, of linking annual performance in long-term R&D programs to ultimate goals.

Question: If applicable, what lessons did the agency learn from its participation in the Results Act pilot phase and how are those lessons being applied to agency wide Results Act efforts?

Answer: FE participated in a pilot study at the Morgantown Federal Energy Technology Center that, as noted in the previous answer, is being reviewed to determine if it is an effective and practical tool for GPRA compliance. More importantly, however, for the last three years DOE has been implementing the Results Act requirements agency-wide. We produced the first Departmental Strategic Plan in 1994. We have had a performance agreement with the President for FY 1995 and 1996, and will very soon have one for FY 1997. With our FY 1998 budget submission, we included an annual performance plan, and we recently issued our first Annual Performance Report covering fiscal years 1994 and 1995. Each of these were done well in advance of the actual Results Act requirements. Although each of these products are not perfect, the experience has been invaluable and has positioned the Department to respond to the Results Act this year with a great deal of confidence that we can not only provide the prescribed products but can achieve the overall intent of the Act-- better management. Last year, DOE instituted an agency-wide Strategic Management System (SMS) that is fundamentally based on the principles of the Results Act and will be the vehicle for the Department to integrate the Results Act requirements into our day-to-day management and decisionmaking activities. With regular meetings of an SMS Steering Committee, representing all relevant supporting organizational entities, we have integrated the requirements for Results Act capacity needs, such as information systems, training, and communications, into our systems as a top priority.

Question: What steps is the agency taking to build the capacity (information systems, personnel skills, etc.) necessary to implement the Results Act?

Answer. Because FE and DOE have been preparing for GPRA compliance for several years, most of the skills and systems are already in place.

Question. The Results Act requires agencies to solicit and consider the views of stakeholders as they develop the strategic plans. Stakeholders can include state and local governments, interest groups, the private sector, and the general public, among others. Who do you consider to be your agency's primary stakeholders and how will you incorporate their views into the strategic plans?

Answer: FE's customers and stakeholders include energy industry trade associations, industry groups, environmental organizations, state and local energy organizations, EPA, DOI, DOC, USGS, DOD, OMB, the White House, and the public. As part of our strategic planning process we will consult with our stakeholders on strategic issues relating to our mission and incorporate consideration of their views when updating our strategic plan.

Question: For the Results Act to be successful, agencies with similar missions, goals, or strategies will need to ensure that their efforts are coordinated. What other federal agencies are you working with to ensure that your strategic plans are coordinated?

Answer: FE maintains good communications with agencies with overlapping interests such as EPA, DOI, DOC, USGS, and DOD, and we will use these communication channels to coordinate our strategic planning efforts.

Question. What steps have you taken to ensure that your efforts complement and do not unnecessarily duplicate other federal efforts?

Answer: We are not experiencing significant problems with duplication of efforts, which attests to effective communication with other agencies and Congressional committees. We will strive to maintain this communication to ensure that our energy activities are complementary with those of other agencies rather than duplicative.

Question: The Results Act requires agencies to consult with Congress as they develop their strategic plans. Since these plans are due in September, now is the time for agencies to begin the required consultations. What are your plans for Congressional consultation as you develop your strategic plan? Which Committees will you consult with?

Answer: FE consults with Congressional committees regularly through courtesy calls and meetings with members and their staff. In addition, the appropriation and authorization committee hearings process provides these committees with a wealth of information on our strategic thinking. FE will continue this dialogue on strategic planning issues with committees that oversee FE programs, including: the House and Senate Appropriations Subcommittees on Interior and Related Agencies; House Subcommittee on Energy and Power; House Subcommittee on Energy and Environment; and the Senate Subcommittee on Energy Research, Development, Production and Regulation.

Question: How will you resolve differing views?

Answer: This problem has not occurred yet, and it is not anticipated, but if there were an irreconcilable, major difference, we would use our best judgement and air any different viewpoints in the strategic plan.

In passing the Results Act, Congress sought to fundamentally change the focus of federal management and decisionmaking to be more results-oriented. Organizations that have successfully become result-oriented typically have found that making the transformation envisioned by the Results Act requires significant changes in what they do and how they do it.

Question: What changes in program policy, organization structure, program content, and work process has the agency made to become more results-oriented?

Answer: As a result of DOE and FE strategic planning initiatives and the broader Results Act initiative, we have already seen important results. The strategic planning efforts sharpened our mission and vision statements, focused business priorities, and facilitated budget formulation and decision-making processes. The DOE Strategic Plan was the blueprint for the Strategic Alignment Initiative that served as the basis for reorganizing the Department and reengineering management processes to focus on results, service quality, and customer satisfaction. FE recently completed a reorganization that reflected strategic planning and performance considerations.

Question: How are managers held accountable for implementing the Results Act and improving performance?

Answer: FE's performance measurement activities have increased the organization's emphasis on well-defined objectives. Employees are becoming more conscious of these objectives and their relationship to individual performance, and job performance ratings will increasingly be linked to successful achievement of objectives.

Question: How is the agency using Results Act performance goals and information to drive daily operations?

Answer: Progress in key performance areas is tracked agency-wide on a quarterly basis. Our budget development and strategic planning processes are now more directly tied to performance goals.

QUESTIONS SUBMITTED BY CONGRESSMAN RALPH REGULA

General/Miscellaneous

Abolition of DOE

Question: As I am sure you are aware, once again legislation has been introduced to abolish the Department of Energy. Could you comment briefly on why you believe there remains a federal role in the field of energy specifically with respect to fossil energy.

Answer: Abolishing the Department of Energy and doing away with federal support for energy R&D would be one of the most serious mistakes this Nation could make. Americans spend almost half a trillion dollars a year for energy, and 85% of the energy Americans consume comes from fossil fuels. Moreover, the contribution of fossil fuels is likely to grow to as much as 88% by 2015. Energy is much more than just another commodity. It is imperative to our economy, our quality of life and our national security. And fossil energy, because it is by far the dominant form of energy used in the country, is one of the reasons we have the strongest economy in the world and why we enjoy a standard of living that is the envy of the world.

There are a host of reasons why research and development of new fossil energy technologies is needed for the 21st century. In this country, environmental standards are tightening, requiring better technologies if we wish to continue improving the quality of our air, water and land without imposing additional costs on consumers or ratepayers. Internationally, the world will likely be using a third more energy in 2010 than it does today, and most of the additional energy will be supplied by fossil fuels. It is imperative that nations, especially developing nations, have access to affordable technologies that reduce the local and global impacts of their increasing reliance on fossil fuels. Finally, the United States continues to confront the alarming prospects of rising oil imports, coming increasingly from oil-rich nations in the most turbulent regions of the world. R&D can enhance domestic production, reducing reliance on oil imports, and is particularly important to the smaller, independent producers who are beginning to dominate U.S. oil and gas production.

These are all reasons why fossil fuel research, in general, remains vital to U.S. interests in the coming century. But there are more specific reasons why the federal government should be involved in such research:

- **Federal R&D can mean the difference between marginal improvements in technology and "quantum leaps" that can save consumers billions of dollars and accelerate public benefits.**

DOE's fossil energy R&D program is developing advanced concepts that are well beyond the timetables and performance goals of private sector R&D. Using Federal R&D investments to make available new technologies 10 to 30 years before they would otherwise emerge from private sector R&D can save consumers billions of dollars, make national environmental choices easier, and strengthen the Nation's energy security.

- **Federal support can keep the U.S. from confronting an "R&D crisis" brought about by sharp reductions in private sector energy R&D in today's era of industry restructuring and corporate cost-cutting.**

Private sector R&D continues to decline in the United States, particularly in the energy sector where market restructuring has created unprecedented financial caution. Energy R&D by the private sector, in virtually every fuel sector, is down nearly a third in just the last three years after a period of steady decline in the 1980s. The Federal fossil energy R&D program, although it too has been cut by nearly 75% since the early 1980s, is virtually the only remaining national R&D effort emphasizing technologies that are still 5 to 10 years or more into the future.

- **Federal R&D can help U.S. companies maintain their global competitiveness at a time when expanding world markets are creating enormous opportunities and unprecedented competition from other nations.**

With world energy use expected to grow by a third in the next decade, huge market opportunities are opening for new, more affordable energy technologies. Other nations recognize the trillion-dollar potential of the global energy technology market, and are creating public-private partnerships to improve the competitive posture of their technology developers. The U.S. must sustain similar partnerships or risk putting U.S. companies at a unilateral disadvantage.

- **Federal R&D can stimulate innovations in areas of national importance where there is no current market incentive.**

Some R&D has no market incentive but may be vital to future U.S. interests. Carbon dioxide capture and disposal, for example, has no immediate economic payoff. Federal R&D is the only way this type of research can be done in the U.S.

- **Federal R&D can turn Cold War technologies into tools for greater energy security.**

The U.S.'s 50-year investment in defense technologies, primarily at national laboratories, has provided a wealth of capabilities that can now be turned toward peaceful energy uses.

In short, the funding we are requesting in the FY 1998 budget will develop technologies that will allow us to use our vast domestic coal reserves -- which have a greater energy content than all of the world's proven oil reserves -- in ways that are 10 times cleaner than today's standards, which virtually eliminates the common pollutants associated with coal, and which can cut the release of carbon dioxide in half -- buying us perhaps decades of time to develop and deploy permanent solutions to global climate concerns.

The federal program is also developing technologies that will produce more oil and natural gas from secure, domestic fields, giving us a way to cut our oil imports by up to 1 million barrels per

day by 2010. This will keep billions of dollars working in the United States, strengthening our economy rather than flowing overseas to help bolster the economies of other nations.

The federal investment in fossil energy programs will also ensure that we have a fully capable and responsive Strategic Petroleum Reserve serving as our national energy insurance policy. This reserve represents over a \$20 billion investment in energy security. It is important that we maintain it at adequate size to meet our energy preparedness objectives.

Utility Deregulation

Question: Last year you testified that the uncertainty in the utility industry was creating disincentives for private sector R&D which is brought on in part by the prospect of increased competition and a deregulated utility industry. In general what are your thoughts about the impacts of deregulation on research and development and have you given any thought to what your agency can and should do to fill this potential gap?

Answer: There will be near-term and long-term impacts. For the near-term, utilities are already anticipating the transition to competition. Many companies are focusing intensively on reducing their costs and are making deep cuts, including cuts in research. R&D is often seen as a non-vital expenditure, except for projects that promise immediate cost savings for the company. As a result, corporate commitments to internal R&D and to joint efforts with the Electric Power Research Institute (EPRI) are declining. Virtually all research sectors have been adversely affected, but some have been hit harder than others. R&D pertaining to program areas such as energy efficiency and renewable generation have been cut severely.

For the long-term, we also think that the nature of the R&D that is supported by the private sector will change. Utilities may emphasize R&D on consumer products and marketing, and less on basic technologies. Utilities will be reluctant to commit funds to R&D that could benefit a competitor just as much as themselves. The industry may rely more on generating technology R&D funded by equipment suppliers in the future than today. R&D related to "public goods," such as environmental protection and reliability, may be more difficult to support in a competitive industry.

One possible way to allow cost-shared private industry expenditures to go farther is to change the way that government partners with industry in R&D projects. As EPRI and GRI have shown, this can be done by structuring R&D projects such that the industrial partner can become an active collaborator in the project, who contributes by making personnel, facilities, and other in-kind support available in lieu of passive cash payments.

The areas where increased DOE R&D can contribute are now being explored.

Question: You mentioned to me a few months ago that the negative impact on research had been one of the unintended consequences of deregulation in Great Britain. Could you comment on what you have learned from other countries experience with deregulation?

Answer: Three countries have made strides toward deregulation: Great Britain, Norway and New Zealand. We do not have information on deregulation effects in Norway and New Zealand. However, it has been reported that deregulation in Great Britain has greatly reduced research investments in the affected industries. Similar trends are starting to appear in the United States as well.

Clean Air Act Requirements

Question: As you know EPA has proposed stringent new standards for regulating ozone and particulate matter. As I have learned more about this issue one thing that has become clear is that there is a dearth of science in this area and that there is not even an air monitoring system with the ability to track the levels of particulate that EPA has proposed regulating. What is anything has your agency done with respect to research on these pollutants and can and should more be done by your agency with respect to improving the science in this area. If you could answer generally and then provide a more detailed response with options and funding requirements for the record.

Answer: DOE/Fossil Energy has conducted a significant amount of research on technologies which reduce pollutants contributing to ozone and fine particulate matter concentrations in the atmosphere. Most of our research is oriented toward achieving "super-clean" environmental performance from new energy systems, like powerplants. However, it appears that the key to achieving these standards within the few years allowed by law will rest on retrofitting existing facilities, and often it is impractical to apply "new source" technologies to the older systems, or it is simply inordinately expensive to do so.

The Department is currently evaluating options and funding requirements.

Question: What role if any did DOE have in formulating the proposed new standards?

Answer: DOE participated in interagency meetings addressing the proposed standards in the fall of 1996. In addition, in prior years, DOE provided comments to EPA on EPA background documents. These comments included a review of epidemiology studies, comments on ozone design values (the averaging period and number of allowable exceedences for a standard), and comments on health effects associated with increased ultraviolet light penetration through the atmosphere if ozone concentrations were reduced.

Cost Share

Question: I have been impressed with the increasing private sector contribution to the fossil initiatives. For the record could you provide the average cost share across all fossil R&D activities and describe briefly the Department's philosophy with respect to levels of cost sharing, i.e., should we only fund projects which the private sector is willing to match 50/50 or do we need to provide greater funding for some riskier research at the early stage. What is the proper balance in our R&D portfolio?

Answer: The average cost share across all fossil R&D is about one-fourth from the private sector and other non-federal entities, and ranges from no cost sharing for the more fundamental research to over 60 percent for the more mature technologies such as some in the Clean Coal Technology Demonstration Program.

The Department's philosophy with respect to levels of cost sharing is to invest in a portfolio of promising technologies through partnerships with the private sector and other non-federal entities for mutual leveraging of R&D funds. Where appropriate and possible, the Department seeks cost sharing in its R&D activities which range from fundamental research to more mature technology development activities. In the earlier stages of R&D when the technical risks are higher, the horizon for returns are further out, and the prospects for success are less certain for our partners, the philosophy is to seek lower levels of cost share from them. In those development activities for more mature technologies which are of lower technical risk and closer to commercialization, the aim is to seek higher levels of cost sharing from our partners.

Federally funded research and development must first and foremost be in response to a market failure, such as inadequate social investment for a clean and healthy environment. While long term research support is clearly a critical federal role, short term efforts frequently represent the final phase (the Demonstration phase) of a long term research effort. The ideal mix is largely judgmental and would vary from program to program. The nearer term programs should have a high degree of private sector cost sharing, and wherever practical DOE should seek repayment of its investment when projects are commercial successes.

International Outlook

Question: Last year you talked a little about what our international competitors were doing with respect to R&D. Could you comment on the current situation and are we keeping pace or falling behind in the global competition?

Answer: For years the U.S. led the world in investing in coal R&D and established itself as the world leader in clean coal technology. In 1995, Japanese spending on coal R&D exceeded that of the U.S. and other countries continuing to invest. As a result, other countries could catch up to and even surpass the U.S. if we waiver on our commitment to clean coal technology research.

International competition in coal technology products and services comes primarily from Japan, Germany, France and the United Kingdom. All have active general export promotion and financing programs, as well as active support for technology development.

The Office of Fossil Energy continues to support US industry by providing relevant and timely information on coal and coal technology markets, by ensuring that there will continue to be a vibrant and growing market for environmentally-acceptable coal utilization technologies, and by continuing efforts to ensure that our industry can compete on a relatively flat playing field in the international arena.

Green Scissors Report

Question: The Green Scissors Report, *Cutting Wasteful and Environmentally Harmful Spending and Subsidies*, recommends eliminating all funding for coal R&D. Could you comment on that recommendation?

Answer: It would be a mistake to eliminate all funding for coal R&D. EIA forecasts that U.S. dependence on fossil fuels will continue to grow through 2015 (the limit of their forecast), continuing to provide over 80% of our energy needs. EIA also forecasts that U.S. dependence on coal to provide over half of our electricity will also continue through 2015. The global dependence on coal is even greater. China, for example, is projected to double its coal use over the next 10 years. Continuing coal use for the foreseeable future is inevitable. The development of advanced coal technology will assure that coal is used in the cleanest and most efficient manner while reducing the cost of energy, if DOE's development goals are achieved. The importance of coal technology has been dramatically demonstrated over the last 25 years. Between 1970 and 1995 coal use for electric power generation more than doubled, but overall SO₂ and particulate emissions came down by 27% and 90%, respectively, while the cost of environmental compliance was greatly reduced at the same time. In the same time period the average SO₂ emission rate came down by 70%. Technology now under development in the coal R&D program will reduce emissions by 90% compared to those from today's modern coal plants and will increase power generation efficiency to 60% (thereby cutting CO₂ emissions by almost half).

Question: According to the report the coal R&D program funds research projects, many in mature technologies that should be commercialized by the private sector. Could you comment on DOE's role with respect to funding technologies that are close to commercialization?

Answer: The coal R&D program contains a reasonably balanced portfolio of projects that include those with long range goals as well as those with short or mid-term goals. In all cases, projects supported under the coal R&D program are strongly driven by the public need--e.g., a clean environment -- while industry is motivated by their return on investments. Industry would not pursue any of the ongoing coal R&D projects on their own, because of the risks associated with "leap frog" technology advances required to achieve the project goals and because these projects respond principally to a public not market need.

It can take well over 20 years to develop a technology from a promising laboratory concept to a commercial product. As a research concept matures through the R&D phases -- from exploratory research, to applied research, to engineering development to commercial demonstration -- development risk is reduced and DOE's share of the development cost diminishes. In the final phase of a development effort the private sector's cost sharing is higher than in any other phase of development. In many instances, the more "mature" technology being developed by DOE represents the culmination of 20 or more years of development by DOE. In many instances, without this final phase support, the technology may just be placed "on the shelf" and perhaps be eventually lost.

Question: The report argues that DOE spends a great deal of money on research that is already supported by the utility and coal industry and thus federal funding is unnecessary. Could you respond?

Answer: We know of no coal research funded by DOE "that is already supported by the utility and coal industry and thus federal funding is unnecessary." There are projects that are cost shared with industry that respond to public needs that would not otherwise be pursued by the industry on its own because of high technology development risk and market uncertainty. Also, industry R&D spending has recently declined mainly due to industry restructuring. R&D spending by the utility industry has declined 30% in the last two years. The Electric Power Research Institute has reported a 42% reduction in their funded R&D.

Question: According to the report in other areas DOE funds research into unpromising technologies. MHD is the example given. Could you comment on the risk factor in technology R&D and is some failure a necessary hazard in this area?

Answer: The high risk nature of R&D is such that not all research efforts will succeed -- that is why we strive to pursue a balanced portfolio of research projects to maximize the chances of overall program success (similar to a personal financial investment portfolio). Also, as overall R&D budgets diminish (as was the case for coal R&D in the 1980s compared to the late 1970s, when MHD technology development was at its peak), choices have to be made between R&D priorities and program content. The MHD program achieved the technical project goals and milestones that were laid out, but it was a costly technology to develop. With diminishing budgets and the increasing competition for funding, it was decided to discontinue MHD research to maximize the funding and probability of success for other research projects in the coal R&D portfolio.

Question: Finally the report concludes that "Subsidizing research and development for an inherently dirty fuel is a bad idea and will artificially delay and stunt development of cleaner fuels and technologies." Could you respond?

Answer: While the U.S. is energy rich, no country has the luxury or energy wealth to be able to eliminate multiple fuel options and still meet its future energy and economic needs. The Department's energy R&D budget reflects this balanced portfolio approach. EIA forecasts that no new nuclear plants will be licensed through 2015 (the limit of its projections) and that existing nuclear plants will be retired at the end of their lives and not be replaced. If coal were to be eliminated from our energy mix, it is unlikely that the remaining fuels could cost-effectively meet our energy needs in the foreseeable future and without adversely impacting the country's economic health. As long as coal remains in our energy mix, clean and efficient coal technology development is critical to meeting our environmental and economic goals. This applies even more to many of the other countries globally. The Department's energy R&D strategy and budget reflects the approach of maintaining a balanced portfolio of technologies aimed at realizing the full potential benefits derived from the best use of all fuel sources. The availability of low cost clean coal technologies will allow us to continue to address the global environmental challenges in the

short term, while providing the necessary R&D lead time to develop still cleaner, cost effective alternative technologies in the longer term.

Question: The report also recommends termination of the clean coal technology program arguing the program is not needed. The report cites a history of "waste and mismanagement" funding technologies that were already commercially available, were not likely to be used because they failed to reduce emissions or were unlikely to become economically viable. Could you respond?

Answer: Over the years that the Clean Coal Technology Program has been underway various congressional offices have asked the Government Accounting Office (GAO) to review nearly every aspect of the Program. In their reports this investigative arm of the Congress has reported results that strongly support the program, the technologies which were selected for development, the management practices and the potential that the technologies, when developed, have for reducing to a minimum the emissions that might be generated when using coal as the source of energy for power production. The value of the program has also been confirmed by the Environmental Protection Agency (EPA) through their cooperative efforts with the Program to address the issues associated with nitrogen oxides emissions, the requirements for control, and the suite of technologies in the program available to assist the utilities in meeting the anticipated standards. Indeed, the results achieved in the Clean Coal Program were, in many cases, the basis upon which a large number of utilities installed low-NO_x burners to reduce the emissions of nitrogen oxides. Finally, the program has been endorsed by almost every sector of the utility industry as providing them with emissions control options that solve critical near-term problems and advanced technologies which will be essential to the long range requirements of the power industry in the years around 2010-2020.

Question: The report also criticizes the program for failing to address the CO₂ problem arguing that CO₂ emissions from coal burning cannot be substantially reduced at any feasible cost. Could you comment?

Answer: Emissions of CO₂ from coal burning can be substantially reduced. Our program has the goal of developing, by 2015, a coal-fired power plant which has a thermal efficiency of 60 percent.

Strategic Petroleum Reserve

Question: Could you comment generally on the Department's view of selling Strategic Petroleum Reserve oil?

Answer: Our budget proposes no further sales from the Strategic Petroleum Reserve in FY 1998. All things being equal, we would prefer to have more crude oil in the Reserve, not less. We recognize that the Administration's "outyear" budget forecasts include a proposal to sell oil in the year 2002 to complete the President's balanced budget commitment, but we hope that as FY 2002 approaches, the need for this sale will disappear.

Question: Would you favor selling an SPR site rather than continuing to sell SPR oil?

Answer: The Department does not favor either selling an SPR site or SPR oil in FY 1998, but would choose the oil if a choice had to be made. Selling a site would reduce drawdown capability, reduce security and affect the balance between types of oil in the oil markets. Such action would diminish U.S. credibility within the International Energy Agency, within which we have advocated that other nations build their inventories. Additionally, the elimination of another site might result in the relocation of the Project Management Office, which could, in turn, affect the employment of hundreds of contractor and federal employees.

Clean Coal Technology

Question: Your budget again proposes a rescission for clean coal technology which I assume is based on your best estimate at the point in time when the budget was submitted. Since then has anything changed to affect that number or do you still believe \$123 million is an appropriate amount to rescind?

Answer: The Department continues to believe \$153 million is an appropriate amount to rescind from the Clean Coal Technology Program. The proposed rescission amount represents savings resulting from approved project restructuring activities and projects that ended prior to completion. The rescission amount also accounted for savings resulting from a proposed restructuring and downsizing of one of the projects. After allowing for the \$153 million rescission proposed for fiscal year 1998, a small amount of uncommitted funds would exist beyond the commitments needed to fully fund all remaining projects.

A supplemental proposal to rescind an additional \$10 million in fiscal year 1997 has been made since the time the budget was submitted. Although the supplemental rescission limits the ability of the Department to fund future cost growths, adequate funds remain to meet current project commitments.

Question: What assumptions did you base that on, further project terminations, projects coming in under budget?

Answer: The Department based the rescission of \$153 million for fiscal year 1998 on approved project restructuring activities and projects that ended prior to completion. To adequately fund program direction requirements for the remainder of the program, the rescission also accounted for savings resulting from a proposed restructuring and downsizing of a project. No future project terminations or reliance on projects coming in under budget are needed to fully fund current commitments for the remaining projects in the Clean Coal Technology Program.

Question: For the record please provide a status on each of the active projects and what the next milestones are.

Answer: Although there are 20 active Clean Coal Technology Demonstration projects, only six of these projects have major milestones remaining that require decisions. Milestones for these projects are shown in the table below. Note that the York Project (number 2 & 5) has two milestones.

	PROJECT	MILESTONE	DATE	DESCRIPTION
1	TAMPA (Lakeland, FL)	Cost Growth	4/30/97	HQ approval of BP2 for construction. Formal request has been received and is in the final review process.
2	YORK (York, PA)	Restructuring	11/30/97	Target date for modifying the Cooperative Agreement.
3	PENELEC (Warren Stn, PA)	Restructuring	5/31/97	Target date for HQ decision on proceeding.
4	COAL DIESEL (Fairbanks, AK)	End of BP1-Project Definition	6/30/97	Target date for HQ decision on proceeding.
5	YORK (York, PA)	Novate Cooperative Agreement from York County Energy Partners to Penelec.	5/31/97	Target date for HQ decision on novation.
6	CLEAN ENERGY (Baltimore, MD)	Restructuring	12/31/97	Target date for HQ decision on restructuring.
7	CPICOR™ (Vineyard, UT)	End of BP1- Project Definition	4/15/98	HQ approval of BP2 for construction.

Question: Assuming your assumptions included some project terminations, when will you know whether those projects are going forward or not?

Answer: See the table in the answer to previous question above. The milestone dates are target dates when DOE expects to make decisions. These dates are DOE's best estimates based on the latest schedules and information from the project Participants. Since these are cooperative agreement efforts with the private sector, it should be noted that these dates depend on the project status and on the Participant providing DOE the necessary and timely information for decisions.

Naval Petroleum Reserves

Question: An April 2 press release, *DOE Outlines Additional Details in Plan to Offer Elk Hills Oil Field to Multiple Bidders*, stated that "DOE has not dismissed the possibility of selling a portion of its interest in Elk Hills in ways which could appeal to institutional investors". What

does that mean? Who are the institutional investors and what interests would be conveyed to them?

Answer: Depending upon the market conditions at the time of the sale, it might be possible to increase the return to the government by selling a portion of the non-operating working interest in Elk Hills in a manner that would appeal to such institutional investors as insurance companies or pension funds. Such an arrangement could take the form of a net profits partnership administered by a trustee. Each of the entities investing in this arrangement would receive its proportional share of the net profits from the field after deductions are made for operating expenses and development costs.

Question: An April 3, 1997 report in The Oil Daily said that DOE, in order to increase attractiveness to institutional investors, may sell the entire non-operating working interest to one buyer. Is this accurate? If fewer rather than more buyers for the non-operating interest could maximize value, why did DOE's April 2 release indicate there would be thirteen 2% buyers for the non-operating interests? Why not fewer buyers with larger percentages?

Answer: The Oil Daily April 3, 1997 report on the DOE press release contained several inaccuracies. DOE is not contemplating selling the entire non-operating working interest to one buyer to increase attractiveness to institutional investors. DOE will offer two types of interests: a single operating working interest, representing approximately three-quarters of the government's interest in the field, which will consist of a working interest of at least fifty-one percent in each of the productive zones; and separate, non-operating working interests, each of which will represent two percent of the government's interest.

Purchasers will be able to bid on one, some, or all of the interests being offered. The key to maximizing value to the government is to have the greatest possible number of entities participate in the bidding process. This can be accomplished best by offering a larger number of smaller segments with the option to purchase one, some, or all of the offered interests.

Additionally, DOE has not rejected the possibility of selling a portion of the government's interest in the field in ways which could appeal to institutional investors. DOE will only do this if this will maximize value to the United States.

Question: Also contained in the release is language which would permit the purchase of the United States' entire interest by one buyer if that maximizes the sales price. Is it fair to assume that a single bid would prevail so long as the single bid was larger in amount than the total of all bids by others on the various working interests? Or, will each working interest be evaluated separately so that a single bidder would have to prevail on every individual bid for every working interest in order to purchase the entire government portion of the field notwithstanding the fact that the single bid exceeded the total of all other bids combined?

Answer: The bid(s) which will prevail for the purchase of any of the government's interest in Elk Hills will be whatever single responsible bid or combination of responsible bids produce the greatest value to the government.

Question: The Department has missed several mileposts for the Elk Hills sale as set forth in the Defense Authorization Act of 1996. Do you plan to meet the statutory sale date of February 10, 1998?

Answer: On July 18, 1996, the Department notified Congress that DOE, in conjunction with the independent contractors retained to support the sale activities, had determined that several of the mileposts contained in the Defense Authorization Act of 1996 needed to be changed in order to optimize the ultimate value received from the sale of Elk Hills. The Department continues to be confident that the present schedule will result in the sale of Elk Hills by the statutory deadline of February 10, 1998.

Question: When will the bid solicitation package be available?

Answer: The marketing brochure and the notice of solicitation will be made available during the month of May 1997.

Question: When will the data room be opened?

Answer: The data room is expected to be opened during the month of June 1997.

Question: When will the equity determination settlement with Chevron be completed.

Answer: The equity finalization process is proceeding by productive zone. Although specific dates for the individual zones may vary, the status is: The Department received recommendations from the Equity Independent Petroleum Engineer for the Dry Gas Zone and Carneros Zone in March 1997. The Assistant Secretary for Fossil Energy anticipates issuing a final equity decision in these zones by July 1997. The Assistant Secretary issued a Preliminary Decision for the Shallow Oil Zone on March 28, 1997, and anticipates issuing a final decision following receipt and consideration of Chevron's comments on the Preliminary Decision. The Stevens Zone equity finalization process is in progress, and the Assistant Secretary is expected to issue a final determination for the Stevens Zone in November 1997. Accordingly, for purposes of the statutory schedule, the Department expects to finalize equity interests for the four known zones in November 1997.

Question: DOE's draft operating agreement addresses the matter of financial responsibility on the part of bidders for the single operating working interests (75% of the government's interest). However, the draft is silent on financial responsibility requirements for various non-operating working interests (25% of the government's interest). Does the Department plan to address financial responsibility requirements for the non-operating working interests?

Answer: Yes. The financial position of each bidder for the government's interest in Elk Hills will be evaluated to determine the bidder's ability to successfully close on the sale and to meet its continuing financial obligations as an owner of an interest in Elk Hills.

LEBS

Question: Your budget for FY 1998 proposed \$5.462 million for the Low Emission Boiler system program, down from \$9.5 million in FY 1997. What is this funding level based on?

Answer: The funding requested for FY 1998 is consistent with Administration funding requests in prior years. In those prior years, Congress added funding to the Administration's request. The FY 1998 funding request reflects current budget constraints and the need to support a balanced portfolio of promising energy technologies. The current request will stretch out the program by about 2 years into the 2002 range or so, depending on the selected developer.

Question: You propose to down select to one contractor this year, however, the budget is insufficient to fund two of the three contractors if either of them were selected. When do you plan to make the down selection and what are your plans to fund the DOE portion of the project if either the DB Riley or ABB team are selected?

Answer: Results for Phase II and Phase III are due at the end of July 1997. A 2-month evaluation period is planned. Phase IV is scheduled to begin in October 1997. We expect to negotiate a cost, a cost sharing, a funding profile, and a schedule for the selected project acceptable to both DOE and the contractor. At the requested funding level, there would be multiyear schedule slippages if either D. B. Riley or ABB were to be selected.

Question: Is a down selection technologically driven or driven by funding constraints?

Answer: The down selection to a single contractor for Phase IV is in keeping with the original program concept. Hard choices have to be made in developing the overall energy portfolio, and given the funding constraints, we cannot afford to pursue more than one concept. The down selection reflects a need to meet the current funding constraints while supporting other promising technologies in order to maintain a balanced energy portfolio.

Question: Are there benefits to continuing more than one team at this point?

Answer: There are always benefits to pursuing more than one development option. It reduces technical risk and increases the probability of successfully achieving program goals. However, these points need to be weighed against development costs and budget constraints.

QUESTIONS SUBMITTED BY CONGRESSMAN JOE SKEEN

Question: How important is the fossil energy research we are funding in DOE?

Answer: Because fossil fuels -- coal, oil and natural gas -- supply 85% of the energy Americans consume, the research we are doing to improve the environmental acceptability of these fuels and, in the case of oil and natural gas, to enhance their production from secure, domestic reservoirs is among the most important investments we can make for future generations.

In this country, environmental standards are tightening. Better technologies will be necessary if we wish to continue improving the quality of our air, water and land without imposing additional costs on consumers or ratepayers. Internationally, the world will likely be using a third more energy in 2010 than it does today, and most of the additional energy will be supplied by fossil fuels. It is imperative that nations, especially developing nations, have access to affordable technologies that reduce the local and global impacts of their increasing reliance on fossil fuels. Finally, the United States continues to increase its oil imports, coming increasingly from oil-rich nations in the more turbulent regions of the world. R&D can enhance domestic production, reducing reliance on oil imports, and is particularly important to the smaller, independent producers who are beginning to dominate U.S. oil and gas production.

These are all reasons why fossil fuel research, in general, remains vital to U.S. interests in the coming century. But there are more specific reasons why the federal government should be involved in such research:

- **Federal R&D can mean the difference between marginal improvements in technology and "quantum leaps" that can save consumers billions of dollars and accelerate public benefits.**

DOE's fossil energy R&D program is developing advanced concepts that are well beyond the timetables and performance goals of private sector R&D. Using Federal R&D investments to make available new technologies 10 to 30 years before they would otherwise emerge from private sector R&D can save consumers billions of dollars, make national environmental choices easier, and strengthen the Nation's energy security.

- **Federal support can keep the U.S. from confronting an "R&D crisis" brought about by sharp reductions in private sector energy R&D in today's era of industry restructuring and corporate cost-cutting.**

Private sector R&D continues to decline in the United States, particularly in the energy sector where market restructuring has created unprecedented financial caution. Energy R&D by the private sector, in virtually every fuel sector, is down nearly a third in just the last three years after a period of steady decline in the 1980s. The Federal fossil energy R&D program is a strong national R&D effort emphasizing technologies that are still 5 to 10 years or more into the future.

- **Federal R&D can help U.S. companies maintain their global competitiveness at a time when expanding world markets are creating enormous opportunities and unprecedented competition from other nations.**

With world energy use expected to grow by a third in the next decade, huge market opportunities are opening for new, more affordable energy technologies. Other nations recognize the trillion-dollar potential of the global energy technology market, and are creating public-private partnerships to improve the competitive posture of their technology developers. The U.S. must sustain similar partnerships or risk putting U.S. companies at a unilateral disadvantage.

- **Federal R&D can stimulate innovations in areas of national importance where there is no current market incentive.**

Some R&D has no market incentive but may be vital to future U.S. interests. Carbon dioxide capture and disposal R&D, for example, has no immediate economic payoff. Federal R&D is one of the few ways this type of research can be done in the U.S.

- **Federal R&D can turn Cold War technologies into tools for greater energy security.**

The U.S.'s 50-year investment in defense technologies, primarily at national laboratories, has provided a wealth of capabilities that can now be turned toward peaceful energy uses.

In short, the funding we are requesting in the FY 1998 budget will develop technologies that will allow us to use our vast domestic coal reserves -- which have a greater energy content than all of the world's proven oil reserves -- in ways that are 10 times cleaner than today's standards, which virtually eliminates the common pollutants associated with coal, and which can cut the release of carbon dioxide in half -- buying us perhaps decades of time to develop and deploy permanent solutions to global climate concerns.

The federal program is also developing technologies that will produce more oil and natural gas from secure, domestic fields, giving us a way to cut our oil imports by up to 1 million barrels per day by 2010. This will keep billions of dollars working in the United States, strengthening our economy rather than flowing overseas to help bolster the economies of other nations.

Question: If I have to make a choice should I be funding increased energy conservation research funding or research aimed at increasing domestic oil production?

Answer: The U.S. imports about half of the oil it currently uses and the Energy Information Administration (EIA) projects that even with advanced conservation technology we will import 60% of our needs in 2010, much of it from politically unstable regions, increasing the risk that our economy will be disrupted by oil-import interruptions. In order to improve domestic energy security and reduce our dependence on foreign oil supplies, technologies to both reduce consumption and increase domestic supply are required.

Question: As far as I can see there continues to be great reliance on fossil fuels by the American consumer. In your statement you predict U.S. oil imports will rise to 60 percent of domestic consumption. Without government mandated programs it seems that energy conservation's role in assuring adequate energy independence is limited. Wouldn't it be more prudent to focus even more on R&D on increasing domestic oil production and let the marketplace fund conservation research at a pace more in tune to the public's acceptance of conservation? In other words can't we get more immediate bang for the buck with R&D on increasing production?

Answer: In order to improve domestic energy security and reduce our dependence on foreign oil supplies, technologies to both reduce consumption and increase domestic supply are required. Increased funding of oil supply R&D is justified because the budget was cut excessively in past years. The FY 1998 budget, although up from last year, is still 36% lower than the FY 1995 budget. The oil research budget is low relative to the importance of oil to the nation's energy security. The oil program will improve the capability of the nation's petroleum industry to produce additional domestic oil supplies, providing 800,000 barrels per day of increased domestic oil production by 2010, which can cut our dependence on insecure foreign sources.

Question: As you may know the Minerals Management Service of the Interior Department is currently exploring major changes in the way oil and gas is valued for royalty purposes. One can assume the new method of valuation would result in higher revenue for the federal government, higher revenue for other royalty stakeholders and less revenue for the actual well operators. Meanwhile at the state and federal level environmental compliance costs as well as just the costs to monitor federal and state actions continue to skyrocket. How can we expect our domestic oil and gas producers to stay in business when every time we turn around we are adding new costs to their bottom line?

Answer: Yes, the Minerals Management Service is in the process of changing its method for valuing oil and gas produced on federal lands for purposes of royalty collections. Their goal is to make sure that royalty payments are based on the true fair market value for the oil and gas to insure that the nation receives full value for these precious natural resources. The Department of Energy supports the efforts of the Minerals Management Service in this regard.

However, we also share the concern that our domestic petroleum industry must remain competitive in world oil markets. This industry is vital to the security and economic well-being of our nation. In this regard, we must develop regulations governing the industry that fully protect the environment, and at the same time allow the industry to remain competitive. To achieve this we must work to eliminate overlapping, inconsistent, or inefficient regulations at the federal, state, and local level that result in confusion as to compliance requirements and significant costs being incurred by the industry. We must also work to insure that each regulation is needed, based on sound science, and will achieve real environmental benefits that benefit the Nation. Further, we must support efforts by the industry to develop environmental compliance strategies that allow the industry to meet all environmental standards in the most cost-efficient manner possible. Promoting both the development of consistent and effective environmental regulations that fully

protect the environment, and the development of more efficient compliance strategies for the industry are primary goals of our oil and gas program at the Department of Energy.

Question: What I'm trying to get at is this administration asks that we fund research that will help make more money for our producers. At the same time, another federal agency is saying never mind, we're going to take money back in increased royalties. Is there a government policy when it comes to domestic oil and gas production or is every agency doing its own thing?

Answer: Yes, there is a government policy governing the actions of all the various executive branch agencies with respect to oil and gas. This policy brings together the full range of government actions initiated by the Administration, or required by laws and regulations affecting our domestic petroleum industry. These actions, some of which may work against each other in some ways when viewed from some perspectives, actually reflect a balancing of important national goals for the economic health and energy security of our Nation, for the financial health of this vital industry, and for the protection of the environment. Thus, government funding research to help the industry maintain its economic viability is consistent with the government's stewardship responsibilities to insure that it receives fair value for the oil and natural gas produced on Federal lands.

QUESTIONS SUBMITTED BY CONGRESSMAN ZACH WAMP

Question: The Fossil Energy Program coal and power systems projects have very ambitious efficiency and emissions goals of 60% with near zero emissions of air pollutants and greenhouse gases so that this country can continue to operate on economical domestic fuels such as high sulfur coal. In order to achieve these performance levels, a new generation of metals and ceramic coatings will have to be produced to operate at extremely high temperatures and chemically hostile environments. Although its budget was reduced over 40% (or from \$8.9 million to \$5 million) from FY 1994 to 1998, the Advanced Research & Technology Development Materials Program has been charged with the mission to meet those needs. Given an FY 1998 Budget request of \$5.3 million, how does this Administration expect to produce the next generation of new materials needed to meet the strategic goals and performance requirements of the Twenty-first Century?

Answer: The FY 1998 Budget request is consistent with the Administration's goals of addressing priority needs in a manner consistent with fiscal restraint. The AR&TD Materials Program is specifically structured with research thrusts in Ceramic Composites, New Alloys, Functional Materials, Corrosion Research, and Technology Development and Transfer. Presently, the program has been narrowed to focus on those materials that have been under development for sufficient time to have nearer term application, i.e., three to five years. We will continue to focus the program on the most critical materials needs of the coal and power systems projects consistent with the availability of funding.

Question: How will existing programs and funding be structured to meet these strategic national goals?

Answer: We have established a balanced program among these elements with the appropriated FY 1997 funds and have planned a similar balanced program with the requested FY 1998 funds. Presently, the existing program is structured to specifically address the high temperature materials needs of the advanced coal and power systems. In FY 1998, the planned distribution of requested funds is: Ceramic Composites - \$810,000, New Alloys - \$1,619,000, Functional Materials - \$1,243,000, Corrosion Research - \$350,000, Technology Development and Transfer - \$1,159,000, and Support (Special Studies, etc.) - \$52,000. Should additional funds be appropriated, primary emphasis would be placed on additional needed work in ceramic composites and corrosion research, and on renewing efforts on exploratory projects in new alloys and functional materials.

Question: Inorganic, catalytic, and metallic membrane technologies which were developed for the gaseous diffusion and enrichment process operate very efficiently in chemically hostile and high temperature environments. In that these processes offer significant advantages in energy efficiency, petrochemical, and inorganic chemical industrial applications, the technology is presently undergoing DOE declassification review so that these technologies can become widely available for a broad range of users. Since this technology offers great promise for energy production from a range of environmentally unfriendly petro-based fuels, what levels of support do you anticipate being needed to protect national security interests and deployment of these

processes in a competitive international environment?

Answer: The Fossil Energy AR&TD Materials Program has sponsored a base program on inorganic membranes for several years. This high potential technology, which is based on the Oak Ridge-developed technology and is being conducted at Oak Ridge, is being pursued for numerous fossil energy applications such as high temperature gas separations including hydrogen separation from, for example, synthesis gas or from hydrogen-carbon dioxide mixtures. Primarily as a result of the AR&TD Materials Program support, this technology has moved closer to industrial applications including the establishment of six CRADAs and one collaborative project on a low-cost fabrication method for solid oxide fuel cell components. Funding in the amount of \$350,000 (B/A) on the AR&TD Materials Program is planned for the inorganic membrane development. In addition, DOE Fossil Energy has a projected allocation of \$200,000 (B/A) from the petroleum program, and \$150,000 (B/A) from the fuel cells program to inorganic membranes. We believe this to be an equitable and appropriate allocation of funds given the limitations of the overall budget request.

Question: The Fossil Energy FY 1997 Budget Request for the Advanced Turbine System Program is reduced by \$15.2 million to the \$31.4 million level for FY 1998. What is the effect of this reduction on the cooperative research and development efforts shared with the Office of Industrial Technologies?

Answer: The FY 1998 budget of \$31.4 million will stretch the program schedule out to around 2002, and the level of cooperative R&D supported by Fossil Energy with the Office of Industrial Technologies will be reduced to reflect the schedule stretch out. At this funding level, funding reductions of \$1 million are anticipated in materials manufacturing and technology base development.

Question: Will this reduction have serious negative impacts on the turbine manufacturers, industrial partners, and material producers teamed at the Oak Ridge National Laboratory?

Answer: The reduction will impact the turbine manufacturers, industrial partners, and material producers as a \$1 million reduction in funding in FY 1998 incurs a 1-year delay in initiation of full-scale engine testing design and instrumentation as part of the scheduled stretch out and will result in escalation of overall program costs.

QUESTIONS SUBMITTED BY CONGRESSMAN SIDNEY R. YATES

Question: How much has the Department of Energy spent on the divestment activities associated with selling Naval Petroleum Reserve - 1 (Elk Hills) and on the evaluation of alternatives regarding the future of the remaining Naval Petroleum and Oil Shale Reserves (NPOSr) properties?

Answer: A total of \$22.7 million has been reprogrammed to fund divestment activities associated with selling NPR-1. To date, \$14.9 million of this amount has been obligated. Through February 1997, expenditures total \$6.4 million.

For the evaluation of alternatives on the remaining NPOSr properties, \$750,000 was reprogrammed. Of this amount, \$603,061 has been obligated and \$588,238 has been expended.

Question: Can you please provide me with specific details about what plans the DOE has for their \$50 million advance appropriation request for an international clean coal technology demonstration project in China?

Answer: An advanced appropriation of \$50 million is requested to initiate support of an international clean coal technology program. The funds appropriated would become available at the start of fiscal year 1999. The project will apply U.S. integrated, coal gasification combined cycle technology in the People's Republic of China to introduce advanced, high efficiency, clean coal technology in the production of much needed electricity. China's rapidly expanding economy depends on coal to supply about three-quarters of its total energy needs. The IGCC technology that would be utilized for this initiative must be adapted for the Chinese environment. Adaptations would be made to achieve lower capital costs, performance with Chinese coals, and lower operating costs. Modifications would also be made to the technology to allow for less stringent performance standards than those imposed for the American market.

The Energy Policy Act of 1992 (PL 102-486) includes under section 1332 a program for the export of clean coal technology to improve quality of life in the host country and create jobs in the U.S. This legislation authorized \$600 million for the program defined in sec. 1332. DOE would receive the appropriations under this section and would be required to work with necessary U.S. agencies doing business in the country of interest. In the case of the IGCC project in China, the approach could be to appropriate the \$50 million under sec. 1332 to provide the greatest flexibility. With appropriated funding under the authority of sec. 1332, DOE would acquire the authority to provide any form of financing mechanism for international clean coal projects. Then DOE could pursue one of two options 1) would work through the U.S. Export Bank to implement the program for reduction of financing costs or 2) conduct a competitive process in conjunction with the Chinese through the DOE procurement process for project capital cost reduction.

Option No. 1: Reduction of Financing Costs

\$50 million could be provided to the Export Import Bank for financing the Project. The Bank has the ability to leverage funds depending upon the risk assumed by the current portfolio of loans. By providing this funding under section 1332 the Export Import Bank would be in the position to lend the funds (to match the European terms) under low interest terms or with other incentives. The details of pursuing the financing through the Export Import Bank would have to be developed. However competition would be achieved through the selection process of the Chinese for the project. All U.S. bidders would be supplied with equal commitment from the U.S. government to include in the bid proposals.

The appropriated funds would enable the Export Import Bank to have the flexibility to extend a low interest loan to compete with the offerings of Germany and the Netherlands without having to constrain available funds for the highly competitive demands of the many projects. These funds will help U.S. industry to offer financial terms that could be competitive with Germany and the Netherlands.

Option No. 2: Capital Costs Reduction

The other option of conducting the procurement process through the DOE could be done in conjunction with the Chinese competitive process for the project. A similar situation was done for the project in Poland. A likely approach would be similar to that described for the Bank. The U.S. government provides an equal expression of interest for all U.S. bidders to include in the proposals submitted to the Chinese and the competitive evaluation would occur through the Chinese selection process. If an American bidder wins then DOE negotiates terms with that bidder. Also under the DOE process the funds could not be leveraged so the financing would be limited to just \$ 50 million in capital cost reduction.

Question: The Advanced Pulverized Coal-Fired Power Plant development of the Low Emission Boiler Systems (LEBS), Prairie Energy Project, is in its crucial final phase. My home state of Illinois has committed to spend more than \$3 million in support of the LEBS work this year and private industry, including a Chicago company, Sargent and Lundy, will continue to invest millions of dollars in research, development and demonstration programs for this project. Federal support for this effort is critical. What plans does the DOE have for this particular project and what type of support can LEBS anticipate?

Answer: Results for Phase II and Phase III of all three LEBS projects are due at the end of July 1997. A 2-month evaluation period is planned. Phase IV is scheduled to begin in October 1997. The down-selection to a single contractor for Phase IV is in keeping with the original program concept. The process for selecting a developer to continue in Phase IV of the LEBS program will be to form a Federal team of experts who will review and evaluate the Phase II and Phase III results as submitted by each of the three contractors. Selection will be based on an evaluation of the submissions and arrived at by a ranking grounded on a set of technical and other criteria.

We believe the request for \$5,462,000 allows us to begin Phase IV in FY 1998. We expect to negotiate a cost, a cost sharing, and a schedule for the selected project, acceptable to both DOE and the contractor.

QUESTIONS SUBMITTED BY CONGRESSMAN DAVID E. SKAGGS

Question: DOE is recommending that the three Naval Oil Shale Reserves (NOSRs) be transferred to the Department of the Interior for surface management under the Federal Land Policy and Management Act of 1976 and leasing for minerals (other than oil shale) under the Mineral Leasing Act. Regarding NOSR 3, in Colorado, the recommendation is that the transfer should await "a prior determination of the appropriate allocation of responsibility for environmental restoration and remediation" of portions of the reserve. To which portions of the reserve does this refer, and how much acreage is involved?

Answer: The only known environmental liability associated with Naval Oil Shale Reserve No. 3 (NOSR-3) is the Anvil Points Shale Pile which covers approximately 10 acres. There has not been a site-wide environmental survey completed on NOSR-3, therefore other environmental liabilities may exist. For example, while no known liability currently exists, there is concern regarding the three building structures that remain on the site of the former 40-acre Anvil Points Oil Shale Production Facility. These concerns could be resolved through a site-wide environmental survey.

Question: What are the environmental problems requiring correction?

Answer: Potential environmental problems do exist related to the shale pile, but at this time no problems have surfaced. Groundwater sampling is conducted annually in and around the shale pile. If it is found that there is leaching of contaminants or movement of the shale pile, then it would be necessary to move the shale pile. To date this has not occurred. Groundwater monitoring continues annually and the results are tracked per Environmental Protection Agency requirements.

Question: What steps would be required to correct these problems?

Answer: Monitoring of the shale pile is sufficient at this time. However, if monitoring reveals that a problem exists, it would be necessary to re-locate the shale pile. This would require finding a new location for the shale pile, obtaining the appropriate local, state or Federal permits, and procuring contractors and equipment to facilitate the re-location.

Question: Are there any estimates of the cost of such measures?

Answer: The monitoring and sampling costs are currently about \$2,500 per year. The estimated cost to move the shale pile, including NEPA requirements, is roughly \$10,000,000.

QUESTIONS FROM CONGRESSMAN MORAN

Clean Coal Technology Program

Question: I'm wondering if you can tell me, even assuming that these projects demonstrate that coal can be an efficient source of energy how does DOE think that coal will compare with other energy sources in terms of its efficiency?

Answer: The Clean Coal Demonstration Program includes a suite of projects to produce clean electricity, fuels and industrial products in highly efficient systems. A significant portion of the projects regard the demonstration of environmentally superior production of electric power. It is projected that first generation advanced coal-based power cycles could achieve efficiencies in the range of 42 to 45 percent range. Continued R&D efforts are underway to extend the performance of these systems into the 60 percent range. This would provide significant improvement over existing coal-based power production and would compare favorably with that provided by state-of-art natural gas based combined cycles.

Question: Is the goal of this program to provide technologies that will make coal competitive with other energy sources or simply to make coal a more energy efficient energy source than it currently is, but not necessarily as compared to other energy sources?

Answer: The goal of the Coal and Power Systems program is to provide electric power, premium fuels and industrial products which are produced in an environmentally superior manner with high efficiency that will be economically competitive in the U.S. as well as world marketplace. These requirements for coal-based products are being pursued concurrently since they are all important to ensure coal's use in a sustainable manner.

Question: Are these clean coal technologies that you are developing likely to help EPA meet the goal of the Clean Air Act?

Answer: The clean coal program is in response to the Clean Air Act and amendments on emissions, and regulations that EPA have promulgated and have assisted industry in providing cost effective compliance technologies (NO_x , SO_2 , etc) that have resulted in \$40 billion in cost savings, reducing the emissions for SO_2 and particulates by 27 and 90 percent respectively. In the same time period, the average plant emissions rate was lowered by 70 percent for SO_2 and 90 percent for particulate matter. In addition, a new generation of low NO_x burners and post-combustion devices have been developed in partnership with industry. Current demonstration and accompanied research of advanced coal-based power cycles, such as integrated gasification combined cycles will provide power plants which will achieve emissions of 1/10 present regulations for SO_2 and NO_x and particulates. In addition, mobile source emissions can be reduced by continued development of processes to produce premium transportation fuels from coal, for example, premium diesel fuel which can be produced from coal or other carbonaceous sources offers the opportunity to significantly reduce SO_2 and NO_x and particulate emissions.

International Environmental Issues

Question: Is DOE working actively to deploy our technologies to other countries that are especially in need of reducing greenhouse gas emissions?

Answer: The Department of Energy is active in the promotion of U.S. technologies internationally. Both the Office of Fossil Energy and the Office of Energy Efficiency and Renewable Energy within the DOE have programs promoting the foreign deployment of U.S. technologies which provide a range of technical, economic, and environmental benefits.

Although the original design objectives of most of these technologies was the more efficient utilization of energy resources and the reduction of conventional pollutants emissions such as sulfur dioxide and particulate, there is the ancillary benefit of reducing net greenhouse gas emissions where fossil fuels are being used, supplemented, or replaced. Also, those U.S. technologies designed to capture and utilize methane for efficiency, safety and health reasons provide significant greenhouse gas benefits.

Countries such as China and those with economies in transition, where economic growth and associated emissions are growing most rapidly, are of particular focus for these DOE programs.

Question: Does the DOE work with the Department of State and Department of Commerce in this regard?

Answer: With regard to interagency cooperation on international environmental issues, DOE is a primary participant in the United States Initiative on Joint Implementation (USIJI) with seven other Federal agencies including the Departments of State and Commerce. Under this program, the U.S. works with its fellow agencies to promote cooperative efforts between foreign entities and their private sector counterparts in this country to engage in activities which, in addition to supporting the development goals of the host country, reduce, avoid, or sequester greenhouse gases. Besides providing economic and environmental benefits in the host country and globally, USIJI projects offer U.S. companies access to new product and energy markets.

DEPARTMENT OF ENERGY

**Office of Energy Efficiency and Renewable
Energy**

WEDNESDAY, APRIL 9, 1997.

DEPARTMENT OF ENERGY

**OFFICE OF ENERGY EFFICIENCY AND RENEWABLE
ENERGY**

WITNESSES

**CHRISTINE A. ERVIN, ASSISTANT SECRETARY, OFFICE OF ENERGY EF-
FICIENCY AND RENEWABLE ENERGY**

**JOSEPH J. ROMM, PRINCIPAL DEPUTY ASSISTANT SECRETARY, OF-
FICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY**

**THOMAS GROSS, DEPUTY ASSISTANT SECRETARY, OFFICE OF TRANS-
PORTATION TECHNOLOGIES**

**JOHN ARCHIBALD, DEPUTY DIRECTOR, FEDERAL ENERGY MANAGE-
MENT PROGRAM**

(651)



U.S. Department of Energy
Washington, D.C. 20585

BIOGRAPHY

CHRISTINE A. ERVIN

Christine A. Ervin was appointed Assistant Secretary for Energy Efficiency and Renewable Energy by President Clinton in November 1993. She oversees the nation's \$1 billion enterprise to develop clean energy technologies that create new jobs, protect the environment and enhance public health. In broadening the public perception of energy as a kilowatt issue to an environmental and quality of life issue, she also serves a leading spokesperson for sustainable development.

Under Ms. Ervin's leadership, her organization has adopted new strategic alliances with automotive, manufacturing, construction, and renewable energy businesses; has launched a series of highly successful voluntary programs to cut energy use and greenhouse gas emissions; and has radically streamlined programs for working with state partners and for developing standards for energy efficient products that save consumers billions of dollars. She has championed a broad array of market transformation initiatives that encourage private sector financing of efficiency and renewable energy technologies such as collaboratives with the insurance industry, green pricing initiatives and new labeling programs for homes and appliances. Communication has been another high priority including the development of one of the most popular websites available for sustainable communities.

Ms. Ervin's diverse background includes serving as the Director of Oregon's Department of Energy, during which time she also led the Governor's Task Force for Livable Communities; project director at the World Wildlife Fund and The Conservation Foundation; and Assistant Director for Missouri's central policy and budget office where she led activities to develop the Governor's budget proposals for all state programs. She completed a B.S. and M.S. in physical geographical sciences and substantial post-graduate work in resource economics.



U.S. Department of Energy
Washington, D.C. 20585

BIOGRAPHY

JOSEPH ROMM

Dr. Joseph Romm was named Acting Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy in August 1995. In this capacity, Romm helps the Assistant Secretary, Christine Ervin, manage the \$800 million portfolio of research, development, and deployment of clean industrial, transportation, building, and utility technologies. He is co-author, with Deputy Secretary Charles Curtis, of the April 1996 *Atlantic Monthly* cover story, "Mideast Oil Forever."

From July 1993 to July 1995, Romm was special assistant for policy and planning to the Deputy Secretary of the U.S. Department of Energy, where he advised the Deputy on energy efficiency, renewable energy, pollution prevention, and industrial competitiveness. He served as the Executive Director of the Department's Pollution Prevention and Waste Minimization Executive Board, which works to minimize the Department's own waste stream and to coordinate its pollution prevention R&D.

Romm is author of the recent book *Lean and Clean Management: How to Increase Profits and Productivity by Reducing Pollution* (Kodansha, 1994), a "how to" book for companies that want to improve their energy and environmental performance. The book documents two dozen case studies of companies that have increased productivity through energy-efficient building and office design, industrial energy efficiency, of pollution prevention.

From mid-1991 to mid-1993, Romm worked with Amory Lovins at Rocky Mountain Institute. Romm holds a Ph.D. in physics from M.I.T. and has written about pollution prevention and manufacturing for *Forbes*, *Technology Review*, *Foreign Affairs*, *Industrial*, *the New York Times*, and *USA Today*.

Mr. REGULA. Ms. Ervin, thank you for coming. I understand you're getting a promotion and this will be your last hearing here.

Ms. ERVIN. That's right, sir.

Mr. REGULA. And we'll assume that you're going over to the White House to get them straightened out and share some of the worthwhile things that we've accomplished in conservation.

Ms. ERVIN. That's right.

Mr. REGULA. Your statement will be made a part of the record. You can comment as you choose, and then we'll go to questions; and we want to move as expeditiously as possible. Thank you, and go ahead.

Ms. ERVIN. Chairman Regula, and members of the subcommittee, I am very pleased to join you today to present and discuss the Energy Efficiency budget of the Department of Energy.

Overall, our request of about \$688 million will help the United States reduce our dependency on imported oil through new transportation technologies and the promotion of alternative fuels. It will help small and large businesses retain jobs and remain competitive through greater resource efficiency and ways to avoid environmental compliance costs.

We'll save consumers billions of dollars in the energy that they use in their homes and their offices. We'll encourage the use of natural gas, cut the Federal Government's energy bill by \$1 billion a year by about the year 2004 and support—

Mr. YATES. And what year will this occur?

Ms. ERVIN. A billion dollars a year more by the year 2004—and support State and community programs, including the weatherization of 78,000 homes in Fiscal Year 1998.

Now I know some of you may be saying to yourselves, "Here she comes again asking for another budget increase." And, indeed, our request for 1998 is an increase of about \$138 million. And in a time when we are jointly moving together to balance the budget, you might well ask how we can afford such an increase.

What I'd like to do in the next few minutes is to give you four reasons why I think we cannot afford not to make this investment in the efficiency programs. First, this subcommittee presides over what amounts to the largest voluntary pollution prevention program in the entire Federal Government, the Energy Efficiency programs of this Department.

A cursory review of the statistics makes it abundantly clear that energy causes more pollution than any other economic activity. It is by far the dominant source of many of the criteria pollutants, of particulates and of greenhouse gas emissions. That is why you might call our programs, actually, the Fossil Energy Efficiency programs, because many of our programs are designed to help use fossil fuel more efficiently.

Now we have essentially two approaches at our disposal in dealing with this pollution. One emphasizes regulatory controls on businesses and industries and on consumers, and the other favors strategies based on the efficient use of raw materials and energy through voluntary methods of R&D. Now, in fact, we need a combination of the two. But the investments that you make in these programs, I think, will go a long way into determining what the balance is between mandatory and voluntary approaches.

A second reason for making this investment is that they are particularly timely given the state of deregulation in the utility industry that we just spoke about and the state of energy research and development funding overall. While the Administration does support, as you know, the long-term goal of deregulation, we are concerned about the chilling effect it's having on utility-supported research and demand-side management programs in the near term. And as you know, this is already exacerbating the precipitous decline in R&D spending in this country.

Within the last decade we've seen R&D investment by the private sector drop by more than a third, and Federal investments are not making up the difference; in fact, quite the opposite; they've reduced, as my colleague, Assistant Secretary Godley stated, about 75 percent over the last 15 years.

Now many, many specialists have commented and expressed alarm about these trends. We heard about the Yergin Commission a few minutes ago. The President's Council of Advisors on Science and Technology, just in last December, called for substantial increases; not stable funding, but substantial increases of energy R&D spending.

At a congressional breakfast last month, Kurt Yeager, the president and CEO of the Electric Power Research Institute, urged that we not, quote, "let short-term expediency sacrifice the engine of prosperity," referring to the role that research and development plays in boosting productivity.

And, finally, I saw recently a Wall Street Journal poll of 1,500 economists across the country revealed that the single most cost-effective way to boost economic productivity in this country is through Government spending on education and research and development. Nothing else came close for getting the bang for the buck.

A third reason for this investment: our international competitors are increasing Government support of research and development, even as we reduce ours. Overall, Japan does spend twice as much as the United States as a percent of GDP on research and development. Germany, the Netherlands, and Scandinavian countries also are outspending the United States on a per capita basis.

The fourth reason why I'm asking for your support for this budget is that simply, we are delivering strong results on returns on investments to American taxpayers. These programs are winning a disproportionate share of the prestigious R&D 100 awards for our technology breakthroughs. Our technologies have captured the very top honors from Popular Science and Discoveries and Inventions of the Year for the two years running.

In terms of saving consumers money, using methods documented by the General Accounting Office, we have documented, for just five of our building technologies, that we have saved consumers \$27 billion through the year 1996. Now keep in mind that the total R&D budget for our conservation programs since their inception in 1978 have totalled just \$7 billion.

Perhaps the greatest measure of success I think comes though from our partners and our customers. I certainly won't take time to review those now, but I am proud of the fact that we have earned a reputation for being one of the most customer-driven or-

ganizations in the Federal Government. It shows in the kind of feedback that we get from consumers who receive tips on how to save money from our toll-free hotline, to leaders of industrial consortia who credit our partnerships for dramatically reducing the costs of environmental compliance, helping protect American jobs.

I said four, but let me add a fifth very quickly. One of my top priorities in the last several years has been to aggressively cut administrative costs in the office, and to help infuse our programs with private sector funding wherever possible. We have a strong track record. In terms of the financing, we have put in place at least five major initiatives that will help overcome market barriers to the financing of clean and efficient energy technologies. These range from partnerships with the insurance industry, to venture capital firms, to energy service companies, bankers, and lenders. That has required thousands of hours of effort from very many talented staff at the Department of Energy, and all for the benefit of American taxpayers.

Mr. Chairman, as you just noted, this is my last Appropriation hearing in my current capacity as Assistant Secretary. In May, I will be moving on to the White House to help the President's Council for Sustainable Development pursue work on climate change and on smart growth policies. As such, I will continue to be a strong advocate for clean energy technologies that I think will be, should be, the cornerstone of the next generation of environmental policy in this country.

So in closing, let me say that over the last several years, I have greatly appreciated the opportunity to work with you. While we have not always agreed on the levels of funding for these programs, I have always respected your professionalism, your courtesy, and your heroic efforts to balance programs given the budget allocations.

I sincerely hope that this year's budget allocation for the subcommittee allows you to avoid solomon-like decisions. If you are able to do so, you have got a great opportunity to make one of the best investments in the Federal Government. Thank you very much.

With me to help answer any questions you might have is Dr. Joe Romm, my Principal Deputy and leader on our budget. At the table is Tom Gross, who heads up transportation programs. I have several other of my management team behind me.

[The prepared statement of Christine Ervin follows:]

Statement of Christine Ervin
 Assistant Secretary for Energy Efficiency and Renewable Energy
 Department of Energy
 Before the
 Committee on Appropriations
 Subcommittee on Interior and Related Agencies

Mr. Chairman and members of the Subcommittee, I am pleased to have the opportunity to appear before you today to present the FY 1998 budget for the Department of Energy's Office of Energy Efficiency and Renewable Energy. I share your concern that the nation's scientific and technological expertise today be applied in ways that will enable sustainable growth in the standard of living for all Americans and a more secure energy and environmental future. I am prepared to work with you to ensure that our programs can cost-effectively deliver the technologies the nation critically needs for that future.

The Department of Energy's FY 1998 request for Energy Efficiency programs is \$687.7 million, an increase of \$138 million from FY 1997 appropriations. Our request reflects the Administration's commitment to maximize energy productivity, prevent pollution, and keep America secure. The President's Committee of Advisors on Science and Technology has recommended a "substantial and sustained increase in Federal expenditures on energy R&D." This testimony will present the details of what our FY 1998 budget request will provide. Let me first briefly tell you why we feel that our R&D programs are of particular importance given today's energy and environmental picture.

The United States today is at risk of losing the technological leadership that would provide for a sustainable energy future. In 1995, our Secretary of Energy Task Force, under the chairmanship of Daniel Yergin, told us that federal support for energy R&D had declined more than three-fold in real terms in the past 15 years, and that private sector energy R&D had fallen off sharply. That situation has not changed. Government spending on energy R&D is higher in other developed nations than in the United States — more than twice as high, for example, in Japan, which spends more than four times as much as a percentage of GNP. This has happened despite the fact that energy supply and energy-efficiency technologies represent an international market opportunity worth hundreds of billions of dollars each year. Growth in global energy demand is rising sharply, and the opportunity exists to meet the domestic and international demand with newer, cleaner, more efficient energy technologies developed in the U.S. This opportunity will not last forever, as our competitors are already positioning themselves to capture the market.

To capitalize on this opportunity, in FY 1998 we plan over 200 R&D projects in various stages of the research pipeline. This year we expect to work with 2,000 partners, including consortia, laboratories, industry groups, states and retailers that will conduct R&D and help deploy our technologies to thousands of sites and users in all 50 states, including 50 "clean cities", 800 utilities, 1,000 industrial partners and thousands of buildings and demonstration fleet vehicles. These partner-customers are on the leading edge of deployment of energy technologies that will address the needs of the public and the marketplace.

The time to move forward in our commitment to develop a balanced energy portfolio, utilizing the most advanced and efficient energy technologies and renewable energy sources is now. If we do so, we will be able to enhance our energy security, improve our balance of trade, retain our world-class technology advantage, and secure the energy future for future generations. If we refuse to accept this challenge, we may one day be facing diminished economic opportunities, increasing health and environmental problems, underemployment, an even greater balance of trade deficit, and an uncertain energy supply. Continuing these cost-shared, leveraged activities, through your leadership and partnership, we can meet this challenge together and go far to ensure a secure energy future that benefits all Americans.

TRANSPORTATION SECTOR

The Transportation Sector's request for \$203.2 million is vital to help develop the necessary technologies that will result in turning the corner on the growth of petroleum use for highway transportation, within the first decade of the 21st century, in a positive and cost-effective manner.

The focus of Advanced Automotive Technologies is research and development that will produce an 80 mpg production prototype mid-size sedan that is competitive with a conventional vehicle. In FY 1997, the program's activities are resulting in many important advances in propulsion system development and component performance, e.g., demonstrating a battery power-to-energy ratio greater than 20 to 1 and developing a 50-kW fuel-flexible fuel processor that will be evaluated in a vehicle system.

For FY 1998, \$128 million within Energy Conservation will enable the program to fully support obligations necessary to achieve the goals of the Partnership for a New Generation of Vehicles. \$12.9 million of the requested increase will be used to support efforts to develop and integrate hybrid vehicle propulsion systems into test vehicles. An \$8.4 million increase in fuel cell R&D has been proposed to accelerate progress of the technological option with the highest energy conversion efficiency and the potential for virtually zero emissions. A \$1.5 million increase will support extensive in-vehicle testing of the long-term lithium polymer batteries for electric vehicles. An increase of \$1.8 million for alternative fuels R&D will be used to reduce remaining cost and technical barriers to the use of fuels such as natural gas.

Advanced Heavy Vehicle Technologies efforts involve the development of enabling technologies to achieve increased efficiency, fuel flexibility and ultra-low emissions in trucks and buses. The focus is on the diesel engine which is currently the most efficient engine available and has the capability to use alternative fuels. Goals include achieving an efficiency of 55 percent in heavy duty diesel engines by 1999; devolving these high efficiency heavy duty diesel engine technologies to the pick-up, van, and sport utility truck market within five years; and developing, by the year 2000, technologies that allow diesel engines to operate as efficiently on alternative fuels as they do on petroleum diesel fuel. In FY 1998 the Advanced Heavy Vehicle Technologies program will be linked with the DOE Office of Energy Research (ER) and its DOE 2000 initiative, to focus the latest advances in fundamental science on reducing nitrogen oxide (NOx) and particulate emissions.

Expected accomplishments in FY 1997 include achieving reliable compression ignition in advanced heavy duty diesel engines. We will also complete the evaluation of heavy vehicle contributions to urban airshed pollution inventories, and design and burst test a carbon composite, conformable-shaped compressed natural gas tank with 40 percent more fuel volume. The FY 1998 heavy vehicle budget request is a decrease of \$1.5 million relative to the FY 1997 appropriation. Planned activities include laboratory experiments to reach 69 percent diesel engine turbocharge efficiency, achieving a 90 percent reduction in both diesel engine NOx and particulate emissions; and undertaking preliminary design and cycle analysis of the diesel engine concept for sport utility vehicles and pick-up trucks.

Transportation Materials Technologies are critical to advanced vehicle fuel economy goals. This portion of the program supports materials research and development on both automotive and heavy vehicles. Development of lightweight vehicle body and chassis materials continues to be an important element of this effort. The FY 1998 budget requests \$2.4 million less than the FY 1997 appropriation. This reflects the restructuring of ceramic R&D efforts. Support for the High Temperature Materials Laboratory would be slightly increased.

Technology Deployment activities are designed to provide support at critical periods in the transition of advanced transportation technologies from the laboratory to the marketplace, and then reduce government support as market penetration improves for vehicles which reduce petroleum consumption. A specific goal is to add 500,000 alternative fueled vehicles by the year 2000, for a total of 3.5 million by 2005.

The request of an additional \$6.2 million for FY 1998, relative to the FY 1997 appropriation, will allow increased benefits and leverage for the widely acclaimed Clean Cities program; the launching of an infrastructure corridor program to encourage placement and use of alternative fueling stations at key points in and between highly populated, clean air non-attainment areas; the completion of the field test/evaluation of electric vehicles with the first generation of advanced batteries; and the addition of electric and hybrid vehicle data to the Alternative Fuels Data Center.

INDUSTRIAL SECTOR

Industry's efficient use of energy is critical to the competitiveness of the U.S. economy and our products and services. The industrial sector consumes over a third of all energy used in the U.S. at a cost of over \$100 billion a year and spends tens of billions annually for pollution abatement and control. The FY 1998 budget request of \$139.6 million for the Office of Industrial Technologies, an increase of \$22 million over the FY 1997 appropriation of \$117.6 million, will make significant contributions to developing innovative technologies to assist industry in becoming more energy and resource efficient through several key initiatives, including the Industries of the Future and the Technology Access programs. Specifically, the Office of Industrial Technologies will work with these industries to reduce energy and material use per unit of industrial output, reduce the generation of industrial wastes and pollutants, and improve labor and capital productivity and international competitiveness.

The FY 1998 budget request includes \$55.7 million for specific Industries of the Future initiatives,

an increase of \$9.4 million over FY 1997. Under this initiative the Office of Industrial Technologies works with the nation's seven most energy and waste-intensive industries to focus cooperative research on increasing energy and resource efficiency. These industries include aluminum, chemicals, forest products, glass, metalcasting, petroleum refining, and steel. Over the past two years, each of these industries has developed a "vision" for the future, which details the characteristics necessary to maintain the global competitiveness of each industry. The modest increase in the FY 1998 request would allow, primarily through competitive solicitations, implementation of "technology roadmaps" that identify research priorities that are needed to achieve the industry visions for the future. Each of the seven industries has completed its industry vision and is working on its technology roadmap.

The Industries of the Future budget request includes \$12.3 million for forest products, an increase of \$1.2 million over FY 1997 levels, which reflects activity to develop the advanced technologies needed by industry and a completion of current projects moving into the commercialization phase, such as those related to sensors and control technologies and improving energy efficiency. A recently demonstrated new technology concept for drying paper promises to decrease the energy used in making paper, improve paper strength, and increase recycled content of paper.

For the steel industry, the increase to \$9.7 million over \$9.1 in FY 1997 will lead to increased production efficiency by allowing the field test of one application of nickel aluminides to steel forming and finishing operations. Achievements include a recently demonstrated steel advanced process control project which could significantly reduce the costs of developing rolling steel practices for new grades of steel.

The increase to \$7.7 million for the aluminum industry, an increase of \$2.1 million over the FY 1997 level, reflects a realignment of the spray forming project and the shift in programmatic emphasis to R&D addressing technical challenges in the aluminum industry vision. A recently demonstrated new production process for improving the quality of alumina also promises reduced energy consumption.

The metal castings request of \$5.5 million, an increase of \$2 million over FY 1997 levels, will continue funding research partnerships in coating technologies, lead-time compression, waste stream elimination, and manufacturing productivity. Recent successes include an advanced inspection and testing technology to allow reductions in inspection times.

The FY 1998 request of \$4.8 million for glass, over a FY 1997 level of \$3 million, will fund efforts in advanced materials R&D and advanced melting R&D. Recent successes include a temperature sensor which will improve the quality of glass products, reduce energy consumption and emissions by optimizing melting temperatures.

The \$12.6 million FY 1998 request for chemicals, an increase of \$2.5 million over FY 1997 levels, will allow critical support for chemical syntheses, bioprocessing and computational techniques identified in the chemical vision. Recent successes include a economically viable demonstration of an electro dialysis separation technique.

The FY 1998 request of \$3.0 million for petroleum refining, down from \$3.8 million in FY 1997, will maintain advanced technologies activities such as R&D on very low emission burners and biodesulfurization of oil.

Our FY 1998 budget also contains a request of \$39.1 million for Industries of the Future cross-cutting technologies that address problems common to all of seven Industries of the Future, a decrease from the FY 1997 level of \$39.4 million. The research undertaken aims to achieve increased efficiencies in energy use and enhanced environmental performance in each of these critical technology components, leading to the development of more competitive processes and products. Specific efforts focus on enhancing technologies and applications in cogeneration/advanced turbine systems and the advanced industrial materials/continuous fiber ceramic composite program.

Cogeneration/Advanced Turbine Systems funding request of \$24.7 million, unchanged from FY 1997 levels, will help develop and demonstrate the next generation of gas turbines for both utility and industrial application, including cogeneration. Specific goals include advancements in engine system and component design, including innovations in cooling, materials and coatings.

The \$14.5 million FY 1998 funding for Advanced Industrial Materials/Continuous Fiber Ceramic Composite program, down from the FY 1997 level of \$14.7 million, will continue efforts to overcome limitations of ceramic materials applications in industrial production and major process industries. Specific focus is on development of materials with high temperature strength and fatigue resistance, improved corrosion resistance, and better wear resistance.

The Office of Industrial Technologies also works with Industry of the Future partners to bring into the marketplace advanced energy-efficient technologies that prevent pollution through the Technology Access program. The FY 1998 Technology Access Budget request is \$37.1 million, an increase of \$12 million over FY 1997. This increase will allow the Office of Industrial Technologies to continue efforts to jointly develop and implement innovative and effective ways to demonstrate, communicate and promote the benefits of energy savings, pollution prevention and cost savings through the adaptation of advanced industrial technologies. The increase will also allow greater effectiveness in programs, such as Motor Challenge, Climate Wise and NICE3, that are focused on cost-effective solutions to the threat of climate change.

The \$9.3 million requested for the Industrial Assessment Center/Technology Transfer programs, an increase from the FY 1997 level of \$8.2 million, will provide for energy, waste and productivity assessments to small and medium sized manufactures, highlighting opportunities to reduce waste and increasing energy-efficiency. The FY 1998 request will also allow the Technology Transfer program to inform industrial firms on advanced, efficiency, renewable energy and pollution prevention technologies through numerous media including on-line technical clearinghouses.

The FY 1998 request of \$7.2 million for Motor Challenge, an increase of \$2 million over FY 1997, will enable continued efforts in partnership with industry to increase the market penetration of energy efficient motor-driven systems by encouraging a "systems approach" towards how

motors, drives, and motor-driven equipment are engineered, specified, purchased and maintained industrially. Activities include information dissemination, development and deployment of technical tools and training, and identifying and highlighting success stories.

The National Industrial Competitiveness through Energy, Environment and Economics (NICE3) program FY 1998 request of \$12.0 million, an increase from \$5.8 million in FY 1997, will enable continued efforts to demonstrate the advantages of energy efficient, cleaner production in industry by providing competitive funding to State and industrial partnerships for technology demonstration.

The FY 1998 funding request of \$3.8 million for Climate Wise, up from \$1.0 million in FY 1997, will allow continued efforts with an additional 90 program industrial partners to set and achieve meaningful emissions reduction goals, undertake specific actions to address energy, source, process, materials and behavioral problems, raising the program participation to 4.6 percent of U.S. industrial energy users. The budget request would support the reporting of resultant emissions reductions under section 1605(b) of the Energy Policy Act of 1992.

The FY 1998 request also includes \$4.7 million for the Inventions and Innovations program, a slight decrease from the FY 1997 level of \$4.8 million. This request will support opportunities for inventors, innovators and entrepreneurs to make their energy-related ideas a commercial reality by providing outreach services, non-financial and financial assistance.

The FY 1998 budget also contains a request of \$7.7 million, an increase from \$7.0 in FY 1997, for Management and Planning activities, including technical evaluation of program impacts through development of quality metrics and program planning, and program direction.

BUILDINGS SECTOR

The energy used to heat, cool, and light our buildings — and to provide the wide array of building-related comforts and services that help create our quality of life — now costs consumers about \$220 billion per year, with the average household spending about \$1,300 per year on domestic energy. Reducing these costs would increase discretionary income, and create more jobs and promote economic growth if spent on goods and services other than energy. The FY 1998 request of \$302.4 million for the Building Technology, State and Community programs would help continue the dramatic improvements being made in the efficiency of many aspects of energy use in buildings. The application of our buildings-related research and development can achieve \$22 billion savings for energy users by 2010. Our activities include leveraging our funding in Research, Technology Development and Deployment Partnerships, State and Local Partnerships, and Codes and Standards program.

Our FY 1998 request proposes a \$71 million increase over FY 1997 for the Building Technology, State and Community programs. This increased investment will enable us to expand our successful research and development and deployment programs. One outcome will be an increased focus on integrating components in a whole building perspective. Using the successful approach of the Building America program, the Buildings for the 21st Century effort will increase

building efficiency, builder profitability, homeowner comfort and health, and ultimately sustainable prosperity.

The request for Research, Technology Development and Deployment Partnerships is \$70 million, a \$20 million increase over FY 1997 levels. The Research and Development programs delivers cost-effective and environmentally-friendly technologies to the market in partnership with private and public sector organizations. The products introduced by these programs have already had an enormous impact. Five of our technologies have generated savings of over \$28 billion (flame retention head oil burner, efficient refrigerator compressor, building design software, electronic fluorescent lamp ballast, and advanced [low-E] windows).

In FY 1998, additional savings will be generated with the release of the second generation of building design software. Among the projects to be supported with the increase requested in the budget are the fabrication of prototype "Hi-cool" heat pumps and industry-led research on advanced high-performance materials. In FY 1997, one of our goals is to complete testing and evaluation of a 400-ton natural gas commercial absorption chiller. In FY 1998, we expect to introduce this technology into the market. Another goal in FY 1997 is to complete the design of a low-powered sulfur lamp laboratory prototype using a solid-state source with a target efficiency of 100 lumens per watt. Our goal in FY 1998 is to optimize lamp design using the lamp prototype and complete the preliminary development of a lamp system.

Through our Deployment Partnerships with industry, utilities, state and local governments' additional progress is being made toward achieving our energy saving goals. The flagship Building America program is moving towards its eventual goal of improving the energy efficiency of new homes by up to 50 percent without increasing first costs. One of our goals in FY 1997 is to have the first community-scale project under Building America completed by building 150 houses at almost double the energy efficiency goals of local code. The proposed FY 1998 investment would include funding for the building of a total of 300 new homes, laying the groundwork for the completion of a projected 1000 homes by the year 2000.

Our Rebuild America initiative will work to create 250 partnerships by 2000 to retrofit more than 2 billion square feet of commercial and multi-family buildings by optimizing energy efficiency with air quality during the design stage, saving 100 trillion Btu per year. The FY 1997 goal is to work with ten new Rebuild America consortia to retrofit 400 million square feet of floor space. The FY 1998 request will support the expansion of this program from 140 to over 200 community partners and the implementation of a consensus-based strategy for reducing energy used in buildings through the establishment of commissioning techniques.

In FY 1997, the Energy Star retailer program will expand to a nationwide effort. In FY 1998, the program will continue to grow towards reaching 75 percent of the appliance market through retail chains. This one program alone could save \$17 million annually for consumers and businesses by 2000. The proposed increase in investment will support this expanded activity as well as the efforts of organizations making volume purchases of high efficiency appliances.

The FY 1998 request of \$192.7 million for State and Local Partnerships, an increase of \$41.3

million, will strengthen our cooperative efforts with States and localities to address a range of needs, opportunities, and benefits for all partners. These grant programs provide a supportive framework with sufficient flexibility to enable the states to address their own energy priorities as well as focus on national initiatives. Through these state and local partnerships, weatherization services are provided that reduce the energy bills of low-income households while ensuring their health and safety. The goal for FY 1997 is to weatherize 61,120 low income homes and save 1 trillion Btu (approximately \$3.5 to \$4.0 million in primary energy costs). With the increase in the FY 1998 request a total of 78,000 low-income families will have their homes weatherized, resulting in energy savings of 18 percent to 35 percent per home. In addition, this program will also support states' efforts to address local, state, regional and national energy issues and will leverage approximately \$148 million non-federal investment for energy-related projects.

\$20.6 million is requested in the FY 1998 budget for the Codes and Standards program, an \$8.5 million increase over the FY 1997 appropriation. This request would enable us potentially to realize over \$11 billion in costs savings through 2010 as a result of the work on appliance standards and State building codes. In 1996, the Department issued new regulations on improved procedures to be used in developing appliance standards. Additional resources are required to implement these new procedures and to complete additional standards rulemakings. At the level of the request, prioritization among candidate products will be needed to select those rulemakings to be undertaken in FY 1998. As indicated in the new procedures, we will work with interested parties to prioritize standards rulemakings in order to maximize benefits.

The request will allow the Building Codes program to provide grants to states to assist builders and code officials to update their building codes; assist states in implementing ASHRAE standards; and train code officials. In FY 1997 our goal is to provide assistance to ten states in updating or implementing residential building codes. The FY 1998 request level will allow us to provide assistance in updating residential buildings codes and training for state code officials for 15 states.

All of the program investments emphasize partnerships, consortia and collaboratives with the private sector to add expertise, build momentum, reach more customers faster, and leverage funding. These efforts will allow us to move forward to advance "whole buildings" and systems engineering approaches called Buildings for the 21st Century.

FEDERAL ENERGY MANAGEMENT PROGRAM

As the world's largest single energy consumer, the Federal government demonstrates leadership by delivering and deploying cost-effective technologies to reduce energy costs in Federal facilities. Through the Federal Energy Management Program (FEMP), Federal energy managers are given the tools necessary to make wise energy efficiency investment decisions to reduce government energy costs an additional \$1 billion annually by 2005. The FY 1998 request for FEMP is \$31.1 million, a \$11.3 million increase from FY 1997.

The Federal government will invest in energy efficiency practices to meet its goal of reduced energy costs and save a cumulative \$20 billion by 2015. FEMP, with its agency and private

sector partners, delivers these energy cost savings far in excess of its appropriated funding levels and has already achieved success in energy efficiency and cost savings. Federal energy consumption continued to fall through FY 1995, exceeding established goals and resulting in more than \$1.8 billion in annual energy savings, with cumulative savings of \$11.8 billion (1995 constant dollars) from the 1985 baseline. Five agencies -- the Departments of Agriculture, Commerce, Energy, Justice and Transportation -- have already achieved 20 percent improvements, with 7 more agencies exceeding 10 percent improvements. However, continued support at requested funding levels is critical for deploying and supporting the regional performance contracts that can fund cost-effective energy efficiency projects across all agencies and produce long-term cost savings for the government.

With the budget increase requested for FY 1998, FEMP will partner with Federal agencies to expand the use of energy project financing mechanisms, including private sector funding through Energy Savings Performance Contracts (ESPCs), utility incentive programs, and efficiency services in utility area-wide contracts. FEMP will complete awards for regional energy saver performance contracts that span the country and cover all agencies. These contracts will make it simpler, cheaper and faster for government agencies to save energy. In total, FEMP will, on behalf of Federal agencies, put in place contracts valued at over \$4.5 billion.

In FY 1998, FEMP will concentrate on putting in place utility financing mechanisms for energy efficiency through GSA area-wide utility contracts, and will develop five nation-wide technology specific energy saver performance contracts. In addition, FEMP plans to broadly promote 15 energy and money saving technologies used in the "Greening of the White House" to Federal energy and facilities managers. Technical assistance efforts will focus on identifying viable energy savings projects at agency sites nation-wide and connecting them to FEMP's private sector financing mechanisms.

Twenty-two Federal agencies, representing 95 percent of Federal purchasing power, have committed to using their buying power to reduce operating costs by buying the most energy efficient products and equipment. This will expand markets for the latest energy efficiency and water conservation products, and create new entry markets for advanced energy-saving technologies and products. To assist agencies in identifying high efficiency products, 27 product recommendations are expected to be completed in FY 1997, with 10 more planned for FY 1998. This will stimulate lower unit costs from volume buys.

POLICY AND MANAGEMENT

Our FY 1998 request also contains \$31.4 million for policy and management, an increase of \$5.2 million over the FY 1997 appropriation. This request supports program management at Headquarters and program implementation activities at the Golden Field Office and the Regional Support Offices. Also included are important initiatives in International Market Development and Information Outreach activities. The Headquarters management function enables the entire Office of Energy Efficiency and Renewable Energy to meet its mission more effectively through corporate planning, execution, evaluation and improved customer service.

CONCLUSION

Thank you again, Mr. Chairman, and members of the Committee for the opportunity to discuss our FY 1998 budget request. I hope you agree that the investments we plan in our programs, coupled with private-sector investments, will enable us to continue delivering significant contributions towards a more sustainable energy future.

Mr. REGULA. Thank you. I think it's unlikely that we'll have any more for 1998 than we have had in 1997, from reading the tea leaves. You mention that they are a management team. I would hope that one of your missions will be to take a critical look at every phase of what you do and see if through management you can get greater effectiveness and efficiencies.

INDUSTRIES OF THE FUTURE PROGRAM

For instance, the Industries of the Future program, you focus on several key industrial areas. I support that approach. I wonder why we can't take the same approach on the building and transportation areas where we actually focus the dollars. I think it's so easy in Government to get sort of spread out all over the landscape and not do anything as well as it should be. Also I think we should avoid funding anything that's beyond the development stage. The marketplace has to drive implementation of research, the product of research. The Government role is to develop the technology, but let the marketplace take over from that point on. I would hope that would be the thrust of whatever role you have in the sustainable future as well as those who continue in your department down there.

Ms. ERVIN. I am glad you posed this question and statement. The Industries of the Future program is in fact similar to what we have in place for the transportation programs under the Partnership for a New Generation Vehicle. It is quite a change from previous years where we had so many, hundreds of different R&D projects. These are very carefully tailored to technology roadmaps that are developed in partnership with key industries. So we have the Industries of the Future for that sector. We have Partnership for a New Generation Vehicle for the transportation sector. I am pleased to say that we have just launched a similar effort in the building sector just six months ago. We call it Buildings for the 21st Century. It is going to go a long way in doing the same kind of streamlining that you have found successful in these other programs.

Mr. REGULA. What happens is that when you have a wide variety, each gets constituents. Then it becomes virtually impossible to consolidate.

Ms. ERVIN. I am very well aware of that.

Mr. REGULA. I am sure you are. So this is a case of an ounce of prevention.

Mr. Yates?

Mr. YATES. Sorry to lose you here. You have done a very good job.

Ms. ERVIN. Thank you, Mr. Yates.

ELECTRIC VEHICLES

Mr. YATES. We appreciate everything you have done. How close are we to getting electric automobiles?

Ms. ERVIN. Tom?

Mr. GROSS. Well, one way to look at it is——

Mr. YATES. Well, I keep seeing these articles coming out in the newspapers. General Motors comes out with one.

Mr. GROSS. One can conclude that we're so close that we're there. In terms of the introduction of certain vehicles, particularly in Cali-

ifornia and Arizona in the U.S., there is the ED-1 from General Motors. Later this year, we expect the S-10 pick-up truck, electric version to be available, both other major U.S. auto producers, as well as Toyota and Honda have announced that they will be introducing electric vehicles into that market as well. So we'll have a variety of models issued.

In terms of building that market successfully over the next few years, can we reduce the costs associated with those vehicles. Of course as you know, we're working on battery technology to do just that.

Mr. YATES. I wonder how close you are to having a liveable battery?

Mr. GROSS. Well, the nickel metal hydride battery, which is one of the results of the research that we have supported, will be the type of technology that's introduced in some of the vehicles that are coming out. We expect within the next couple years to move to the advanced batteries, which we would help support increasing them.

Mr. YATES. What about the fuel cell?

Mr. GROSS. The fuel cell is a little bit longer in terms of introducing for consumer use. However, there have been a couple of very exciting recent announcements. Chrysler a couple of months ago at the Detroit Auto Show announced the internally funded program that's picking up on the fuel processor technology that the Department of Energy started supporting about five years ago. Chrysler became interested a couple years ago and is now going to build a concept vehicle using that technology, but also indicating that there is going to have to be significant enabling technology, component development work, cost reduction work still needed in order to actually come up with prototype vehicles and to turn that into direction.

They are saying it's shaved 10 years off of the introduction time to maybe from 2020 to 2010. So we have still got a lot of work to do.

Mr. YATES. I take it—I don't hear much talk about a solar cell. Is there one?

Mr. GROSS. There are vehicles in the program that use solar technology, but that's a bit further out with respect to the requirements for conversion efficiency of those cells.

Mr. YATES. What is your guess as to when the big three are going to come out with that technology?

Mr. GROSS. Solar vehicles?

Mr. YATES. No, no. I mean electric vehicles.

Mr. GROSS. Well, the process has started in the niche markets. So they are coming out right now.

Mr. YATES. Thirty five thousand dollars?

Mr. GROSS. For the average consumer, I think we're still looking at five to six years down the road, at least.

Mr. YATES. Is the industrial sector using them?

Mr. GROSS. We have in alternative fuels, including electric vehicles, increasing interest as well for example in buses in fleet units at airports, in part of our Clean Cities Program, for example. We are focusing on shuttle buses at airports, vans as a more earlier more cost effective way to introduce electric vehicles, as well as other alternative fuels such as natural gas.

ENERGY STAR PROGRAM

Mr. YATES. Can you elaborate? Let's turn to another program. DOE's Energy Star program, volume purchases of high efficiency appliances. DOE and the Housing Authority are cooperating in this respect. How is it going?

Ms. ERVIN. It is going very well, although we have a lot more work to do. The Energy Star program has two different components. One is to promote consumer awareness of energy efficient appliances in retail stores across the country. So about a year ago, after doing some detailed site research in the Washington, D.C. area, we entered into a partnership with Circuit City and Montgomery Ward to begin with. We are now using the Energy Star labeling program in 750 stores across the country. We expect to expand to about 1,400 by the end of the year. That's a very important accomplishment and one that our newly created advisory board for the appliance standards program whole-heartedly endorses as a supplement to the program.

In terms of the partnership with the housing authorities, in March of this year, public housing authorities in several areas are going to receive about 70,000 high efficiency refrigerators for public housing apartments. In the New York Power Authority alone, we are looking at 20,000 refrigerators and over the life of those products, that will cut the housing utility bills by about \$30 million. So it's a very significant effort.

It is good for the manufacturers too, because when we are able to use those volume purchases, it allows them to have confidence in continuing to produce a product like that and to reduce the cost.

Mr. REGULA. Mr. Moran?

Mr. MORAN. Thank you, Mr. Chairman. I am delighted, Ms. Ervin, that you are going to be put in charge of sustainable development for the White House. I can't even talk about that?

Ms. ERVIN. Well, I haven't been promoted that high.

Mr. MORAN. Okay. You're going to be playing a major role.

Ms. ERVIN. I'm going to help contribute, absolutely.

INTEGRATED ENVIRONMENTAL & ENERGY POLICY

Mr. MORAN. Now I want to get your response on the record to the idea of putting together, particularly from your vantage point an organic energy efficiency/environmental protection/sustainable development policy, an integrated policy that would then be carried out through on an integrated legislative package. Is that possible? Do you think it's a good idea?

Ms. ERVIN. It is an appealing, creative, innovative idea.

Mr. MORAN. It doesn't stand a chance.

Ms. ERVIN. I think it is a goal that we should strive for. I think we should also not let it serve as an obstacle to some important incremental steps in that direction. When we spoke recently about an organic law, we talked about some work that I did at the Conservation Foundation a number of years ago, where that organization really did some ground-breaking work in creating some model legislation like that.

I think it is very important. I think it is very difficult to do. But that doesn't mean that we shouldn't strive for it. Now in the in-

terim, the Administration is actively working to better integrate our energy and environmental policies. As you mentioned, with Secretary Peña, joining us from the Department of Transportation, we have an opportunity to link our programs and policies even more closely with that agency. A couple of examples with the Environmental Protection Agency, our Energy Star partnership is one. But our collaboration on utility restructuring was another. Our collaborative work on diesel research that Tom is responsible for is another area. The discussions that we are having on the proposed rules for particulates, those are another.

From what I have heard and seen, we have never seen such a time of this kind of collaboration between agencies. I hope that will continue.

FOSSIL FUELS

Mr. MORAN. The cost of over-dependence upon fossil fuels is not a national problem, it's an international problem. Given your expected new responsibility, are you going to be able to work with Commerce and State Department to deal with the fossil fuel emissions of other countries, particularly using our more advanced technology to address the problem so that all the good things we do are no more than a drop in the bucket toward the goal?

Ms. ERVIN. Well, I certainly do hope to be involved in those kinds of discussions. But I do want to point out that the Department of Energy in our programs is also actively working in those areas. Denise Swink, my Deputy Assistant Secretary for the industrial programs, was just in China a week or so ago. She told me when she came back that we have some Chinese teams visiting in the country in early May. She also informed me that the Chinese policy is giving equal weight to energy efficiency and new supply. That is of profound importance to us all.

FEDERAL FLEET GAS EMISSIONS

Mr. MORAN. That's true. It is. It is wonderful. The last thing, when we were trying to deal with what I considered to be a stupid, inefficient, illogical policy on emissions inspections that the EPA issued, where you have to buy up these public buildings and force your constituents to spend all day Saturday bouncing back and forth from the emissions station to the auto body shop and so on, I was told that the largest fleet of vehicles, and this is particularly the case in Northern Virginia, it may be in other places, is the Federal fleet. They didn't even have to comply with this kind of stuff in terms of emissions.

Now that may not be true. Maybe that's just a bizarre rumor. But it may be a case of do as I say, not as I do. Can you assure me that the Federal fleet has to be at least as conscientious as our private citizens in terms of emissions?

Ms. ERVIN. It is my understanding that we are not required per se to meet those standards. But in practice, we do.

Mr. MORAN. I was told you are not required and that in practice you don't. But I would like to see some—

Ms. ERVIN. I would be happy to follow up.

[The information follows:]

EMISSION STANDARDS FOR FEDERAL FLEET VEHICLES

Every Federal vehicle procured, whether conventionally or alternatively fueled, is certified to the Environmental Protection Agency's emissions standards applicable to the vehicle at the time of its production. Although Federal fleet vehicles are not required to submit to non-Federal vehicle emissions testing programs in the localities where they are operated, the Department has had hundreds of emissions tests performed on Federal fleet vehicles, both conventionally and alternatively fueled, as part of the Alternative Motor Fuels Act emissions testing program. Data from these tests is available at the Department's Alternative Fuels Data Center, operated by the National Renewable Energy Laboratory in Golden, Colorado. The relatively short length of time vehicles remain in Federal fleets, and the exceptionally high level of service these vehicles receive, helps ensure that Federal vehicles remain in compliance with Federal emission standards. In the event that a vehicle is found not to be in compliance, the vehicle is taken out of service immediately and sent to a manufacturer approved repair facility to correct the problem.

Mr. MORAN. That would really be helpful. But it sure is tough to tell people to go through all this silly rigmarole when the Federal Government doesn't even do it itself. So that would be helpful if you would check into that.

Thank you, Mr. Chairman.

Mr. REGULA. I might tell the committee members, it's contemplated there will be a vote about 12:15, and that will be the only vote for the day. So that will be our target or a little earlier.

Mr. Skaggs and Mr. Dicks, I appreciate your getting here. You can each have 10 minutes because you missed the first round. So, Mr. Skaggs, it's yours.

Mr. SKAGGS. Thank you, Mr. Chairman. I want to thank you for your service at the Department, and look forward to continuing to follow your career in a new venue.

These are moments in life when you are entitled to sort of do your valedictory or your whatever. Not so much what you may be proudest of, but what did you get done in the last three years that makes the most difference and what didn't get done that we ought to pay the most attention to?

Ms. ERVIN. Several things are of particular—

Mr. SKAGGS. No, you can only do one each.

Ms. ERVIN. Oh, no. I would want to highlight two, okay, two accomplishments, give me that. One really is the general policy direction that we have made considerable headway in boosting the understanding and the public awareness that energy is right in the bullseye of environmental policy. For many many years, the public has not made the connection between energy and environment. Ironical in that energy is the largest source of pollution. But we have made great strides I think in improving that link. That's important not simply for the awareness of course, but for the opportunity that it presents us to use efficiency in renewable energy technologies to reduce pollution, improve public health, and minimize environmental compliance costs. That's the opportunity for us all.

Second of all, one of the things that I am most proud of is the various financing efforts that we have put under way. I have been a long-time believer that there is obviously a critical role that the Federal Government must play in research and development, in making those contributions and in providing leadership. This role cannot be sacrificed. We are on dangerous ground here today.

But I also believe that in the long run, to be truly successful, we need to make sure that the private market has incentives to invest

in these technologies. There are a host of obstacles to the private market doing that today, because energy prices are so relatively cheap.

We strive to overcome those barriers through these various financing partnerships with the insurance industry, the energy service companies and so forth. So in the long run, that will generate much more activity in the efficiency renewable programs than previously. I am quite proud of that.

In terms of unfinished business, we could just do a lot more in all of the areas. Also, the Buildings Program, our Buildings for the 21st Century initiative is just starting, and has a lot ahead of it, but I think it will make a profound difference in probably the sector that has the most effect on our daily lives. We spend most of our lives in homes and offices. Many of them are inadequate and could be a lot better. So I am excited about that.

Mr. SKAGGS. The chairman gives us a heads up about the unlikelihood of substantial increases in funding within your jurisdiction. I am just wondering if you would advise us to cut off the legs of several horses or put one horse out of its misery.

Mr. MORAN. You don't want to elaborate on that or she knows what you are referring to.

Mr. SKAGGS. I think so.

Ms. ERVIN. I have not given up hope that in the wisdom of the allocation committee, your subcommittee will receive a boost of funds to prevent choices between legs and horses.

FEDERAL INVESTMENT IN TECHNOLOGY R&D PROGRAMS

Mr. SKAGGS. You mentioned the important market-leading function of some of these technology R&D programs. Is the investment that we're making with the new vehicle effort one of those? What would happen if we weren't doing that? What would the private sector be doing on its own without Federal money?

Ms. ERVIN. Well, in the transportation sector, we have the situation of record levels of oil imports with a very high price tag associated with that, \$50 or \$60 billion a year now being exported out of this country to pay for imported oil. That is associated with some considerable security risks as well. Those numbers are getting even more depressing as we look at the projections. So clearly, the work that we are doing together in the Partnership for a New Generation Vehicle and the alternative fuels is fundamental to stabilizing and turning that around.

We know that the private sector is not doing that on its own. It is only through a partnership between the public and private sector that we can even hope to reduce our reliance on imported fuel.

Mr. SKAGGS. In other words, the big three would not be pushing this technology without your investment?

Ms. ERVIN. That is what they tell us. I believe that is absolutely true, based on considerable part of the price of gasoline. It does not provide an economic incentive for long-term risky investments like this.

Tom Gross was just reminding me that in Ford's roll-out last month of the P2000 vehicle which refers to the weight of the vehicle, 2,000 pounds using light-weight materials. Ford has directly and consistently said this would not have happened without the

partnership with the Federal Government. It's just one more example of the kinds of technologies, in this case hybrid technologies coupled with light-weight next generation materials.

MARKET FORCES

Mr. SKAGGS. Just one final question. Your testimony and answers reference market forces. Clearly if we were able to really have the market account for a lot of the externalities that are involved, particularly in the energy and transportation sectors, we would have a much different set of market forces. Is anything being done either within the Department or through grants that you may be making to really perfect our market mechanisms so that command strategies, regulatory strategies can be replaced really by better-informed market decisions?

Ms. ERVIN. So many of our programs are targeted to exactly that, providing better information, making it more accessible to people, demonstrating to consumers and businesses and industries that an advanced technology works, validating its performance.

Mr. SKAGGS. Forgive me for interrupting, but I'm taking the conceptual leap of really costing out externalities and forcing those costs into the price of things.

Ms. ERVIN. We are doing some work in terms of costing the externalities, also work on the life cycle analysis of our energy use, which is very important. Sometimes we only look at the energy that's being used at the end use of the site, when in fact we should be considering the whole life cycle effects of energy, from its very production to manufacture, to transportation and eventual disposal. So those are appropriate roles that we are undertaking now.

Mr. SKAGGS. Thank you.

Ms. ERVIN. If you are asking are we proposing a gasoline price increase, I would say no.

Mr. REGULA. Mr. Dicks?

Mr. DICKS. Madam Secretary, we want to welcome you here today. I want to complement you on the job that you have done. We look forward to working with you on sustainable development.

From our part of the world out in the northwest, Battelle Northwest has been at the lead with the Boeing Company, in fact, in making application of the Partnership for a New Generation of Vehicles. I think you have got some very interesting technology and some ideas out there about materials and the manufacture of materials, a lot of things learned in the airplane business that hopefully can be relevant here as well. So I just want to mention that.

FEDERAL ENERGY MANAGEMENT PROGRAM

You and I had a conversation the other day about another program, the Federal Energy Management Program. I have been one of those who feels that as was suggested, the Federal Government should be leading. That we need to work with each of the departments in trying to do more in terms of conservation within their buildings, structures, facilities, operations. In our discussion, you mentioned the fact that sometimes it's hard to get people to understand why we have to have this \$31 million of funding as seed money in your department in order to get these other agencies to do this work.

I mean I thought it might be appropriate for you to give us an example of how this thing works so that the committee might better understand why you believe that having this seed money here is essential to getting the work done and involving the private sector in actually doing the energy conservation work, and a whole industry is sprung up that does this work and invests their own money to do it.

Ms. ERVIN. We are asking for \$31.1 million in the Fiscal Year 1998 budget for the Federal Energy Management Program, which as you know is designated as the lead program in the Federal Government to implement the EPACT requirements for the Federal Government.

We not only have a leadership role, we have an opportunity to reduce the national deficit through these Federal Energy Management programs. It is not a trivial exercise to locate energy waste in buildings and to find ways to reduce it. Thirty million is a very modest amount of money, in fact, to do that.

Yes, I will give you an example of what I have come to appreciate in this job. We are making a radical change in the way that we do business with the Federal Energy Management Program. In the old days, all the Federal agencies would rely on in-house expertise to identify potentials for energy savings. Sometimes energy efficiency is not at the top of the list of building managers responsibilities. So that's one of the obstacles. Plus, having the expertise. Plus having the funds to actually pay for the improvements is a problem.

About 10 years ago, we started seeing the emergence of what we call energy service performance contracts. Those are tools that private companies use to come in, do auditing or survey of buildings, and to pay up front for the cost of the improvements. Sometimes they can even go further and provide for operation and maintenance of those energy saving and equipment technologies. So that's a real boon. But in the last 10 years, we have seen a total of 40 contracts put in place, 40 alone. That is because these were new contract measures in a very difficult procurement system for the Federal Government. It took a lot of expertise to know how to design them, how to negotiate them. The average time is one to three years to put a energy savings performance contract in place.

What I am very pleased about, and this is one of the finance initiatives that I was discussing, is that after about two years of effort, we now have a master energy savings performance contract in place. We will shortly in the next couple of weeks, we will be announcing one that is 15 times greater than what we have achieved in the last 10 years. That's for the western region alone. Agencies will be able to buy projects directly off of a central procurement tool in three to five months rather than one to three years.

In total, the new energy savings performance contract mechanism is going to be generating \$5 billion of private sector financing for improvements in the Federal system by the year 2005. That will be in place. So I am very pleased. It's a radical change in the way that we do business.

Mr. DICKS. And how much will that lead to in terms of savings, energy savings for the agencies themselves? This actually pays for itself, as I understand.

Ms. ERVIN. Oh absolutely. We are estimating that with these kind of mechanisms in place, we'll be able to pare another billion dollars off the energy bill every year by the year 2004.

We spend a total of about \$4 billion a year in our Federal sector energy bill. So we will be reducing that by another billion we hope, beginning in the year—

Mr. DICKS. Four billion on an annual basis?

Ms. ERVIN. On an annual basis.

Mr. DICKS. And so by doing these, with these companies doing this, we can get that down to \$3 billion?

Ms. ERVIN. That's right. Now after all of these long words, let me hasten to say though that we still need expertise in agencies and funding levels to keep strong vibrant efficiency programs in place. These energy savings performance contracts can not be a wholesale substitute for funds that we need in other agencies. That is a struggle for several of them. If you look at the Department of Defense, the General Services Administration, and the Department of Energy, we used to have \$300 million in place for these energy programs. That has been reduced to \$30 million. This is quite a considerable challenge. We need to support the remaining programs.

Mr. DICKS. You and I talked about the fact that they cut some of this money out of the defense budget. Did we find out whether it is in the defense budget or is it in the military construction budget?

Ms. ERVIN. This is John Archibald, who is the acting director for the Federal Energy Management Program.

Mr. ARCHIBALD. There used to be funding in a centralized Department of Defense program. That money has now been identified in the agency programs. However, it's no longer fenced as energy retrofit funding only. So there is no practical mechanism to constrain it to be expended just for energy retrofits. In fact, the Department of Defense energy manager tried to get an accounting of that last year and was unable to get an accurate account of how much was actually expended for energy retrofit projects.

Mr. DICKS. So before, they had \$300 million, and then that was taken out of the budget?

Mr. ARCHIBALD. It was taken out of the Department of Defense centralized budget.

Mr. DICKS. Who is it, the energy manager at the Department of Defense?

Mr. ARCHIBALD. The gentleman that has the central responsibility is Mr. Millard Carr. He reports to I can't remember the Assistant Secretary's name right now.

Mr. DICKS. Well if you would get me that, I would appreciate it, and we'll take a look at that.

Ms. ERVIN. Of course.

[The information follows:]

THE ENERGY MANAGEMENT PROGRAM AT THE DEPARTMENT OF DEFENSE

Mr. Millard E. Carr, P.E., is the Director for Energy and Engineering responsible for administration of the Department of Defense's energy resource management program. He is the DOD member of the Interagency Energy Task Force. He works for Mr. John B. Goodman, the Deputy Under Secretary for Defense for Industrial Affairs and Installations who is the DOD member of the Interagency Committee on Energy Policy. Funding decisions for the energy management program are made during the formal budget development process within the Department of Defense in consideration of the priority of all requirements and budget availability.

Further clarification is provided on the status of funding within the Department of Defense for energy management at DOD facilities.

Energy Management Improvement Program (Operations and Maintenance Fund)			Energy Conservation Investment Program Investment Program (Military Construction Fund)	
	Requested	Budgeted	Requested	Budgeted
FY 95	\$171.2 million Central Account. ¹	\$171.2 million Central Account	\$50 million Central Account	\$50million Central Account
FY 96	\$235 million Central Account	\$35 million ² Central Account \$200 million to Armed Services, <u>not</u> fenced for energy only.	\$50 million Central Account.	\$40 million Central Account
FY 97	\$117 million Central account \$110 million to Armed Services	\$15million ³ Central Account \$212 million to Armed Services, <u>not</u> fenced for energy only.	\$47 million Central Account.	\$47 million Central Account.
FY 98	\$0 million Central Account \$70 million in Services requests	To be determined	\$25 million Central Account	To be determined

¹Central Account is applied to entire Department of Defense, as opposed to funding for one or more Armed Services. Funding for the Armed Services does not cover all the functions of the Department of Defense.

²As the result of an internal reprogramming requirement, \$29 million of the \$35 million appropriated was obligated for energy conservation projects and studies.

³ FY97 \$15 million in central account was subsequently reprogrammed for other requirements with DOD.

Mr. DICKS. But getting back to this. The point is, that \$31 million that you get in this bill is kind of the catalytic fund, right? In order to get these other agencies up and running and able to do the best job they can on the energy savings side. Isn't that correct?

Ms. ERVIN. It's a perfect case of you have got to spend a little to make a little. In this case, we'll be saving a lot of money with this small investment in the Federal Energy Management Program.

Mr. DICKS. So you strongly support the increase in the budget, I understand?

Ms. ERVIN. Absolutely.

Mr. DICKS. Thank you, Mr. Chairman.

Mr. REGULA. Thank you. Mr. Skaggs, do you have any additional questions you want to ask? You have got a little time here.

Mr. SKAGGS. I have got to run. Thank you, Mr. Chairman.

BUILDINGS FOR THE 21ST CENTURY

Mr. REGULA. Okay. Just a couple. I have gotten some communications from the building industry, home building, expressing concern about this proposal for "Buildings for the 21st Century." Have they been in touch with your department to articulate their concerns?

Ms. ERVIN. The National Home Builders Research Center has been a participant in the last two workshops that we have had for Buildings for the 21st. I have not had an extended conversation with NHB proper, and would be happy to do so. They have not expressed those concerns to me.

WEATHERIZATION ASSISTANCE

Mr. REGULA. That's interesting. Weatherization Assistance has a large proposed increase. How much funding is devoted to weatherization in the low income home energy assistance program funds through HHS? It seems like there are two different programs going here.

Ms. ERVIN. They are two.

Mr. REGULA. Why don't we consolidate it? That's not efficient.

Ms. ERVIN. They are two separate and distinct programs. I don't know what the Administration's request for LIHEAP is in Fiscal Year 1998. But it's generally been in the billions.

Mr. REGULA. Tell me why there's two different missions here, or are there?

Ms. ERVIN. LIHEAP is a welfare assistance program.

Mr. REGULA. All right. I understand that.

Ms. ERVIN. That provides emergency and fuel assistance to low income households. So for example, if there is a cold snap and low income residents are without power, they are given emergency fuel.

Mr. REGULA. Okay. So at HHS, it's more than just the weatherization of the building, it's the money for paying the bills.

Ms. ERVIN. Only up to 15 percent of the LIHEAP money, I believe, is allowed for weatherization. The vast majority of the money is used to provide money to households to pay for their energy bills.

Now the weatherization program is an energy program to obviously retrofit and weatherize low income homes.

Mr. REGULA. I understand that, but staff advises me that that 15 percent is probably more money than you have in your whole program for weatherization. So you get two different programs. I don't quite understand why we don't do it with one agency.

Ms. ERVIN. The weatherization program relies on generally community action programs across the country.

Mr. REGULA. Yes, CACs, right.

Ms. ERVIN. That kind of infrastructure. So you will find that the LIHEAP program works very closely with that same infrastructure. They piggyback.

Mr. REGULA. Right.

Ms. ERVIN. Off of each other. And the total amount of funding, if LIHEAP were to use up to the full 15 percent, does start approximating what we have in weatherization. But that does not negate or in any way undermine the need for the low income weatherization program in the Department of Energy. This program is weatherizing 78,000 homes.

Mr. REGULA. I understand, but why can't the LIHEAP people do the 78,000 homes and reduce the administrative overhead?

Ms. ERVIN. I have asked that question with the various weatherization leaders and providers. They advise me that the expertise, the technical assistance and expertise that we have in the Department of Energy by virtue of our mission does not exist at HHS.

Mr. REGULA. Well then we should take it out of LIHEAP and put it in your agency.

Ms. ERVIN. Does that mean our funding allocation goes up?

Mr. REGULA. I beg your pardon?

Ms. ERVIN. I won't touch that one.

Mr. REGULA. Let you do the expertise and let them handle the money. In other words, you are in a sense a research agency to develop better technologies. Would it not make sense as a management technique, to let your agency develop the techniques, new insulating materials, and so on, share that with LIHEAP, but let the LIHEAP program be used to put these technologies on the ground.

Ms. ERVIN. Once again, we do work closely with the same provider network. But I think there are probably more synergies and efficiencies with this energy weatherization program being in our buildings program than vice versa.

Remember, a number of the technologies that we develop in our core buildings program find their way into the weatherization program and occasionally some of the advances that we find on the ground in the weatherization program help inform our buildings program.

Mr. REGULA. So you get into school buildings?

Ms. ERVIN. We do.

Mr. REGULA. Hospitals, which LIHEAP would not. Is that correct?

Ms. ERVIN. In other programs, yes. Not in the low income weatherization. That is targeted only to residences. Not just low income, but is especially targeted to elderly, sick and disabled within the low income population.

Mr. REGULA. How is the consolidated State grant program working? Does this differ from the weatherization program?

Ms. ERVIN. The State energy program is wholly distinct from the weatherization program. Often in the vast majority of cases, different agencies run their programs for one thing. The HHS affiliated program and cap agencies are largely responsible for weatherization. The State energy offices are responsible for the other programs.

I might mention that one of the important challenges for the State energy offices in the next couple of years will be to help States and communities include efficiency and renewable technologies in the State implementation plans for Clean Air Act requirements. This is a new and expanding role that they have not had in the past. They are also planning a stronger role as we undergo utility restructuring.

NATURAL GAS VEHICLE RESEARCH

Mr. REGULA. Last year Congress directed the department to work with industry to develop a five-year plan for conducting research for natural gas vehicles. What is the status of the plan? Has industry been involved in the planning process?

Mr. GROSS. Mr. Chairman, there was a meeting, a conference that was hosted in January at the West Virginia University to assemble a number of interested parties in natural gas vehicles to put together the plan, a draft and plan. That draft has been completed. It is about to go into internal review within the Administration. I would hope that within a month or so it will be ready to go forward from the Administration to Congress.

Mr. REGULA. We added \$2.3 million to the Fiscal Year 1997 budget request for natural gas vehicle research. One million for systems optimization, \$300,000 for engine optimization, and \$1 million for NO_x emissions research. Are you using these funds? And in what way?

Mr. GROSS. We are indeed using those funds. It's consistent with the plan that was just mentioned. We have both in the automotive part of the program as well as the vehicles part of the program, natural gas related activities consistent with the directions of the Congress.

Mr. REGULA. Does the Fiscal Year 1998 budget assume or what does it assume with respect to continuing the research started by the \$2.3 million? Are you requesting money to keep this going?

Mr. GROSS. In part we'll be able to continue what is being started. The amounts are in the budget for Fiscal Year 1998, are a bit less than what the plan has indicated, what the natural gas industry is interested in, so we'll either have to slow up a portion of it or make some selections going back to either cut the legs off a couple horses or kill one.

Mr. REGULA. Now if you could give us a little more detail for the record, but let me ask you, what do you see as the future in natural gas vehicles? We do have a great deal of natural gas available. It's obviously non-polluting, pretty much. How do you see this emerging over the next 10 years? Will we be buying automobiles and driving to Ohio with a natural gas vehicle?

Mr. GROSS. Well we have got a number of components of the program which if successful, would have that result. In the technology

arena, we do have work such as a continuing effort to increase the range of natural gas vehicles by adsorbent technology, for example.

A major focus at this point in time is looking at where the use of natural gas is most cost effective, medium trucks, delivery trucks for example, fleets.

Mr. REGULA. And they go into where the problem exists.

Mr. GROSS. Within the Clean Cities program, we are focusing our efforts on natural gas vehicles on those kinds of fleets where there is a standard route each day, they go back to the same place every night. The owners look much more closely at the life cycle costs associated with different fuels. Natural gas is more attractive in those uses.

So we believe that that's an excellent opportunity. Then you will see in the 1998 budget, the increased emphasis on the Clean Cities Corridors Program, so we can connect for some selected corridors, these nodes where we've got the fleets operating and the refueling stations can be supported properly together. We are working on one in the northeast with a high priority as well as in California, Nevada, and the I-25 corridor in Colorado. So I don't know that we're going to be able to get to Ohio as first order. But if those are successful, then—

Mr. REGULA. You know, I was in British Columbia, it's been five years ago. I was in a small town. Here they had a fueling station. I think all the taxis, obviously they have done something with tax incentives or whatever to get people in British Columbia to use NGVs. I don't know why they are so far ahead of us, but it would appear that way to me just having been in a few small towns where I found fueling facilities.

Do you know anything what stimulated it up there?

Mr. GROSS. The relative economics is different. As has been discussed, the signals that our consumers particularly like vehicles. The alternative fuels are still at a significant disadvantage.

Mr. REGULA. Does Canada or British Columbia give the consumer a tax incentive to go to a vehicle because they have an abundant supply of natural gas?

Mr. GROSS. The combination of the costs of gasoline being higher. I don't know the details on any incentives, we can provide that for the record, that are available in Canada for the alternative fuels. But we would be happy to provide that.

[The information follows:]

CANADIAN INCENTIVES FOR NATURAL GAS VEHICLE USE

Canada, through March 31, 1997, offered "market development incentive payments" for the purchase of (C\$1,000), or conversion to (C\$500), a natural gas vehicle (NGV), and the purchase of a home compressor (C\$500). The Canadian government also offered funding up to 25 percent of the capital cost of a natural gas vehicle refueling station, not to exceed C\$50,000. It is not yet clear what impact these incentives had on the sale of NGVs in Canada.

Legislation passed in 1995 requires the Canadian government to steadily increase its purchase of alternative fuel vehicles (AFVs) beginning in the fiscal year starting on April 1, 1997. In 1997, the percentage of new vehicles purchased must be composed of 50 percent AFVs, with this percentage rising to 60 percent in 1998 and 75 percent in 1999 and all subsequent years.

Natural gas as a transportation fuel is exempt from Canadian federal excise taxes. A number of the Canadian provinces, including British Columbia, Alberta, Saskatchewan, Ontario and Quebec, also exempt natural gas from provincial excise taxes.

Mr. REGULA. Do you follow up on your programs like weatherization to see if they are cost effective? Do you have some type of evaluation of these various conservation programs?

Ms. ERVIN. We have rigorous evaluation methods in place. For weatherization, there's a great example. The Oak Ridge Laboratory has just completed an exhaustive study of the weatherization program, has verified its savings, and in fact has documented that we have doubled the amount of energy savings per house over the last five to six years. On average, five years ago, the weatherization crew would reduce energy consumption by about 16 percent. Now it's up to 33 percent. That is well documented.

Overall for other programs, we have invested a tremendous amount of effort into developing what we call a quality metrics system for verifying our numbers and our market assumptions for the technologies, for the dollar value associated with it, the emission reductions associated with it. In the last year and a half, we actually hired Arthur D. Little to do an extensive peer review of those metrics that we use. So we have invested a lot of time and effort in that, and believe that our estimates are very credible.

ARTHUR D. LITTLE REVIEW

Mr. REGULA. A story in the Houston Chronicle was just pointed out to me. You probably saw this article challenging the efficacy of the Department's estimated savings. "In most cases, especially in the early years, Little's analysis found that the energy savings would be lower than predicted by the Energy Department." Do you have any comment on that?

Ms. ERVIN. We have a number of comments on that. I am going to let Joe Romm here elaborate. But let me preface it by saying that I thought the criticisms of the process were quite ironic and unfair given that we did not need to work with a consultant to do a rigorous peer review of our programs. The intention of it was to give us good healthy criticism so that we can make adjustments where need be.

Mr. REGULA. It appears that they did that.

Ms. ERVIN. In many cases, our estimates were too low and they were adjusted upwards. But Joe?

Mr. ROMM. Yes. This is one of those things that comes up at every hearing because of one outside guy who I'm sure sends you a lot of paper. He sends us a lot of paper. We asked Arthur D. Little to review our numbers. We were very careful when we sent up numbers, to use the most conservative numbers because we knew that we were in the midst of figuring out what was the most accurate estimates of our energy and environmental benefits. This outside person got a hold of this document and spent a lot of time mischaracterizing it to the press, to be very blunt, as DOE's numbers are wrong, rather than DOE is engaged in a process to develop the best numbers possible.

I will say that the vice president of Arthur D. Little submitted to us a letter saying that DOE should be praised for undergoing the process to develop the most credible numbers possible. The point is, we have been trying to provide you the best estimates possible. There has never been an effort to mislead. This has all been very public and above board.

Mr. REGULA. Did that letter get in a press story?

Mr. ROMM. The letter from——

Mr. REGULA. Praising you.

Mr. ROMM. One of our trade papers ran a story in which they presented this case without even bothering to talk to us. I had a long talk with the editor. After half an hour, he said gee, you really do have a story. I am going to give you 600 words to present your side. In that 600 word response, we did in fact.

Mr. REGULA. I can have some sympathy for that kind of a problem.

Ms. ERVIN. As is often the case, words of apology or words of praise for Federal Government do not often occur.

Mr. REGULA. Page 59, I know. I always say to my staff we can't gather up the papers once they are out there, even though the story may have not been totally accurate. We'll have questions for the record. Thank you for coming. Best wishes in your new assignment.

Ms. ERVIN. Oh, thank you very much.

[The following questions and answers were submitted for the record:]

ADDITIONAL COMMITTEE QUESTIONS

Overview Of The Budget Request

Question: The budget request for energy conservation is \$707,700,000, an increase of \$137,938,000 above the fiscal year 1997 level. That's a 24% increase in funding. It is unlikely that the subcommittee will receive an allocation that will allow for increases in your budget. If you were held to the fiscal year 1997 level, how would you readjust your priorities?

Answer: Our budget request represents difficult decisions made by the Office of Energy Efficiency and Renewable Energy, the Department's top leadership, and the Administration. We have selected an energy program portfolio that represents the results of extensive evaluation of program costs and public benefits. The Administration has accepted the recommendation of the President's Council of Advisors on Science and Technology that a "substantial and sustained increase in Federal expenditures in energy R&D" is required to increase economic productivity, protect the environment, and ensure national security, as well as to sustain U.S. technological leadership in critical international energy markets. Given the careful and deliberate nature of our funding request decisions, we have no readjusted priorities to offer at this time.

The Department of Energy's Interior appropriations provide the primary support for the national research and development effort to address the rise in oil imports and the environmental impacts of energy production and use. Our programs yield the additional benefits of increased energy productivity, pollution prevention, and cost savings to consumers and businesses. They have been highly cost-effective for the American taxpayer. Limiting energy conservation funding to FY 1997 levels—which are significantly lower than FY 1995 levels—will be to the detriment of pursuing these benefits and undercuts important investments in the nation's energy, environmental and economic future.

Question: You justify your increases based on studies which show the need for greater investments in government research and development and on the need to address the growing dependence on imported oil. Why do you believe that argues for huge increases in the energy conservation budget but not in the fossil energy budget?

Answer: Federal support for energy R&D is needed to protect the public interest in maximizing energy productivity, preventing pollution, and keeping America secure. For these reasons, the President's Council of Advisors on Science and Technology has recommended a "substantial and sustained increase in Federal expenditures in energy R&D." To address this need, the Department has had to make tough budget decisions in arriving at a budget request that to the Department and the Administration represents a balanced energy R&D portfolio. We consider funding for all the programs in this portfolio to be highly important to achievement of the Department's mission.

The Department's Energy Conservation programs are lowering the nation's consumption of oil and other fossil fuels. By reducing oil consumption, our programs are counteracting the demand for oil imports from unstable regions of the world and are improving our balance of trade. For

example, our key technological support for the Administration's Partnership for a New Generation of Vehicles will directly contribute to lowering U.S. dependence on oil for the transportation sector—which today depends almost entirely on oil as an energy source.

The Administration is also committed to reducing the nation's greenhouse gas emissions in response to the international concern of scientists that energy production and use is changing global climate and affecting human health. The public benefits of energy conservation programs represent a high return on investment. In the area of buildings efficiency R&D, for example, the Department has invested less than \$1 billion since 1979. From this investment, five of the Department's successful buildings efficiency technologies (themselves developed at a cost of \$30 million) have saved consumers a total of \$28 billion, as measured in net present value. Consumer cost savings from these technologies continue to accrue at a rate of more than \$5 billion annually.

Transportation/Alternatively Fueled Vehicles

Question: What has been done to ensure that alternatively fueled vehicles are incorporated into the Federal fleets at the various Federal agencies now that there isn't a central pot of money in DOE to pay for acquisition of these vehicles?

Answer: In recognition of the changes in funding for alternative fuel vehicles, the President issued Executive Order 13031 on December 13, 1996. This order requires Federal agencies to fund alternative fuel vehicle acquisitions to meet the requirements of Section 303 of the Energy Policy Act of 1992 within their own budgets. Furthermore, the order requires each Federal agency to submit, as part of its annual budget request to the Office of Management and Budget, a report detailing compliance with the acquisition requirements for alternative fuel vehicles in the prior fiscal year. The agency report must also include a plan for meeting future alternative fuel vehicle acquisition requirements, with specific plans for the next two subsequent fiscal years.

Question: What is DOE's role now?

Answer: The Department will continue to provide technical assistance to Federal agencies in their acquisition of alternative fuel vehicles, and will help coordinate these acquisitions with non-Federal alternative fuel vehicle acquisitions through the Clean Cities program. In addition, the Department will work with the General Services Administration to prepare a summary report of the agency compliance reports submitted annually to the Office of Management and Budget. Also, the Department will establish a program, contingent on the availability of funds, that will help defray the incremental cost of electric vehicles acquired by the Federal agencies, in return for data collection on, and testing of, those vehicles. The Department's assistance to the agencies is limited to half the incremental cost of the electric vehicle, with a maximum contribution of \$10,000 per vehicle.

Electric Vehicles

Question: What is the status of the electric vehicle program in the U.S.?

Answer: The Department of Energy continues to work with the United States Advanced Battery Consortium on the Phase II program approved in August 1996. Under this phase of our cooperative agreement, the USABC effort is focused on developing and scaling up the long-term lithium polymer battery to a full-sized electric vehicle battery system, and reducing the cost of nickel metal hydride electric vehicle batteries. The Department continues to test and evaluate electric vehicles from the automobile industry in the Field Operations program.

Electric vehicles are now being introduced in California under a market based approach agreed to by the seven largest automotive manufacturers. General Motors and Honda are leasing their EV1 and EV-Plus vehicles through dealers to the general public. Nationally, electric utilities have ordered about 1,000 electric vehicles in order to meet their responsibilities under the Energy Policy Act as fuel providers. The Federal government has purchased about 100 electric vehicles through the General Services Administration, and will purchase or lease additional electric vehicles for the Federal fleet consistent with Executive Order 13031.

Question: Where do we stand in comparison to foreign automakers?

Answer: Some foreign automakers are providing tough competition in the introduction of electric vehicles utilizing advanced batteries. Japanese automakers are utilizing nickel metal hydride and lithium ion advanced batteries in pilot production vehicles, and have indicated that these vehicles will be offered in the U.S. marketplace within the near future. German automakers are using the sodium nickel chloride battery ("zebra" battery) in demonstration programs in Germany. U.S. automakers are currently offering for sale vehicles that are competitive in all other respects with those of the foreign automakers, but which do not incorporate advanced batteries at this time. U.S. automakers have indicated that electric vehicles with advanced batteries will be offered for sale within the near future.

Question: What are the differences in the electric vehicle technologies being pursued in the U.S. and overseas?

Answer: U.S. electric vehicles are all developed for the more highly regulated and demanding U.S. market. Consumers expect high performance, and full compliance is required with all safety regulations. Some European manufacturers have not brought their products to the U.S. market for these reasons. The U.S. is the only country pursuing the development of a lithium polymer electric vehicle battery. The work on the sodium nickel chloride battery is unique to Germany. Developers in Japan, Europe, and the United States are all working on nickel metal hydride and lithium ion advanced batteries.

Question: You have asked for \$15 million for high power energy storage as compared with \$8 million in fiscal year 1997. How do you justify nearly doubling the budget in this area?

Answer: High power energy storage is one of the major performance-limiting subsystems required for successful hybrid vehicles. High power batteries, ultra capacitors, and flywheels have been identified as potential energy storage candidates. The increase in funding is required to accelerate progress on addressing the technology barriers and risks associated with developing an energy storage device that simultaneously has high power, long life, and low cost. Risk reduction requires accomplishing innovative technology breakthroughs, as well as substantial hardware development, all needed in time to meet the Partnership for a New Generation of Vehicles (PNGV) timetable.

Partnership For A New Generation Of Vehicles

Question: What have you done with the \$100 million provided by the Congress in each of the last two years for the PNGV program?

Answer: Funding for the Partnership for a New Generation of Vehicles program supports research and development on technologies such as fuel cells (FY 1996 - \$21.5 million; FY 1997 - \$21.2 million), hybrid vehicles (FY 1996 - \$52.7 million; FY 1997 - \$54.8 million), automotive materials (FY 1996 - \$18.2 million; FY 1997 - \$20.4 million), and heat engine development (FY 1996 - \$5.4 million; FY 1997 - \$7.6 million). Approximately 27% of the Energy Efficiency and Renewable Energy Budget for PNGV goes to the national laboratories to conduct research and development, while the remaining funds support industry. In addition, the Advanced Automotive Technologies R&D Plan provides detailed tasks and program integration efforts needed to achieve the PNGV goal of 80 mpg. Since inception of the program, many significant technological advances have been achieved. These accomplishments include:

- Demonstration of a prototype fuel-flexible processor for a fuel cell with an 80% efficiency.
- Demonstration of a sub-scale, lithium-ion battery cell for 100,000 cycles for hybrid vehicle application.
- Survival of a glass-fiber-reinforced, composite front-end structure design in a 35 mph barrier crash test.
- Scale-up of a lean NO_x (nitrogen oxides) catalyst demonstrating 30% NO_x reduction. In March 1997, this development received the Vice President's PNGV award.

Question: To what extent are other parts of the Department or other Federal agencies funding this initiative?

Answer: The Department of Energy budget request would fund approximately 88% of the total FY 1998 PNGV budget request that *directly* supports PNGV, which accounts for all program elements coordinated within the PNGV technical teams. The Office of Transportation Technologies' FY 1998 PNGV request is approximately 90% of the total DOE PNGV request. The other Federal agencies that directly and indirectly support the Partnership include the

Department of Transportation, the Department of Commerce, the Environmental Protection Agency, and the National Science Foundation.

Question: Who besides the "big 3 automakers" are participating in this program?

Answer: In addition to Ford, General Motors, and Chrysler, numerous technology suppliers, Federal agencies, national laboratories, and organizations are involved in the Partnership program. A list of OTT's PNGV "suppliers" follows:

Office of Advanced Automotive Technology's Partners

U.S. AUTOMAKERS

Chrysler Corporation
Ford Motor Company
General Motors Corporation

TECHNOLOGY SUPPLIERS

3M
AC DELCO
Advanced Systems Concepts
Aero Tec
AeroVironment
Air Products
AFPS-Amherst
Alcoa
AlliedSignal Aerospace
AlliedSignal Automotive
AlliedSignal Ceramics
AlliedSignal Engines
Allison Engine Company
Amcast
American/SCI
Analytic Power
Analytic Sciences Corporation
Applicator System AB
ARCO Aluminum
ARIAS Research
Arthur D. Little
Ballard
Baltimore Gas and Electric
BCS Technologies
Bipolar Technology
BOC Gases
Booz-Allen & Hamilton, Inc.
Budd Corporation
Bus Manufacturing Incorporated

Chesapeake Automotive Enterprises
Chevron
CMI
Commonwealth Aluminum
Concurrent Technologies
Consolidated Edison
Corning
Covalent Associates
Cummins Engine Company
Dako Services
Delphi Energy & Engine Management Systems
Detroit Diesel Corporation
Directed Technologies, Incorporated
Dow Chemical
DuPont
DuPont Lanxide
Duracell/Varta
EDO FiberSciences
EGW Associates
Electrolyser
Energy Partners
Exxon Research
Federal Fibers-Fabrics
FEV Engine Technology
Flywheel Energy Systems
Fuji Electric Company
GE - Corporate R&D
GNB Battery Company
Goodyear Tire & Rubber Co.
H-Power Corporation
IMPCO Technologies
Innovative Research
International Fuel Cells
Johnson Controls
Knight+Packer
Kyocera Industrial Ceramics
Lincoln Composites
Manpower Automotive
Maxwell Laboratories
Mechanical Technology, Incorporated
Micro Systems Design
Midwest Aircraft
Mooradian Associates
Northern Iowa Die Castings
Norton Ceramics

Optima Advanced Technologies
Ovonic Battery Company
Owens Corning
Pacific Scientific
Pentastar Electronics, Incorporated
PolyPlus Company
Praxair
PSI Technologies
Ravenswood Aluminum
R&D Dynamics
R.D. Porter
Reynolds Aluminum
Rockwell
SAFT America
Soleq
SRI International
Stirling Thermal Motors
Superior Design
TASC
Technologies Research Corporation
Tecogen
Teledyne Ryan Aeronautical
Textron
Thermotech
Thiokol
Thixomat
Thompson Aluminum Castings
Transportation Manufacturing Corporation
Tribology Systems
Trillium Corporation
TRW
Unique Mobility
Universal Tool
Vairex
Washington Gas Light Co.
W.R. Grace
Yardney

FEDERAL AGENCIES

Environmental Protection Agency
National Aeronautics and Space Administration
National Science Foundation
U.S. Department of Commerce
U.S. Department of Defense

U.S. Department of Energy
U.S. Department of Transportation

NATIONAL LABORATORIES

Ames Laboratory
Argonne National Laboratory
Brookhaven National Laboratory
Idaho National Engineering and Environmental Laboratory
Lawrence Berkeley National Laboratory
Lawrence Livermore National Laboratory
Los Alamos National Laboratory
National Renewable Energy Laboratory
Oak Ridge National Laboratory
Pacific Northwest National Laboratory
Sandia National Laboratories

UNIVERSITIES

Case Western Reserve University
Colorado School of Mines
Drexel University
Florida A & M University
Florida Atlantic University
Georgetown University
Georgia Technical University
Imperial College
Johns Hopkins University
Massachusetts Institute of Technology
Northwestern University
Oakland University
Pennsylvania State University
Princeton University
Southern University
Stanford University
SUNY Binghamton
Texas A&M University
University of Connecticut
University of Dayton Research Institute
University of Idaho
University of Illinois
University of Michigan
University of South Carolina
University of Southern Mississippi
University of Tennessee

University of Texas at Austin
 University of Wisconsin
 Wayne State University

ORGANIZATIONS/CONSORTIA

American Foundryman's Society
 American Society of Mechanical Engineers
 California Air Resources Board
 Gas Research Institute
 Low Emissions Partnership
 Natural Gas Vehicle Coalition
 North American Die Castings Association
 Southwest Research Institute
 Supercomputing Automotive Applications Partnership
 U.S. Advanced Battery Consortium
 U.S. Automotive Materials Partnership
 U.S. Council for Automotive Research

Question: What level of cost sharing is involved?

Answer: Cost sharing requirements for the transportation sector are prescribed in the Energy Policy Act of 1992 (Public Law 102-486), referred to as EPACT. Cost shared research with industry in technology areas that include hybrid power trains, light weight structures, and advanced batteries are required to have at least 50 percent cost share from non-Federal sources. For fuel cells, and any other technologies, at least 20 percent of the cost of the project must be provided from non-Federal sources. The Secretary is granted the authority to reduce the cost share if the technological risks involved in the project are high.

In practice, the Department of Energy has tended to cover a greater share of costs, subject to the statutory maximum, for those technologies considered long-range or higher risk, while industry has paid a higher fraction of the development costs for technologies closer to commercialization. In addition to the direct cost-sharing, the auto industry (the "big three" automakers and their suppliers) is committing internal funds for related activities.

We are not aware in all cases of how the industry cost share is split among the "big 3" automakers (referred to as OEMs) and their suppliers. Based on available data, a cost share summary by budget line-item follows:

Automotive Alternative Fuels

Systems Optimization work includes R&D on natural gas storage, natural gas refueling infrastructure, and the development of low emission and high efficient engines optimized for alternative fuels. Partners include universities, National Laboratories, and other research institutions which contribute a cost share ranging from 0% to 57%, with an average in Fiscal

Year 1997 of about 39%.

There are two student competitions, FutureCar Challenge and Propane Vehicle Challenge. For FutureCar, DOE and the OEMs are each contributing 43% of the funding. The remaining 14% is provided by other US government and Canadian government agencies. In the Propane Vehicle Challenge, DOE is providing 25%, OEMs about 55%, and other industry about 20% of the total funding.

Electric Vehicle R&D

The work on advanced electric vehicle batteries conducted by the U.S. Advanced Battery Consortium is funded 45% by DOE, 35% by suppliers, and 20% by the OEMs.

Vehicle Systems R&D

With the exception of the advanced heat engine (gas turbine) work, cost share is 50% DOE, 50% industry. The portion of the industry contribution funded by the OEMs varies by program element. It ranges from less than 1% for high power energy storage to 47% for one of the hybrid propulsion system contracts. For advanced heat engines, the industry cost share ranges from 20-30%, averaging 27% for all projects. Virtually all of the industry cost share for advanced heat engines is paid by suppliers.

Fuel Cell R&D

For the fuel cell program, industry (OEMs and suppliers) partners are currently providing 20% of the total funding. However, if the partner is a small or disadvantaged business, a cost share of 15% is typical. In Fiscal Year 1998, fuel cell suppliers will increase their cost share to a minimum of 25%. This increased cost share reflects a decreased technical risk as a result of the R&D progress made by previous government investments. In Fiscal Year 1998, the OEMs will not be receiving government funding. DOE R&D implementation strategy is to fund fuel cell developers and suppliers directly.

Advanced Combustion Engine R&D

The majority of advanced automotive piston engine r&d is accomplished through Cooperative Research and Development Agreements (CRADAs) with the OEMs. The cost share for these CRADAs is 50% DOE, 50% OEM. Grants to support university research are not cost shared, but funded 100% by DOE.

Transportation Materials Technologies, Automotive Materials Technologies

For propulsion systems materials, primarily ceramics for high efficiency gas turbines, all 1997 cooperative research partnerships are with universities and suppliers. Universities contribute services in-kind, which range from 8-10% of total project cost. Suppliers

contributions range from 20-27% of total cost. The DOE contribution for all Propulsion Systems Materials projects averages 86%.

Lightweight vehicle materials, for body and chassis applications, are funded through agreements with the US Advanced Materials Partnership (USAMP), a consortium including OEMs and suppliers. Considering all projects, DOE contributes an average of 63% of total funding. OEMs average 9%, while other industry contributes 28%. For individual projects OEM share ranges from 0-57%, while other industry involvement varies from 0-50%.

Question: Why does the Federal government need to be involved in this effort?

Answer: Government involvement in the Partnership for a New Generation of Vehicles (PNGV) flows from a view that government has a valid role to support long-range, high-risk research and development activities that have large potential payoffs, but are not reflected in current market pricing. This support includes funding, as well as access to, unique R&D capabilities within the Federal laboratory system. The lack of market demand or current competitive pressures, combined with realistic requirements for private sector return on investment, provides industry with little or no incentive to undertake this high risk research on its own.

Question: When will these vehicles actually be in the showrooms for mass market sales?

Answer: A major goal of the PNGV program is production prototypes of automobiles, which have a fuel economy three times that of today's comparable vehicle, by the year 2004. It is anticipated that, by the year 2010, these vehicles will be produced in large volumes. Progress has been made to date toward this goal, for example, concept prototype vehicles, development, and production of advanced technology vehicles which include:

Ford's P2000
Chrysler's ESX
General Motors' EV-1

Numerous PNGV technologies are embodied in these vehicles including the extensive use of lightweight metals and composites, high efficiency electric motors and power electronics, advanced diesel engines, and low rolling resistance tires. None of these technologies is currently cost-competitive, however with the increased interest by foreign companies and the recent announcement by Toyota regarding production plans for hybrid vehicles, heightened competition may move introduction and production dates for advanced vehicles closer.

Question: For the record please provide a listing of all the various projects in the PNGV initiative, along with fiscal year 1995, 1996, 1997, and 1998 cost estimate by project. Also note the responsible Federal Departmental element and the budget activity and subactivity for each project.

Answer: All PNGV projects supported by DOE's Office of Energy Efficiency and Renewable Energy, for fiscal year 1995, 1996, 1997, and 1998, are displayed in the table below:

**Department of Energy
Energy Efficiency and Renewable Energy
Partnership for a New Generation of Vehicles
(dollars in millions)**

Budget Activity	Project	FY 1995	FY 1996	FY 1997	FY 1998
Office of Transportation Tech					
Advanced Automotive Tech	Automotive Alternative Fuels: Systems Optimization*	0	0	0	4.0
Advanced Automotive Tech	Automotive Alternative Fuels: Student Competitions*	0	0	0	1.0
Advanced Automotive Tech	Vehicle Systems R&D: Hybrid Propulsion Systems	34.7	36.7	38.8	45.0
Advanced Automotive Tech	Vehicle Systems R&D: Heat Engine R&D	7.3	6.0	5.0	3.2
Advanced Automotive Tech	Vehicle Systems R&D: High Power, Energy Storage	1.9	8.1	8.0	15.0
Advanced Automotive Tech	Vehicle Systems R&D: Advanced Power Electronics	2.1	3.0	3.0	4.5
Advanced Automotive Tech	Fuel Cell R&D: Systems Development	18.4	13.8	12.2	6.0
Advanced Automotive Tech	Fuel Cell R&D: Component R&D	3.4	7.0	4.5	10.0
Advanced Automotive Tech	Fuel Cell R&D: Reformer & Storage R&D	0.9	1.0	4.5	13.5
Advanced Automotive Tech	Advanced Combustion Engine: Automotive Piston Engine	4.5	5.5	7.6	7.5
Transportation Materials Tech	Automotive Materials Tech: Propulsion Materials	7.3	7.9	6.5	4.2
Transportation Materials Tech	Automotive Materials Tech: Lightweight Vehicle Materials	10.0	10.8	13.9	13.3
Office of Industrial Tech					
Industries of the Future	Aluminum Vision: Aluminum Recycling	0	0	1.0	1.0
TOTAL EE PNGV		90.5	99.8	105.0	128.2

*Funding for the Alternative Fuels program was not scored as PNGV in fiscal year 1995, 1996, and 1997.

Clean Cities

Question: Briefly describe the "clean cities" program for the record.

Answer: The DOE Clean Cities program is a voluntary, locally-based government/industry partnership which has been very effective in mobilizing local stakeholders in the effort to accelerate the deployment of alternative fuel vehicles, and to build local alternative fuel vehicle refueling infrastructure. The program has served to focus and coordinate the activities of both private and public sector proponents of alternative fuel vehicles by providing them with a forum to discover their common interests and issues, collaborate on public policy, investigate opportunities for joint projects, avoid unnecessary conflicts, leverage scarce resources, and cooperate in promoting the benefits of alternative fuel vehicles in their communities. Clean Cities' success, particularly in light of relatively limited financial incentives for participation, is a testament to the commitment of its stakeholders and the flexibility and effectiveness of its design.

The Clean Cities network is currently comprised of 54 communities and more than 2,000 stakeholder organizations, including local and State government offices, automakers, utility companies, environmental groups and fleet operators. Initiated and sponsored by DOE, this network has become the single largest national coalition dedicated to advancing alternative fuels and developing sustainable, local markets for alternative fuel vehicles.

Question: What is the difference between the clean cities program and the "infrastructure corridor development program"?

Answer: Clean Cities and Clean Corridors are both part of the Department's strategy to encourage the use of Clean Cities as "anchors" in a strategically linked structure that can dramatically increase the attractiveness of alternative fuels for fleets. Clean Cities are the first step in this effort; they are the foundations upon which clean transportation corridors will be built. Corridors are the next logical step, enabling alternative fuel vehicles to move beyond niche applications in locally-based fleets (which has been the focus of Clean Cities to this point), and to gain access to the routes between Clean Cities. Widespread acceptance of alternative fuel vehicles will become a reality only when the market recognizes that there are no boundaries for their operation. Clean transportation corridors will build upon work to create opportunities for alternative fuel vehicle market development and literally "fill-in" the market gaps created from existing local programs. The Clean Corridors element of our strategy will focus on linking major commercial and travel destinations with alternative fuel capability, accelerating and attracting refueling investment, and strengthening existing Clean Cities programs by building outward concentrically from each local core.

Question: You have asked for significant funding increases for PNGV, and for electric vehicles, and for the clean cities program and for the infrastructure corridor program. Which among all these increases is your highest priority?

Answer: To achieve the transportation program's energy security and environmental objectives, both technology development (PNGV and electric vehicles) and technology

deployment (clean cities and alternative fuel corridors) must be successful. There is a synergy between these two overall areas of activity, in that neither can get the job done unless both are sufficiently robust. That increases were requested for both indicates that each area is considered a high priority. Therefore, we are hopeful that allocations will be sufficient to fund all parts of the request for transportation programs.

Hybrid Vehicles

Question: The hybrid propulsion systems budget is targeted for an increase from \$39 million in 1997 to \$45 million in 1998. How much have you invested in this program to date?

Answer: The hybrid vehicle program was initiated in 1993. The total DOE cost in the program through March 1997 is \$95,711,857. This represents a total investment of over \$190 million in technology development since it is a 50-50 cost shared program with industry.

Question: What different types of technologies are you pursuing?

Answer: The primary technology emphasis has been in those propulsion system components which have the greatest impact on hybrid vehicle fuel economy, emissions, and driveability. Listed below are technologies that the hybrid program has pursued since the beginning of the program in 1993:

Hybrid Power Units

- Compression Ignition Direct Injection Engines (CIDI)
- Spark Ignition Engines
- Stirling Engines
- Turbines
- Fuel Cells.

High Power Energy Storage

- Flywheels
- Advanced Lead Acid Batteries
- Ultracapacitors

Electric Machinery & Electronics

- Electric Drive Units
- Wheel Motors
- Power Electronics
- Motor Controllers
- High Speed Generators

Question: When will you downselect to pursue the most promising approaches?

Answer: The downselect process has been going on continuously as different technologies have proven to be unfeasible, too costly, or too immature for the time frame of the program. All

of the program's auto manufacturers have made their individual downselect decisions. However, the Partnership for a New Generation of Vehicles partners are working with industry on the FY 1997 process. Some of the technologies that have been eliminated from the hybrid electric vehicle program include: spark ignition engines, ultracapacitors, some turbine designs, and permanent magnet motors and some semiconductor technologies.

Question: What successes have you had in the hybrid program? Please provide details for the record.

Answer: There have been many successes in the hybrid program.

Some key **Ford** successes include:

- Developed carbon dioxide flooding mechanism for a flywheel system, emergency power reserve for a hybrid powertrain, and a multiple rotor flywheel concept.
- Fabricated, tested, and improved battery cells using two competing lead acid technologies.
- Initiated the development of an advanced compression ignition direct injection hybrid power unit.
- Progressed sufficiently to warrant Ford's announcement of its P2000 program in March 1997; this initiative will include assembly and testing of multiple lightweight hybrid prototype vehicles, which are projected to achieve over 60 miles per gallon.

Some key **General Motors** successes include:

- Completed development of the first test mule vehicle (Gen 1-1) with a gas turbine hybrid power unit (HPU).
- Developed unique components for Stirling series hybrid propulsion system, i.e., 40-kW HPU, spiral wound lead acid high power to energy ratio battery, and electric drive system that has double the torque per amp rating than the GM production electric vehicle (EV1) electric drive system.
- Developed the second test mule (Gen 1-2) using a Stirling HPU, which has over 2,500 test miles; operated the HPU for 35 hours with over 135 starts.
- Completely redesigned the Gen 1-2 battery pack to create more space in the passenger compartment, and improved the spiral wound lead acid batteries.
- Significantly improved the power electronics box, which contains the motor controller, DC-DC converter, power steering, and heater controller, to reduce its volume by 30% and reduce overall cost.

Some key **Chrysler** successes include:

- Completed preliminary simulation modeling work and identified a unique parallel hybrid configuration.
- Conducted initial automatically controlled manual transmission tests, including control of clutch engage/disengage motor, and control of selector.
- Established communications protocol routine among vehicle controller, propulsion system, and onboard auxiliary equipment; i.e., power steering and HVAC systems.
- Completed design of an advanced compression ignition direct injection engine and

initiated fabrication.

Question: What would be the impact of holding you to the fiscal year 1997 level for the hybrid program in fiscal year 1998?

Answer: Reducing the budget to the FY 1997 level will not only hurt the base program, that is, developing a propulsion system capable of achieving 50 mpg in a mid-size automobile, but will also have a significant negative impact on the development time for technologies which have the potential to be used in the PNGV vehicle, for which the goal is 80 mpg. Some technologies are strong candidates to move on to the next phase, aimed at the higher fuel economy. If these candidate technologies are not funded in FY 1998, the outcome will be to significantly increase the risk of achieving 80 mpg fuel economy and stringent emission targets by 2004. Level funding will also cause the current program to be extended by at least six months, moving the delivery of test bed vehicles into the mid-1999 time frame and increasing the overall cost of the program. This will also delay obtaining important vehicle integration test data which is needed to solve integration issues in the PNGV program. Further, the increased budget request will be used to develop a broader supplier base, thus increasing innovation and competition from which the automobile companies can draw to improve the chances for program success and reducing the risk of having a very limited number of suppliers on which to rely. Many small companies have unique and innovative technologies that have not been part of the current program. This budget request will provide the opportunity to identify the most promising of these companies whose ideas have not been evaluated and integrated into the existing partnership.

Fuel Cells

Question: What fuel cell vehicles are included in your research program and at what stage of development is this technology?

Answer: The Fuel Cells for Transportation program has focused on the development of proton exchange membrane (PEM) fuel cell technologies for automotive applications, not on the development of a specific fuel cell concept vehicle. Our current stage of development includes the completion this year of two full-scale (30-50 kW) automotive powerplants—a direct hydrogen system developed by Ford Motor Company, and a methanol fueled system developed by General Motors. These fuel cell systems will demonstrate the ability of PEM technology to provide the power required by today's vehicles, but will need considerably more development before they are commercially viable. Improvements needed for automotive fuel cell systems include: performance enhancement to meet all automotive requirements (e.g., durability, start-up, and transient operation); size, weight and cost reduction; and integration of fuel-flexible fuel processing.

Question: We have been funding the transportation fuel cell program for 20 years. What evidence do you have that this program is about to yield any commercially viable products?

Answer: Funding for DOE's Fuel Cells for Transportation program was initiated in FY 1989. From fiscal years 1989 to 1991, the program was focused on development of phosphoric acid fuel

cell buses. It was not until FY 1992 that a substantial effort in R&D of proton exchange membrane fuel cells was initiated. During the past five years, tremendous progress has been achieved—for example, platinum loading has been reduced ten-fold and stack power density has tripled. As cited by Chrysler, the cost ratio between fuel cell engines and gasoline engines has dropped from 1,000 times (a decade ago) to 10 times today.

The evidence that this program is about to yield commercially viable products is two-fold:

(1) Under sponsorship of the U.S. Department of Transportation, fuel cell buses are being commercialized, using fuel cells manufactured by International Fuel Cells and Ballard Power Systems. The fuel cell technology for these buses was developed through DOE support in the early years of the transportation fuel cell program.

(2) Chrysler recently announced its plans to build a fuel cell concept car which includes a fuel-flexible fuel processor capable of operating on gasoline. The fuel processor was developed by Arthur D. Little, Inc. (ADL) with funding by DOE's Fuel Cells for Transportation program. In addition, the ADL fuel processor could be a commercial product for fuel cell building applications within the next two years.

Question: You want to increase funding for fuel cells from \$21 million in fiscal year 1997 to nearly \$30 million in fiscal year 1998. How do you justify this increase? What will you have to show this time next year if we were to fund this increase?

Answer: The funding increase is needed because transportation fuel cell development is transitioning from laboratory to automotive scale, and systems integration issues are receiving increased emphasis. Additional funds are required to address the technical challenges associated with the systems development efforts. These include:

(1) Continual development of an onboard fuel-flexible fuel processor capable of operating on gasoline, methanol, ethanol, or natural gas. Additional funds will be used to begin addressing key barriers to this technology: improved carbon monoxide clean-up devices; compact, efficient heat exchangers; and integration of fuel processor components (fuel purification system, heat exchangers, controls and sensors) into a vehicle-ready 50 kW system capable of rapid start-up and fast transient response.

(2) Integration of fuel cell stack, fuel-flexible fuel processor, and balance-of-plant components (compressors, expanders, automated controls, etc.) for a complete, stand-alone power system capable of being evaluated in a test-bed vehicle under driving cycle profiles. A complete power system at the automotive level has not yet been accomplished. Since integration of these three subsystems significantly impacts efficiency, as well as air, thermal, and power management, this work is necessary to focus the R&D for the fuel cell stack, fuel processor, and balance-of-plant components for optimum performance under real operating conditions. Additional funds will also be used to develop balance-of-plant components having reduced size, weight, and cost. These are not off-the-shelf components.

The additional funds will result in the achievement of a major program milestone next year—the upgrade of the ADL fuel-flexible fuel processor and its integration with the carbon monoxide clean-up device under development at Los Alamos National Laboratory. This will be the first time an automotive-scale, fuel-flexible fuel processor is constructed which includes automated controls and transient capability.

Question: Are you still exploring hydrogen fuel cells? How do they work?

Answer: Yes, our research and development program is focused on fuels cells for automotive applications using hydrogen directly or hydrogen generated by onboard fuel processors.

A fuel cell is an electrochemical device that converts the chemical energy of a fuel directly into electricity. The principal components of a fuel cell are two electrodes, one for the fuel (anode) and one for the oxidant (cathode), and a conductive electrolyte in between. Because the operating conditions are largely determined by the electrolyte, fuel cells are classified by the type of electrolyte used. The PEM fuel cell uses a proton- conducting polymer membrane as the electrolyte. At the anode, the hydrogen fuel is chemically separated into hydrogen ions and electrons. The hydrogen ions travel through the electrolyte to the cathode. Simultaneously, the electrons move through an external circuit to a load and then to the cathode. This flow of electrons provides the electric current. At the cathode, the oxygen, hydrogen ions, and electrons combine to form water.

Therefore, the fuel for fuel cells is hydrogen. Hydrogen can be generated from methanol, ethanol, natural gas, propane and other hydrocarbon fuels. Two primary fueling options are possible: (1) stored hydrogen can be provided directly to the fuel cell as a pure gas; and (2) methanol, ethanol, natural gas, or gasoline can be processed (reformed), using an onboard reformer, to provide hydrogen-rich gas for consumption in the fuel cell.

Question: What has been done to solve the problem of engine embrittlement caused by hydrogen?

Answer: Manganese, some nickel-based, and other high strength steels are prone to hydrogen embrittlement, particularly after prolonged exposure at high temperatures and pressures. These materials are not used in PEM fuel cells, nor are high temperatures and pressures. Engine embrittlement is therefore not expected to be a problem in PEM fuel cells.

Heavy Vehicles Systems

Question: You have proposed an industry-wide cooperative effort with automakers and diesel manufacturers for light trucks. Please describe what you have in mind.

Answer: The proposed cooperative effort with the U.S. diesel engine manufacturers, teamed with the light truck (vans, pickups and sports utility vehicles) divisions of U.S. automakers, is directed at having commercially viable clean diesel engines available as an option in these vehicles within seven years. Light truck sales are currently 43 percent of the U.S. passenger vehicle

market, and are projected to grow to 50 percent by the year 2000. While the overall sales of passenger vehicles have remained stable, the growth in light trucks has been at the expense of the automobile, replacing a higher mile per gallon vehicle with one that nearly doubles the per vehicle fuel consumption. Replacing the gasoline engines in these vehicles will result in a 50 percent improvement in fuel economy, and will reduce the primary greenhouse gas, carbon dioxide, emissions by an equivalent amount. Emissions is a key technical focus area; the target is to achieve at least the EPA Tier II standards. Specifically, DOE intends to award one or more contracts, based on a competitive solicitation, to U.S. diesel engine manufacturer/U.S. automotive manufacturer development teams. Cost sharing will be 50 percent; project length will be no more than five years. These teams will develop the critical technologies for a high performance, low cost, clean diesel engine for light trucks of less than 8,500 lbs. gross vehicle weight.

Question: Industry has spoken of this initiative to the Committee. If this is an important new research area, why don't you divert funds from other transportation programs like PNGV to pay for this program?

Answer: PNGV is developing advanced vehicles for a market segment that currently represents approximately 50 percent of the fuel used by highway vehicles. Even though the light truck program focuses on a segment experiencing significant growth in sales and fuel consumption, we concluded that moving funds would disrupt the PNGV's momentum, and further increase the risk of achieving its important objective. The potential benefits justify robust funding of both initiatives; given budget limitations, however, we believe it is better to provide sufficient resources for the program which is reaching its mid-point, so as to benefit from significant investments already made.

Question: How much do you propose to devote to this program in fiscal year 1998 and what will you get for that amount?

Answer: Of the \$7.4 million requested in FY 1998, \$5 million will be used to support one competitive industry development team, and \$2.4 million will be used for cooperative research on combustion and exhaust aftertreatment. The cooperative research is being supported and equally shared by the three U.S. automobile manufacturers and the three largest U.S. diesel manufacturers.

Question: Industry has reported that you realistically would need in the neighborhood of \$20 million if you were to conduct a serious program with 2 or 3 different contract teams. Would you comment on that assertion?

Answer: Each industry development team would need government funds of approximately \$5 million per year for 4 to 5 years (50 percent cost shared) for the competitive development of critical technologies needed for a low cost, high performance, clean diesel engine. Ideally, these development efforts would be supported by an additional \$5 million for the U.S. automotive/U.S. diesel engine manufacturer cooperative research program aimed at investigating more fundamental issues in combustion and exhaust after treatment.

Question: What are your estimates of costs by year for this program and when would you hope to realize a commercially marketable product?

Answer: In an unconstrained budget situation, the program costs for fiscal years 1998, 1999, 2000, and 2001 would be \$20 million per year, and \$15 million in 2002, the final year of the program. This level would fully support three development teams along with the defined cooperative research in combustion and exhaust after treatment. With that funding level, it is projected that commercial products resulting from this program would be introduced into mid-range trucks (greater than 8,500 lb. gross vehicle weight) by the end of the program in 2002, and into light trucks (less than 8,500 lb. gross vehicle weight and the program target) by 2004. Lower funding levels will delay achievement of program objectives.

Natural Gas Vehicles

Question: How widespread are natural gas vehicles as an alternative to gasoline-powered cars?

Answer: According to the Department's Energy Information Administration (EIA), there were 62,805 natural gas vehicles (NGVs) on the road in 1996. EIA projects that this number will grow to approximately 82,000 NGVs through calendar year 1997. According to the Department's Alternative Fuels Data Center, there were 1,239 natural gas vehicle refueling stations in service as of October 1996.

A number of original equipment vehicle manufacturers have included NGVs in their vehicle offerings for model year 1997. For example, General Motors Corporation offers two different models of compressed natural gas full-size pickup trucks. Ford Motor Company products include compressed natural gas compact sedans, full-size sedans, full-size pickup trucks, and full-size vans.

Question: How much of your alternative fuels research is geared toward natural gas vehicles?

Answer: In our FY 1998 budget request, approximately \$6.5 million will be for research and development of natural gas vehicles. This would provide \$2.0 million for light duty vehicles and \$4.5 for heavy duty vehicles. Beyond that, a substantial portion of the FY 1998 Technology Deployment budget request, \$17 million, would encourage fleet owners and other consumers to acquire natural gas vehicles already available for sale.

Question: Congress added \$2.3 million to the fiscal year 1997 budget request for natural gas vehicles research--\$1 million for system optimization, \$300,000 for engine optimization and \$1,000,000 for NOx emissions research. What specifically are you doing with these funds?

Answer: In fact, Congress added \$3.2 million to the FY 1997 budget request for natural gas vehicle research, i.e., \$1,000,000 for onboard storage (systems optimization), \$1,200,000 for engine optimization, and \$1,000,000 for NOx emissions research. Following is a list of the projects supported by the additional FY 1997 funds:

Onboard Storage

- Through a cooperative agreement, the Institute of Gas Technology is developing low-cost, lightweight, type 2 natural gas tanks (\$500,000).
- Brookhaven National Laboratory is subcontracting research activities on liquefied natural gas and compressed natural gas storage technology (\$500,000).

Engine Optimization

- Together with the Gas Research Institute and the South Coast Air Quality Management District in California, DOE is issuing a competitive solicitation to advance the technologies needed to achieve higher efficiency, lower emissions heavy vehicle natural gas engines (\$400,000).
- Southwest Research Institute and John Deere Tractor are optimizing the natural gas school bus engine (\$300,000).
- DOE is initiating on-road engine development projects to bring about production ready engine/fueling systems for heavy vehicles (\$500,000).

NOx Emissions Research

- Tecogen, Inc., is developing a low-energy, non-thermal plasma for reducing NOx in the exhaust stream (\$100,000).
- NOx Tech, Inc., is optimizing its non-thermal plasma NOx reduction technology (\$100,000).
- Through Cooperative Research and Development Agreements (CRADAs), Detroit Diesel Corporation, Cummins Engine Company, and the Oak Ridge National Laboratory are developing NOx reduction catalyst materials (\$600,000).
- Cummins Engine Company is developing in-cylinder NOx reduction utilizing lean-burn technology (\$200,000).

Question: What does the fiscal year 1998 budget assume with respect to continuing the research enabled by the \$2.3 million add? Please provide details for the record.

Answer: The FY 1998 budget request is substantially lower in the heavy vehicle area relative to the FY 1997 appropriation level. With the exception of the development of onboard storage for automobiles being conducted with the Institute of Gas Technology, all other activities listed above would be either terminated or substantially reduced at the budget request level.

Ceramics

Question: This committee has long been a supporter of ceramics research in the area of propulsion materials. One of the few decreases in your budget involves cutting this program. Please explain your rationale for this decrease.

Answer: We appreciate the long-time Committee support for the ceramics research programs. The ceramics program is essential to the success of many major energy efficiency programs, including the automotive gas turbine engine program. The budget request is consistent with the program goals and objectives. The funding and priority has shifted to applications in hybrid propulsion and heavy vehicle propulsion systems. Under the automotive, and heavy vehicle propulsion materials technologies requests, ceramic component development and manufacturing technology efforts will support the gas turbine and diesel engine systems development.

Question: What additional funds would you need to continue your existing contracts on schedule in fiscal year 1998?

Answer: The budget request is sufficient to implement activities which support the program goals and objectives. The request will provide enough to continue contracts which are not complete in FY 1997, and support planned programs for FY 1998 in ceramic gas turbine and diesel engine component development and manufacturing technology.

Buildings

Lighting and Appliance Research

Question: Last year, as part of the conference agreement on the fiscal year 1997 bill the Congress provided \$5 million for high priority lighting and appliance research. How are you using these funds?

Answer: Of the \$5 million, \$2,600,000 has been allocated to Energy Star partnerships, including the DOE Retailer Initiative for high-efficiency appliances. \$950,000 is being used for emerging technology introduction, including advanced, hot water-conserving clothes washers, and \$900,000 is for organizing volume purchases like the one that resulted last year in procurement of 60,000 innovative apartment-sized refrigerators for public housing. \$550,000 funds research under the Advanced Lighting Collaborative, including research on advanced compact fluorescent lamps.

Question: What have you done to identify cooperative lighting research projects with industry? Please provide specific examples.

Answer: The Department works continuously in a variety of ways to identify cooperative research projects with industry. DOE has been a partner with the Electric Power Research Institute and the National Science Foundation in a comprehensive series of workshops with the

U.S. lamp industry over the last two years to better understand industry research needs and to develop a national research agenda in basic, pre-commercial lamp research. Funding support for projects in this agenda is requested in the Department's 1998 budget request under VHF Light Sources. Each year, DOE also receives unsolicited proposals and requests for assistance from industry. Several such proposals are currently under evaluation.

On a more informal basis, the dialogue established through current cooperative projects with industry serves to identify research needs. Many cases exist of our Cooperative Research and Development Agreements (CRADAs) with industry licensing DOE-developed technology. DOE's Lawrence Berkeley National Laboratory has been very successful in the last five years in collaborating with many members of the lighting fixture industry. The Los Alamos National Laboratory also has developed CRADAs in lighting with industry. A major lighting manufacturer has also recently accepted an invitation from the DOE to tour several of DOE's laboratories to learn of advances there which may have application to the manufacturer's lighting research needs. Also in recent years, DOE has funded research and development in lighting conducted by small businesses. All these activities provide opportunities to identify cooperative lighting research projects with industry.

Question: What is the Energy Star program?

Answer: The ENERGY STAR program promotes a wide range of high efficiency appliances and other energy performance measures applicable to consumer products, residential and commercial buildings, and industrial facilities. DOE and EPA jointly administer the ENERGY STAR Retailer program, which focuses on major appliances, lighting, and other building products that are sold primarily through retailers and distributors. Under this program, DOE and EPA establish performance targets for various appliances and building products, identify products that meet these targets, and carry out a broad range of educational and promotional activities designed to promote their purchase by consumers. Major U.S. retailers and utilities are working in partnership with DOE in these education and promotion efforts which include product labeling, point-of-purchase consumer information, retailer sales training programs, and utility-distributed educational materials. Major appliance manufacturers are providing information on product performance for use in ENERGY STAR labeling and are integrating the ENERGY STAR program into their marketing efforts.

Question: What types of establishments are working with you in the Energy Star program?

Answer: DOE is working in a variety of ways with major appliance manufacturers, retailers, utilities, industry associations, financial institutions, other Federal agencies, state governments, and home builders to make the ENERGY STAR program a nationwide success. For example, Circuit City and Montgomery Ward, two of the largest U.S. appliance retailers are advertising ENERGY STAR appliances nationwide and over 850 of their stores are displaying ENERGY STAR product labeling and point-of-purchase informational materials. Southern California Edison, Wisconsin Electric Power, Sacramento Municipal Utility District, and Potomac Electric Power Company have all signed agreements with DOE allowing them to utilize the ENERGY STAR logo in their consumer education materials, and several hundred thousand utility customers

have already received information from their utilities describing the benefits of buying ENERGY STAR-rated products. Major appliance manufacturers and their associations are working with DOE to provide performance information on appliance products, using the ENERGY STAR label as a way to create brand awareness for energy efficient models.

Question: Why is the government involved in the retail sale of appliances?

Answer: A significant barrier to widespread market acceptance of energy-efficient appliances is the absence of information on product performance and the resulting energy, economic, and environmental benefits that accrue to consumers who choose higher-performing appliance models. DOE's ENERGY STAR program is focused on providing this much-needed information in an accurate and objective format to consumers. Targeting major retail chains where most major household appliances are sold provides DOE with the best possible opportunity to reach consumers with information to assist them in deciding which appliances to purchase. By channeling its information and education efforts through cost-sharing partnerships with retailers and utilities, DOE is leveraging its resources and at the same time gaining an opportunity to demonstrate the value of ENERGY STAR products. As consumer demand for ENERGY STAR appliances grows, retailers, utilities, and manufacturers are expected to take over major roles in program promotion, and DOE's involvement will be limited to maintaining the technical integrity of the program.

Question: What are you doing in our lighting collaborative program and who are your industry cooperators? (P. 392)

Answer: The lighting collaborative program's primary focus is to increase lighting efficiency in the residential sector where inefficient incandescent lamps are most commonly used. We are taking several near-term approaches. In 1997, the Department intends to initiate a new project at a low funding level with a major lamp manufacturer to reduce the cost of compact fluorescent lamps (CFL) through research on advanced lamp and electronics technology. The Department's 1998 request includes funds to accelerate this important effort. In on-going work with the fixture industry, the Department is developing at Lawrence Berkeley National Laboratory more efficient fixtures that use CFLs rather than incandescents. In the lighting collaborative, DOE and its laboratories are working with the fixture and lamp industry to get existing and emerging CFLs and other technologies into wider use. For example, a collaborative with hotel and motel operators has been formed to test and evaluate new technologies. For 1998, our plans include initiating several volume purchase projects to achieve wide use of these technologies in hotels and motels. These projects produce energy savings for hotel and motel operators, while making hotel and motel customers aware of the availability of these new products for home use. Another 1998 activity will establish a national design competition for industrial arts students to develop efficient and attractive dedicated CFL fixtures in cooperation with the fixture industry.

Question: You propose to more than double funding for the lighting collaborative program. What would you do with the increased funds? (\$400,000 in 1997, \$980,000 requested for 1998)

Answer: The largest portion of the increase will be used to fund the development of technology for a low-cost compact fluorescent lamp (CFL) in a cost-shared program with a major lamp manufacturer. Funds available in FY 1997 only permit start-up of this project at a low-effort level. The additional funding is consistent with completion of the project in three years and with its possible market introduction in early 2000. The increase will also support demonstrations of dedicated CFLs in multi-family housing with public housing authorities and private owners. A low-level exploratory effort will also examine the potential for the emerging new generation of non-CFL technologies developed by industry.

Affordable Low Income Housing

Question: The Committee has urged the Department to provide technical assistance to the House and Urban Development agency with the understanding that the cost of energy saving techniques should be incorporated in the HUD program and that HUD should bear the cost of these energy efficient technologies as part of its housing program. What are you doing to comply with the Committee's direction?

Answer: The program has been designed as a joint effort between DOE and HUD to address federally-supported public and assisted housing. The program also addresses low and moderate income housing supported by non-profit community-based housing providers (such as Habitat for Humanity) and by other private providers of affordable housing that do not receive direct financial support from HUD. Even with this broad approach, the overall program will be financed by both direct and indirect contributions from DOE and HUD, and intends to leverage significant additional investments for capital retrofits from such private sources as energy service companies (performance contractors), utilities, mortgage lenders, and housing developers and redevelopers. The program is purposely designed to support the use of existing HUD programs and capital funds with DOE's technical assistance to build and retrofit affordable housing. No funds from DOE will be used for any capital investments for any housing provider.

To implement the partnership between DOE and HUD, specific substantive and fiscal responsibilities have been defined for each Department. HUD will continue to offer incentives through their Performance Funding System to leverage private capital through the use of performance-based energy investments, and to encourage public housing authorities to partner with DOE in evaluating capital improvement needs that maximize all energy saving opportunities. HUD is directly financing a national clearinghouse for energy efficiency information through the National Center for Appropriate Technology, and is providing direct financial support to DOE's Oak Ridge National Laboratory to provide energy performance contracting training to several "troubled" public housing authorities.

The DOE funds requested will complement and strengthen these HUD initiatives by providing a broad range of technical assistance services directly to a large number of both HUD public housing authorities and other community housing providers who have direct responsibilities for the construction, rehabilitation and management of low income housing. It will work through voluntary partnerships that bring together leaders from the housing development and financing industry, government and non-profit associations at both national and local levels. This

partnership will assure the effective use of capital funds and the application of best existing technologies by taking advantage of DOE's expertise in assisting housing providers for best whole-building approaches. Costs for implementing these approaches and energy efficient technologies will be borne by HUD, public housing authorities, and/or community housing providers—for example, new construction under HUD's HOPE VI programs can benefit from energy efficiency improvements that in many cases will be supported by private capital through investments from performance contracting firms. Additionally, the program will be involved closely with the Administration's "National Partnership for Homeownership," a collaboration of fifty-six private, public, and non-profit organizations designed as a public/private initiative to increase the use of innovative new technologies and produce less costly and more energy and resource efficient new homes.

Question: You have asked for a funding increase for this program. How do you justify this increase (\$1 million in 1997; \$1.6 million in 1998)

Answer: The goal of the program is to support activities that will ensure the deployment and use of energy efficient technologies, management practices, and financing alternatives sufficient to increase energy efficiency by an average of 25 percent in a minimum of 1 million units of affordable housing by the year 2000. This is an aggressive goal. The intent is to make long term, lasting changes in how buildings are designed, built, renovated, and operated, by providing DOE research findings to housing providers, builders, architects, contractors, and to local communities to create a new generation of affordable, energy-efficient housing. The increase in funding reflects the need for outreach, training, and direct technical assistance activities provided both to public and non-public housing providers needed to reach this goal by the year 2000.

Question: It seems that your involvement should be limited to initial awareness training for HUD. Why do you need to continue to be involved in the program in fiscal year 1998?

Answer: One year of initial awareness-building and training alone is unlikely to have a significant impact in establishing lasting capabilities for technical approaches and management practices that will institutionalize energy efficiency as a normal part of the construction and rehabilitation of affordable housing. Awareness training alone will not suffice for evaluating those approaches, technologies, and management practices that are truly effective in achieving long term institutional change. Additionally, the scope of the program extends well beyond housing that is owned and/or managed directly by HUD. Again, the goals of the program are to improve the energy efficiency of at least one million units of low income housing by the year 2000, to create a framework for the use of energy-efficient building technologies and building specifications, and through such improvements to build a lasting institutional basis for continuing an emphasis on energy efficiency within the housing development, financing and management industries—in both the public and private sectors. These objectives will not be reached in one year, nor will the program be able to reach the nation's thousands of community housing providers and housing industry organizations within one year.

Question: How much is HUD contributing to this program?

Answer: HUD provides modernization funds of over \$2 billion annually in grants to public housing authorities that are explicitly directed towards funding of capital improvements. HUD is also contributing approximately \$1 million to support a clearinghouse for energy efficiency through the National Center for Appropriate Technology.

Question: What exactly are you doing that HUD is unable to do?

Answer: DOE staff and national laboratories have significant capabilities in the development and use of energy-efficient technologies, design and financing practices, new construction and rehabilitation specifications, and other energy efficiency techniques that are not now widely available internally within HUD. For example, DOE's activities with public housing authorities have focused on reviewing construction designs, assessing whole-building approaches, optimizing siting, design, material and equipment selections, assisting in the acquisition of high efficiency appliances, developing audit approaches for correcting high billing complaints, assessing and defining means to improve maintenance effectiveness, and developing innovative retrofit approaches. These activities and others ranging from on-site technical assistance to field testing of energy efficient technologies, and the extension of this assistance to affordable housing outside of HUD's direct responsibility, are not a major part of HUD's current energy efficiency portfolio or management mandate. Although HUD recognizes the importance of energy efficiency to housing affordability, energy efficiency in itself is not the primary emphasis of its program. Training in energy conservation is not generally available at HUD (except for training in performance contracting), and while HUD field staff have been involved in analyzing energy needs and review activities for compliance with regulations related to utilities, HUD has neither a designated energy officer at the field level nor the applicable technical resources needed by local housing authorities. DOE has established a partnership with the National Association of Housing and Redevelopment Officials to establish a national training program for its members and to support HUD's National Training Academy. A coordinated effort that takes advantage of DOE's experience and technical expertise is the most effective way to make energy efficiency improvements common practice in HUD housing, as well as in low income housing managed by other community housing providers.

Question: When do you anticipate you will withdraw from the program and turn it completely over to HUD?

Answer: DOE has a continuing responsibility to foster energy efficiency as a key element in assuring a healthy and vital national economy. Affordable housing will always be a part of this responsibility. As HUD is not responsible for the nation's total stock of affordable housing, the program cannot be turned over completely to HUD. DOE expects that its formal "affordable housing" program and related requests for funding will end after FY 2000. Continuing responsibilities for energy efficiency's inclusion as a common and well-accepted element in making housing more affordable are expected to become a normal part of the operations of both HUD and the private housing industry.

Best Practices

Question: What is the "Best Practices" program and why do you propose to increase funding for this program? (\$4.5 million in 1996, \$5.4 million in 1997; \$8.5 million requested for 1998)

Answer: Best Practices represents a consolidation of related and interactive programs into a single program with common vision and mission. Energy Design Tools and Passive Solar activities are combined with programs relating to Indoor Air Quality, Technology Transfer, and Outreach. Taken together, these programs make a collective contribution to the vision of defining energy excellence in the building sector.

The Best Practices planning unit provides the building industry with design tools and knowledge systems, effectively integrating renewable energy and energy efficiency technologies into the crucial building design and renovation know-how needed to achieve excellence in building energy performance. One main product is the development of accurate predictive tools, starting at the predesign stage where there is the greatest flexibility, continuing into the design process to optimize the disparate design choices, and ending with the analyses and tests required to understand the potential of advanced innovative concepts and better techniques of buildings. Combining these tools with the strategies emanating from our Passive Solar and Exemplary Buildings strategies will lead to very low-energy buildings—buildings, which by using less energy, will reduce emissions. Progress in the Indoor Air Quality program is providing the scientific knowledge and technological advances needed to reduce energy used to condition, ventilate and clean the air in buildings, while simultaneously providing good indoor air quality and thermal comfort. Our Technology Transfer and Outreach program supports a variety of activities promoting energy efficient technologies produced in the Best Practices and other Building Sector programs. Recent emphasis in the Outreach program centered on developing effective training programs with the Building Operators and the Energy Services industries. The funding increase requested will provide the building industry and our *Buildings for the 21st Century* process with advanced and upgraded tools and techniques for whole building design, retrofit and operation.

Question: What industry participants are there and what are their contributions?

Answer: Design tools are being developed at the request of, and in partnership with, industry. In making improvements to the DOE-2 and BLAST hourly building energy simulation tools DOE is working with industry partners such as the Electric Power Research Institute, individual utility companies and several international public sector organizations. These entities have contributed approximately \$4.3 million between 1994 and 1997. For Multiple industry organizations continue to participate in the development and testing of the predesign tool, *Designing Low Energy Buildings/ENERGY-10*. The Passive Solar Industries Council and its member organizations, representing multiple sectors of the building and utility industries, tool developers and design practitioners, are contributors to this effort. To develop the needed for increasing confidence,, At least six international research organizations are participating in the development of validation procedures to assure that these design tools correctly model buildings and their components. These organizations contribute an estimated \$6 to \$9 for each \$1 spent by the United States.

For our Exemplary Buildings work, building owners support their own design teams. Research staff from our National Renewable Energy Laboratory work with these teams to identify, analyze and test appropriate advanced concepts. Construction of the buildings incorporating these advanced concepts is funded by building owners. Each Federal research dollar invested in Exemplary Buildings is estimated to generate a \$15 to \$25 investment by these owners. The basic and applied research carried out on indoor air quality ultimately is translated into industry-developed consensus standards. The American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) is a major participant in this process. Our developing training programs are cost-shared on an equal basis by industry participants.

Question: What are you doing with the increased funding provided in fiscal year 1997 for the best practices program?

Answer: The small increases in design tool and passive solar research funds for FY 1997 over FY 1996 are being used to: (1) initiate work on EnergyBase, the building energy simulation tool which builds on the best features of DOE-2 and BLAST, and (2) speed up the development of Version 2.0 of the *Designing Low Energy Building/ENERGY-10* Software predesign package, that allows designers to take maximum advantage of renewable energy strategies. Increased funding for technology transfer and outreach focuses on the training needs identified by commercial building owners and operators, and energy service company personnel. These new training activities, developed with industry, are well underway in FY 1997. The Indoor Air Quality program experienced a significant decrease in funding in FY 1997.

Question: For the record please provide a list in priority order of the projects which comprise the increase requested in fiscal year 1998 for the best practices program.

Answer: The activities for which we have requested increased funding are crucial to achieving the mission of the Best Practices program to bring about the proper design and renovation of buildings and to address industry-defined needs for achieving improved health and productivity in the built environment. Currently, Federal funding is not adequate to support all of these efforts, toward which industry would like to contribute resources. For example, the development of EnergyBase, the building energy simulation tools incorporating the best feature of DOE-2 and BLAST, represents an opportunity for which industry is ready to share cost substantially. Essential improvement to the ENERGY-10 Software package, which industry requested and is helping develop, is required in 1998. The primary reason for the increase request for the Indoor Air Quality program is the expansion of research on the effects on productivity of indoor environments. We will conduct a highly visible intervention studies in various building sites in FY 1998. Co-funded with the National Institute of Occupational Safety and Health (NIOSH), these studies are expected to yield scientifically valid conclusions about the relationship of critical environmental factors and occupant productivity. Energy-related factors such as ventilation rates and filtration technologies will be the subject of the planned interventions. Additionally, the National Renewable Energy Laboratory will seek Cooperative Research and Development Agreements (CRADAs) for advanced ventilation experimentation. These CRADAs are essential to help industry develop energy efficient solutions to poor indoor air quality. Training of practitioners in the use of advanced design and building energy simulation tools. and know-how

emerging from research and development activities like the Commercial and Exemplary Buildings Programs, is paramount to enabling the buildings community to replicate results and benefit from lessons learned.

Space Conditioning Research

Question: Please explain the Hi-Cool Heat Pump program and why you propose to more than double the budget for the program is fiscal year 1998. (\$910,000 in 1997, \$2, 150,000 requested for 1998)(p. 383)

Answer: The Hi-cool Heat Pump is an advanced cycle "second generation" absorption heat pump that will have a 30 percent better cooling performance than the "first generation" Generator Absorber Heat Exchange (GAX) cycle. The Hi-cool heat pump is scheduled to be ready for market entry in 2005. This technology will enable widespread use of natural gas cooling in the southern tier markets where space cooling is the dominant mode of energy use. Two out of seven advanced "hi-cool" cycle concepts obtained through a competitive process are being developed with small business firms. The present work is focused on designing, fabricating and testing selected critical components. The next phase of work is to develop and laboratory-test complete heat pump systems, which is vital to increasing industry participation. Development of complete heat pump systems inherently requires more funding than development of selected critical components. The additional funds of \$1,240,000 in FY 1998 are needed to accelerate the component development phase and begin to fabricate complete engineering test units.

Question: Congress provided \$1 million to study building applications of fuel cell microcogeneration technology in fiscal year 1997. What are you doing with those funds?

Answer: In FY 1997, a Program Research and Development Announcement (PRDA) was issued to seek proposals to advance basic technologies for the proton exchange membrane (PEM) fuel cells specifically for application in buildings. The \$1 million will fund at least two contracts to develop components for reforming natural gas into hydrogen for use as fuel for the fuel cell. This technology is one of four critical enabling technologies unique to building application. This research is not being conducted in any other fuel cell program.

Question: How is this micro-cogeneration technology different from the proton exchange membrane fuel cell technology being studied as part of the PNGV program?

The Proton Exchange Membrane being developed in the Fuel Cell for Buildings (FCB) program will differ significantly from that being developed by the PNGV Program due to application requirements. The application requirements dictate significant differences in several of the key components of the fuel cell system (e.g., fuel processor, bi-polar plates, catalysts, membranes). The table following gives some major differences in application requirements and technology between the two programs.

Differences in PEM Technology for Fuel Cell Programs		
Characteristics	Buildings	Automotive
Acceptable Cost (\$/kW)	1,500	65 Small/500 Truck
Heat Recovery	Critical	Optional
Life Cycle (operating hours)	40,000	3,000
Fuel Reforming Method & Temperature	Steam High Temperature	Partial Oxidation Low Temperature
Fuel	Natural Gas	Methanol, Liquids
Packaging	Not Limited	Critical
Response Time	Important	Critical

Question: What would you do with the requested increase for this program in fiscal year 1998? (\$1.7 million requested) (p. 389)

Answer: In the Fuel Cell for Buildings Program, \$1 million in FY 1997 will be used to fund at least two concepts for reforming natural gas. The program plan for reforming R&D is divided into three phases, each phase having its own funding level. Phase I is to develop a concept, a step that is not being duplicated by other fuel cell programs. At the end of Phase I, we will select a concept and fabricate and test a laboratory test unit. The additional funds requested in FY 1998 will enable the continuation of Phase I, when we will build a methane reformer unit to be tested on a 50kW PEM fuel cell stack. Additional funds will be used to initiate investigating methods of CO cleanup, a critical issue in the operation of the PEM fuel cell.

Question: What are the outyear costs associated with the micro-cogeneration program and what industry cost sharing is involved?

Answer: The program is scheduled to have a "first generation" prototype 50 kilowatt PEM fuel cell ready for test and evaluation in a building in 2002 and ready for market entry in 2005. The Federal appropriations currently deemed necessary to meet this schedule are \$1.7 million in FY 1998, \$3.0 million in FY 1999, \$4.0 million in FY 2000, \$4.0 million in FY 2001, \$4.0 million in FY 2002, and \$2.0 million in FY 2003. The industry cost share for this program will be in the range of 35 to 50 percent.

Highly Reflective Surface Demonstrations

Question: You have proposed a new program which involves highly reflective surface demonstrations. What do you propose to do with the \$600,000 requested for this new program? (p. 400)

Answer: DOE would initiate a program to involve the roofing and the paving industries, other Federal agencies (EPA, DOT, HUD, USDA), local governments, and other organizations to implement recommendations of urban heat island research. Among the many problems resulting from use of heat absorbing materials on roofs and pavements in urban infrastructure are elevated ambient air temperature, accelerated deterioration of building and pavement surfaces, excessive energy consumption for air conditioning in buildings, increased motor vehicle fuel use, accelerated smog formation, and increased incidence of human health problems. Urban heat island research recommendations include: 1) demonstrate use of highly reflective surfaces in combination with urban forestry on Federal facilities and in cities nationwide; 2) develop cooperative agreements with private organizations to take leadership, with DOE support, in implementing outreach and community participation programs that focus on mobilizing outside funds and resources to solve local urban heat island problems; 3) support development of incentive strategies such as building code modifications, local pollution control credit markets, reflective roofing and pavement industry collaboratives, and standardized roofing product labeling; and 4) collaborate with other Federal programs with related objectives such as Climate Challenge, Clean Cities, Rebuild America, Building America, Energy Star, Federal Energy Management Program, Weatherization Assistance, and Industries of the Future in compliance with the National Performance Review Act.

Question: The Committee is skeptical of funding new programs in this era of budget cuts and skeptical of programs which involve marketing efforts. Why isn't this program better left to the private sector?

Answer: Government must take the lead for several reasons. Consumer awareness of the value of reflective surfaces and vegetation for saving on heating and cooling costs in buildings is low. Public understanding of important biological and physical relationships between urban vegetation and surface reflectivity is limited. Industry-accepted measurement standards and a labeling conventions for roofing and pavement reflectivity have not reached the marketplace. Industry would have an incentive to gain market share by advertising surface reflectivity, but no industry organization has established reflectivity standards and labels. Government can contribute to public awareness of technologies that will reduce ambient air temperature and smog formation and lower human health costs in partnership with communities. Solving urban heat island problems requires a concerted effort that no one consumer or product manufacturer can individually provide.

Windows and Glazing Research

Question: You propose to increase your windows research budget from \$5.4 million in fiscal year 1997 to \$7.6 million in fiscal year 1998. Given the major advances in windows technology and the availability of these new technologies in the marketplace, why do we need continued Federal investments in windows research?

Answer: There have been a number of advances in window and glazing technologies in the past few years, including the most recent progress under the DOE program in electrochromics and deposition technologies and advances in new computer tools and test capabilities. Today, one

third of the residential building market uses efficient glazing, that is, Low-E or spectrally selective glazing. Adoption of this glazing, however, has slowed. Part of the reason two-thirds of the market does not use efficient glazing related to the need for technology advances. With continued research, this slowness of adoption will be resolved over the next few years. Another high-value technology requiring Federal investment is electrochromics. Electrochromics would provide a means to dynamically control solar and optical properties in windows to achieve an optimum performance at a relatively low cost. Alternative approaches, such as automated mechanical shades or passive optical coatings, cost more and do not perform as well. At this time, foreign companies are poised to use electrochromic technology to gain a major foothold in the \$20 billion per year high-performance window market. DOE's efforts over the last few years have stimulated a major change in the window industry and market, where high performance, value-added energy-efficient windows, rather than low cost commodity sales, are now the product focus. Economic impacts of our research include near-term benefits to automotive applications and to near-term building solar control and daylighting applications—using existing mechanical shade and spectrally selective coatings. Further, the deposition technology we are developing for use in electrochromic applications will also support development of nearer-term durable Low-E and spectrally selective coatings with improved performance and lower cost.

In summary, existing energy-efficient products sales have stalled at approximately one-third of the market. Increasing market share to 80 to 90 percent will eventually lead to a 2 quad per year savings in energy, saving \$16 billion for the American consumer. The window technologies currently under research at DOE are estimated to lead to an additional 2 quad/year savings once they have been fully developed by industry.

Question: What industry cost sharing is involved in this program?

Answer: DOE provides direct funding and technical support to two industry consortia aimed at developing electrochromic glazings. DOE funds approximately 50 percent of the total costs for these R&D efforts. In later phases of the project, the Department expects additional cost sharing from utilities and building owners. DOE provides technical support to the National Fenestration Rating Council (NFRC) to ensure NFRC existing and emerging procedures to rate the thermal performance of windows and other fenestration products are accurate and cost-effective. The window industry spends approximately \$1 million each year for NFRC administrative costs and over \$10 million annually developing product ratings. The Efficient Window Collaborative (otherwise known as the SuperWindow Collaborative) has been focusing on the development of the tools and framework for a major transformation of the market to efficient windows. As the program enters the implementation phase, industry cost sharing is expected to far exceed DOE's investment.

Question: What breakthroughs in windows technology are directly the result of research by DOE?

Answer: "Hard" low-emissivity (Low-E) coatings (more durable than the original soft coatings), used in all high-performance windows, are the result of DOE-sponsored research in the 1970's and 1980's. The NFRC rating system, based on DOE-sponsored research and DOE-

supported software, was developed in collaboration with industry by DOE researchers who served as effective intermediaries among various industry groups with diverse interests in the development of this rating system. SuperWindows, or highly insulating windows, were originally developed at a DOE lab and demonstrated in test houses with DOE cost-sharing. Such prototypes led to the development of commercially available SuperWindow products and helped fuel an industry interest in low-conductance spacers and gas-fills. DOE supported work on the basic materials science underlying electrochromic windows and was essential in convincing industry that such coatings were technically feasible. DOE studies proving the energy and non-energy benefits of electrochromics have helped convince industry to invest more heavily in this field. The effective use of daylighting in commercial buildings can save 30 to 60 percent of lighting energy. DOE has supported the development of new design assistance tools and test facilities that are helping manufacturers and architects capture more of the energy savings potentials of these technologies.

Question: Please provide a list in priority order of the projects which comprise the increase requested for windows and glazing research.

Answer: The FY 1997 appropriations for windows and glazing research represent a significant decrease in funding for this program. Our FY 1998 request restores critical funding for this work. The Department's request is for a balanced, integrated program in windows research. In late FY 1996, an evaluation of the electrochromic consortia contractors participating in this program found each had exceeded the initial goals for energy and optical performance. However, some improvements in durability and more extensive durability testing were required. During FY 1997, each contractor is developing more durable large test specimens and undergoing more extensive testing. During FY 1998 and FY 1999, scaleup of the process deemed superior will result in the initial production of full size prototype windows and field testing. Advanced glazing research provides critical support to industry in establishing the technology bases for: new tools to address both residential and commercial buildings; the rating system extended to address commercial building glazing technologies and gain international acceptance; and, new tools to enable industry to develop the next generation window and glazing technologies. The SuperWindow Collaborative provides the technical assistance to a few existing regional programs and initial industry collaborative efforts. In FY 1998 increased technical assistance for additional regional programs and educational materials will support efforts of interested manufacturers. SuperWindow technologies will have accelerated efforts to develop a new generation of versatile ion beam coating deposition processes for increased durability and improved performance.

Codes and Standards

Question: Describe your efforts over the past year to work with industry, the States and other interested parties to resolve the controversy in the codes and standards program.

Answer: In September 1995, the Department announced a formal effort to consider further improvements to the process used to develop appliance efficiency standards, calling on energy efficiency groups, manufacturers, trade associations, state agencies, utilities and other interested parties to provide input to guide the Department's work. A series of meetings was held and

interviews were conducted with thirty organizations that have participated in past appliance rulemakings to solicit information regarding the perceived strengths and weaknesses of the process.

This effort culminated in the publication of a process rule on July 15, 1996, which institutionalized the procedural improvements, based on input from stakeholders. New procedures included such improvements as very early and frequent input from stakeholders, increased use of outside technical expertise, increased predictability of the rulemaking timetable, the use of transparent analytical methods, and the support for consensus building.

Other actions in the Department's process improvement effort included: a review of manufacturing impact analysis model and methodologies; the prioritization of future rules; and the creation of an advisory committee, consisting of a representative group of interested parties, to oversee the implementation of the commitments in the process rule. The Office of Codes and Standards instituted an annual prioritization process in the fall of 1996. The prioritization process uses criteria such as potential energy savings from regulatory action only, potential economic benefits/burdens and stakeholder recommendations, which are to identify covered products as high, medium and low priority products. This not only provides a basis for scheduling rulemakings but also allows the Office to allocate its available financial and staff resources according to the priority categories, with high priority products receiving the majority of the resources.

The Department has created the Advisory Committee and the first meeting was held on January 8, 1997. At this meeting a number of subcommittees, who will be reviewing a number of specific concerns, were established. The Department also completed its review of the approach to analyzing the impact of standards on manufacturers. A new approach was developed and presented at a workshop held on March 11-12, 1997. The Office will be working with its stakeholders to tailor each rulemaking to the specific product under consideration.

Question: It is unrealistic to expect that the Committee will be able to provide the \$20.6 million requested for the codes and standards program in fiscal year 1998 (\$12.1 million in 1997). What are your top two priorities among all the increases requested for this program?

Answer: The Department has requested an increase of \$8.458 million for the Codes and Standards Program. The increase is for both Building Standards and Guidelines and Lighting and Appliance Standards.

The increase in Building Standards and Guidelines includes increased support of state and local adoption of energy codes. As part of this activity, the Department expects to work closely with model code groups, states, builders and others to develop materials, training programs and improvements to existing model energy codes. The Council of American Building Officials Model Energy Code, for example, has been incorporated as the baseline in the Environmental Protection Agency's Energy Star Program for buildings, Home Energy Rating programs and the Edison Electric Institute's E-Seal program. Materials developed by the Department, such as MECcheck, have been adopted by others, such as the National Association of Home Builders, in their training

programs which support these programs. In order to make these voluntary market-driven building energy programs work, builders, code officials, utilities and others need an effective model energy code and training and materials to enhance their effectiveness. If cuts are made, the level of support to states, building code officials, code organizations and builders will be reduced accordingly.

The increase in Lighting and Appliance Standards includes increased support for appliance standards rulemakings. During the moratorium on appliance standards rulemakings imposed by the fiscal year 1996 appropriations act, DOE instituted a new process for conducting appliance standards rulemakings. As part of the new process, the Department instituted an annual prioritization process for standards rulemakings. The prioritization process includes the establishment of criteria such as potential energy savings (from regulatory action only), potential economic benefits/burdens and stakeholder recommendations, which are used to identify covered products as high, medium and low priority products. Then the Department allocates its available financial and staff resources according to the priority categories, with high priority products receiving the majority of the resources. The Department will use this approach in allocating annual appropriations. If cuts are made, then rulemakings may be delayed or new ones not initiated. Since standard rulemakings can take up to three years, appropriations will be used first for continuing rulemakings rather than initiating new ones.

Weatherization and State Grants

Question: The Weatherization Assistance Program, again this year, has a large increase requested in the budget. (\$121 million in 1997, \$154 million requested for 1998). How much funding is devoted to weatherization in the Low Income Home Energy Assistance Program funds, through the Department of Health and Human Services?

Answer: The DOE Weatherization Assistance Program has long served as the core program for delivering energy conservation services to low-income Americans. The DOE Weatherization Assistance Program has national impact and serves national interests by creating the technological and programmatic foundation for the individual State programs. Weatherization contributes to achieving national energy and social goals including: cleaner air through reduced CO₂ emissions; reduced consumption of imported fuels through reducing residential consumption; reduced demand on other social programs such as fuel assistance, housing, and health care; and implementation of innovative energy efficiency technologies and transfer of this technology into the private marketplace. Over the years State and local agencies have established a professional delivery system of providing quality energy conservation materials and installation on low-income homes using sophisticated state-of-the-art energy auditing techniques.

The success of the DOE energy program has led the nation's governors to supplement the Weatherization program by designating up to 15 percent of their annual LIHEAP block grant funds, which could amount to as much as \$135 million in the current year. These LIHEAP designations are not provided because the DOE Weatherization Program is a welfare program—lowering low-income households' energy bills through improving the energy efficiency of their homes reduces the need for cash assistance in the long term. A major DOE goal is to

offer improved energy efficiency technologies to the nation. Without federal support the marketplace would exclude low-income citizens who cannot afford to make investments in these technologies. Low-income households have an energy payment burden four times that of other households (14 percent of income versus 3.5 percent). Weatherization successfully addresses this inequity. The program's effectiveness is enhanced through the flexibility of core DOE Weatherization funding, which enables States and local agencies to leverage additional funding from low-income housing programs, utilities, and, in the case of rental unit Weatherization, from property owners.

Question: The weatherization program continues to be one of the Administration's highest priorities in your budget. Why is it a higher priority than energy research and development that will, over the long term, permanently reduce our dependence on oil imports?

Answer: The President's budget provides sufficient resources to fund both of these important programs. Research and development programs have brought to the marketplace many new technological advances in energy auditing techniques as well as state-of-the-art products and applications which greatly improve the long term energy savings in residential and commercial buildings. The Weatherization program serves as a vehicle to bring these technological advances in residential energy research to the marketplace for millions of low-income Americans who could not otherwise afford to make these energy saving investments in their homes. These new technologies and products have helped to increase the measured energy savings of the Weatherization program over the past seven years from 18 percent in 1989 to 32.5 percent in 1996. The program now operates on a favorable cost-benefit ratio of 2.4, as documented in a report *State-Level Evaluations of the Weatherization Program in 1990-1996: A Meta-Evaluation that Estimates National Savings*, soon to be published by Oak Ridge National Laboratory. The Weatherization Assistance Program provides cost-effective energy efficiency services to constituencies that cannot afford investments in Weatherization and who, without the program, would not benefit directly from government and industry energy efficiency technologies.

Question: To what extent are there other sources of funding for the State grant program?

Answer: The State Energy Program (SEP) provides a supportive framework that has as one of its primary purposes serving as a catalyst for leveraging funds from non-Federal sources. Each SEP Federal dollar is expected to leverage at least \$4 in Petroleum Violation Escrow (PVE), State, utility and other private sector funds. In addition, the Department's end-use sector programs: Energy Efficiency and Renewable Energy programs and federal are contributing to the new (starting in 1996) Special Projects (non-formula) part of SEP. These activities were targeted for implementation by States and are consistent with States' Annual State Plans under SEP. The inclusion of the SEP Special Projects funding has expanded the program, allowing the States to compete for funds to implement additional State-oriented building, industrial, transportation and utility sector programs of \$11.2 million in FY 1996 and \$9.8 million in FY 1997 representing an increase of 38 percent over the total of \$55 million appropriated for SEP in those two years.

Federal Energy Management Program

Question: You've asked for a 57 percent increase in the Federal Energy Management Program (\$20 million in '97, \$31 million requested for '98). The rationale you give is that other Federal agencies are not funding energy efficiency improvements in their buildings. Why should DOE pick up the slack for the other agencies?

Answer: The 57 percent, or \$11.3 million increase, will leverage private sector financing across all Federal agencies. This is consistent with the FEMP mission of assisting agencies with identifying alternative financing mechanisms for Federal energy efficiency and renewable energy technology investments. This increase is a fraction of historical annual appropriations for all agencies, and is insignificant compared to the several billion dollar private sector investment it will leverage through Energy Saving Performance Contracts (ESPCs) and the resulting several billion dollars of savings that will accrue to all agencies. The rapid increase in ESPC efforts is essential to capture financing while Federal facility expertise remains at agencies to put financing projects in place. This increase will make a timely contribution to deficit reduction. Without this increase, agencies will not see the rapid in flow of private financing and will continue to lose resources to implement energy efficiency cost recovery.

As legislative lead for federal energy management, FEMP can and should specialize in energy services that would be more costly to replicate in each agency. Our estimates show that FEMP-based Super ESPCs will save \$26 million in initial contracting costs and \$100 million more in energy savings through 2002 than providing the same energy management through energy service contracts awarded by individual agencies. Providing these services through FEMP will avoid delays in awarding contracts and implementing task orders. The FEMP Super-ESPC plan calls for the award of 26 Super ESPCs as opposed the 70 ESPC that would be required to cover the top 17 energy consuming agencies. FEMP's centralized policy, training and technical assistance capabilities and functions offer similar budget savings versus multiple agency efforts.

Question: Why can't you work with the Office of Management and Budget to ensure that energy efficiency funding is a mandatory requirement in each agency's annual budget?

Answer: Until the past couple of years, the largest energy using agencies (DOD, GSA and DOE) included requests for efficiency improvements in their budgets which OMB supported. In recent years those funds have been zeroed out by the appropriations committees and the agencies have not included them in their recent requests. Given the current budget climate, OMB has concurred.

Question: Will you approach OMB with the suggestion that they coordinate the inclusion of an energy efficiency program in the budget of each major Federal department?

Answer: We will continue to work with OMB to ensure that all agencies capitalize on their energy savings opportunities. The inclusion of energy efficiency programs in the agency budgets has been and will continue to be a key component of our government-wide strategy to reduce

energy use and cost. However, each agency is ultimately responsible for the allocation of funds proposed to OMB to accomplish its mission priorities. We will continue to work this issue with OMB.

Question: The In-House Energy Management Program was eliminated in the Energy and Water appropriations. The staff from that program have been reassigned to the Federal Energy Management Program. Please explain.

Answer: Former IHEM staff members have been integrated into the FEMP staff and are assigned to support FEMP's many interagency activities. For example, former IHEM engineers assisted in the evaluation of proposals for the Western Region Super ESPC and are establishing other Super ESPCs that can be used by all agencies. Former IHEM staff have provided assistance in evaluating applications by contractors applying to be qualified energy service contractors under the DOE qualified contractor list. In addition, staff members have created energy awareness posters that were made available for all agencies as part of the government-wide energy awareness month activities. They also assist in the collection of data to support FEMP's annual report to Congress on behalf of all agencies' energy management activities.

The activities of the former staff members are fully in line with the interagency support activities that FEMP has traditionally provided and are in no way a preservation of the single-agency focus of the former IHEM office.

Question: How many people are involved in the IHEM reassignment and what additional cost has it imposed on FEMP?

Answer: There are five FTEs who have been integrated into the FEMP programs of Project Financing, Technical Guidance and Assistance, and Planning, Reporting and Evaluation from the IHEM program that was eliminated by Congress. The FEMP budget request for Program Direction is \$2.1 million which includes salaries, benefits, travel support, and realignment costs for 20 FTEs to manage and support the Federal Energy Management Programs under the Energy Policy Act of 1992. The funding for other services includes training, employee incentive awards, library services, and a small contingency fund.

Industry Research Programs

Advanced Gas Turbines

Question: What is the advanced gas turbine program and how does your program differ from the fossil energy turbine program?

Answer: The Advanced Turbine Systems (ATS) program develops improved gas turbines for industrial and utility power generation. The program is jointly planned with industry to create large improvements in gas turbine performance between 1993 and 2000. The program is a collaborative effort of the Office of Energy Efficiency and Renewable Energy (EE) and the Office of Fossil Energy (FE) and capitalizes on the strength of each organization and shared efforts in the development of base technologies. Management responsibility is shared by the two organizations. The Office of Energy Efficiency and Renewable Energy is funding the development of an industrial scale turbine of less than 25 MW, which can be used to produce combined heat and power for residential, commercial and industrial plants. The Office of Fossil Energy funds the development of a utility turbine of greater than 150 MW.

Question: Why is the turbine program funded both in Energy Conservation and in Fossil Energy?

Answer: In the program plan submitted to Congress in 1993, entitled *Report to Congress, Comprehensive Program Plan for the Advanced Turbine Systems, February 1994*, the Department established a joint program in response to Congressional language requesting that the two organizations work together on this initiative. Fossil Energy contributes expertise in utility programs, combustion research and coal technologies. Energy Efficiency and Renewable Energy contributes expertise in industrial processes, biomass and materials research, including the Advanced Materials Program and the Continuous Fiber Ceramic Composite (CFCC) Program. This has proven to be a very effective partnership between Fossil Energy, Energy Efficiency and Renewable Energy and industry. The coordinated base technology work in the national laboratories and universities on materials, heat transfer, and coatings has also been very successful.

Question: How many contractors are involved in your program and what plans do you have to downselect to a single contractor?

Answer: The industrial funding within the Office of Energy Efficiency and Renewable Energy covers two main gas turbine contractors, Solar and Allison. The effort also encompasses supporting programs in critical technologies. These secondary programs include PCC/GE, Westinghouse, Pratt-Whitney and Howmet.

Since the two manufacturers are pursuing distinctly different technology approaches to the ATS program, there is no critical need to downselect to one contractor at the end of Phase 3, for major component development. The large market opportunity in industrial power generation and distributed power (a result of the deregulation of utilities) suggests that both products will find

extensive application. Solar's design is based on 30 years of industrial ruggedness for power generation and oilgas piping; Allison's design captures novel aerospace technologies for power generation, especially peaking opportunities. Downselect will occur in the Phase 4 demonstration stage. Allison is fully funding their Phase 4 effort, and the Federal share of the costs for Solar's Phase 4 is minimal given Solar's large cost share. Currently, both Solar and Allison have spinoff activities in the materials and combustor technologies that are currently influencing their current commercial products designs.

Question: You've asked for a total of \$24,650,000 for the turbine program in fiscal year 1998. What are the projects which make up that total?

Answer: The project breakdown in FY 1998 includes:

Contractor	FY98 Funding (\$millions)
Solar Turbines	10.4
Allison Engine Company	8.2
Ceramics for Stationary Gas Turbines	2.5
ORNL/Program Support	2.0
Westinghouse (coatings)	1.05
Pratt-Whitney (coatings)	0.5

Question: The Committee understands that the funding requested is not sufficient for continuing the existing contracts on schedule. What additional funds would you need to keep the contracts on schedule?

Answer: To return to the funding profile to the 1993 Program Plan levels and end the program in 2000, the funding necessary would be:

(Funding in \$millions)

Fiscal Year	Base Funding	Incremental Funding	Total Funding
1998	24.650	12.0	36.650
1999	24.650	12.0	36.650
2000	24.650	11.0	35.650

Question: What would you do in fiscal year 1998, given the budget request and how would that differ if you had funding sufficient to keep on schedule?

Answer: At the FY98 request level of 24.650 million our activities would encompass:

- Compressor manufacture and testing at Wright-Patterson AFB
- Full scale ultra-lean combustor development
- Airfoil manufacturing
- Recuperator development
- Fuel injector design and component development
- Ceramic combustor liner testing
- Ceramic 2nd stage turbine vane development
- Part power emissions development

With an additional increment of 12 million, we would include:

- Catalytic combustion development
- Combustion controls
- Thermal barrier coating sensor development
- Dual-fuel combustor
- CO sensor
- Power turbine development
- Compressor titanium disks
- Design of ceramic scroll

Question: What is the industry cost share in the program and to what extent could it be increased?

Answer: The contracts for the industrial ATS gas turbine contractors requires a total cost share of 42 percent, with 50 percent in the demonstration phase. The Solar Turbines program is officially cost shared by 59 percent in the contract and is adding considerable investment in production facilities outside the contract in order to reach the market quickly. Allison is cost sharing 43 percent in the contract and has other supporting work as well.

Increasing the cost share would be difficult. The two contracts specify cost share amounts, which the companies agreed to and have exceeded. The companies are already making major investments in support of the program, and changes in these arrangements would likely cause delays in the program. Both contractors are also investing outside the program to spin off technology breakthroughs that update their current product lines.

Question: What economies could be achieved through consolidating the turbine programs from fossil energy and energy conservation into one organization?

Answer: Little, if anything, would be achieved by consolidating the two programs into one organization, since there is a need for one program manager for the utility program and one for

the industrial program. Even within one organization, the program would require two program managers to oversee the program's complex contracts, that have differing needs for utility and industrial customers. The main contracts have been contracted out of FETC for both programs in order to maximize resources and minimize differences in the program. Other technical support from DOE-Chicago and Oak Ridge National Laboratory is important whether or not the program is managed within one or two organizations. There are no apparent cost redundancies in the joint program as it operates today.

The disadvantages of placing the program in a single organization would be a loss of ready access to other programs and increased distance from the customer base. Within the EE Office of Industrial Technologies, the ATS program is closely tied to the Industries of the Future Program, the ultimate customer base. Ongoing work with the industries to provide access to the ATS engines and the demonstrations will be tied to Industries of the Future Program sites. The easy access to the biomass programs within EE is also beneficial to several other DOE programs including the Forest Products efforts and the OUT Biomass Power program. Within FE, access to other coal programs such as coal gasification and the utility market is equally beneficial to the ATS program.

Question: For the record, please provide two profiles of funding for the turbine program by fiscal year, past and future. The first should assume continuing the full scale program. The second should assume you will downselect to a single contractor in fiscal year 1998.

Answer: The following table compares the full-scale program costs versus a one-contractor scheme. It is OIT's recommendation that extending the program to 2002 is better than downselecting to one contractor to meet the 2000 deadline. Although this will cause delays in meeting market pressures via deregulation, it improves the long-term deployment opportunities by having two products on the market.

	FY92 (\$MM)	FY93 (\$MM)	FY94 (\$MM)	FY95 (\$MM)	FY96 (\$MM)	FY97 (\$MM)	FY98 (\$MM)	FY99 (\$MM)	FY00 (\$MM)	FY01 (\$MM)	FY02 (\$MM)
Full scale Program	2.2	3.0	7.3	18.5	21.6	24.6	24.6	24.6	24.6	22	13
Program with down selection to one contractor							17	17	17	15	10

Industries Of The Future

Question: The “industries of the future” program focuses on 7 key industrial areas. They are 1) forest and paper products, 2) steel, 3) aluminum, 4) metal casting, 5) glass, 6) chemicals, and 7) petroleum refining. The Congress has supported your efforts to streamline the industry programs and to use the limited funds available to target funding to the 7 major energy consuming industries. Why can’t you take a similar approach in your buildings and transportation research programs?

Answer: The Office of Energy Efficiency and Renewable Energy has in fact taken action to streamline our buildings and transportation research programs. We have aligned our transportation research and development programs with the Administration’s initiative to develop prototype automobile with triple the fuel economy of today’s family sedan. Our support for this interagency effort under the Partnership for a New Generation of Vehicles entails coordinating the many aspects of our transportation research—in advanced materials, propulsion systems, energy storage, fuel cells, and alternative fuels — in a systems approach to optimizing vehicle efficiency. This research counts on the participation of the “Big Three” automakers; the national laboratories; the Departments of Commerce, Transportation and Defense; the Environmental Protection Agency; the National Science Foundation, and NASA to work together on a technology roadmap to achieve a unified goal. The focus on this objective in a cooperative framework allows the Partnership for a New Generation Vehicle to eliminate research redundancies and select the most promising technologies that together will bring the efficiencies needed for the car of the future.

Similarly, our buildings research and development efforts are being focused on the Buildings for the 21st Century initiative. The Department is launching a Buildings for the 21st Century program to integrate energy efficiency and renewable energy technologies for buildings in a “whole building” systems approach. The Buildings for the 21st Century Program will advance the design of buildings as whole energy systems. The program will bring together the capabilities of the design, construction, and investment industries to unify the fragmented focus existing in the building industry today. The Department’s efforts to improve building efficiency will benefit from this combined focus. The program will involve industry in expanding the adoption of whole buildings practices.

Question: What tangible results have you had from the funding provided for the industries of the future program over the past couple of years?

Answer: In operation for two years, the Industries of the Future (IOF) process of working with the seven energy- and waste-intensive industries has produced a number of tangible results, as outlined below:

First, six of the seven industries have completed Visions of their future, taking into account market conditions, regulatory issues, and many other factors. The Vision for the Petroleum Refining industry is expected to be completed before the beginning of FY 1998. These Visions project where the industry needs to be in 20 to 25 years in order to be globally competitive and more resource efficient. Technology Roadmaps, which define specific development of

technologies needed to achieve the future state of each industry, are under development with all industries that have a Vision. Several Technology Roadmaps are nearing completion (Forest Products, Metal Casting, and Aluminum), while those for Steel, Chemicals, and Glass are moving along nicely with completion expected early in FY 1998.

Second, the Industries of the Future process has sparked real interest in other industries. For example, the Heat Treating and Forging industries, which are suppliers to the three metals industries in the IOF, requested assistance from the Office of Industrial Technologies (OIT) to facilitate the creation of their own Vision. Their interest was to structure a vibrant future for their own industries, as well as to tie into and complement the industries with which they are aligned. The carbon products industry has initiated the development of their Vision, as have the Corn Growers and Bio-based Renewable portions of the agriculture industry. Just recently, the mining industry requested OIT's involvement in the early stages of the creation of their Vision. Finally, the IOF process is being initiated at the state level, with West Virginia leading the way. The concept is for the state to work closely with any of the same seven industries which may be a part of the state's economy, in order to make those industries more robust, and environmentally friendly. The approach will be to fine-tune visions, roadmaps and R&D investments made at the national level to meet the particular needs of facilities at the state level.

Third, R&D partnerships with these industries have been greatly strengthened through the formation of the Laboratory Coordinating Council, which has representatives from each of the National Laboratories. These representatives coordinate the delivery of the best laboratory capabilities to improve the resource efficiency of these industries. Industry has praised the Lab Coordinating Council and the National Laboratories as expert suppliers of research. Similarly, our partners in academia are coordinating as never before. Some 15 universities that have historically performed research for the Forest Products industry have formed an alliance to deliver coordinated research that is focused on the needs of the industry as defined by its Technology Roadmap.

Fourth, a variety of R&D mechanisms have been developed to expedite identification and funding of research for these industries. These mechanisms involve industry more in the solicitation process, with the result that the process has been shortened from an average of 12 months for solicitations executed through a DOE Operations Office to four to five months. This allows for a more rapid evolution of research from inception to marketplace.

Fifth, there have been many technology developments achieved during the IOF process, including:

- In the Metal Casting industry, a method of dimensional analysis that validates pattern dimensions and certifies overall part qualifications was created in only 27 months. It is a precise non-destructive, non-contact system allowing measurements of sand cores, EPC foam patterns, metal castings and other manufactured parts made from standard, exotic or low modulus materials. The project involved a consortia of 25 industry partners who provided cost-share funds as well as in-kind contributions to the research activities.

- In the Steel industry, nickel aluminide, a material developed under OIT's Advanced Industrial Materials program, has been successfully tested in transfer rolls under service in a reheat furnace since January 1994 at the Bethlehem Steel plant in Burns Harbor, Indiana. These transfer rolls appear to last at least 10 times as long as previous rolls, and Bethlehem Steel has decided to install 30 nickel aluminide rolls this year.
- Also in the Steel industry, the Advanced Process Control program, which is comprised of a number of discrete projects to use advanced controls and sensors in the processing of steel, has had several successes. One is an optical sensor that provides high-accuracy measurements of the bath temperature of the steel melt in a basic oxygen furnace. Commercial sales should start by the end of this calendar year. Other projects are also approaching commercialization.
- In the Aluminum industry, a bridge deck panel system using aluminum multivoid extrusions is being developed and tested through a CRADA between Reynolds Metals Company and Oak Ridge National Laboratory. The panels are to be used for upgrading deficient bridges in the U.S. Dedication of the first aluminum bridge deck replacement on the Corbin Bridge in Pennsylvania took place in November, 1996. Two more deck replacements will take place in Virginia in FY 1997.
- Also in the Aluminum industry, we have had promising test data from the titanium borasilicide project which shows energy savings in the range of 7 to 11 percent in the primary production of aluminum.
- In the Petroleum Refining industry, the development of a new generation of low emission refinery boiler and furnace burners to facilitate low cost environmental compliance is underway. Refineries obtain 92 percent of their energy through the on-site combustion of fuels. Progress has been made in reducing NOx to the 9 ppm level in pilot scale tests without using costly post-combustion cleanup.

Question: You have asked for an increase of nearly \$10 million for the programs that support the 7 major industry "vision" efforts. It is unlikely that we will be able to comply with that request. How would you realign your budget if you were held to the 1997 level for the industries of the future program?

Answer: Technology Roadmaps are being completed early in FY 1998 for all but the Petroleum Refining industry (which will be completed late in FY 1998). Any reductions from the FY 1998 request would have a significant negative impact on the ability of the Department to partner with these industries. This is particularly true for technologies that relate to waste reduction, energy efficiency and reductions in greenhouse gases where the Federal commitment is viewed by industry as essential.

If the IOF budget must remain at the overall FY 1997 appropriated level of \$46.3 million, we would propose a distribution in FY 1998 among the seven industries that approximates the FY

1997 distribution. However, the FY 1998 request for Petroleum Refining is \$839,000 less than the FY 1997 appropriation, and we would not increase the funding for that program. Instead, we would spread the \$839,000 difference to three industries in order to provide a better balance among the industries, as follows:

Aluminum	+ \$413,000 =	\$6,000,000
Metal Casting	+ \$226,000 =	\$3,726,000
Glass	+ \$200,000 =	\$3,200,000

Question: If the Committee is able to provide a small increase, what are your top two priorities for the program?

Answer: If the Committee is able to provide an increase over the FY 1997 appropriated level, our top priorities would be to provide a proportional increase for the six industries funded at less than the FY 1998 level. After all have reached that level, our second priority would be to provide proportional increases for all seven industries.

Industrial Assessment Centers

Question: What is the Industrial Assessment Center program and why is it needed?

Answer: The Industrial Assessment Center (IAC) Program provides energy, waste and productivity assessments to help small and mid-sized manufacturers pinpoint and analyze opportunities for cost-effective energy and waste savings. These analyses are performed by local teams of engineering students, under the leadership of IAC Directors (professors) from 30 participating universities across the country. On average, recommended actions from each IAC assessment result in annual energy savings of about 4 billion Btus and cost savings of about \$40,000. The program is needed because: 1) it has a proven track record for saving energy, reducing pollution and waste, increasing productivity and saving money for manufacturers who lack the in-house technical expertise to conduct their own assessments, 2) it provides hands-on, practical training to engineering students while building valuable local industry/university relationships, and 3) it is an effective means of introducing new energy efficient technologies to manufacturers.

Question: What industry cost sharing is included in the program?

Answer: While the IAC assessments are provided to manufacturers at no direct cost to the participating company, all costs associated with implementing the identified opportunities are borne by the manufacturer. These implementation costs average approximately \$20,000 for each plant assessed.

Question: You have asked for a \$1.1 million increase for the IAC program. How would you use those funds? (7.2 million in 1997; \$8.3 million requested in 1998) (p. 502)

Answer: In addition to continuing the current level of support for the 30 participating universities, the increase in funding will provide incentives to top-performing schools to evaluate new, innovative assessment approaches like two-day audits. Extending the audit time from one to two days may prove to be more cost effective due to an expected increase in the percentage of opportunities implemented by participating manufacturers. The funding increase will also allow the program to continue working with States on collaborative industrial efficiency projects.

Motor Challenge

Question: What success stories do you have to report from your motor challenge program?

Answer: Some examples of the successes achieved by the Motor Challenge Program include:

Showcase Demonstration

Showcase demonstration projects and the resulting case studies provide examples of how companies have undertaken improvements in their electric motor systems and have benefitted from verified energy savings and related gains in waste reduction and productivity. To date, nine projects have been completed and collectively have achieved an annual energy savings of \$1.2 million (US). Fifteen more projects are active and will save approximately an additional \$2 million, annually. For example, the 3M Company's Showcase has delivered the best results in saving \$821,000 per year with a 1.8 year payback. The 3M project success has led to 3M becoming Motor Challenge's first Excellence Partner, which involves a corporate commitment to the continual improvement of motor systems management practices; supported with a written plan.

Allied Partners

A clear message received from hundreds of companies was that Motor Challenge information and related software were in great demand primarily because they were developed and delivered by an unbiased source, DOE. The challenge then became how to cost-effectively deliver this information to tens of thousands of manufacturing firms, given the program's limited resources. In consultation with industry, the idea of the Allied Partnership was conceived in 1995. To date, Motor Challenge has recruited 125 suppliers, distributors, utilities, state agencies, and consulting engineering firms as Allied Partners. Allied Partners develop an action plan to disseminate Motor Challenge software and information. In return, DOE supports the Allied Partner with technical assistance and provides a variety of Motor Challenge software packages. The Allied partnerships now are beginning to achieve results. For example:

- General Electric Motors and Industrial Systems (GEMIS) of Fort Wayne, Indiana, is adopting MotorMaster+ (MM+) software as their primary customer assistance tool. GE saw the benefit of offering unbiased information as a valuable customer service.
- Union Electric of St. Louis, Missouri, held hands-on MM+ training workshops for their account executives, staff engineers, and their industrial and municipal customers. This

approach to educating industry marketing and technical staff has proved effective for many other Allied Partners. We expect hundreds of Allied Partner events similar to Union Electric's workshops will expose thousands of manufacturing employees to Motor Challenge information or training curriculum this year.

- Electro-Mec, Inc of Indiana, Pennsylvania, successfully used the MM+ software for two of their larger customers (PPG Industries and Armstrong Cement) in making motor system upgrades. As the result, PPG will replace 50 motors and Armstrong Cement replaced two 200 hp motors with 75 hp motors and new adjustable speed drives. The energy cost savings are \$10,000 per year with about a one year payback. Electro-Mec claims that Motor Challenge products and tools made the difference in convincing the customer to upgrade to the new, more energy-efficient technology.

Question: Why do we need to continue the program? Why isn't this a good example of a program that worked, met it's purpose quite well, and now can be concluded?

Answer: While the program's accomplishments to date are significant, Motor Challenge and its industrial partners have just begun to realize the tremendous cost and energy savings from promoting a "systems approach" to energy efficient motor systems. The program has the potential to influence the saving of over 100 billion kWh per year energy savings and \$3 billion (US) annual energy cost savings by 2010 using existing and new technology. But these savings can only be realized by changing both end-user and supplier behavior by encouraging the adoption of best practices and introducing new methods and approaches to managing motor systems. Reaching this goal requires program participants to both work within existing market structures and also cut across barriers to form the new relationships with suppliers and end users. These partnerships are encouraging people and companies to look at motor system design, procurement and management in a new way. Since the program began in FY 1994, Motor Challenge has been reaching out to industry and the companies and associations that serve them. We have explained our program goals and asked for their assistance in developing and delivering our program message. These companies and associations have taken their commitment to partnership seriously—they have made substantial investments of time, personnel, and resources to support Motor Challenge. Motor Challenge is just now starting to enjoy widespread commitment by industry to assist DOE in promoting the energy efficiency of industrial motor systems. DOE and industry's work has just begun to capture these sizable and cost-effective benefits.

Question: How much longer do you expect to continue the program?

Answer: The program needs a few more years to integrate energy efficient motor system management practices into the daily business practices of industry and the companies that serve them. Program success will be achieved when the relationships built through program activities begin to create their own business opportunities for the Program's participants.

Question: What won't you do if you are held to the 1997 funding level for the motor challenge program?) (\$5.2 million in 1997, \$7.2 million requested in 1998) (p. 504)

Answer: If current funding levels are maintained, the program will significantly curtail plans to seriously penetrate the motor systems market in FY 1998. The investment (both public and private) has been made in creating an infrastructure, the momentum has been built, and the expectation has been created that Motor Challenge will ramp up activities in support of our industrial partners. The additional funds would be used to implement more Showcase Demonstrations and to support more Allied and Excellence Partners. The additional Program investment will dramatically accelerate the energy saving results in the next one to three years. Failure to follow through on this growing interest in the Program will result in a loss of this momentum that may not be fully recoverable.

National Industrial Competitiveness Through Energy,
Environment, and Economics (NICE³)

Question: What is the "nice cubed" program and why do you propose to more than double funding for this program from \$5.8 million in fiscal year 1997 to \$12 million in fiscal year 1998? (P. 506)

Answer: The National Industrial Competitiveness through Energy, Environment and Economics (NICE³) Program provides funding to State and industry partnerships (on a competitive basis with the federal cost-share limited to 45 percent) for projects that demonstrate advances in energy efficient, clean production technologies. Although States have continued to express great interest in the program, only 11 to 15 projects could be funded at the FY 1997 funding level. The additional funding will support 22 to 27 new projects in FY 1998. The funding increase also will: 1) support a number of new activities aimed at encouraging greater replication of successful projects, and 2) provide funding for workshops by States with the highest proposal success rates to promote greater penetration by less successful States.

Question: What successes have you had with this program? Please provide a few examples for the record.

Answer: Some examples of the successes achieved through the NICE³ Program follow:

- The New Jersey Department of Energy and Environmental Protection teamed up with Telesonics USA, Inc. and Dupont-Merck to demonstrate a new technology for cleaning the storage and production tanks used in manufacturing chemicals and pharmaceuticals. Using a new type of ultrasonic tank cleaning system the manufacturer was able to eliminate volatile compound emissions from the cleaning process and end the incineration of used solvents. In addition, methanol use was reduced by 80 percent and labor requirements for tank cleaning were reduced by 70 percent. The process saves energy and reduced carbon dioxide emissions. After this successful NICE³ project, this process has been installed in 16 facilities throughout the US.
- The Ohio Department of Development and Pegasus Technologies Corp. demonstrated a new combustion control system that can be used to improve the efficiency of coal-fired boilers. The demonstration at the Penn Power plant in Newcastle reduced the plant's fuel

requirements and at the same time reduced the emission of nitrous oxide by 17 percent. After this successful demonstration four more units have been installed and seven more have been ordered by US firms.

- Beta Control Systems, Inc. and the Oregon Department of Energy demonstrated a process that recycles used hydrochloric acid. Galvanizing and other steel fabrication processes often involve immersion in a tank of hydrochloric acid to clean the raw steel. Spent hydrochloric acid is treated as a hazardous waste. This process allows small and medium sized plants to take advantage of a process that previously was available only to large steel plants and saves energy. The system generates no hazardous waste and produces as its main byproduct iron chloride, which can be used in fertilizer or as animal feed.

Question: How much longer do you expect to continue the program?

Answer: NICE³ currently is in its seventh year of operation. Investments in designing and implementing the program infrastructure are beginning to pay off. The program has had numerous successes and provides an effective incentive to stimulate investments in innovative technology to support long term economic growth, create new jobs and protect the environment. States and their industrial partners continue to respond to the annual solicitation with proposals that meet both local and national interests—but only a fraction of the best projects can be funded in any given year. For these reasons, there are no plans to end the program.

Climate Wise

Question: The Climate Wise program is primarily an EPA program. Please describe the program and explain why the Department of Energy is involved? (\$1 million in 1997; \$3,780,000 requested in 1998)

Answer: Climate Wise is, and has been since its inception, a joint DOE and EPA program. Climate Wise operates as a partnership between U.S. industry and the Federal Government. The program encourages industry to take advantage of the economic and environmental benefits associated with adopting energy efficient technologies that prevent pollution and reduce overall greenhouse gas emission. Since energy is the focus of the program and energy efficient technologies are used to reduce industrial greenhouse gas emissions, DOE is heavily involved. DOE provides the necessary energy technology expertise to industry. Industrial participants in this joint DOE/EPA program are expected to set and achieve meaningful emission reduction goals; undertake specific actions to address energy, source, process, materials and behavioral problems; and report the reductions. The most energy intensive industries, including those already working with DOE through the Industries of the Future program, are specially targeted for program participation.

Question: How much is EPA contributing to this program and what is the division of responsibilities?

Answer: EPA does not have a separate budget line item for Climate Wise so it is difficult to be precise in answering this question. Recently EPA indicated to DOE that approximately \$2.8 million is being allocated for Climate Wise activities in FY 97 and that \$5.8 million is being requested for Climate Wise as part of the EPA FY 98 budget request. The program is jointly planned and managed by DOE and EPA. Both agencies are involved with efforts to recruit industrial partners. DOE has a major role in providing energy technology know-how and technical assistance and EPA has concentrated on other issues such as the policy and behavioral implications to greater greenhouse gas reductions.

Question: What other agencies are participating in the program and what funding are they providing?

Answer: No other agencies are providing funding to the program. The program has been working closely with the Small Business Administration and with the Department of Commerce's Manufacturing Technology Centers. Both of these agencies have been contributing time and services to support the program.

Policy and Management

Question: You have asked for a 20% increase in funding for policy and management. In these days of streamlining government, how can you justify such a large increase in administrative management (\$26,150,000 in 1997; \$31,380,000 requested for 1998)

Answer: The administrative management portion of the Policy and Management request consists of funding for federal employee salaries and benefits at headquarters and in the field and the costs for landlord functions such as rent and utilities. Within FY 1997 funding for Policy and Management, administrative activities total \$22,050,000. As we have described in the budget, in FY 1997 we are using an additional \$2,338,000 in unobligated carryover funds for the Regional Support Offices, which brings the total available for administrative activities to \$24,388,000. The FY 1998 Request for the administrative activities is \$25,480,000, a four percent increase.

The Office of Energy Efficiency and Renewable Energy (EE) has taken actions to lower administrative costs. We have realized significant savings and are continuing to streamline administrative activities. In FY 1996, we eliminated four of the former Support Offices and reorganized the headquarters offices to eliminate most third-tier organizations while expanding supervisory span-of-control. We are reducing travel expenses and expanding the use of video conferencing. We have greatly reduced support service costs. We reduced FTEs by 13 percent in FY 1997 and will implement an additional 13 percent reduction in FY 1998 (from 212 in FY 1997 to 184 in FY 1998). The costs for Federal employee salaries and related expenses has been reduced by ten percent, from \$16,281,000 in FY 1997 to \$14,611,000 in FY 1998.

Contractual services for administrative activities include landlord functions such as rent, utilities, communications, copy machines, postage, and other similar activities. At headquarters, the Department is paying for these activities in FY 1997 through the Working Capital Fund (WCF), in its first year of operation. In the FY 1998 request, the the Energy Conservation portion of the

WCF is increased \$1,019,000, or 34 percent. This is because in FY 1997 funding for the WCF was requested on a 1:1 ratio for programs funded by Interior and Energy and Water Development appropriations. In FY 1998, the split for the WCF more closely parallels this ratio for FTEs funded by these two appropriations. This is a more equitable distribution, since the costs for the WCF are primarily driven by the number of staff supported; approximately 77 percent of EE FTEs are funded by Interior appropriations.

The \$2,338,000 in unobligated carryover, noted earlier, is being used for landlord functions for the Regional Support Offices, including rent, utilities, communications, postage, and the normal costs of running an office. Overall landlord functions for the Regional Support Offices are reduced about 3 percent. Finally, at the Golden Field Office, the landlord functions are increased in FY 1998 in order to satisfy a projected increase in program execution responsibilities through the use of contract employees.

Question: You want to double the funding for your information and communications program. Please explain the increase. (\$1.5 million in 1997; \$3 million requested for 1998)

Answer: The information and communication programs administered by the Office of Energy Efficiency and Renewable Energy (EE) are designed to provide up-to-date information and technical assistance on energy efficiency to a variety of end users in all sectors of the economy, as well as the public at large. These programs employ printed material, a clearinghouse, and a state-of-the-art information system which has received numerous awards.

While the information and communication program funding level for FY 1998 represents a doubling of the FY 1997 funding levels, it actually represents a decrease from an historical perspective, at a time when Americans are demanding information services more than ever. We have had steadily increasing demand for information on EE's web page.

The American public benefits from this information in the form of lower energy bills and a cleaner environment. One of the primary reasons that the market fails to take advantage of cost-effective opportunities to save energy and money is that it lacks information. Provision of technical assistance and information is one of the cheapest ways to get market forces operating to encourage efficiency and clean energy. It is also a function that is not likely to be performed by the private sector.

The information and communication program administered by EE represents one of the most cost-effective ways of meeting the requirements of the Government Performance Results Act, which requires that government agencies have a means of engaging customers, both in terms of giving and getting information about programs, activities and results. Given the value of this service to our citizens and companies, our commitment to communication with our customers, and the increased demand for these services, we believe that restoring funding to near-historical levels represents an investment in good government and good policy which returns benefits well in excess of this modest increase.

Question: For the record, please provide a list in priority order of all the programs included in your requested increase for policy and management.

Answer: The requested prioritization of the programs requested in Policy and Management are submitted for the record as requested.

**Prioritization of Programs in Policy and Management
(Dollars in Thousands)**

<u>Priority</u>	<u>Amount</u>	<u>Description of Program</u>
1.	\$14,611	Salaries and related expenses for federal employees at headquarters and in the field
2.	10,179	Landlord activities at headquarters and in the field including rent, utilities, communications, and similar costs to operate an office.
3.	690	Contractual services to support the development of quality metrics and performance measurement data consistent with the provisions of the Government Performance and Results Act of 1993.
4.	2,900	International market development activities to enhance market opportunities for U.S. produced energy efficiency technologies in the \$84 billion foreign market and especially the European Community and Asia.
5.	3,000	Information and communications activities to disseminate information about energy efficiency and renewable energy.

National Laboratory Funding

Question: To what extent is the level of National laboratory participation in our programs increasing in fiscal year 1998?

Answer: The FY 1998 Budget includes \$194.6 million for the National laboratories, an increase of \$21.5 million or 12 percent.

Question: Please provide details for 1996, 1997, and 1998 in the same fashion as in previous years.

Answer: The requested data on laboratory funding for the Energy Conservation is provided for the record. [Table attached]

Energy Conservation Laboratory Summary
(Dollars in Thousands)

	<u>Los Alamos National Lab</u>			<u>Sandia National Lab</u>		
	FY 1996	FY 1997	FY 1998	FY 1996	FY 1997	FY 1998
	Actual	Planned	Planned	Actual	Planned	Planned
Bldgs. Tech., State, & Community Sector	\$0	\$0	\$0	\$0	\$0	\$0
Industry Sector	2,700	2,000	1,700	3,068	1,264	1,139
Transportation Sector Program	2,870	3,000	3,400	4,364	6,360	7,260
Utility Sector	0	0	0	0	0	0
Federal Energy Management Program	0	0	0	0	0	0
Policy and Management	0	0	0	0	0	0
Total Energy Conservation	\$5,570	\$5,000	\$5,100	\$7,432	\$7,624	\$8,399

	<u>Ames Lab</u>			<u>Argonne National Lab</u>		
	FY 1996	FY 1997	FY 1998	FY 1996	FY 1997	FY 1998
	Actual	Planned	Planned	Actual	Planned	Planned
Bldgs. Tech., State, & Community Sector	\$0	\$0	\$0	\$175	\$350	\$450
Industry Sector	150	0	0	5,324	5,680	4,655
Transportation Sector Program	200	150	115	8,771	8,312	8,355
Utility Sector	0	0	0	0	0	0
Federal Energy Management Program	0	0	0	0	0	0
Policy and Management	0	0	0	0	0	0
Total Energy Conservation	\$350	\$150	\$115	\$14,270	\$14,342	\$13,460

	<u>Brookhaven National Lab</u>			<u>Nat'l Renewable Energy Lab.</u>		
	FY 1996	FY 1997	FY 1998	FY 1996	FY 1997	FY 1998
	Actual	Planned	Planned	Actual	Planned	Planned
Bldgs. Tech., State, & Community Sector	\$1,550	\$1,150	\$1,200	\$7,251	\$11,321	\$14,283
Industry Sector	125	150	150	4,050	2,900	2,950
Transportation Sector Program	943	500	1,000	44,991	43,095	53,100
Utility Sector	0	0	0	0	0	0
Federal Energy Management Program	0	0	0	0	0	0
Policy and Management	0	0	0	340	300	400
Total Energy Conservation	\$2,618	\$1,800	\$2,350	\$56,632	\$57,616	\$70,733

Energy Conservation Laboratory Summary
(Dollars in Thousands)

	<u>Total All Labs</u>		
	FY 1996	FY 1997	FY 1998
	Actual	Planned	Planned
Bldgs. Tech., State, & Community Sector	\$43,282	\$52,986	\$61,723
Industry Sector	32,603	27,557	24,708
Transportation Sector Program	104,608	91,364	106,773
Utility Sector	0	0	0
Federal Energy Management Program	0	0	0
Policy and Management	5,340	1,200	1,400
Total Energy Conservation	\$185,833	\$173,107	\$194,604

Energy Conservation Laboratory Summary
(Dollars in Thousands)

	<u>Idaho Nat'l Engineering Lab</u>			<u>Oak Ridge National Lab</u>		
	FY 1996	FY 1997	FY 1998	FY 1996	FY 1997	FY 1998
	Actual	Planned	Planned	Actual	Planned	Planned
Bldgs. Tech., State, & Community Sector	\$0	\$0	\$0	\$15,126	\$17,510	\$19,970
Industry Sector	1,200	450	400	13,677	12,661	11,214
Transportation Sector Program	4,788	3,225	3,920	31,971	17,382	20,758
Utility Sector	0	0	0	0	0	0
Federal Energy Management Program	0	0	0	0	0	0
Policy and Management	0	0	0	600	500	600
Total Energy Conservation	\$5,988	\$3,675	\$4,320	\$61,374	\$48,053	\$52,542

	<u>Pacific Northwest Lab</u>			<u>Lawrence Livermore Lab</u>		
	FY 1996	FY 1997	FY 1998	FY 1996	FY 1997	FY 1998
	Actual	Planned	Planned	Actual	Planned	Planned
Bldgs. Tech., State, & Community Sector	\$8,182	\$9,530	\$11,235	\$0	\$0	\$0
Industry Sector	1,184	1,272	1,700	0	0	0
Transportation Sector Program	2,095	4,065	3,390	1,000	2,775	2,775
Utility Sector	0	0	0	0	0	0
Federal Energy Management Program	0	0	0	0	0	0
Policy and Management	4,300	300	300	0	0	0
Total Energy Conservation	\$15,761	\$15,167	\$16,625	\$1,000	\$2,775	\$2,775

	<u>Lawrence Berkeley Lab</u>			<u>Energy Tech. Engineering Ctr.</u>		
	FY 1996	FY 1997	FY 1998	FY 1996	FY 1997	FY 1998
	Actual	Planned	Planned	Actual	Planned	Planned
Bldgs. Tech., State, & Community Sector	\$10,998	\$13,125	\$14,585	\$0	\$0	\$0
Industry Sector	1,125	1,180	800	0	0	0
Transportation Sector Program	2,575	2,500	2,700	40	0	0
Utility Sector	0	0	0	0	0	0
Federal Energy Management Program	0	0	0	0	0	0
Policy and Management	100	100	100	0	0	0
Total Energy Conservation	\$14,798	\$16,905	\$18,185	\$40	\$0	\$0

GOVERNMENT PERFORMANCE AND RESULTS ACT (GPRA)

Office of Energy Efficiency and Renewable Energy

Question: GPRA, known as the Results Act, requires each executive agency to issue, no later than September 30, 1997, a strategic plan covering at least five years. In addition to a mission statement grounded in legislative requirements, the plans are to contain general goals and objectives that are expected to be outcome or results oriented (such as to improve literacy) as opposed to output or activity oriented (such as to increase the number of education grants issued). What progress is the agency making in developing its strategic plan, including defining its mission and establishing appropriate goals? Has the agency identified conflicting goals for any of its program efforts? If so, what are the performance consequences of these conflicting goals and what actions -- including seeking legislative changes -- is the agency taking to address these conflicts?

Answer: The Office of Energy Efficiency and Renewable Energy (EE) recently initiated updating of its strategic plan in response to new developments in the national and international energy and environmental outlook. The 1997 Strategic Plan will represent our second update of the 1992 Office of Energy Efficiency and Renewable Energy Strategic Plan. We have carefully defined our mission, and our strategies represent our implementation of the National Energy Policy Plan issued in 1995. We expect our updated Strategic Plan to revise our program evaluation and budget formulation processes and to feed into the Department's Strategic Management System (SMS).

The development and review of our updated Strategic Plan is expected to reveal any conflicting goals for EE. Should conflicting goals be identified, we would consider actions to resolve these conflicts. We anticipate finalizing the Plan in September.

Question: Strategic plans must be based on realistic assessments of the resources that will be available to the agency to accomplish its goals. As you are developing your strategic plan, how are you taking into account projected resources that likely will be available -- especially as we move to a balanced budget? What assumptions are you making? How are you ensuring that your goals are realistic in light of expected resources?

Answer: For strategic planning purposes, EE assumes the Administration's five year budget projections. We realize that budget constraints may reduce our resources and that new commitments may require increases in funding to our programs. Rather than to foreclose prematurely on the benefits we can reasonably expect to provide over the next five years, we assume resources that are at least equivalent to current program capabilities.

Question: For Congress, the heart of the Results Act is the statutory link between agency plans, budget requests, and the reporting of results. Starting with fiscal year 1999, agencies are to develop annual performance plans that define performance goals and the measures that will be used to assess progress over the coming year. These annual goals are to measure agency progress toward meeting strategic goals and are to be based on the program activities as set forth in the

President's budget. What progress have you made in establishing clear and direct linkages between the general goals in your strategic plan and the goals to be contained in your annual performance plans? OMB expressed concern last year that most agencies had not made sufficient progress in this critical area. More specifically, how are you progressing in linking your strategic and annual performance goals to program activity structure contained in the President's budget? Do you anticipate the need to change or modify the activity structure to be consistent with the agency's goals? Overall, what progress has your agency made -- and what challenges is it experiencing -- defining results-oriented performance measures that will allow the agency and others to determine the extent to which goals are being met?

Answer: EE participates in the Department of Energy's efforts to ensure that the narrative justifications for its budget requests for each program area contain that program's performance goals. In addition, EE performance goals are part of the Secretary of Energy's Performance Agreement with the President. The use of performance goals for both budget formulation and program evaluation has created a link between program plans, budget requests, and the reporting of results.

EE has developed a peer-reviewed "quality metrics" system that allows us to set concrete goals, measure program progress, impacts, and success. This evolving strategic management process provides for program planning and evaluation. Through the budget formulation and performance evaluation processes, our quality metrics system is part of the Department's Strategic Management System (SMS).

The linkage between our strategic planning and our performance goals is less developed. We anticipate creating a better alignment between our 1997 Strategic Plan, now under development, and our performance goals. During our strategic planning process, we will consider the possibility of restructuring some activities, particularly "crosscutting" R&D that applies to more than one sector of the economy.

For most programs, we have developed quality metrics that express program results appropriately. In the case of our research programs, anticipating the nature of program results can be difficult, and we rely on a variety of metrics to arrive at a balanced set of performance indicators that will capture the extent of program success.

Question: If applicable, what lessons did the agency learn from its participation in the Results Act pilot phase and how are those lessons being applied to agency wide Results Act efforts? What steps is the agency taking to build the capacity (information systems, personnel skills, etc.) necessary to implement the Results Act?

Answer: During the pilot phase of the Results Act, EE developed performance measures for the Energy Partnership for a Strong Economy (EPSE) programs. These programs were designed to lower greenhouse gas emissions through improved energy efficiency and the use of renewable energy in partnership with state and local government organizations. The results of this pilot program have been applied to other EE programs, and all programs now report their progress on performance goals with reference to quality metrics.

Question: The Results Act requires agencies to solicit and consider the views of stakeholders as they develop the strategic plans. Stakeholders can include state and local governments, interest groups, the private sector, and the general public, among others. Who do you consider to be your agency's primary stakeholders and how will you incorporate their views into the strategic plans?

Answer: EE's customers and stakeholders include state and local energy organizations, energy industry trade associations, industry groups, environmental organizations, the Departments of Transportation, Agriculture, Commerce, the Environmental Protection Agency, OMB, the White House, Congress, and the public. For our strategic planning process, we will consult with our stakeholders on strategic issues relating to our mission and incorporate consideration of their views into the updating of our strategic goals and objectives.

Question: For the Results Act to be successful, agencies with similar missions, goals, or strategies will need to ensure that their efforts are coordinated. What other federal agencies are you working with to ensure that your strategic plans are coordinated? What steps have you taken to ensure that your efforts complement and do not unnecessarily duplicate other federal efforts?

Answer: EE works closely with EPA, and the Departments of Transportation, Commerce, and Agriculture to achieve many of its program goals. We coordinate with these agencies on a regular basis, and our strategic plans reflect the fact that these efforts are complementary and not unnecessarily redundant. As stakeholders, representatives of these agencies will participate in the updating of our strategic plan.

Question: The Results Act requires agencies to consult with Congress as they develop their strategic plans. Since these plans are due in September, now is the time for agencies to begin the required consultations. What are your plans for Congressional consultation as you develop your strategic plan? Which Committees will you consult with? How will you resolve differing views?

Answer: EE consults with Congressional committees regularly through courtesy calls and meetings with Members, Senators and their staff. In addition, the appropriations and authorization committee hearings process provides these committees with a wealth of information from testimony and the EE's response to committee questions. EE expects to consult with committees with oversight over EE programs, including House and Senate Interior and Related Agencies Appropriations Subcommittees; House and Senate Energy and Water Development Appropriations Subcommittees; House Committee on Commerce Subcommittee on Energy and Power; House Committee on Science Subcommittee on Energy and Environment; and Senate Committee on Energy and Natural Resources.

Question: In passing the Results Act, Congress sought to fundamentally change the focus of federal management and decision making to be more results-oriented. Organizations that have successfully become result-oriented typically have found that making the transformation envisioned by the Results Act requires significant changes in what they do and how they do it. What changes in program policy, organization structure, program content, and work process has

the agency made to become more results-oriented? How are managers held accountable for implementing the Results Act and improving performance? How is the agency using Results Act performance goals and information to drive daily operations?

Answer: EE's performance measurement program has increased the organization's emphasis on reaching well-defined objectives. Employees are increasingly conscious of these goals and their relationship to individual performance. In addition, our budget formulation process is now more directly tied to performance measurement data. Our strategic planning process is providing a framework for reconsideration of EE's organizational structure in relation to our mission.

QUESTIONS SUBMITTED BY CONGRESSMAN REGULA

General

Question: I have read a couple of newspaper accounts recently critical of DOE's energy savings estimates. An analysis by the consulting firm Arthur D. Little found that the Energy Department managers overstated by 79 percent the potential energy savings from renewables sources and advanced technologies in the year 2000 alone. Could you comment on these findings.

Answer: The Arthur D. Little (ADL) study was commissioned by the Department to help arrive at externally reviewed energy savings estimates based on the FY 1997 request. As part of our review process, ADL worked with the Department's program managers to review and revise our preliminary in-house draft energy savings impacts. Together, they arrived at final energy savings impact estimates. The difference between the preliminary in-house draft energy savings and the final numbers accounted for the referenced "79 percent" overstatement. The numbers presented to Congress were the final energy saving arrived at with ADL's assistance. As part of the Department's continuous improvement process, ADL worked with Department to externally review energy savings estimates based on the FY 1998 request. The final estimated energy savings based on the FY 1998 request are consistent with final FY 1997 numbers.

While the energy savings estimates provided in the FY97 request were reduced from the preliminary estimates, the benefits of energy productivity improvements, pollution prevention, and national security make our energy efficiency and renewable energy technology programs cost-effective and important to the nation. In its report, ADL stated that "Overall...the selection of technologies in the DOE (Energy Efficiency) portfolio are very reasonable. They are in line with R&D programs of other industrialized countries and have gained a high level of industry support in the U.S. The portfolio mix in the post 2000 time frame will place the U.S. in a highly competitive position in the coming decades."

Buildings

Question: I had a letter from a constituent expressing opposition to DOE's *Buildings for the 21st Century* program. Could you describe this program for me.

Answer: Buildings for the 21st Century is an effort by the Department's Office of Building Technology, State and Community Programs to increase the energy efficiency of new and existing buildings. This effort provides an umbrella under which to accomplish multiple needs. The first is to accelerate innovative "whole building" or systems engineering approaches to siting, design, material and equipment selection, and financing of buildings. It builds on the successes occurring within the Building America and Exemplary Buildings Programs. The second is to link building energy programs to other efforts, including the Home Owner Initiative overseen by the Department of Housing and Urban Development, and the Subcommittee on Construction and Building of the President's Council on Science and Technology. Further, the initiative includes a means to update the plan for the Department's portfolio of buildings research, demonstration and

deployment by seeking input from the industry and stakeholders, the private sector and other Federal agencies.

Question: According to my constituent this program is both overstepping DOE's mission and overlapping with missions of HUD, EPA and NIST. Could you comment on how you see this program fitting DOE's mission and how you are avoiding overlap and duplication of other agencies functions.

Answer: Buildings for the 21st Century is focused on energy use. Since the "whole buildings approach" may involve issues beyond energy the Department has coordinated with HUD, EPA, NIST, and other federal agencies from the start. Representatives of these agencies are active participants in this process, and where any actions are identified that are outside DOE's energy mission, one of these other agencies will take the lead. The effort is designed to avoid overlap and duplication with other agency functions by actively involving those agencies in the process.

Question: My constituent also commented that the National Association of Home Builders previously participated in DOE's Global Climate Change Initiative. While this participation cost the industry considerable time and resources they claim they have seen little results or actions taken on industry inputs. Quoting from my constituents letter: "I am concerned that DOE likes the appearance of industry involvement but is not willing to take action on its inputs." Could you comment.

Answer: There have been two meetings under the Buildings of the 21st Century umbrella. Representatives of the National Association of Home Builders or NAHB Research Center have been at both and have provided significant input and leadership. NAHB is involved in the working group, created by meeting participants, to look at the residential market and its long-term and short-term needs. The Department values NAHB and other building industry organizations. The industry's insight, and experience is important in assisting in the determination of the needs of the market and research, development and deployment opportunities. Thus, NAHB and other trade and professional organizations, product manufacturers and others have historically provided input to the buildings research and development agenda, participated in its implementation, and worked to help the appropriate segments of industry adopt the resulting innovations. The input of the industry has resulted in current and proposed Department programs including the Energy Value in Housing Awards and the Advanced Housing Technology Programs. Because of scarce resources, planned activities cannot always be carried out as anticipated. The Department recognizes that organizations and firms expend resources and time to assist in carrying out these activities. We appreciate industry's interest and commitment to these efforts.

Transportation

Natural Gas Vehicles

Question: Last year Congress directed the Department to work with industry to develop a five year plan for conducting research for natural gas vehicles (NGVs). What is the status of the plan and how has the industry been involved in the planning process so far?

Answer: The plan is now in draft form and is being reviewed within the Department. It was developed with contributions from industry, many of which were developed in forums facilitated by West Virginia University. Specifically, the University hosted a workshop in January 1997 to address natural gas research and development needs. This workshop was attended by stakeholders in the natural gas industry, as well as engine and vehicle manufacturers. When the Department completes its internal review, the plan will be sent to the workshop participants for comments and then made final.

Question: The NGV industry has discussed the need for R&D in the infrastructure area. Your FY 1998 request does not reflect this need. Is it included in your five year plan, and do you plan to ask for funding in FY 1999?

Answer: Yes, the needs for research and development in the area of infrastructure are included in the Natural Gas Vehicle R&D Five Year Plan. We anticipate that new efforts initiated in FY 1999, to implement work consistent with the plan's goals and objectives, will be included in our funding request.

Question: What research needs can and should be met in the infrastructure area?

Answer: The Natural Gas Vehicle R&D Five Year Plan addresses the following infrastructure issues: small scale fueling station development; compressor technology development; auxiliary component development, including dispensing technology improvements; and education and training.

Question: You received an increase of \$1.7 million in FY 1997 for research on heavy duty engine development and emissions for NGVs. What is the status of this research?

Answer: In the area of heavy duty engine development, the Department, together with the Gas Research Institute and the South Coast Air Quality Management District in California, is cost sharing an engine research and development effort with the objective of advancing the technologies needed to achieve higher efficiency, lower emissions heavy vehicle natural gas engines. At this time, a competitive solicitation has been issued for this effort, which is being managed by the Trucking Research Institute of the American Trucking Associations. Also, Southwest Research Institute and John Deere Tractor are under contract to optimize the natural gas school bus engine.

With funds provided for NOx emissions research, Tecogen Inc. is developing a low-energy, non-thermal plasma for reducing NOx in the exhaust stream; NOx Tech Inc. is optimizing its non-thermal plasma NOx reduction technology; and Cummins Engine Company is developing in-cylinder NOx reduction using lean-burn technology. Through Cooperative Research and Development Agreements, the Detroit Diesel Corporation, Cummins Engine Company, and the Oak Ridge National Laboratory are developing NOx reduction catalyst materials.

Question: Funding is not included in FY 1998 to continue this heavy duty engine development work; in fact it has been reduced by \$3.5 million. What is the reason for the reduction, and what

are your plans for the program under this budget request?

Answer: The heavy duty alternative fuels research and development budget request in FY 1998 is \$3.5 million below the FY 1997 appropriation level. Relative to our FY 1997 budget request, the FY 1998 request is about even; however, Congress added funding, for additional work on natural gas fueled vehicles, near the end of the FY 1997 budget process. In developing our FY 1998 request, this had not been anticipated. As a result, we will have to slow up or stop some work begun with the additional FY 1997 funds. At the current time, our plan for expenditure of the FY 1998 budget request is:

- Combustion and emissions research (Oak Ridge National Laboratory, Detroit Diesel, John Deere, Sandia National Laboratories):
 - alternative fuels and diesel blends (\$1,000)
 - natural gas engines (\$0)
- Enabling technologies for fuel flexible LE-55 engines (Caterpillar, Oak Ridge National Laboratories, TBD/RFP):
 - flex fuel engines (\$2,160)
 - natural gas engines (\$640)
- Atmospheric reactivity:
 - natural gas atmospheric impacts (Coordinating Research Council/ EPA/TBD) (\$300)
 - atmospheric impacts of heavy vehicles (TBD/RFP) (\$200)
 - diesel and alternative fuels particulates (TBD/RFP) (\$300)
- Natural gas engine exhaust aftertreatment (NOx control) (Cummins Engine Company, TBD/RFP) (\$284)
- CNG tank technology:
 - smart tank (e.g., tank with sensors for failure prediction) (Thiokol) (\$200)
- LNG storage technologies:
 - on-board fuel delivery systems for high pressure injected engines (TBD/RFP) (\$300)
- CNG and LNG storage systems analysis (Brookhaven National Laboratory) (\$200)
- Natural gas engine development (TBD/RFP, Caterpillar, John Deere, Detroit Diesel) (\$1,945)
- Portable chassis dynamometer for testing and evaluation of alternative-fueled heavy vehicles (West Virginia University) (\$700)
- On-road development (Gas Research Institute, South Coast Air Quality Management District):
 - Natural gas heavy vehicle (\$671)

Question: You have expanded clean corridor development for alternative fuel vehicles, however, these corridors make the assumption that interstate vehicles such as heavy duty trucks will play an important role. How does your development of clean corridors square with your budget reduction for heavy duty alternative fuel vehicles.

Answer: The DOE Heavy Vehicle Systems R&D effort has successfully yielded a variety of viable new heavy engine technologies. Now we are at a juncture where the new engines (like any new product) need to achieve an appreciable market penetration to realize the full potential of the R&D investment. More than anything, the Clean Corridors effort is an initiative intended to help achieve greater market penetration, and to deploy the results obtained through research and development. Clean Corridors, based on the public/private partnership approach of Clean Cities, stimulates and encourages the private sector to "pick up" where the researchers left off. By linking Clean Cities, corridors create increased market confidence in refueling capability critical for businesses and trucking companies considering an investment in new alternatively fueled heavy vehicle engine technologies.

Question: Will natural gas play a more significant role in the Partnership for a New Generation of Vehicles (PNGV) in FY 1998 than it has in previous years.

Answer: Plans for increasing the role of natural gas in PNGV include three main approaches:

- (1) A recent study by Directed Technologies, Incorporated, indicates that: (a) 50-60% of the gasoline stations in urban areas are equipped with natural gas pipelines, and (b) a natural gas reformer constructed on-site could generate enough hydrogen to service 300-400 light duty fuel cell vehicles per day at a price comparable to today's fuel. Based on this scenario, the advanced automotive technology fuel cell and alternative fuels programs are working with DOE's hydrogen program managers to develop on-board hydrogen storage technologies for light duty fuel cell vehicles.
- (2) The Fuel Cells for Transportation program is also developing fuel-flexible fuel processors for onboard generation of hydrogen from a variety of fuels, including natural gas and methanol (which is normally made from natural gas).
- (3) The increase in the advanced automotive technology alternative fuels R&D budget, from \$2.3 million in FY 1997 to \$4.0 million in the FY 1998 request, will be used to develop low-cost natural gas storage tanks using new lightweight materials and improved manufacturing techniques.

These approaches are consistent with the PNGV goal to develop lighter, more fuel efficient vehicles that are cost-competitive with internal combustion vehicles.

Question: Why does the PNGV program have such a small alternative fuel component?

Answer: PNGV is a program to improve fuel economy. a small alternative fuels adjunct is important to assure that these fuels can be used in propulsion systems being work on to achieve a

high mileage vehicle. In addition, the respective technologies are at different stages. However, many technologies being considered for PNGV are capable of operating on alternative fuels. Efforts to include alternative fuels in compression ignition direct injection work have recently been initiated in the PNGV program. In addition, the fuel cell program is developing fuel processors that will be capable of reforming many fuels including methanol, natural gas and ethanol to hydrogen to be used in the fuel cell.

Question: If research and development in the area of NGVs was a priority what areas of research would you recommend funding that are not currently addressed in your budget?

Answer: The workshops and other activities associated with drafting the five year plan for natural gas research and development revealed two areas that are not sufficiently addressed by the current program: these are safety/systems integration and fueling infrastructure.

Question: The Trucking Research Institute has been studying the effects of using alternative fuels in commercial trucking applications since the early nineties. These projects have been designed to focus the efforts of new research so that the alternative fuel which has the greatest promise to succeed economically in the industry can be exploited. Early results of the project have shown that natural gas—in liquefied form for heavy duty operations, and in either compressed (CNG) or liquefied form for medium duty vocations —holds this promise. Would you care to comment on the Trucking Research Institute study.

Answer: We agree with these results, and our program is focused on supporting activities to bring about greater use of these fuels in the indicated applications.

Federal Acquisition Of Alternative Fuel Vehicles

Question: In December, President Clinton issued an Executive Order (E.O. 13031) requiring Federal agencies to fulfill the alternative fuel vehicle acquisition mandates established under the Energy Policy Act. In that order, the President directed the Department to establish a program to assist Federal agencies in the demonstration of a limited number of EVs. Has the Department established such a program?

Answer: Yes, the Department, in cooperation with the General Services Administration (GSA), General Motors Corporation, and the Electric Transportation Coalition, has established an electric vehicle leasing program for Federal agencies, utilizing \$2 million of prior year Departmental funds in an interagency account with GSA. This program, established prior to Executive Order 13031, is expected to cover the full incremental cost for approximately 100 electric vehicles (EVs) in Federal fleets, half of which will be for Department of Energy fleets. The Department has also identified \$300,000 of fiscal year 1997 funds, appropriated for electric vehicle field test and evaluation, that will be offered to the Federal agencies. Consistent with the Executive Order, the Department will offer to defray half of the incremental cost of electric vehicles, up to \$10,000 per vehicle, for EVs that Federal agencies acquire for test and evaluation. In return, the agencies will provide DOE with operating costs and performance data on the electric vehicles. The Department proposes to expand this program in fiscal year 1998, offering

up to \$2 million to the Federal agencies to help defray incremental costs. The Department's fiscal year 1998 request includes this expanded program.

Question: What impact, if any, has the President's Executive Order had on encouraging other Federal agencies to add alternative fueled vehicles to their fleets?

Answer: Executive Order 13031 has had a very positive effect on encouraging Federal agencies to acquire alternative fuel vehicles for their fleets. The order requires each Federal agency to submit, as part of its annual budget request to the Office of Management and Budget, a report detailing the acquisition of alternative fuel vehicles in the prior fiscal year and planned alternative fuel vehicle acquisitions in the two subsequent fiscal years. The first such report, which was not tied to a budget submission, covered fiscal years 1996, 1997, and 1998. Preparation of these reports, and the requirement that each agency's incorporate funding requirements for the planned acquisitions into their budget requests, has elevated the visibility of alternative fuel vehicle acquisitions within Federal agencies.

Battery Technologies

Question: In a recent visit with German automakers, my staff assistant was briefed on a battery technology that is not under consideration currently by the USABC (United States Advanced Battery Consortium). The technology, sodium nickel chloride, appears to have tested well in demonstrations by the German manufacturers, with claims being made that the technology might be developed to the point where it could compete — in terms of range and price performance—with lithium-based batteries. Could you comment on this battery technology and explain why the USABC is not pursuing this technology while the Germans are? Shouldn't this technology at a minimum be tested? Don't we need to pursue more than one battery technology at this juncture and don't we run the risk of putting all our efforts into one technology (nickel metal hydride)?

Answer: The USABC partners are well aware of this technology from regular briefings received from the German developers of the sodium nickel chloride technology. The German technology developers were unwilling to work with the USABC on a common sodium nickel chloride technology development program. It was their decision to develop this technology for their own electric vehicle programs.

The USABC has tested earlier versions of the sodium nickel chloride battery in Phase I of its cooperative agreement with the Department of Energy. These early tests showed that the technology did not meet the USABC's mid-term goals. As a result of recent information claimed by the German automakers, the Department is discussing with the USABC the need to retest this technology, to determine its performance relative to improvements claimed by the battery developer. There are also design issues that complicate the use of sodium nickel chloride batteries. They operate at high temperatures, requiring battery energy to maintain the temperature between 270°C and 300°C, and must be very well sealed to prevent atmospheric oxidation of the sodium.

With DOE support, the USABC is pursuing lithium ion and lithium polymer technology as alternatives to the nickel metal hydride battery. Lithium polymer technology is its choice for the long-term technology. In the short term, nickel metal hydride electric vehicle batteries will be available from a number of developers, both domestic and foreign.

Question: Some of the European automakers alleged that electric vehicles did not have a big advantage compared to internal combustion engines with respect to emissions. Could you comment on the Department's view of electric vehicles with respect to emissions?

Answer: The Department has followed the lead of the responsible regulatory authorities in California and the Northeast States, who have continued to pursue electric vehicle deployment in their states in order to meet the goals of the Federal Clean Air Act. California studies have shown that the use of electric vehicles will result in reduced emissions relative to vehicles powered by internal combustion engines. The Department's major electric vehicle program, with the United States Advanced Battery Consortium, was undertaken partially in response to the automotive industry's request to develop advanced battery technology which would enable electric vehicles to meet the requirements of the California Zero Emission Vehicle Program. California continues to show great interest in the USABC program, and sends an observer regularly to the meetings of the USABC Technical Advisory Committee.

Question: One of the German automakers indicated that tests they had performed questioned the safety of the nickel metal hydride battery. Have any tests of the USABC revealed anything which would question the safety of this technology?

Answer: Nickel metal hydride batteries are in widespread use in consumer products. No significant safety problems have been reported. The Department's Ad Hoc Advanced Battery Readiness Subworking Group on Shipping recently noted that large nickel metal hydride electric vehicle batteries can be shipped safely under the Department of Transportation's existing regulations, without restriction. The USABC is now beginning to evaluate the safety response of large electric vehicle nickel metal hydride batteries to abusive conditions.

Electric Vehicle Market Launch

Question: The former Secretary of Energy, Hazel O'Leary, committed the Department to work with the electric utility and automotive industries to help launch electric vehicles into the U.S. market place by the end of this year. Through the *EV Market Launch Framework*, the Department joined with industry to help prepare a number of key communities around the U.S. to support EV's operation and committed to the purchase of a significant number of EVs by the Federal government. Could you please tell me the status of those efforts.

Answer: The Department, working with its partners—the Department of Transportation, the Electric Transportation Coalition and the Electric Vehicle Association of the Americas—planned and carried out an initial effort to inform city/local policy makers and their staff members about electric vehicle infrastructure issues available products and other matters. This was done through a series of workshops in ten emerging or designated Clean Cities.

The series of EV Market Launch workshops was completed in November 1996. (In alphabetical order, these workshops were held in the following cities: Atlanta, Boston, Detroit, Fort Lauderdale, Los Angeles, New York City, Phoenix, Richmond, Sacramento, and Washington, D.C.) Conducted jointly by the partners, the purpose of these workshops was to inform and educate key individuals in a region about electric vehicles and related infrastructure equipment. Approximately 1,400 business, policy, and civic leaders attended the ten informational meetings held throughout the country. The workshops were successful in identifying and bringing together key stakeholders, policy makers, and decision makers in each of the communities and educating them on available technology, national energy and transportation policies, and local EV efforts to date. Each workshop featured a "Ride and Drive" event which allowed participants to test the available technology.

The workshops resulted in a clear signal that local communities wanted more choices in electric vehicle products, particularly more original equipment manufactured (OEM) products, and more clarity from industry on how competing vehicle charging approaches could be reconciled. In all cases, the workshops were a starting point for the process of "EV readiness." As a result of the workshops, four of the ten communities have formed EV Action Committees, such as Policy, Infrastructure, Public Information, and Building Codes, and have been meeting since the initial workshop. Other cities have used existing groups to ensure the EV-ready dialogue continues. Some EV Market Launch cities have expressed the desire for the national partners to continue to support local efforts. Therefore, the Department intends to conduct some follow-on activities by assisting communities with needs analysis for establishing local EV markets, formation of EV-ready infrastructure business plans, and national meetings so leaders in all ten communities can exchange information and work together on electric vehicle infrastructure issues.

In regard to the vehicle purchase agreement, there are several different projects the Department is implementing to assist in the deployment of electric vehicles in the Federal fleet. One project involves leasing approximately 40-50 electric vehicles to non-Department of Defense (DOD) agencies in California and the greater Washington, DC, metropolitan area. The project includes the General Services Administration (GSA), General Motors, and several interested electric utilities. The Department also plans to purchase about 40-50 electric vehicles for its own fleet in FY 1997. In addition to current projects, the fiscal year 1998 budget includes \$2 million that, if appropriated, will be offered to agencies on a matching-grant basis (up to a limit of \$10,000 per vehicle) for electric vehicle purchases, in return for each recipient agency's commitment to collect operating, performance, reliability, and life-cycle cost data on the vehicles and to share that data with DOE.

Question: What can or should the government be doing to provide low cost incentives for electric vehicles such as those being employed in Europe, i.e., free parking, tax policy, etc?

Answer: The Department made specific recommendations to the Congress in a report Encouraging the Purchase and Use of Electric Motor Vehicles, dated July 19, 1995, in response to Section 615(b) of the Energy Policy Act of 1992. Among the report's recommendations were the following:

(1) Continue current Federal electric vehicle research and development projects that will assist in the continual improvement and cost reduction of the technology.

(2) Establish an active electric vehicle consumer education and awareness program. Because electric vehicles represent a substantially different vehicle technology from conventional spark ignition vehicles, additional educational activities are recommended.

(3) Work with state and local governments, especially in conjunction with The Clean Cities program to encourage the use of incentives such as those relating to parking, high occupancy vehicles and local tax breaks.

The Department's support of and involvement in projects such as the EV Market Launch Workshops and possibly partnering with the Electric Vehicle Association of the Americas (EVAA) to do an informational CD-ROM product, are examples of such educational efforts. In this vein, the Department continues to provide electric vehicle information to the National Alternative Fuels Hotline.

(4) Continue to increase Federal Fleet purchases of electric vehicles. We are currently working on doing an EV leasing project with GSA, Federal agencies and some large electric utilities. Also, the Department has begun to implement the electric vehicle provisions of Executive Order 13031.

(5) Coordinate development of standards for electric vehicle purchases by government and private fleets. The Department's Field Operations Program is continuing with the development and revision of purchase guidelines and nationally-accepted vehicle testing procedures, as well as providing information on currently available electric vehicle models to fleet managers via the National Alternative Fuels Hotline and the National Alternative Fuels Data Center. The information provided includes, or will include, performance, reliability and cost data.

(6) Investigate battery leasing for electric vehicles. Since the battery is a significant cost factor in the purchase, and life-cycle costs, of an electric vehicle, battery leasing represents a potentially viable method of putting electric vehicles on the road. The Department is currently working on a study, called for by Section 625 of the Energy Policy Act of 1992, to determine the means by which electric utilities may invest in, own, sell, lease, service, or recharge batteries for electric vehicles.

(7) Congress and the Administration should periodically review the effectiveness of various measures to encourage electric vehicle purchases.

QUESTIONS SUBMITTED BY CONGRESSMAN SKEEN

Question: How do you justify a budget request that jumps your programs an overall 25 percent at a time when most programs are just holding their own?

Answer: Federal support for energy R&D is needed to protect the public interest in maximizing energy productivity, preventing pollution prevention, and keeping America secure. In 1995, the Task Force on Strategic Energy Research and Development, chaired by Daniel Yergin for the Secretary of Energy Advisor Board, found that Federal support for energy R&D had declined by 75 percent since the late 1970s—and that private sector energy R&D was undergoing widespread cutbacks just at a time when science and technology are of growing importance for meeting international challenges. Twenty-five of the largest companies, which account for roughly half of all private energy R&D spending, reduced their energy R&D commitments by 22 percent from 1991 to 1993. The Yergin Task Force, noting that investment in R&D, both public and private, is a major driver of economic growth and technological leadership, recommended continuity in public funding for energy R&D. Similarly, the President's Council of Advisors on Science and Technology recently recommended a "substantial and sustained increase in Federal expenditures in energy R&D."

The Department of Energy fills the Federal role in conducting energy R&D to secure America's energy future and technological leadership. Our energy conservation programs provide applied research for technologies that realize energy and resource savings in the industrial, transportation and buildings sectors. The costs for development are increasingly shared by our private sector research partners as these technologies approach and achieve commercialization.

The proposed FY 1998 budget for Energy Conservation is aimed at returning our programs to FY 1995 levels of support. The public benefits of energy conservation programs represent a high return on investment. In the area of buildings efficiency R&D, for example, the Department has invested less than \$1 billion since 1979. From this investment, five of the Department's successful buildings efficiency technologies (themselves developed at a cost of \$30 million) have saved consumers a total of \$28 billion, as measured in net present value. Consumer cost savings from these technologies continue to accrue at a rate of more than \$5 billion annually. Another of our efforts, the Federal Energy Management Program, is aimed at reducing energy costs in Federal facilities by \$1 billion annually by 2005 at a minimal cost to taxpayers through the use of energy service contracts. Taxpayers are aware that our programs also bring about improved environmental quality and a more secure energy future. Reducing federal budgets for energy efficiency makes little economic sense when these programs provide substantial cost savings and economic productivity gains for the nation.

The Department's energy efficiency programs are reducing U.S. dependence on oil from unstable regions of the world. There have been three major oil disruptions in the past 23 years, each causing substantial domestic and international turmoil. In the next 15 years, U.S. net oil imports are projected to rise to 60 percent of domestic consumption; and Persian Gulf oil producing nations will increase their oil exports to surpass their peak of 67 percent of global oil exports in

the embargo year of 1974. This situation poses potential risks for America's future. In addition, high levels of oil imports raise the nation's balance of trade deficit.

Government spending on energy R&D is higher in other developed nations than in the United States—more than twice as high, for example, in Japan, which spends more than four times as much as a percentage of GNP. This has happened despite the fact that global energy demand is rising sharply, and the opportunity exists to meet the domestic and international demand with newer, cleaner, and more efficient energy technologies developed in the United States.

Question: Conservation R&D appears to have done little to reduce America's reliance on imported oil in spite of billions of dollars spent by government and private industry. Isn't the rising dependence on imported oil the real failure of American energy policy? How does your conservation funding address this issue?

Answer: One reason for our growing dependence today is that the Department's approach toward reducing oil demand was largely ignored during the 1980s. The Department's energy programs help slow the decline in domestic oil production and help slow the increase in demand for imported oil. These efforts and measures are cost-effective and provide environmental benefits in addition.

The nation is increasingly dependent on imports of oil from unstable regions of the world. Global and domestic demand for oil is growing rapidly, and the Persian Gulf seems to get less stable with every passing day. If we do not act decisively now, with a concerted effort of foreign policy and technology development, another oil shock will be more likely, and when it comes, its effects on the nation will be more devastating.

The Department's Office of Energy Efficiency and Renewable Energy addresses the demand side of the oil dependency problem. The transportation sector accounts for two-thirds of all petroleum consumed in this country. The Office of Energy Efficiency and Renewable Energy invests in developing cars and trucks that are highly fuel-efficient and vehicles that will run on fuels other than petroleum, including natural gas, electricity, and biofuels (ethanol) from crops, crop waste, and municipal solid waste.

Our programs develop and facilitate the deployment of energy efficient technologies and alternative fuels that are projected to substantially reduce future U.S. oil consumption. Most of these efforts focus on transportation technologies and fuels because two-thirds of U.S. oil is used in transportation and substantial fuel switching and efficiency gains in the past have reduced the potential for substantial further reductions in other sectors. The current DOE transportation portfolio has four basic components:

- 1) R&D to develop with industry the next generation passenger vehicle with three times the current efficiency (Partnership for a New Generation of Vehicles);
- 2) R&D to reduce the cost of transportation biofuels;

- 3) R&D to develop more efficiency engines for heavy duty trucks; and
- 4) Technology development and deployment efforts to accelerate the use of alternative fueled vehicles in fleets and other markets.

These four activities are estimated to reduce U.S. oil use by 200 to 400 million barrels per year in 2010 (0.6 to 1.1 million barrels per day) and 380 to 760 million barrels per year by 2020 (1.0 to 2.1 million barrels per day).

The Department collaborates with other federal agencies, the national laboratories, and the auto industry in a Partnership for a New Generation of Vehicles. The Partnership's goal is to design and construct a prototype clean car by 2004 that has three times the fuel efficiency of existing cars and very low emissions, with comparable or improved performance, safety, and cost. Supporting technologies include lightweight, super-strong materials, and advanced engines. Such a car would replace imports of oil with domestically produced advanced technologies.

Technologies are being developed under the Partnership to make possible a super-efficient hybrid vehicle that has both a small internal combustion engine and an energy storage device, such as a battery or fly-wheel. We are also researching advanced batteries for use in electric cars. Among these is the nickel metal-hydride battery, which promise to double the range of vehicles that use lead-acid batteries. Such batteries could replace imported oil with domestically produced electricity. As for biofuels, research sponsored by the Department has brought the cost of ethanol from \$3.60 per gallon a decade and a half ago, to \$1.20 per gallon. With continued investment, the biofuels program is expected to produce ethanol from waste paper, crop waste, and fast-growing dedicated crops for 70 cents a gallon by 2005, competitive with oil at \$25 a barrel.

The Department is also seeking to increase the use of natural gas as a transportation fuel. Probably the one technology most experts would agree has the best chance over the long term of significantly reducing petroleum use in the transportation sector is fuel cells. These are compact, modular devices that generate electricity and heat with high efficiency and virtually no pollution. They run on hydrogen converted from fuels such as natural gas.

The Department's technology investment can limit the economic and geopolitical impacts of importing Persian Gulf oil and create domestic jobs. The Administration has been committed to increasing these investments even as overall government spending declines in order to balance the budget. For while we have a duty to eliminate the deficit, we also understand that public investment in R&D is an investment in America's future.

QUESTION SUBMITTED BY CONGRESSMAN ZACH WAMP

Question: Inorganic, catalytic and metallic membrane technologies which were developed for the gaseous diffusion and enrichment process operate very efficiently in chemically hostile and high temperature environments. In that these processes offer significant advantages in energy efficiency, petrochemical, and inorganic chemical industrial applications, the technology is presently undergoing DOE declassification review so that these technologies can be widely available for a broad range of uses. Since this technology offers great promise for energy production from a range of environmentally unfriendly petro-based fuels, what levels of support do you anticipate being needed to protect national security interests and deploy these processes in the competitive international environment?

Answer: The Department of Energy does not separately fund the selection and evaluation of particular technologies for declassification as part of the re-industrialization effort. However, declassification reviews and analyses may be requested as part of the overall re-industrialization effort by the respective program offices.

As part of the declassification program, the Office of Nonproliferation and National Security has provided support for the declassification evaluation, for example, of gaseous diffusion barrier technology. As a result, the Office of Nonproliferation and National Security recommended not to declassify the barrier technology because of concerns over nuclear proliferation. The office has supported the effort to investigate ways to permit the commercial use of barriers while safe guarding the technology used to produce the barriers. Currently, some aspects of commercially useful inorganic membranes that could be produced using the gaseous diffusion barrier technology are classified. A technical review group, led by the Nuclear Transfer and Supplier Policy division of the Office of Arms Control and Nonproliferation, has initiated a "reverse engineering" study of the barrier products. The results of this study will assist the Department in identifying ways to safeguard the barrier production technology if it is used to produce inorganic membranes for commercial purposes. The "reverse engineering" study is jointly funded by the Office of Arms Control and Nonproliferation and the Office of Nuclear Energy. The Office of Declassification has supported this effort by providing classification and technical assistance to the working group.

In the near-term, through work-for-others and licensing agreements, technology transfer of non-classified technology to the private sector is being accomplished. The approach addresses the "low hanging fruit" type of technology that can be readily utilized by the private sector, but does not address the longer term capabilities of this technology for energy applications.

Both Fossil Energy and Energy Efficiency and Renewable Energy within the U.S. Department of Energy have programs that offer the opportunity for longer-term development of industrial energy membrane applications. Currently in place is the Advanced Research and Technology Program within Fossil Energy, funded at about \$1 million/year, which is supporting four industrial applications of membrane technology (i.e., upgrading heavy crude oil, recovery of hydrogen from refinery gases, purification of natural gas, fuel cells). The Industries of the Future strategy employed by the Office of Industrial Technologies, Energy Efficiency and Renewable Energy, to

facilitate the development of technologies relevant to broad industry needs (as defined by industry visions and technology roadmaps), offers additional opportunities for developing partnerships with industry that are consistent with DOE's mission to improve energy efficiency and the environment.

QUESTIONS SUBMITTED BY CONGRESSMAN YATES

Question: Within the Municipal Energy Management request can you be more specific about the 20 to 25 new projects which when implemented will achieve energy savings and create 265 jobs? I am particularly interested in those projects which will affect Chicago.

Answer: The City of Chicago is the grant recipient for the Municipal Energy Management Program. Each local government selected for funding enters into a contract with the City of Chicago to complete its proposed project. The request for proposals is available January 15 each year that funding is appropriated. Local jurisdictions submit proposals by March 31. An internal review takes place within the Department of Energy offices that have expertise in the subject area. The comments from the Internal Review Group are submitted to the Municipal Energy Management Program selection committee that is appointed by the Urban Consortium Energy Task Force Chairperson. Two of the 44 applications under review for 1997 were submitted by the City of Chicago. Selections will be made in May and the grant will be awarded by September 30. The number of jobs created as well as the energy savings are based on historic performance as it relates to the level of funding awarded to the program.

Question: What is the status of the new refrigerator standards rule?

Answer: The Department transmitted a draft final rule on the refrigerator products energy efficiency standards to the Office of Management and Budget for review as required by Executive Order 12866 on January 10, 1997. Since he was confirmed, Secretary Peña has reviewed the draft final rule and a few issues are being addressed by staff. Once these issues have been addressed, the Secretary plans to complete his review and make a final determination. The final rule is expected to be issued later this month.

Question: What impact did the one-year moratorium on new appliance standards rules have on DOE's efforts to produce more energy efficient products for consumers?

Answer: The Department used the moratorium period to review its rulemaking process and to develop some new procedures and analytical tools which could expedite future rulemaking to produce more energy efficient products for consumers. Unfortunately, for rulemakings that had begun prior to the moratorium, the moratorium has caused some delay.

In September 1995, the Department announced a formal effort to consider further improvements to the process used to develop appliance efficiency standards, calling on energy efficiency groups, manufacturers, trade associations, state agencies, utilities and other interested parties to provide input to guide the Department's work. A series of meetings was held and interviews were conducted with thirty organizations that have participated in past appliance rulemakings to solicit information regarding the perceived strengths and weaknesses of the process.

This effort culminated in the publication of a process rule on July 15, 1996, which institutionalized the procedural improvements identified by the stakeholders. New procedures to address stakeholders' concerns included such improvements as very early and frequent input from

stakeholders; increased use of outside technical expertise, increased predictability of the rulemaking timetable, the use of transparent analytical methods, and the support for consensus building.

Other actions in the Department's process improvement effort included: a review of manufacturing impact analysis model and methodologies; the prioritization of future rules; and the creation of an advisory committee, consisting of a representative group of interested parties, to oversee the implementation of the commitments in the process rule. The Office of Codes and Standards instituted an annual prioritization process in the fall of 1996. The prioritization process includes the establishment of criteria such as potential energy savings (from regulatory action only), potential economic benefits/burdens and stakeholder recommendations, which are used to identify covered products as high, medium and low priority products. This not only provides a schedule of the rulemakings to the stakeholders but also allows the Office to allocate its available financial and staff resources according to the priority categories, with high priority products receiving the majority of the resources.

The Department has created an Advisory Committee that met for the first time on January 8, 1997. At this meeting, subcommittees that will be reviewing specific concerns were established. The Department also completed its review of the approach to analyzing the impact of standards on manufacturers. A new approach was developed and presented at a workshop held on March 11-12, 1997. The Office will be working with its stakeholders to tailor each rulemaking to the specific product under consideration.

Question: Can you please elaborate on the DOE's Energy Star Program Volume Purchases Program of high efficiency appliances? I am particularly interested in the collaboration between the DOE and housing authorities across the country, in my district in Chicago this program has great potential.

Answer: Under its volume purchase program, DOE supports a variety of efforts to aggregate purchases of exceptionally high-efficiency appliances. The idea is to bring new products to market faster by demonstrating to manufacturers that ready markets exist for efficient appliances and to achieve lower unit costs for newly-introduced models by greatly increasing initial production volumes.

In the most successful volume purchase effort to date, a joint effort initiated by the New York Power Authority (NYPA), DOE and the Consortium for Energy Efficiency (CEE) is bringing cost-effective, highly efficient refrigerators to housing authorities through volume purchases. In Phase 2 of the project, begun in 1996, the Department intends to stimulate purchase of refrigerators that are more efficient than any product previously available.

In 1996, the Maytag Corporation won the competition to provide 60,000 (or more) highly efficient Magic Chef refrigerators to housing authorities. Maytag developed these refrigerators in response to the program's efficiency specifications. The new Magic Chef model is rated at 437 kWh per year, which is 12 percent less energy use than any product previously available and 30 percent better than the current DOE standard. The DOE team met with more than 50 housing

authorities to assist them in evaluating their appliance and energy needs and to develop commitments for the purchase of the new refrigerators for delivery in 1997. DOE also worked with HUD to make it possible under HUD rules to finance all or part of the acquisition cost of the refrigerators with projected energy savings. As a result, the DOE team has received orders or letters of intent for delivery of more than 70,000 refrigerators by 36 public housing authorities and similar institutions throughout the US. No DOE funds are used for purchasing refrigerators.

In Chicago, the Chicago Housing Authority (CHA) has joined the program. CHA plans to replace 10,000 refrigerators in Senior Housing that use an average of 1100-1200 kilowatt-hours per year with units that use approximately 450 kilowatt-hours per year. This purchase is being done with an Energy Performance Contract with a private firm at no capital cost to the housing authority. DOE, through the Argonne National Laboratory, is providing technical support and monitoring to verify energy consumption and savings, using protocols developed and tested in New York City by DOE through Pacific Northwest National Laboratory. CHA management is also working with DOE to identify other volume purchase opportunities for the future—advanced, high-efficiency lighting in particular.

DOE is also working with private sector apartment building owners, water utilities, and municipal governments to purchase large volumes of efficient laundry products. In FY 1998, we plan to expand our efforts with private sector apartment building owners, and begin to organize purchases of efficient water heating products, like heat pump water heaters.

Student Vehicle Competitions

Question: Does your request provide any funding for the student vehicle competition sponsored by DOE in past year?

Answer: For FY 1998, DOE has requested \$1.0 million to co-sponsor: (1) the Future Car Challenge, together with Ford, General Motors, and Chrysler; and (2) the Ethanol Vehicle Challenge, in conjunction with the Illinois Department of Commerce, the Wisconsin Bureau of Transportation, and General Motors. For every dollar that DOE invests in a student vehicle competition, other sponsors invest \$3-4.

Question: Desiccant technologies remove moisture from the air in an energy and cost efficient manner while at the same time improving air quality. These natural gas cooling technologies' ability to reduce electricity use during the summer months when prices are high will be economically attractive to consumers. What has the DOE committed to this technology in FY98 and what results do you hope to achieve?

Answer: FY 1998 funding for Advanced Desiccant Technology is \$2,000,000, a \$540,000 increase over fiscal year 1997. Current projects, being carried out in a cost-shared program with manufacturers of desiccant technologies, are focused on solid desiccant technology application in large commercial buildings. In 1998, testing of desiccant systems will continue in three different establishments, a theater, and two fast food restaurants. Research and development of enabling technologies for Indoor Air Quality (IAQ) and the development of sensors and specialized control

will take full advantage of the energy savings and air quality improvement potential of solid desiccant-based air conditioning equipment. The need exists to establish a desiccant technology and educational base for users of desiccant system.

QUESTIONS SUBMITTED BY CONGRESSMAN SKAGGS

Question: The "Energy Stars" program assists consumers to know about the energy efficiency of appliances. What progress is being made toward a similar way of establishing market incentives for improving the energy-efficiency of homes and other buildings?

Answer: Two activities that are underway in this area are the pilot program for Home Energy Rating Systems (HERS) and the Energy Star homes program. The HERS program provides grants to seven pilot states to implement home energy rating systems and use these to provide consumers with information on the relative efficiency of their homes and to ease access to energy efficiency financing products. The joint DOE EPA Energy Star program includes Energy Star Homes for residential new construction. The Energy Star is for homes that are 30 percent better than the Model Energy Code or have a five-star HERS rating.

Question: Please describe changes DOE plans to make establish priorities among the various programs dealing with building technologies.

Answer: The Office of Building Technology, State and Community Programs is in the process of assessing priorities and opportunities. Several meetings have recently been held to obtain stakeholder input in this process.

QUESTIONS SUBMITTED BY CONGRESSMAN MORAN

Building America Program

Question: How has the building industry, particularly the National Association of Homebuilders, reacted to the goals of your program? Do most building codes currently incorporate sufficient energy efficiency standards? Are you working with the appropriate code-making bodies to ensure that your standards are incorporated?

Answer: In the Building America program specifically, the building industry has reacted very positively. Upon initiation of the program, numerous builders requested to be a part of the Building America consortia fully realizing that only modest support would be forthcoming from the Federal Government. Considerable extra effort has been willingly spent by the builders as part of the four active consortia teams. Participating builders have particularly praised the consortia arrangement that facilitates innovation while minimizing the government presence. The National Association of Home Builders has included Building America as a topic for their most recent Annual Convention and meeting in Houston last January.

The National Association of Home Builders has incorporated the Department's simplified code compliance materials, MECcheck, into their training program. Furthermore, NAHB has strongly advocated that their members participate in home energy rating programs, the Edison Electric Institute's (EEI) E-seal program and the Environmental Protection Agency's Energy Star program. The baseline for all of these programs is the model energy code.

In addition, Habitat for Humanity, the largest building organization in the country, has actively endorsed building energy codes, including the Model Energy Code, as being appropriate regulations and cost effective. In fact Habitat recommends building to more energy efficient levels than the current Model Energy Code.

Some state home builder organizations have been also been supportive of the Model Energy Code. California, Colorado, and Nevada builders, for example, are participating in a jointly-funded \$1 million tri-state/building industry/DOE energy code and quality control training program. The program is targeting over 1,200 builder employees including purchasing agents, construction superintendents, subcontractors and others, about how to build to energy efficiency codes. The building industry has contributed over \$144,000 and the States another \$489,000.

Product manufacturers, particularly those who benefit from expanded markets through the recognition in codes of the efficiency and environmental benefits of their products, have long supported the program. Producers of insulation, glass and windows, heat recovery systems, and controls and small innovative product manufacturers, are among those supporting codes.

The engineering and lighting professional societies (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.(ASHRAE) and Illuminating Engineering Society of North

America (IESNA) for two decades have sponsored the development and upgrading of the building industry consensus standards on which all of the energy codes are based.

The sufficiency of energy efficiency measures in codes is a function of the progress of technology. For example, high performance windows, lighting, and controls today that are technologically feasible and cost effective today, were not available five years ago. The model codes and standards are constantly being upgraded to reflect the benefits of new and improved technologies. However, the stringency of residential building energy codes is in the end a state decision. States periodically determine whether it is appropriate to update their building energy codes. As of September 30, 1996, 25 States had adopted residential energy codes that meet or exceed the 1992 edition of the Model Energy Code. These codes govern approximately 54 percent of the construction in this country. Eighteen states have no statewide energy code or only have such a code for state or state funded buildings.

In addition, 25 states have updated their commercial building energy code to meet or exceed the ASHRAE/IESNA Standard 90.1-1989. These codes govern approximately 61 percent of commercial and multi-family high rise construction. Twelve states are currently working together, with DOE assistance to develop an upgraded code that will achieve greater energy savings and improved environmental conditions than the current building industry consensus code, Standard 90.1-1989

Although the Department defers to states regarding the implementation of residential building codes, there is substantial evidence that there are energy saving, cost-effective technologies that are not a part of most standards set at the state level. As of September 30, 1996, 25 states had adopted residential building energy codes that meet or exceed the 1992 Model Energy Code. Of the remaining 25 states, 18 have not statewide energy code or only have such a code for state or state funded buildings. In addition, because energy efficiency technologies are constantly improving, established codes soon become out of date.

The Department is working with the voluntary building energy code organizations to support the upgrading of their model building energy codes and standards. DOE assists in improving the technical basis for these models and in determining the cost-effectiveness and technical feasibility of energy efficiency measures, as require by the Energy Conservation and Production Act, as amended. The Department also assists in making these models easier for states and local governments to adopt and implement and for users to apply. The Department participates in the building industry codes and standards organizations, including: the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. the Building Officials and Code Administrators International, the International Conference of Building Officials, the Southern Building Code Congress International the Council of American Building Officials, which among other things prepares and maintains the Model Energy Code with the participation of the three regional code organizations, and the International Code Council.

Question: Are the new buildings (office and home) being constructed today meeting the energy efficiency standards advanced by your office? If not, why not? Does your office advocate retrofitting existing buildings to improve their energy efficiency? What is the single best way to

improve the energy efficiency of an older building and how much does it cost for this improvement? How long after retrofitting, on average, are the costs of the retrofit recouped through increased energy savings?

Answer: In states that have implemented ASHRAE building efficiency standards in local buildings codes, new construction for both commercial and residential are meeting the standards advanced by our office. However, many states have not yet adopted these, or comparable, standards in local building codes as outlined in EPACT. Our current program focus is to provide information and training that will allow states to adopt the ASHRAE standards without undue burden on local builders and designers.

The Office of Building Technologies, State and Community Programs strongly advocates building energy retrofits. The best way to retrofit an older building is to use a comprehensive approach that will identify all cost saving opportunities. The building owner can then make an informed choice based on their investment objectives. Building systems that should be analyzed are lighting, HVAC, including chillers or boilers, the envelope (windows, walls, insulation), plug loads (computers, copiers), energy management systems and also how these systems are operated and maintained. Most building retrofits will cost between \$1 to \$3 per square foot.

Lighting retrofits are the most common type of building energy retrofit and can pay for themselves in one to two years. More comprehensive retrofits may have a simple pay back of four to five years but the cumulative savings are far greater at the end of the equipment's useful life. As illustration; a lighting retrofit with initial costs of \$100,000 has savings of \$40,000 per year. The payback would be 2.5 years. The same example with a comprehensive retrofit would cost \$400,000, and save \$100,000 per year, a simple payback of four years. However, the more comprehensive retrofit will save \$600,000 over 10 years, while the lighting retrofit will only save \$300,000 over the same period. In addition, comprehensive retrofits allow the building owner to enhance the comfort and productivity of the occupant, resulting in benefits to the building owner that far exceed the energy cost savings.

Energy Efficiency In U.S. Versus Other Countries

Question: How do our energy efficiency standards in the United States compare with other countries, particularly European countries? Do you know if any studies have been done on the correlation between what has been called "sick building syndrome" and energy efficiency? In other words, for those buildings that are considered to have poor air circulation, improper ventilation, and the general types of problems that result in a "diagnosis" of sick building syndrome, is it really just an energy efficiency problem?

Answer: The United States provides efficiency standards for appliances and other energy-consuming equipment that establish, through Congressional mandate, minimum levels of performance for several types of consumer products, e.g., furnaces and central air conditioners. DOE promulgates these regulations through the federal rulemaking process that has been reengineered to consider substantial industry input. Many European government agencies have inquired about the U.S. experience with these standards.

U.S. energy standards for buildings are unique compared to those of other countries in two ways. First, other countries do not offer a system of model codes, with the result that central governments and other interests do not have a forum to effect the minimum allowable efficiency of new buildings. Second, the building standards promoted by DOE through the industry consensus process are more comprehensive than those of most other countries in that they include prescriptive and performance-based requirements. The building requirements of other countries, including European countries, include only prescriptive requirements such as minimum R-value. U.S. building standards such as those based on ASHRAE Standard 90 allow for trade-offs among energy saving options. The result is considerable latitude for the design of U.S. buildings in terms of energy performance.

Many studies have attempted to determine the correlation of "sick building syndrome" symptoms and building-related environmental factors. Some of the factors investigated are energy-related, such as outdoor ventilation rates and thermal comfort. Other factors investigated include job-related constraints in the office workplace, such as accessibility to windows. The current literature reports weak correlations for most of the factors that have been investigated. In general, non-energy-related factors such as job constraints have shown better correlation than energy-related factors, but the subject remains largely unresolved and is the subject of continuing research. As part of DOE's Best Practices program, we are planning to conduct intervention studies in this area with the National Institute of Occupational Safety and Health. These studies will seek to provide some definitive findings on the effects, or lack of effects, of specific measures such as improved filtration. On a larger scale, EPA's Indoor Air Quality Building Studies or BASE program is engaged in measurements and data collection for a large sample of buildings. For this program we expect that the large amount of data available can yield some important findings. The BASE program was developed with considerable interagency cooperation and the data is shared with other agencies and the private sector.

Federal Energy Efficiency Program

Question: Is the federal government meeting its energy efficiency goals: How are these goals being met?

Answer: The Department of Defense, the largest energy consumer among the Federal agencies, has made considerable progress, achieving the 10 percent energy reduction goal a year earlier than the 1995 target date. Nine other agencies have also achieved the 10 percent reduction goal. The Energy Resource Management Program in DOD is estimated to save more in operations and maintenance costs than all of the recent round of base closures. In 1995 DOD achieved a cost avoidance of approximately \$380 million compared to a 1985 baseline. These annual savings will continue for years to come due to the long life of the funded efficiency projects.

DOE, the Department of Justice and the Federal Emergency Management Agency have achieved even more striking results. DOE is one of three Federal agencies that have already achieved the 20 percent goal, six years ahead of the year 2000 target date. Energy efficiency improvements in

DOE alone for 1985 to 1994 have saved over \$940 million in energy costs to the government and will create additional net savings of approximately \$1.2 billion through 2016.

The Departments of Agriculture, Interior, and Transportation and Veterans Affairs, General Services Administration and the National Aeronautics and Space Administration have also achieved the Energy Policy Act goal of a 10 percent reduction in buildings energy use from 1985. The remaining agencies continue their efforts to reach the goals set under EPAct and Executive Order 12902. While their progress has been slower, these agencies have indicated their willingness to reach their goals without compromising their mission requirements and exceeding resource constraints.

Question: Can you describe some of the more innovative energy efficiency programs that have been developed for federal buildings?

Answer: There is both interest and cooperation from Federal agencies, which continue to look to FEMP for leadership. While most agency budgets are decreasing, FEMP, as part of its mission, will continue to help agencies identify alternate financing arrangements. To help streamline the contracting process, DOE issued a solicitation for a FEMP Energy Saver Performance Contract (Super ESPC) in May 1996. The Super ESPC process allows Federal agencies to issue orders from each contract awarded and to begin to realize energy cost savings more quickly than with the conventional contracting process. Each agency will pay the contractor from the savings in the agencies' energy expenses.

The first Super ESPC should be awarded in the next 60 days. It will cover eight western states and the Pacific territories and has a contract value of \$750 million. Demands on agency resources to develop contracts should be reduced by this process, allowing agencies to use their valuable and scarce resources on other priorities. As a result, other agencies are cooperating in the establishment of this contracting mechanism and are anxious to see it in place across the country. In addition, FEMP plans to apply 15 energy and money saving technologies used in the "Greening of the White House" to three additional showcase buildings and existing Federal facilities.

To help deliver an economic and secure energy future, the Federal Energy Management Program will deploy cost-effective energy and water technologies, as well as solar and other renewable energy, to reduce energy costs in Federal facilities. Twenty-two Federal agencies have committed to using the buying power of the Federal Government to reduce operating costs for Federal agencies, expand markets for the latest energy efficiency and water conservation products, and create new entry markets for advanced energy-saving technologies and products. This will stimulate lower unit costs from volume buys.

While there is a strong commitment to environmental excellence within Federal agencies, these agencies need good information, education and programs to make the best decisions. With the right support, our government can set a good example and lead the way to reducing and preventing pollution. As part of the Department's environmental stewardship, FEMP has proposed to spend \$7 million in FY 1997 to apply existing technology deployment mechanisms to DOE and Federal facilities. FEMP will provide technical assistance to Departmental elements to

implement a joint demonstration program for chiller replacements and steam plant conversions as a pilot for expanding this effort to all Federal agencies. FEMP will work with DOE headquarters program managers and program managers at DOE facilities to identify chiller retrofit projects and steam plant conversions and explore energy savings performance contract opportunities. In addition, FEMP will work to advance Federal facility energy management through incorporation of technology deployment lessons learned in Federal facilities. This effort will explore the potential Federal sector benefits for energy and cost savings and pollution prevention through "Climate Change Action Plan (CCAP)" programs, such as Technology Introduction Partnerships, NICE³, Rebuild America, Climate Challenge, Climate Wise, Motor Challenge, among others, and extend them into the Federal sector as appropriate.

Automobiles

Question: How cooperative have domestic auto manufacturers been in developing more fuel efficient vehicles and vehicles that run on alternative fuels? What has their financial commitment been compared to your office?

Answer: The domestic auto manufacturers have been very cooperative in pursuing our joint programs, including the Partnership of New Generation of Vehicles (PNGV), our research program on advanced batteries with the U.S. Advanced Battery Consortium (USABC), and activities to deploy alternative fuel vehicles. Since 1993, the domestic auto manufacturers and the Department of Energy have been cooperating under a 50/50 cost-share arrangement to develop 80 mpg production prototype vehicles. Under PNGV, a fuel-flexible fuel strategy has been employed in the development of high efficiency gas turbines and fuel cells. Very recently, the PNGV established an alternative fuels advisory group to evaluate the emissions of various alternative and renewable fuels for the compression ignition direct injection (CIDI) engine. This is significant because the CIDI technology will likely be employed for PNGV concept cars in 2000.

Under the USABC cooperative agreement, the automakers and the Department are cooperating on the development of advanced batteries for electric vehicles. Currently, industry is providing 55 percent of the program costs, and the Department's contribution is 45 percent.

Auto and engine manufacturers have been increasing their cooperative efforts to deploy alternative fuel vehicles (AFVs) for several years. For example, the number of light-duty AFVs offered by manufacturers has increased from 4 models in 1992 to more than 13 this year, with 20 planned for model year 1998. The first production electric vehicle was introduced this year by General Motors, and there are now over 21 different alternative fuel heavy duty engines and powertrains available. In addition, the manufacturers are working closely with the Department and fuel suppliers through the Clean Cities program to meet the growing demand from fleets and consumers for alternative fuel products. Furthermore, the manufacturers work closely with the Department to design test and evaluation standards, and data collection protocols to help standardize emissions and performance data on alternative fuel vehicles.

Question: How does the United States compare to other countries in the development of fuel efficient automobiles?

Answer: At this time, there is unprecedented worldwide cooperation between government and industry, aimed at the development of advanced vehicle technologies such as electric and hybrid propulsion systems. Substantial domestic partnerships, such as PNGV which links seven Federal agencies and their laboratories with Ford Chrysler and GM, have encouraged European countries to accelerate their joint development activities under EUCAR. Japan continues to rely on the Ministry of International Trade and Industry (MITI) approach for their cooperative activities.

Major programmatic differences exist. Driven by significantly higher fuel costs, Asian and European efforts focus on increasing the fuel efficiency of sub-compact size vehicles. In contrast, domestic efforts have the goal of significantly increasing the fuel economy of the Taurus, Lumina, Concorde size cars that American drivers most often demand. In spite of these differences, research and development priorities appear to be in agreement:

- improve conventional engine performance,
- increase lightweight material substitution in bodies and chassis,
- develop hybrid propulsion technology

Within the area of hybrid propulsion, there is also agreement that fuel cells are longer-term, offering considerably higher potential efficiency and emissions benefits, than advanced combustion engines.

Worldwide vehicle manufacturers have recently made exciting announcements regarding progress on hybrid and fuel cell vehicles. A very competitive "horse race" seems to be taking shape, aimed at developing and producing the next generation of vehicles for international markets. DOE's Office of Transportation Technologies has recently received a report on foreign technology assessments, which provides more details. As part of the examination of international advanced vehicle technology trends, a series of patent-based analyses were conducted. While patents are not a perfect measure of technology development, general literature indicates the tendency to file for patent protection in the United States correlates with a tendency to pursue commercialization of a product in this market. In the period of January 1975 to June 1996, the U.S., Japan and Germany dominate the patent statistics. The U.S. leads, but others are catching up in total numbers of patents filed. Several trends are worthy of note:

- There is evidence of Japanese, European and U.S. innovation across the board in technologies of interest.
- All three have their largest patent holdings in the areas of fuel cells, battery technology and electronics.
- Innovation patterns, as evidenced by patent applications, have come in waves in the U.S. and Europe. Japanese innovations have been more consistent and are increasing in numbers.

The report concluded that:

- European Commission funding for technology development has not kept pace with plans, but private commitments appear to have increased.

- Japanese government funding has been higher than the 1996 projections and private commitments have increased.
- Thanks to government bureaucracy, national initiatives have not progressed as fast as the original plans, or rhetoric, would imply in Europe or Japan.
- Japanese and European auto manufacturers determine technology priorities in cooperative government programs, though funding is jointly administered.
- Suppliers are major contributors to advanced technology development and are playing a key role in maturing technology to support electric and hybrid vehicles.
- The successful development and introduction of advanced technology depends on suppliers and the strength of their relationships to auto manufacturers.
- Notable fuel cell technology development has resulted from increased government and corporate commitment globally.
- Direct-injection engine development and applications are widespread.
- Lithium-ion energy storage battery development in Japan does not target high power-to-energy ratios. Capacitors, versus high-power batteries or flywheels, are the preferred power peaking devices in hybrid concepts.
- Electric drive train technology is maturing. Major suppliers are offering more technology options.

Question: Are we likely to see an alternatively powered vehicle on the market in the next decade...the next twenty years? If so, is your office working with the appropriate fuel suppliers to ensure that there will be an adequate supply of fuel for these vehicles, or are we still thinking that the market will respond when the demand for the fuels rises?

Answer: Each of the various alternative fuel vehicles and advanced technology vehicles are at different stages in the process of research, development, demonstration, and deployment. In general, alternative fuel vehicles are in the later stages, with many models actually in production and at dealers, while vehicles which will achieve significantly improved fuel economy are in the earlier stages.

In model year 1997 each of the three U.S. automakers is producing and selling alternative fuel vehicles. General Motors is producing electric vehicles (EVs) and compressed natural gas (CNG) full-size pickup trucks. Chrysler has sold a limited number of EV minivans. Ford is offering the largest line of alternative fuel vehicles in model year 1997, which includes: CNG compact sedans, full-size sedans, pickup trucks and vans; methanol mid-size sedans; ethanol mid-size sedans; and liquefied petroleum gas (LPG, or propane) medium duty trucks. Ford will add a compact EV pickup truck, and LPG full-size vans and pickup trucks, to its alternative fuel vehicle offerings in the 1998 model year. In addition, Chrysler plans to build ethanol minivans in model year 1998.

The Department works extensively with fuel suppliers to expand the available refueling infrastructure for alternative fuels such as natural gas, electricity, and ethanol. The concentrations of ethanol refueling stations are primarily in the Midwest, while natural gas and electric infrastructure is being expanded nationwide. Methanol fuel suppliers are also active in California. To assist users of alternative fuel vehicles in finding refueling stations to obtain alternative fuels, the Department has developed a database of available alternative fuel stations at its Alternative

Fuels Data Center (AFDC). The information, which is being updated continuously, is available in text and map formats on the AFDC website at <http://www.afdc.doe.gov>. Furthermore, the Department links vehicle buyers and fuel suppliers through its Clean Cities program to ensure that adequate refueling stations will be available to serve increasing vehicle demand.

The Department also conducts analysis and modeling to investigate the future refueling and infrastructure needs for alternative fuel and advanced technology vehicles, such as hybrids, that help guide our partnership with manufacturers and fuel suppliers.

DEPARTMENT OF ENERGY

Office of Hearings and Appeals

ADDITIONAL COMMITTEE QUESTIONS

Office of Hearings and Appeals

Case Work

Question: The Office of Hearings and Appeals resolved 4,804 refund cases in fiscal year 1996 and expects to resolve 2,900 in fiscal year 1997 and 2,700 in fiscal year 1998. Why isn't your budget declining in fiscal year 1998 as your case processing declines?

Answer: In the past, OHA's funding has declined very substantially as OHA has reduced its refund case load. In this case, OHA requests the same level of funding for fiscal year 1997 and 1998 although a decline in case closures is projected principally because the remaining cases are more difficult and often vigorously contested and consequently require greater efforts. OHA has requested funding at a level that will allow it to complete the refund program in the next few years. If funding continues to be reduced as closures decline, OHA cannot project an end to this task.

In prior years OHA devoted the bulk of a nearly \$7.0 million dollar budget exclusively to refund and related case work. OHA has resolved more than 200,000 refund cases -- more than 50 times the present case load. As a result of these efforts, the federal government has received the benefit of more than \$300 million in excess refund moneys that have been used in place of appropriated funding. The cost of OHA's operations has, therefore, been very small in comparison to the very substantial funds having been provided to replace appropriated funding.

Question: How much longer will you be processing crude oil refund cases? Please explain.

Answer: OHA is working to substantially complete processing all refund applications -- crude oil and otherwise -- during the 1999 fiscal year. Reductions in the funds available for the refund activity would delay completion of these cases beyond fiscal year 1999.

Question: Why did oil overcharge distributions to the States increase from \$16 million in fiscal year 1996 to \$30 million in fiscal year 1997?

Answer: The question appears to involve different programs. The \$30 million figure relates to moneys that OHA distributes under the Petroleum Overcharge Distribution and Restitution Act of 1986 (PODRA) to supplant appropriated funding. OHA's fiscal year 1996 operations allowed the distribution of \$30 million in excess funds in fiscal year 1997. In another setting, OHA paid \$16 million in fiscal year 1996 to the states in indirect restitution under procedures utilized in refined product direct refund proceedings that were begun prior to the enactment of the PODRA. This was the final payment made under those procedures. The fiscal year 1996 PODRA distribution was \$30 million.

Question: How do you expect your case load to change over the next few years? Please provide details by year for the record.

Answer: With respect to activities funded through the Interior Appropriations Subcommittee, OHA expects to substantially complete its crude oil and refined product refund case work during fiscal year 1999. However, there will be cases that cannot be resolved during this time frame, those under litigation for example, and OHA expects to receive approximately 2,000 new refund applications during this period. In addition, OHA anticipates receiving yearly up to 150 requests for exception from firms that collect and submit purchase, sale, distribution and distribution data in compliance with Energy Information Administration reporting requirements. OHA's non-Interior-related work is expected to increase from the present level of 275 cases per year to 300 cases in fiscal year 1998.

Question: What are the outyear estimates by year of budget requirements for the Office of Hearings and Appeals?

Answer: The projected Interior Appropriations Subcommittee budget requirements for OHA are:

<u>Fiscal Year</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>
(\$ millions)	2.2	1.0	0.3

Question: When do you expect to complete your activities relative to the adjudication of cases arising from the Emergency Petroleum Allocation Act of 1973? Please explain.

Answer: OHA expects to have substantially completed its EPAA-related compliance and refund work by the end of fiscal year 1999. There may, however, be a few cases which cannot be completed during that period due to the presence of unusually complex issues or to matters involving litigation. Exception applications are different. OHA will continue indefinitely to receive requests for exceptions to Energy Information Administration reporting requirements.

Reimbursable Work

Question: What work do you do on a reimbursable basis for other elements of the Department of Energy? What funding do you receive from each organization for each of these activities?

Answer: Of the wide variety of adjudicatory services that OHA performs for the Department, there are four major types: Refund cases, Personal Security cases, Whistleblower cases, and Freedom of Information Act and Privacy Act Appeals. Since receiving direction from the subcommittee to charge other Departmental elements for adjudicative services, OHA has extensively studied how this might be accomplished. OHA has determined the cost of processing various types of cases and has considered whether Departmental elements should be charged directly or through the Department's Working Capital Fund.

All of the work performed for those Departmental elements funded through the Energy and Water Development Appropriations Bill is funded through "Other Defense Activities" appropriations. During fiscal year 1996, the Office of the Chief Financial Officer arranged for OHA to be compensated for its Personal Security case activities through a single payment from the Office of Nuclear Non-Proliferation and National Security (NN). For fiscal year 1997 NN reflected the projected cost of OHA's services in its budget and OHA was able to draw funds from that Office. The fiscal year 1998 DOE budget request for other defense activities includes funding for all non-Interior-related OHA activities.

Staffing

Question: What was the actual staffing level for the Office of Hearings and Appeals in fiscal year 1996 and how does that compare with fiscal years 1997 and 1998?

Answer: OHA's staffing for fiscal year 1996 was 59 FTEs. Projected staffing levels for fiscal year 1997 is 50 FTEs. Due to higher than anticipated attrition, this is four lower than was projected at the time the budget was drafted. We project staffing of 47 FTEs in fiscal year 1998.

Question: How much of your staffing is supported through your appropriation in the Interior bill and how much is supported through reimbursements from other organizations in the Department?

Answer: With the understanding that nearly every OHA employee is involved in cases that do not fall under the Interior bill, OHA estimates that in fiscal year 1996, the equivalent of 31 FTE's were funded through the Interior bill. OHA projects that staffing level to be 27 FTE's in fiscal year 1997, and 25 FTE's in fiscal year 1998.

Sunset Plan

Question: To what extent are you developing a sunset plan for the Office for such time as you complete your EPAA activities? Please explain.

Answer: OHA is the principal adjudicatory office of the Department and conducts many activities other than those related to the EPAA. Therefore, while OHA continues to conduct planned-for downsizing in conjunction with the decline and projected completion of its EPAA-related work, no sunset plan is contemplated.

ADDITIONAL COMMITTEE QUESTIONS

Office of Hearings and Appeals

Government Performance and Results Act (GPRA)

The Department of Energy is committed to full and effective implementation of the Results Act. In fact, the implementation of the Results Act has been a top priority of this Department for several years. Last year, DOE instituted an agency-wide Strategic Management System (SMS) that is fundamentally based on the principles of the Results Act and will be the vehicle for the Department to integrate the Results Act requirements into our day-to-day management and decisionmaking activities. The SMS integrates the interrelated strategic planning, budget, and performance evaluation process throughout the Department. The following answers are based on the Results Act activities of our office as part of the Departmental framework.

Question: GPRA, known as the Results Act, requires each executive agency to issue, no later than September 30, 1997, a strategic plan covering at least five years. In addition to a mission statement grounded in legislative requirements, the plans are to contain general goals and objectives that are expected to be outcome or results oriented (such as to improve literacy) as opposed to output or activity oriented (such as to increase the number of education grants issued).

- What progress is the agency making in developing its strategic plan, including defining its mission and establishing appropriate goals?
- Has the agency identified conflicting goals for any of its program efforts? If so, what are the performance consequences of these conflicting goals and what actions--including seeking legislative changes--is the agency taking to address these conflicts?

Answer: With the advice of the Office of Policy and International Affairs and the Office of Quality Management, the Office of Hearings and Appeals (OHA) has developed and implemented a strategic plan. That plan is reviewed periodically. During the development of its strategic plan and during its review, OHA has not identified any conflicting goals for any of its program efforts.

Question: Strategic plans must be based on realistic assessments of the resources that will be available to the agency to accomplish its goals. As you are developing your strategic plan, how are you taking into account projected resources that likely will be available--especially as we move to a balanced budget? What assumptions are you making? How are you ensuring that your goals are realistic in light of expected resources?

Answer: The OHA strategic plan takes into consideration growing and declining missions of the office, declining resources and the need to downsize. Strategic downsizing has been in effect for nearly 3 years. The OHA staff has been reduced by over 35 percent without a reduction in force action. OHA budget requests are prepared in accordance with

strategic planning goals and limited resources. Assuming budget needs are met, the OHA goals are energetic but realistic.

Question: For Congress, the heart of the Results Act is the statutory link between agency plans, budget requests, and the reporting of results. Starting with fiscal year 1999, agencies are to develop annual performance plans that define performance goals and the measures that will be used to assess progress over the coming year. These annual goals are to measure agency progress toward meeting strategic goals and are to be based on the program activities as set forth in the President's budget.

- What progress have you made in establishing clear and direct linkages between the general goals in your strategic plan and the goals to be contained in your annual performance plans? OMB expressed concern last year that most agencies had not made sufficient progress in this critical area.
- More specifically, how are you progressing in linking your strategic and annual performance goals to the program activity structure contained in the President's budget? Do you anticipate the need to change or modify the activity structure to be consistent with the agency's goals?
- Overall, what progress has your agency made--and what challenges is it experiencing--defining results-oriented performance measures that will allow the agency and others to determine the extent to which goals are being met?

Answer: Because OHA's workload depends upon how many cases are filed by third parties, OHA necessarily operates in a largely responsive mode. Nevertheless, with experience, budgetary assumptions based upon general workload/operating projections can and have been made. In one area (refund cases) there is a known inventory of unresolved cases, and specific performance goals have been established for that set of cases. As a part of its own planning effort, OHA engages in the formulation and regular revision of the overall DOE Strategic Plan. OHA's operating priorities and strategic plan are modified to suit the Department's goals. OHA does not at this time anticipate the need to modify its activity structure to be consistent with Departmental goals. OHA has made considerable progress in analyzing the nature of its caseload and outputs in order to develop accurate operating metrics. For example, OHA has implemented a team approach for processing appeals of Freedom of Information Act and Privacy Act determinations. Measurements of productivity are regularly made of this team. The results indicate that even with an increased workload in this area, statutory deadlines are always met and productivity per staff member has increased. In addition, the office has developed and regularly reviews per case cost data for its personnel security clearance review and for its Freedom of Information Act and Privacy Act appeal functions.

Question: If applicable, what lessons did the agency learn from its participation in the Results Act pilot phase and how are those lessons being applied to agency-wide Results Act

efforts? What steps is the agency taking to build the capacity (information systems, personnel skills, etc.) necessary to implement the Results Act?

.. Answer: OHA did not participate in the pilot phase.

Question: The Results Act requires agencies to solicit and consider the views of stakeholders as they develop the strategic plans. Stakeholders can include state and local governments, interest groups, the private sector, and the general public, among others. Who do you consider to be your agency's primary stakeholders and how will you incorporate their views into the strategic plans?

Answer: The primary OHA stakeholders include the Administration, the Congress, various Departmental elements, and the general public. OHA has surveyed many of its stakeholders and customers to determine their needs. Views of stakeholders are continuously monitored and carefully considered in planning.

Question: For the Results Act to be successful, agencies with similar missions, goals, or strategies will need to ensure that their efforts are coordinated. What other federal agencies are you working with to ensure that your strategic plans are coordinated? What steps have you taken to ensure that your efforts complemented and do not unnecessarily duplicate other federal efforts.

Answer: OHA continuously "talks" with or "follows" the operations of similar offices in other government agencies. We have not identified any unnecessary duplication of the efforts of other agencies.

Question: The Results Act requires agencies to consult with Congress as they develop their strategic plans. Since these plans are due in September, now is the time for agencies to begin the required consultations. What are your plans for congressional consultation as you develop your strategic plan? Which Committees will you consult with? How will you resolve differing views?

Answer: With the guidance of the DOE Office of Congressional, Intergovernmental and Public Affairs and the Controller's Office, OHA plans to consult -- at least initially -- with the staff of the Interior and Energy and Water Appropriations Subcommittees of the House and Senate. Resolution of differing views, if any, will depend upon the nature of the differences.

Question: In passing the Results Act, Congress sought to fundamentally change the focus of federal management and decisionmaking to be more results-oriented. Organizations that have successfully become results-oriented typically have found that making the transformation envisioned by the Results Act requires significant changes in what they do and how they do it.

- What changes in program policy, organization structure, program content, and work process has the agency made to become more results-oriented?

- How are managers held accountable for implementing the Results Act and improving performance?
- How is the agency using Result Act performance goals and information to drive daily operations?

Answer: The OHA mission involves the processing of appeals and other requests. OHA's proceedings are generally governed by statute, rule or regulation, and their resolution is frequently driven by a compelling or emergency need of the applicant. Consequently, much of the office's operations has been results oriented and the Results Act required no modifications of these procedures. All of the workload of the office is continuously monitored through tailored information retrieval systems that identify, for example, areas where timely action is warranted or may be improved. This has been OHA's customary practice during the office's entire tenure. One example would be the processing of Freedom of Information Act and Privacy Act Appeals. In every instance where processing can begin immediately, i.e., all necessary information is already on file, the case is resolved within the 20 working day statutory deadline. The same is true in other areas where statutory or regulatory procedural deadlines pertain, such as Personnel Security review cases, Whistleblower cases and initial requests for information under the Freedom of Information Act. Improvements in office procedures, such as the team approach to processing Freedom of Information Act appeals, have expedited the processing of cases.

DEPARTMENT OF ENERGY

Energy Information Administration

Statement of Jay E. Hakes
 Administrator, Energy Information Administration
 Department of Energy
 Before the
 Committee on Appropriations
 Subcommittee on Interior and Related Agencies

OVERVIEW

The Energy Information Administration (EIA) is the leader in providing high-quality, policy-independent energy information to Government, industry, and the public, in a manner that promotes sound policy decisions, efficient markets, and public understanding. While an integral part of the Department of Energy, EIA is mandated to maintain a policy-neutral position. EIA was established by Congress as an unbiased source of energy information and analysis.

In accordance with Section 205 of the 1977 Department of Energy Organization Act, EIA collects, interprets, analyzes, and disseminates information on energy reserves, production, consumption, distribution, prices, technology, and related international, economic, and financial matters. EIA produces reports with statistical time series, projections of near- and mid-term future energy trends, and analyses of topical energy issues. On a reimbursable basis, EIA provides custom energy data, analyses, and data processing support to other Department of Energy offices and other Federal agencies.

The National Energy Information System contains the operational elements of the EIA. The Oil and Gas program develops, operates, and maintains the statistical information systems for the collection, processing, and analysis of data on petroleum and natural gas reserves, production, refining, distribution, marketing, and prices. The Coal, Nuclear, Electric, and Alternate Fuels program performs statistical and analytical functions for its respective fuels markets. The Energy Markets and End Use program maintains energy statistical and analytical information systems for energy end use, price, supply and demand balances, and economic, international, and financial matters. The Integrated Analysis and Forecasting program produces mid-term forecasts for domestic and international energy markets. The ADP Services program provides computer processing support to EIA, other Departmental offices, and other Federal agencies. The Information Services program performs preparation and dissemination activities for all EIA information products and manages the National Energy Information Center. The Statistical Standards program provides coherent and credible strategies for information collection, analysis, and forecasting; develops processing and documentation standards, and coordinates standard definitions. Program Direction provides salaries, benefits, travel, and training for EIA personnel and funds administrative overhead.

USES OF EIA PRODUCTS

EIA data are a recognized and integral statistical source for customers in Federal, State, and local governments, private industry, the media, and the general public. The Bureau of Economic Analysis uses EIA's petroleum data for the Gross Domestic Product accounts. The Bureau of Labor Statistics

uses our energy price and sales volume data to verify and re-weight the Producer Price Index, the Consumer Price Index, and to calculate foreign crude oil price indexes. EIA data on coal, electric power, and petroleum are used by the Environmental Protection Agency for developing the National Allowance Data Base and associated calculations. EIA analyses of waste water treatment costs associated with offshore oil and gas production also are used by the Environmental Protection Agency. The Department of Commerce uses jet fuel retail price and supply data in its projections regarding domestic and international tourism. The Federal Energy Regulatory Commission uses EIA data and analyses in conducting their statutory functions. The Low Income Home Energy Assistance Program uses EIA data to assist in the evaluation of state level allocations of program funds for energy bills.

The U.S. Geological Survey relies on EIA estimates of proved domestic reserves of crude oil, natural gas, and natural gas liquids by state and state subdivision in its oil and gas resources assessment work. They also rely on the EIA Oil and Gas Integrated Field File, which contains estimates of ultimate recovery by field derived from EIA's proved reserves data and non-EIA production history data. The Minerals Management Service uses EIA estimates of proved reserves as a check on their own estimates for Federal Outer Continental Shelf fields. The Nuclear Energy Agency of the Organization for Economic Cooperation and Development relies on EIA for historical data and projections of nuclear electricity generation, associated nuclear fuel cycle requirements, and electricity generating costs. The International Energy Agency uses EIA's information and analyses on energy sources as the official statistics to describe the U.S. energy situation in international forums and publications. State government offices use EIA's data, particularly price forecasts, for assessments of proposed energy taxes and alternative energy strategies and for ongoing analysis of supply, demand, and fuel substitution. EIA also supplies data to the Commodity Futures Trading Commission, the Council of Economic Advisors, the Office of Management and Budget, the Treasury Department, the Congressional Budget Office, Congressional staffs and committees, and the General Accounting Office.

EIA data, analyses, and forecasts are also used extensively by trade associations, such as the American Petroleum Institute, the Petroleum Marketers Association of America, the American Gas Association, the National Mining Association, the Edison Electric Institute, and the National Association of State Energy Officials. EIA provides geographic information on natural gas pipelines to DOE labs and State Energy Offices. EIA is a major source of energy information for the media, including *Forbes*, *Business Week*, *New York Times*, *Los Angeles Times*, *Wall Street Journal*, *Washington Post*, and Reuters News Services, a broad spectrum of trade journals and newsletters, and national and local radio and television networks. EIA information is used for energy workshops, courses and seminars for Congress, universities, industry groups, and the public.

RECENT ACCOMPLISHMENTS

In 1996, EIA prepared numerous speeches, reports, and presentations on the market situation (inventory levels, price levels, volatility, and other explanatory factors) for home heating oil, propane, diesel fuel, gasoline, and natural gas for the White House, Congress, Federal agencies, states, businesses, and the public. Due to the price spikes of motor gasoline and diesel fuel in late spring 1996, EIA increased its collection of gasoline and diesel fuel price surveys. During the summer of

1996, over 30,000 calls per month were made to the gasoline and diesel fuel hotline to obtain price data. EIA collaborated with other DOE offices in preparing "An Analysis of Gasoline Markets" to explain the high gasoline prices during 1996.

Numerous one-time studies were prepared throughout 1996. A study that analyzes various technology scenarios and evaluated their impact on carbon emissions was prepared for DOE's Policy Office and the Environmental Protection Agency. Another study evaluates the value of oil imports and their impact on the economy was prepared for the Government Accounting Office for Representative Kasich. An evaluation of FERC Order 888 and its environmental impact was prepared for the Subcommittee on Energy Production and Regulation, Senate Energy and Natural Resources Committee for Senator Jeffords.

EIA published a new analysis report, *Issues in Midterm Analysis and Forecasting*, in response to customers interests. One article examined technology penetration through the evaluation of various cases and their impact on carbon emissions. EIA's *Voluntary Reporting System on Greenhouse Gas Emissions* was published, it documents the implementation of a new survey required by the Energy Policy Act of 1992. This publication contains 108 reports from respondents encompassing 645 projects. A communications center for voluntary reporting was established through the development of a periodic newsletter, an 800 phone number, a brochure, and technical assistance.

Additional information on electric industry restructuring was published. The report, *The Changing Structure of the U.S. Electric Power Industry: An Update*, the history of the domestic electric power industry, why it evolved into a monopoly, and the forces and issues surrounding the efforts to deregulate it. An article, "Upgrading Transmission Capacity for Wholesale Electric Power Trade," was released and is being accessed on EIA's home page more than 200 times a month. This article addresses issues on meeting new demand due to open competition in the U.S. wholesale electric market.

Data is being released earlier. For example, the *Annual Energy Outlook 1997* reference case forecast was released on EIA's home page 2 months earlier, and the hard copy report was published 1 month earlier. The *International Energy Outlook 1996* was released 1 month earlier and included additional analysis of oil supply development in non-OPEC areas and demand issues in Southeast Asia. The *Uranium Industry Annual 1995* was published 5 weeks earlier at one-half the cost. The *Short-Term Energy Outlook* is now updated monthly and available in real time through electronic release on the home page.

Improvements are being made in the survey area, as well. EIA established an agreement with the North American Electric Reliability Council (NERC) which offers utilities the option to file their annual plant capacity information through the NERC, thereby eliminating duplication with one of EIA's survey. In March 1996, an agreement was signed between EIA, the Mine Safety Administration, and the Department of Labor for the sharing of coal mine production and related information. This should result in a reduced reporting burden on U.S. coal-producing companies and improved quality, completeness, and timeliness of coal data collected by the Federal government.

PERFORMANCE INDICATORS AND GOALS

EIA is currently participating in a pilot performance measurement project sponsored by the Office of Management and Budget as part of the Government Performance and Results Act. The project is titled "Vision 2000: Improving EIA Products and Services" and involves the development of performance goals and objectives and measurement of performance toward those goals. Measures include customer satisfaction, number of customers served, timeliness and accuracy of data, and employee satisfaction. The main focus of the EIA's performance measurement effort in FY 1997 and FY 1998 is to incorporate fully the performance measures into the EIA strategic planning and budgeting processes and into the agency's infrastructure, as envisioned in both the Government Performance and Results Act of 1994 and the Government Management Reform Act of 1995.

Customer satisfaction is being measured through surveys. A majority of telephone customers indicate that they are satisfied with the availability, relevance, accuracy, and comprehensiveness of EIA's information. The lowest mark the respondents gave referred to the timeliness of EIA information. This issue is being addressed by increases in preliminary release of information, improvements in electronic access (Web) and dissemination (listserve and CD-ROM), and increases in the number of summary reports, brochures, and press releases. EIA's customer survey has also shown that customers are expressing a very high level of satisfaction (99%) with the service they are receiving from EIA's workforce. The goals for the agency by 2002 are to increase the number of customers that are very satisfied with the relevance of data and analyses to 70% and with ease of access to data and analyses to 70%. In 1996, customer satisfaction was at 58% for relevance and 54% for ease of access.

EIA is expanding both its customer base and the avenues through which it communicates. EIA has increased dramatically its electronic presence on the Internet. When EIA's electronic dissemination program was first established, accessions to EIA information averaged less than 100 different users per day. Recently, accessions surpassed 2,200 different users per day downloading 280 megabytes of information. Between FY 1995 and FY 1996, there was a 29% decrease in the number of hard-copy publications distributed. Uses of EIA information by the media have increased by 38% between FY 1995 and 1996. Increased use by this customer segment is important because of the multiplicative effect it has on the dissemination of EIA information. The goals for the agency by 2002 are to increase the number of unique daily users of EIA's Internet site by 25% per year and to increase citations of EIA information in the media by 10% per year.

Some EIA customers have indicated a need for more timely energy information. In an attempt to properly address this issue, EIA is tracking a timeliness indicator for 77% of its surveys. This indicator measures the period of time from the closure of the survey period until the time the resulting data is first published in a hard-copy publication. EIA is working to develop the same information for its electronic releases of information. Of particular concern to EIA's management is the trade-off between increasing the timeliness and decreasing the accuracy of the information. The goal for the agency by 2002 is to increase the number of customers that are satisfied with timeliness of data to 80% and with accuracy of data to 60%. In 1996, customer satisfaction was at 73% for timeliness and 52% for accuracy.

EIA has conducted organizational assessment surveys to measure employee satisfaction. EIA's management is focusing improvement efforts on two workforce satisfaction indicators: to provide employees with the necessary training to perform their job effectively and to increase cooperation between work groups through team building. Annual survey results indicate that employee satisfaction has risen. The goal for the agency by 2002 is to increase the EIA score on the organizational assessment survey to match the average organizational sample benchmark of 5.0 for training and 5.7 for team building. In 1994, EIA scores were 4.6 for training and 4.6 for team building.

FISCAL YEAR 1998 BUDGET REQUEST

The FY 1998 Congressional budget request for EIA is \$62.8 million plus \$5.0 million in funds from the DOE Office of Energy Efficiency and Renewable Energy. This request is 4.4% below the comparable level of \$70.9 million appropriated for FY 1997 (\$66.1 million appropriation plus \$4.8 million in funds from DOE Energy Efficiency). The \$5.0 million in external transfers in FY 1998 are for support for core EIA data and modeling activities needed to set energy efficiency program needs and measure program results.

The most significant change to the core EIA program in FY 1998 will be the addition of analysis and data collection in response to electric industry restructuring. The recent proposed rulemaking to restructure the electric utility industry has far-reaching impacts on the domestic energy sector, the U.S. economy, and financial markets.

Other changes will affect the depth and scope of EIA's traditional energy programs. The Residential Energy Consumption Survey will be conducted on a quadrennial basis, instead of triennial. Several publications will be eliminated or reduced in scope. The frequency of some data collections and the development of improvements to modeling systems will be reduced. Analysis, customized support, and data quality activities will be reduced. The distribution of hard-copy reports will be decreased and replaced by the increased use of electronic data dissemination.

Over the last year unique monthly users increased by a factor of three growing from 10,600 unique monthly users in February 1996 to about 34,000 in February 1997. Over 70 percent of these users are from domestic corporations or the general public. These figures are in addition to the 450,000 publications that were mailed out in recent years. Electronic access has also provided a new avenue for customers to contact EIA's National Energy Information Center to ask energy questions or simply provide comments on EIA services. In 1996, telephone inquiries rose by 4%, while e-mail inquiries rose by 40%.

EIA will continue to strive to maintain its position as the nationally and internationally recognized source of energy information through projects such as the following: putting all publicly available data on an Internet EIA home page; providing a periodic CD ROM (InfoDisc) of the latest EIA data, publications, and models; maintaining an updated product and service mix by responding to customer needs communicated through user forums and surveys; and utilizing existing information dissemination processes (such as the media) to maximize effectiveness in reaching a wide variety of customer groups; and using performance measures to track progress and identify areas for improvement.

ADDITIONAL COMMITTEE QUESTIONS

Energy Information Administration

Energy Conservation

Question: Last year Congress provided \$5 million in the energy conservation account for fiscal year 1997 to provide for reimbursable work by the Energy Information Administration. What EIA programs and staff were supported by these funds? Please provide funding and staffing details by project.

Answer: EIA identified a requirement for \$4.8 million in funding support in fiscal year 1997 from Energy Conservation to support the core EIA data and modeling activities needed to set energy efficiency program needs and measure program results. The following are the programs involved and their contract costs: efficiency and renewables data collection and analysis (\$0.6 million); residential, commercial, and industrial energy consumption surveys (\$3.0 million); greenhouse gas data collection studies (\$0.8 million); mid-term energy demand modeling (\$0.2 million); and integrated end-use energy data compilation (\$0.2 million).

Question: What does your budget assume this year with respect to receiving reimbursements from the Energy Conservation account in fiscal year 1998?

Answer: The fiscal year 1998 budget assumes \$5.0 million in funding support from Energy Conservation which would be used again to support the core EIA data and modeling activities needed to set energy efficiency program needs and measure program results. The following are the programs involved and their contract costs: efficiency and renewables data collection and analysis (\$0.7 million); residential, commercial, and industrial energy consumption surveys (\$2.4 million); greenhouse gas data collection studies (\$0.5 million); mid-term energy demand modeling (\$0.2 million); integrated end-use energy data compilation (\$0.5 million); and computer support for renewable and energy efficiency information activities (\$0.7 million).

Question: What would be the consequences if these funds were not forthcoming in fiscal year 1998?

Answer: Without the addition of \$5 million from Energy Conservation in fiscal year 1998, EIA's budget would be at \$62.8 million. This would represent a reduction of 11 percent from the fiscal year 1997 level and 27 percent from the fiscal year 1994 level, and necessitate the elimination of some traditional core EIA programs. Examples of such programs include greenhouse gas emissions data collection, nuclear power data collection and analysis, weekly petroleum reporting, renewables data collection and analysis, and energy industry financial analysis. EIA would have to review legislative requirements and consult with its customers to obtain their views on priorities of all programs before making such significant reductions.

Budget Reduction

Question: In fiscal year 1994 the budget for EIA was \$86,553,000. Each year since then you have had budget reductions. The request for fiscal year 1998 is \$62,800,000, a reduction of five percent below 1997 and more than 27 percent below the 1994 level. How are you able to sustain these continued annual reductions without conducting a reduction in force?

Answer: Including the \$5 million in funding for EIA activities requested in the Energy Conservation budget, the total fiscal year 1998 request for EIA is \$67,800,000, a reduction of 22 percent below the fiscal year 1994 level. Through attrition and the use of buyout authority, EIA has managed to reduce staff and avoid a reduction in force, thus far. EIA expects to achieve an FTE usage of 417 in fiscal year 1997 compared to an authorized FTE staffing level of 494 in fiscal year 1994. The majority of budget reductions, however, have been taken in the contracts area. Some of the highest priority work required to assure the current quality of EIA's published core data series has been shifted from contractors to Federal staff. Some lower priority research and analysis of trends and issues required to assure the longer term viability of the core data series previously performed by the Federal staff have been curtailed. Contractor funds for the maintenance and development of data collection and processing systems has been significantly reduced, consistent with the on-going reengineering of data collection, processing, and dissemination in an effort to achieve longer term savings. Savings have also been achieved through the streamlining of administrative processes and reduction of overhead expenses as staffing has declined. In fiscal year 1998, a reduction in force would probably be required to meet the Department's staffing targets. The FTE ceiling for fiscal year 1998 is 374 and could require a reduction in force of 13 to 23 FTEs, depending on attrition levels and the possibility of further buyout authority.

Question: What specifically have you done since 1994 that has enabled you to cut your budget by 27%? Please provide details for the record with associated funding and staffing by project.

Answer: In achieving budget reductions, EIA has placed highest priority on maintaining the core data programs that are essential to policy decisions, energy markets, and analysis of current issues of high interest, such as the rise in heating oil and gasoline prices and electricity restructuring. Broad-based project reductions and eliminations have been required throughout all programs. This includes the elimination and/or consolidation of publications, reductions in sample size for a number of surveys, and the collection of some information on a less frequent basis. Examples include the reductions in sample size of the survey on petroleum price and volume data (EIA-782B) and of the Annual Oil and Gas Reserves Survey (to 650 companies from 3,800 in alternate years). Contractor funds for mid-term analysis and forecasting have been reduced by 37%, significantly reducing the maintenance and enhancements to EIA's modeling systems. Contractor staff in the EIA computer center has been reduced with commensurate reductions in hours of operation and services provided. Contractor funds for the maintenance of current data

collection and processing systems and required enhancements to keep these systems current have been drastically reduced, consistent with on-going efforts to reengineer data collection, processing, and dissemination activities. The ability to sustain these reductions is dependent upon the successful implementation of a common data collection and processing system across EIA surveys that builds on current technology to reduce future operating and maintenance costs. Savings are also being achieved through the streamlining of administrative processes and the reduction in overhead expenses as staffing has declined. EIA has successfully made virtually all of the information that it collects accessible electronically through the Internet, thus allowing some reductions in paper publication costs. The table below shows program changes between fiscal year 1994 and 1997 (including fund transfers from Energy Conservation).

Program	FY 1994	FY 1997 (million \$)	% Change
Oil and Gas	14.786	10.376	-30
Petroleum Supply	5.725	3.497	-39
Petroleum Marketing	5.516	3.913	-29
Reserves and Natural Gas	3.545	2.966	-16
Coal, Nuclear, Electric, and Alternate Fuels	5.219	4.022	-23
Coal, Electric, and Renewables	3.228	2.489	-23
Analysis and Systems	1.991	1.533	-23
Energy Markets and End Use	7.959	4.410	-45
Energy Markets and Contingency Information	1.196	0.822	-31
Energy End Use and Integrated Statistics	6.763	3.588	-47
Integrated Analysis and Forecasting	6.662	2.282	-66
Energy Demand and Integration	3.832	1.736	-55
Energy Supply and Conversion	2.830	0.546	-81
ADP Services	8.416	6.903	-18
Information Services	0.483	0.592	+23
Statistical Standards	1.015	0.777	-23
Program Direction	42.013	41.565	-1
Total EIA	86.553	67.800	-22
FTE	460	442	-4

Question: What programs and or publications will be eliminated or significantly reduced in fiscal year 1998 under your budget proposal?

Answer: Major project reductions for fiscal year 1998 are occurring in the survey area. The Residential Energy Consumption Survey is the first survey to officially operate under a quadrennial schedule, but because of previous budget cuts, EIA has decided to make all its current consumption surveys quadrennial. Also in response to earlier budget cuts, EIA has discontinued funding of the Residential Transportation Energy Consumption Survey (RTECS). The 1994 RTECS, already completed and in the process of data dissemination, will be the final cycle of RTECS. The possibility of reducing the sample size of the survey on Fuel Oil and Kerosene Sales (EIA-821) is being assessed.

Reductions in sample size of the survey on petroleum price and volume data (EIA-782B) and of the Annual Oil and Gas Reserves Survey (to 650 companies from 3,800 in alternate years).

There will also be eliminations and/or reductions in analysis and in the scope of several publications. Less emphasis will be placed on the coal and nuclear analysis areas. This would include the elimination of the triennial report *Coal Data: A Reference* and other coal-related feature articles on less important areas of the coal industry. In addition, feature articles on a variety of nuclear issues will not be done, and all published analysis work will be confined to one or two major analysis reports.

The development of improvements to modeling systems will be reduced. There will be a reduced level of updates for the Natural Gas Deliverability Model and a trading off of resources with Natural Gas Issues and Trends (done every other year). Customized support will be less available, such as support to the International Energy Agency and during energy emergencies. Data quality activities will be cut back, such as data audits and workshops, offered by the Office of Statistical Standards. There will be decreased distribution of hard-copy reports combined with increased use of electronic data dissemination and fax-on-demand systems.

Reorganization

Question: You recently informed the Committee of a pilot project involving the reorganization of your data survey and information technology planning and operations. Please explain this proposal for the record, including how it differs from your current operations.

Answer: Over the past year, EIA undertook a major effort to reengineer its data collection, processing, and dissemination activities in an effort to achieve savings through the application of modern technology and standardization of processes and systems. The pilot reorganization within EIA is designed to test the key elements of the reengineering proposal including the efficiency and economy of a revised method of conducting data survey and information technology planning and operations. The pilot reorganization has three elements. The first element of the pilot currently underway involves the consolidation of survey operations and survey quality assurance activities for selected surveys from the Office of Oil and Gas and the Office of Coal, Nuclear, Electric, and Alternate Fuels. At the same time, EIA will be able to maintain critical analytical expertise in each fuel area within the Federal workforce. This part of the pilot does not involve the official reassignment of personnel. These employees will be managed by one of the current office directors.

The second element of the pilot involves the reorganization of personnel. The program organizations of EIA (Office of Oil and Gas; Office of Coal, Nuclear, Electric, and Alternate Fuels; Office of Energy Markets and End Use; and Integrated Analysis and Forecasting) have been responsible for the design and maintenance of the automated

systems used to collect and process the energy information required to produce the various products published. Under the pilot, the information technology functions of these offices and the Automated Data Processing Services Staff have been consolidated into a single organization called the Information Technology Group.

The third element of the pilot involves the separation of the information dissemination functions of the National Energy Information Center from the administrative support activities of the agency.

Question: What do you hope to achieve through this pilot project?

Answer: Through feedback information received in this pilot, EIA plans to implement the approaches that will keep EIA at its most effective operating level. The survey pilot is designed to evaluate whether consolidation of survey operations and/or quality assurance functions will result in operational savings. Key concepts being tested include the identification and application of best practices across surveys, work load leveling, cross training, and application of technology such as optical character recognition. EIA anticipates that savings for survey activities can be achieved by staggering their activities across multiple fuel type surveys; this is possible due to the cyclical nature of EIA surveys. The formation of the Information Technology Group will enable the most efficient sharing of systems design and operations resources and applying standardized applications across the agency as a whole. This will involve the development of a common data collection and processing system maximizing the recycling of code across surveys and leading to a single energy information data base. EIA believes that this approach will significantly reduce costs for systems operation and maintenance and improve staff utilization through cross training. The purpose of the separation of the National Energy Information Center from administrative functions is to recognize this function as a primary business process of EIA and results in a reduction of 2 FTEs, a senior executive and a secretary.

Question: To what extent will EIA employees be involved in assessing the success of the pilot project.

Answer: EIA employees have been extensively involved in the design of the business reengineering proposals and in implementing the pilots. EIA employees will be taking on new assignments and receiving training. They will be working with the performance measures that will be used to evaluate the success of the pilot project.

Question: How will you measure the success of this pilot project?

Answer: The success of the pilot project will be measured through the use of the organizational performance measures of customer satisfaction, number of customer served, timeliness, accuracy, and employee satisfaction. Increases in these areas will indicate improvement in EIA's internal performance.

Question: When will you report the results of this project to the Committee?

Answer: EIA proposes to operate this pilot project for one year. By December of 1997, EIA will report the results to Congress along with recommendations regarding organization and budget structure, as well as recognized savings and expected future economics.

Question: How are you coordinating this effort with the Government Performance and Results Act requirements?

Answer: When this pilot project is fully implemented, it will become an integral part of EIA's annual strategic planning, budgeting, and performance measurement structure. This process is part of the Government Performance Results Act.

Staffing

Question: How are you using employee early retirement and "buyout" incentives to meet your workforce reduction goals and to stay within your declining budget?

Answer: The fiscal year 1997 target of 417 FTEs will be met through expected normal attrition and voluntary buyouts of 14 staff. The fiscal year 1998 target of 374 FTEs will be met through a combination of normal attrition, the potential use of voluntary buyouts for 5 to 10 staff, and a reduction in force of 13 to 23 FTEs if necessary. OMB and Congressional committee approval would be required to use buyouts in fiscal year 1998. These personnel changes will create cost savings, but are expected to be offset by the separation costs and increasing annual costs in salary and benefits due to pay raises. Thus, budget reductions will be handled through reduced funding for support service contracts.

Question: For the record please provide a staffing history of EIA by year for each of the last ten years.

Answer: The actual Federal FTE staffing levels over the last ten fiscal years for EIA were as follows:

1987	446	1992	475
1988	455	1993	463
1989	462	1994	460
1990	462	1995	471
1991	466	1996	442

Question: What is your FTE target for this year and each of the following years through 2000?

Answer: The FTE targets for EIA through fiscal year 2000 are as follows:

1997	417	1999	354
1998	374	2000	343

Question: How will you meet those targets and still maintain a viable statistical organization?

Answer: For fiscal year 1997, EIA is following Congressional guidance to "place greater reliance on Federal staffing rather than on support service contractors for gathering, compiling, and analyzing the Nation's energy statistics." Federal staffing targets will be met in fiscal year 1997 through a combination of attrition and voluntary buyouts using the pre-FY 1997 authority. In fiscal year 1998, EIA expects it to be necessary to request additional buyout authority, which expires in December 1997, and to use reductions in force to achieve its target. Beyond fiscal year 1998, EIA expects to achieve its Federal staffing levels through normal attrition. Assuming a constant budget and absorption of pay raises and other inflationary increases through productivity improvements, contractor staffing levels will decrease at a greater rate than Federal staffing levels. While the total EIA workforce will be smaller under a constant budget, there will be a trend for the workforce to place a greater reliance on Federal staff. Over the long run under these planning assumptions, EIA expects to have sufficient Federal staff to assure its viability as a statistical organization.

Administrative Overhead

Question: What are you paying the Department for administrative overhead expenses in fiscal year 1997? What does that buy?

Answer: Administrative overhead expenses are handled through the Department's Working Capital Fund. EIA's share of these direct expenses for fiscal year 1997 is estimated at \$7.6 million. This fund covers expenses for building rental, operations, and maintenance, printing and graphics, photocopying, contract closeout, contract audit, telecommunications, postage, and supplies.

Question: How does the amount for fiscal year 1997 compare with what you paid in fiscal year 1996?

Answer: The amount paid by EIA for administrative overhead to the Department in fiscal year 1996 was \$8.5 million for the same types of services. However, these charges were not handled through a Working Capital Fund; they represent a combination of direct and indirect expenses. The fiscal year 1997 level is expected to be \$0.9 million lower than the fiscal year 1996 level primarily because of rent savings from space consolidation.

Question: What does the budget request assume with respect to administrative support costs in fiscal year 1998?

Answer: Administrative support costs in fiscal year 1998 for EIA are expected to remain level with the fiscal year 1997 level at \$7.6 million.

Question: What are you doing to control administrative overhead costs as your budget continues to decline?

Answer: Two administrative analysts are being reassigned to programmatic functions, and at the end of fiscal year 1996, two clerical/technical positions were vacated and abolished. Administrative processes are being reviewed continually for redundancies. Increased efficiencies are expected from these reviews. Working Capital Fund expenses are being scrutinized further and additional savings are expected in this area.

ADDITIONAL COMMITTEE QUESTIONS

Energy Information Administration

Government Performance and Results Act (GPRA)

The Department of Energy is committed to full and effective implementation of the Results Act. In fact, the implementation of the Results Act has been a top priority of this Department for several years. Last year, DOE instituted an agency-wide Strategic Management System (SMS) that is fundamentally based on the principles of the Results Act and will be the vehicle for the Department to integrate the Results Act requirements into our day-to-day management and decision making activities. The SMS integrates the interrelated strategic planning, budget, and performance evaluation processes throughout the Department. The following answers are based on the Results Act activities of our office as part of the departmental framework.

Question: GPRA, known as the Results Act, requires each executive agency to issue no later than September 30, 1997, a strategic plan covering at least five years. In addition to a mission statement grounded in legislative requirements, the plans are to contain general goals and objectives that are expected to be outcome or results oriented (such as to improve literacy) as opposed to output or activity oriented (such as to increase the number of education grants issued). What progress is the agency making in developing its strategic plan, including defining its plan, including defining its mission and establishing appropriate goals?

Answer: The Energy Information Administration (EIA) is currently in its fourth year of strategic planning. The annual update of the EIA strategic plan will begin in April 1997. Since the inception of its strategic planning effort, EIA has made considerable progress. EIA has a clearly defined mission and has established appropriate goals. In each of the previous reviews of the strategic plan, EIA's mission, vision and goals have been reviewed and reaffirmed. The strategic plan itself has undergone a change from a relatively broad document to one that does provide the basis for corporate initiatives designed to attain the goals established in the strategic plan. The intent of this year's review is to incorporate the established performance measures directly into the strategic plan.

Question: Has the agency identified conflicting goals for any of its program efforts? If so, what are the performance consequences of these conflicting goals and what actions--including seeking legislative changes--is the agency taking to address these conflicts?

Answer: Inherent within EIA's five stated goals is some conflict. EIA recognized its most basic conflict when it was a new organization. To quote Lincoln Moses, the first Administrator, "... responsiveness, which often calls for speed and objectivity, which usually calls for deliberateness, can be in conflict with each other." Through the use of the performance measures development process, this conflict has been clearly identified. After consultation with EIA's customers and stakeholders on their priorities, EIA has recently established performance objectives for the year 2002. It was through this establishment of

performance objectives, that EIA has both acknowledged the conflict and attempted to resolve it by establishing appropriate counter balancing performance objectives.

Possibly a more significant issue exists because of EIA's statutory requirement to collect statistically valid data and its requirement to share that data with requesting agencies, including regulatory and law enforcement agencies. EIA has consistently attempted to maintain the confidentiality of its respondents in order to ensure the validity of the data it collects by practicing a policy of confidentiality; that is, by safeguarding sensitive information so that its disclosure outside of EIA is limited to statistical purposes only. EIA has previously proposed legislative changes to its statutory provisions which would allow the confidential treatment of the data the agency collects but, to date, there has been no legal resolution to this issue.

Question: Strategic plans must be based on realistic assessments of the resources that will be available to the agency to accomplish its goals. As you are developing your strategic plan, how are you taking into account projected resources that likely will be available--especially as we move to a balanced budget?

Answer: EIA's initial strategic plan was not resource constrained, but was prepared with the understanding that future resources levels, both human and financial, would be greatly diminished. Since that time, work on EIA's strategic plan has recognized the resource constraints as real world inputs.

Question: What assumptions are you making?

Answer: At present, EIA is using the following four budgetary assumptions in the development of its strategic plan: (1) EIA will continue to perform the same mission it presently performs; (2) standard inflation rates for goods and services reflects levels stated within the current OMB budget guidance; (3) salary and benefits will continue to grow at a rate higher than projected standard inflation, based on historical trends in EIA personnel data and; (4) EIA will continue to downsize to meet the DOE end-of-year workforce targets.

Question: How are you ensuring that your goals are realistic in light of expected resources?

Answer: EIA's goals are long-term goals which are expected to describe how EIA accomplishes its mission. As such, the goals themselves should be realistic; it is too soon to tell. Regular reporting and analysis of operating results is expected to reveal whether or not the established performance objectives are realistic.

Question: For Congress, the heart of the Results Act is the statutory link between agency plans, budget requests, and the reporting of results. Starting with fiscal year 1999, agencies are to develop annual performance plans that define performance goals and the measures that will be used to assess progress over the coming year. These annual goals are to measure agency progress toward meeting strategic goals and are to be based upon the

program activities as set forth in the President's budget. What progress have you made in establishing clear and direct linkages between the general goals in your strategic plan and the goals to be contained in your annual performance plans? OMB expressed concern last year that most agencies had not made sufficient progress in this critical area.

Answer: As a pilot project under the Results Act, EIA has been required to provide performance plans. These performance plans have tended to focus on the development and operation of the performance measurement program within EIA, as opposed to focusing on the operational plans of the EIA as a whole. The development of EIA's performance plan is set to proceed to the next stage in its development.

Question: More specifically, how are you progressing in linking your strategic and annual performance goals to the program activity structure contained in the President's budget? Do you anticipate the need to change or modify the activity structure to be consistent with agency's goals?

Answer: The linkage of EIA's strategic and annual performance goals and the program activity structure contained in the president's budget has not yet been achieved. EIA placed a priority on putting a strategic planning and performance measures system in place and is now looking into the need to change or modify the activity structure and presentation of its budget requests to be consistent with its strategic goals.

Question: Overall, what progress has your agency made--and what challenges is it experiencing--defining results-oriented performance measures that will allow the agency and others to determine the extent to which goals are being met?

Answer: EIA participated in the Results Act pilot phase. EIA's development of performance measures has been detailed by the National Performance Review as a case study. As a result of the participation, EIA has already developed a set of performance measures.

Question: If applicable, what lessons did the agency learn from its participation in the Results Act pilot phase and how are those lessons being applied to agency-wide Results Act efforts?

Answer: Deciding on a set of measures is the easy part. Collecting the data is more difficult and can be more resource intensive. Changing the environment of the organization so that managers and staff actually use the measures is the most difficult. Participation in the pilot was beneficial. Otherwise it would have been very difficult to meet GPRA deadlines with a well reasoned approach to performance measurement. Because of its participation as a pilot, EIA has an active performance measurement team, which has developed a set of performance measures and started collecting the data.

Some specific lessons learned from EIA's active participants in the performance measurement process, beyond those lessons learned that are listed in the NPR's case study, are:

- Performance based management is so radically different from the norm, that it must be developed systematically with a pilot period to shake out problems and with the understanding that mistakes will be made in the beginning.
- The change to performance based management is difficult--initially to understand and then to operationalize. Operationalization means measuring performance by measuring results, using that information to make strategic decisions, and then reallocating resources to implement them. The reallocation of resources is really at the heart of changing the operating environment and is the most difficult.
- Implementing performance measures is a long-term process. It takes time to develop the measures, convince staff to accept and use the measures, and to actually collect the data.
- Focus on making the organization aware of the need for and usefulness of performance measures.
- Strong support from the leadership of the organization is vital to the success of performance based management.
- An agency wide performance measures development committee is needed in order to get buy-in from all parts of the organization.
- The initial tendency is to have too many measures, and more measures on outputs than outcomes. Obtaining data on outcomes you would like to measure can be difficult.
- Be flexible with what you are measuring. The initial measures developed are not necessarily the final ones to be used to measure agency performance. If some measures that sound great don't work out, you need to revise or drop them.
- Continually display the results and status to date. There is no chance of improvement or reaching our goals if there is no feedback on how the agency is doing.

Question: What steps is the agency taking to build the capacity (information systems, personnel skills, etc.) necessary to implement the Results Act?

Answer: This year the performance measures team, in conjunction with management, established a set of performance objectives. Current data on the measures and goals are being provided to EIA's strategic planners well in advance of the strategic planning session, so that they can understand the measures and use them in their planning. Concurrently, data on the measures and goals will be made available to all EIA staff, so that they will have an opportunity to provide the strategic planners with input prior to the planning meeting.

Question: The Results Act requires agencies to solicit and consider the views of stakeholders as they develop the strategic plans. Stakeholders can include state and local governments, interest groups, the private sector, and the general public, among others. Who

do you consider to be your agency's primary stakeholders and how will you incorporate their views into the strategic plans?

Answer: EIA's primary stakeholders are the Congress, the Administration, the Department of Energy, state and local governments, private industry, academic institutions, and the general public. EIA regularly conducts customer surveys and focus groups and meetings with industry associations in an attempt to determine their views. This information is consolidated and used by EIA senior management in the planning process. The 1997 customer survey show 99% of the respondents were satisfied with the service they received from EIA; 93% of the respondents were satisfied with the quality of the information.

Question: For the Results Act to be successful, agencies with similar missions, goals, or strategies will need to ensure that their efforts are coordinated. What other federal agencies are you working with to ensure that your strategic plans are coordinated?

Answer: EIA is an active participant in the Heads of Statistical Agencies Committee.

Question: What steps have you taken to ensure that your efforts complement and do not unnecessarily duplicate other federal efforts?

Answer: Through the Heads of Statistical Agencies Committee and at various other levels within the agency, officials are attempting to coordinate their activities with their counterparts in other statistical agencies.

Question: The Results Act requires agencies to consult with Congress as they develop their strategic plans. Since these plans are due in September, now is the time for agencies to begin the required consultations. What are your plans for congressional consultations as you develop your strategic plan?

Answer: The EIA administrator regularly consults with the Congress, through courtesy calls and regularly scheduled appointments with members. A regular feature of these consultations has been the subject of performance measurement. During EIA's 1996 analysis agenda review, EIA requested and received input from the lead staff for the Senate Energy and Natural Resources Committee. Consultation with Congress and their staffs is expected to be a regular occurrence.

Question: Which Committees will you consult with?

Answer: EIA expects to consult with these committees and subcommittees in the Congress:

- United States House of Representatives
- Committee on Commerce
- Subcommittee on Energy and Power
- Committee on Appropriations
- Subcommittee on Interior and Related Agencies

United States Senate
 Committee on Energy and Natural Resources
 Subcommittee on Energy Research, Development, Production and Regulation
 Committee on Appropriations
 Subcommittee on Interior and Related Agencies

Question: How will you resolve differing views?

Answer: EIA's authorizing statute provides the administrator with the flexibility to make the determination in resolving differing viewpoints.

Question: In passing the Results Act, Congress sought to fundamentally change the focus of federal management and decision making to be more results-oriented. Organizations that have successfully become results-oriented typically have found that making the transformation envisioned by the Results Act requires significant changes in what they do and how they do it. What changes in program policy, organization structure, program content, and work process has the agency made to become more results-oriented?

Answer: As a direct result of early strategic planning efforts, EIA undertook a major reengineering study to review the program policy, organization structure, program content, and work process involved with several of the data operations, data integration, product preparation and dissemination business lines. Also considered in this reengineering study were the supporting functions of resource management, information technology management and standards management and how they related to these business lines and supported them.

Directly resulting from this study, EIA has initiated a number of organization changes. EIA has recently created an Information Technology Group with responsibility for managing EIA's information technology assets and functions throughout the agency. The resources and responsibilities associated with the National Energy Information Center (NEIC) have been expanded. As a result of this expansion and realignment, the NEIC has been established as a separate office within the EIA. Presently in the pilot stage is the creation of an Information Management Group (IM Group). The IM Group is designed to centrally manage all survey operations. A major initiative was undertaken to move to electronic dissemination of information. Today virtually all EIA data is available through the Internet and CD-ROM.

Several corporate initiatives also have resulted from this study. These initiatives are technology initiatives designed to alter the process EIA uses to collect and process its data. In each case the underlying goal is to reduce the costs to the taxpayers either by increasing productivity or by lower actual costs and, where possible, to reduce the information burden on the public. EIA is currently in the initial stages of the development of a common data collection and processing system for all of its surveys, as well as a common database for all of EIA. EIA has adopted a standard desktop publishing system. EIA is also investigating new technologies, including the Internet to collect its data and is also looking to transition away from a mainframe reliant computing environment. While not directly related to the reengineering study, EIA's resource management assets have been centralized within the

Office of Resource Management with the intent of providing better service to its customers.

Question: How are managers held accountable for implementing the Results Act and improving performance?

Answer: The linkage between the Results Act and managerial performance is most developed at the senior management level. All Senior Executive Service employees performance standards include elements on strategic planning, customer orientation, and continuous improvement of processes and programs. EIA's senior managers have agreed to ten performance measures and objectives for the agency and progress towards these objectives will be used in evaluating and rewarding senior managers. Managers at all levels have been involved in improvement efforts, and their success in these endeavors is considered in their evaluations. Further work is required to establish the clear linkages between the Results Act and performance at these levels.

Question: How is the agency using Results Act performance goals and information to drive daily operations?

Answer: EIA's customer surveys, focus groups, and performance measures all indicate that EIA is customer driven.

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