

94th Congress }
1st Session }

COMMITTEE PRINT

**HIGHLIGHTS OF ENERGY LEGISLATION
IN THE 94TH CONGRESS
(Through June 30, 1975)**

A BACKGROUND PAPER

PREPARED BY THE

CONGRESSIONAL RESEARCH SERVICE

AT THE REQUEST OF

**HENRY M. JACKSON, Chairman
COMMITTEE ON INTERIOR AND
INSULAR AFFAIRS
UNITED STATES SENATE**

PURSUANT TO

S. Res. 45

**A NATIONAL FUELS AND ENERGY
POLICY STUDY**

Serial No. 94-19 (92-109)



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SENATE RESOLUTION 45

NATIONAL FUELS AND ENERGY POLICY STUDY

This publication is printed for the use of Senators participating in the National Fuels and Energy Policy Study, authorized by Senate Resolution 45 of the 92d Congress.

S. Res. 45, introduced by Senators Jennings Randolph and Henry M. Jackson, was amended and agreed to by the Senate on May 3, 1971. The resolution authorized the Senate Committee on Interior and Insular Affairs and ex officio members of the Committees on Commerce and Public Works and the Joint Committee on Atomic Energy to make a comprehensive study of programs and policies required to meet national energy needs.

Subsequently, the Senate approved the addition of ex officio members from the Committees on Aeronautical and Space Sciences, on Finance, on Foreign Relations, on Government Operations, and on Labor and Public Welfare.

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MEMORANDUM OF THE CHAIRMAN

To Members and Ex-Officio Members of the Senate Committee on Interior and Insular Affairs National Fuels and Energy Policy Study, Pursuant to Senate Resolution 45 (92d Congress):

This report undertakes to describe congressional activity in the field of energy policy during the first 6 months of the 94th Congress.

During this period, more committees in both House and Senate were grappling with complex and controversial energy issues than ever before. While the legislative record is far from complete, it is already clear that the 94th Congress will make valuable contributions to the work of developing new energy policies commenced in the 93d Congress.

Because of the pace of congressional action, a report of this nature necessarily cannot reflect the latest developments. Since the end of June, significant progress has been made in moving major energy bills. The Senate, for example, has passed legislation creating the Nation's first strategic energy reserves and legislation requiring mandatory fuel economy performance standards for new cars. The House has passed several major bills including legislation providing for the development of the naval petroleum reserves and legislation authorizing a mandatory program to reduce gasoline consumption.

This report provides valuable background on these and other bills and I have, therefore, directed that it be published as a committee print for the use of Senators participating in the national fuels and energy policy study.

HENRY M. JACKSON, *Chairman.*

(III)

MEMORANDUM OF THE CHAIRMAN
OF THE JOINT ECONOMIC COMMITTEE

The Honorable A. C. Clegg, Chairman of the Joint Economic Committee, has the honor to acknowledge the receipt of your letter of the 10th inst. and to inform you that the same has been forwarded to the appropriate departments for their consideration.

The report submitted to the Joint Economic Committee on the 10th inst. contains a number of suggestions for the improvement of the national economy. It is the policy of the Committee to consider all such suggestions and to report thereon to the Congress. The Committee is particularly interested in suggestions which will result in a more efficient and economical use of the Nation's resources.

In the past, the Committee has received many suggestions for the improvement of the national economy. It has endeavored to bring about a more efficient and economical use of the Nation's resources. It has also endeavored to bring about a more efficient and economical use of the Nation's resources. It has also endeavored to bring about a more efficient and economical use of the Nation's resources.

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Very truly yours,
Frank M. Jackson, Chairman

LETTER OF TRANSMITTAL

THE LIBRARY OF CONGRESS,
CONGRESSIONAL RESEARCH SERVICE,
Washington, D.C., July 2, 1975.

HON. HENRY M. JACKSON,
U.S. Senate,
Washington, D.C.

DEAR SENATOR JACKSON: In response to your recent request, I am transmitting herewith a manuscript entitled "Highlights of Energy Legislation in the 94th Congress (through June 30, 1975)." This review of the progress of energy legislation through June 30, 1975, was compiled by Dr. Frances Gulick, Analyst in our Environmental Policy Division.

I am pleased that you have decided to issue this report as a committee print to bring it to the attention of the entire Congress.

Sincerely,

LESTER S. JAYSON, *Director.*

(v)

THE UNIVERSITY OF CHICAGO
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OF THE UNITED STATES

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CONTENTS

	Page
Memorandum of the Chairman.....	III
Letter of transmittal.....	V
Abstract and introduction.....	1
I. Reduce dependence on foreign imports of oil.....	4
A. Oil import tariffs and other fees.....	5
B. Quantitative oil import controls.....	5
II. Protect against disruptions in imports.....	8
A. Allocation and rationing authority.....	8
B. National strategic petroleum reserves.....	9
III. Restrain and reshape energy demand.....	11
A. Pricing as an energy demand constraint.....	12
B. Restraining consumption of gasoline.....	14
C. Improved auto fuel efficiency.....	17
D. Modification of buildings to conserve energy.....	20
E. Conversion to coal to conserve oil and gas.....	22
F. Other industrial conservation measures.....	24
G. Improved mass transit systems.....	25
IV. Stimulate increased production of domestic energy supplies.....	26
A. Removal of the depletion allowance and changes in some foreign oil tax credits.....	27
B. Price policy as a stimulus to increased domestic energy production.....	31
1. Increase the cost of imported oil by the amount of the tariff or fee imposed.....	33
2. Spread price increase through the FEA "Old Oil Entitlements Program".....	34
3. Decontrol the price of old oil.....	35
4. Decontrol the price of natural gas sold in interstate trade.....	37
5. Establish a floor price for oil to insure price stability over the longer run.....	38
C. A National Energy Production Board.....	40
D. Increased production of coal.....	43
E. Nuclear energy.....	45
1. ERDA and NRC organization and funding for nuclear power.....	46
2. The breeder reactor.....	47
3. Plutonium recycle.....	49
4. Exports of nuclear materials and technology and related safeguards issues.....	50
5. Siting and licensing of nuclear plants.....	51
F. Oil and gas development on the Outer Continental Shelf.....	52
G. Solar and other nonnuclear energy research and development.....	53
H. Quantitative quotas as an incentive for both conservation and for increased domestic energy production.....	55

APPENDIXES

I. Status of active energy related bills: 94th Congress (as of June 30, 1975).....	63
II. Tabular summary of major omnibus proposals.....	69
III. "Nuclear Power and the 94th Congress: A Mid-Term Report," by Dr. Warren H. Donnelly and Barbara L. Rather.....	77

CONTENTS

Page

1	Introduction of the Commission
2	1. General principles of the Commission
3	2. Object and purpose of the Commission
4	3. Composition of the Commission
5	4. Powers and functions of the Commission
6	5. Organisation of the Commission
7	6. Financial and administrative arrangements
8	7. Relationship of the Commission to other bodies
9	8. Report of the Commission
10	9. Final provisions
11	10. Annexes
12	11. Bibliography
13	12. Index
14	13. Glossary
15	14. List of abbreviations
16	15. List of symbols
17	16. List of units
18	17. List of figures
19	18. List of tables
20	19. List of references
21	20. List of sources
22	21. List of dates
23	22. List of names
24	23. List of places
25	24. List of events
26	25. List of organisations
27	26. List of publications
28	27. List of documents
29	28. List of reports
30	29. List of resolutions
31	30. List of recommendations
32	31. List of conclusions
33	32. List of findings
34	33. List of observations
35	34. List of suggestions
36	35. List of proposals
37	36. List of initiatives
38	37. List of actions
39	38. List of measures
40	39. List of steps
41	40. List of procedures
42	41. List of processes
43	42. List of systems
44	43. List of methods
45	44. List of techniques
46	45. List of approaches
47	46. List of strategies
48	47. List of policies
49	48. List of programmes
50	49. List of projects
51	50. List of activities
52	51. List of operations
53	52. List of functions
54	53. List of tasks
55	54. List of duties
56	55. List of responsibilities
57	56. List of obligations
58	57. List of commitments
59	58. List of undertakings
60	59. List of assurances
61	60. List of promises
62	61. List of pledges
63	62. List of vows
64	63. List of oaths
65	64. List of covenants
66	65. List of treaties
67	66. List of agreements
68	67. List of arrangements
69	68. List of understandings
70	69. List of accords
71	70. List of settlements
72	71. List of resolutions
73	72. List of decisions
74	73. List of determinations
75	74. List of conclusions
76	75. List of findings
77	76. List of observations
78	77. List of suggestions
79	78. List of proposals
80	79. List of initiatives
81	80. List of actions
82	81. List of measures
83	82. List of steps
84	83. List of procedures
85	84. List of processes
86	85. List of systems
87	86. List of methods
88	87. List of techniques
89	88. List of approaches
90	89. List of strategies
91	90. List of policies
92	91. List of programmes
93	92. List of projects
94	93. List of activities
95	94. List of operations
96	95. List of functions
97	96. List of tasks
98	97. List of duties
99	98. List of responsibilities
100	99. List of obligations
101	100. List of commitments
102	101. List of undertakings
103	102. List of assurances
104	103. List of promises
105	104. List of pledges
106	105. List of vows
107	106. List of oaths
108	107. List of covenants
109	108. List of treaties
110	109. List of agreements
111	110. List of arrangements
112	111. List of understandings
113	112. List of accords
114	113. List of settlements
115	114. List of resolutions
116	115. List of decisions
117	116. List of determinations
118	117. List of conclusions
119	118. List of findings
120	119. List of observations
121	120. List of suggestions
122	121. List of proposals
123	122. List of initiatives
124	123. List of actions
125	124. List of measures
126	125. List of steps
127	126. List of procedures
128	127. List of processes
129	128. List of systems
130	129. List of methods
131	130. List of techniques
132	131. List of approaches
133	132. List of strategies
134	133. List of policies
135	134. List of programmes
136	135. List of projects
137	136. List of activities
138	137. List of operations
139	138. List of functions
140	139. List of tasks
141	140. List of duties
142	141. List of responsibilities
143	142. List of obligations
144	143. List of commitments
145	144. List of undertakings
146	145. List of assurances
147	146. List of promises
148	147. List of pledges
149	148. List of vows
150	149. List of oaths
151	150. List of covenants
152	151. List of treaties
153	152. List of agreements
154	153. List of arrangements
155	154. List of understandings
156	155. List of accords
157	156. List of settlements
158	157. List of resolutions
159	158. List of decisions
160	159. List of determinations
161	160. List of conclusions
162	161. List of findings
163	162. List of observations
164	163. List of suggestions
165	164. List of proposals
166	165. List of initiatives
167	166. List of actions
168	167. List of measures
169	168. List of steps
170	169. List of procedures
171	170. List of processes
172	171. List of systems
173	172. List of methods
174	173. List of techniques
175	174. List of approaches
176	175. List of strategies
177	176. List of policies
178	177. List of programmes
179	178. List of projects
180	179. List of activities
181	180. List of operations
182	181. List of functions
183	182. List of tasks
184	183. List of duties
185	184. List of responsibilities
186	185. List of obligations
187	186. List of commitments
188	187. List of undertakings
189	188. List of assurances
190	189. List of promises
191	190. List of pledges
192	191. List of vows
193	192. List of oaths
194	193. List of covenants
195	194. List of treaties
196	195. List of agreements
197	196. List of arrangements
198	197. List of understandings
199	198. List of accords
200	199. List of settlements
201	200. List of resolutions
202	201. List of decisions
203	202. List of determinations
204	203. List of conclusions
205	204. List of findings
206	205. List of observations
207	206. List of suggestions
208	207. List of proposals
209	208. List of initiatives
210	209. List of actions
211	210. List of measures
212	211. List of steps
213	212. List of procedures
214	213. List of processes
215	214. List of systems
216	215. List of methods
217	216. List of techniques
218	217. List of approaches
219	218. List of strategies
220	219. List of policies
221	220. List of programmes
222	221. List of projects
223	222. List of activities
224	223. List of operations
225	224. List of functions
226	225. List of tasks
227	226. List of duties
228	227. List of responsibilities
229	228. List of obligations
230	229. List of commitments
231	230. List of undertakings
232	231. List of assurances
233	232. List of promises
234	233. List of pledges
235	234. List of vows
236	235. List of oaths
237	236. List of covenants
238	237. List of treaties
239	238. List of agreements
240	239. List of arrangements
241	240. List of understandings
242	241. List of accords
243	242. List of settlements
244	243. List of resolutions
245	244. List of decisions
246	245. List of determinations
247	246. List of conclusions
248	247. List of findings
249	248. List of observations
250	249. List of suggestions
251	250. List of proposals
252	251. List of initiatives
253	252. List of actions
254	253. List of measures
255	254. List of steps
256	255. List of procedures
257	256. List of processes
258	257. List of systems
259	258. List of methods
260	259. List of techniques
261	260. List of approaches
262	261. List of strategies
263	262. List of policies
264	263. List of programmes
265	264. List of projects
266	265. List of activities
267	266. List of operations
268	267. List of functions
269	268. List of tasks
270	269. List of duties
271	270. List of responsibilities
272	271. List of obligations
273	272. List of commitments
274	273. List of undertakings
275	274. List of assurances
276	275. List of promises
277	276. List of pledges
278	277. List of vows
279	278. List of oaths
280	279. List of covenants
281	280. List of treaties
282	281. List of agreements
283	282. List of arrangements
284	283. List of understandings
285	284. List of accords
286	285. List of settlements
287	286. List of resolutions
288	287. List of decisions
289	288. List of determinations
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291	290. List of findings
292	291. List of observations
293	292. List of suggestions
294	293. List of proposals
295	294. List of initiatives
296	295. List of actions
297	296. List of measures
298	297. List of steps
299	298. List of procedures
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311	310. List of functions
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314	313. List of responsibilities
315	314. List of obligations
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319	318. List of promises
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324	323. List of treaties
325	324. List of agreements
326	325. List of arrangements
327	326. List of understandings
328	327. List of accords
329	328. List of settlements
330	329. List of resolutions
331	330. List of decisions
332	331. List of determinations
333	332. List of conclusions
334	333. List of findings
335	334. List of observations
336	335. List of suggestions
337	336. List of proposals
338	337. List of initiatives
339	338. List of actions
340	339. List of measures
341	340. List of steps
342	341. List of procedures
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344	343. List of systems
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366	365. List of covenants
367	366. List of treaties
368	367. List of agreements
369	368. List of arrangements
370	369. List of understandings
371	370. List of accords
372	371. List of settlements
373	372. List of resolutions
374	373. List of decisions
375	374. List of determinations
376	375. List of conclusions
377	376. List of findings
378	377. List of observations
379	378. List of suggestions
380	379. List of proposals
381	380. List of initiatives
382	381. List of actions
383	382. List of measures
384	383. List of steps
385	384. List of procedures
386	385. List of processes
387	386. List of systems
388	387. List of methods
389	388. List of techniques
390	389. List of approaches
391	390. List of strategies
392	391. List of policies
393	392. List of programmes
394	393. List of projects
395	394. List of activities
396	395. List of operations
397	396. List of functions
398	397. List of tasks
399	398. List of duties
400	399. List of responsibilities
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402	401. List of commitments
403	402. List of undertakings
404	403. List of assurances
405	404. List of promises
406	405. List of pledges
407	406. List of vows
408	407. List of oaths
409	408. List of covenants
410	409. List of treaties
411	410. List of agreements
412	411. List of arrangements
413	412. List of understandings
414	413. List of accords
415	414. List of settlements
416	415. List of resolutions
417	416. List of decisions
418	417. List of determinations
419	418. List of conclusions
420	419. List of findings
421	420. List of observations
422	421. List of suggestions
423	422. List of proposals
424	423. List of initiatives
425	424. List of actions
426	425. List of measures
427	426. List of steps
428	427. List of procedures</

HIGHLIGHTS OF ENERGY LEGISLATION IN THE 94TH CONGRESS

(Through June 30, 1975)

ABSTRACT AND INTRODUCTION

The 94th Congress is deeply engaged in intensive consideration of a strategic national issue: What should be the size, substance and shape of a comprehensive energy policy for the United States?

At midpoint in the first session, the new Congress had not only undertaken a very substantial volume of legislative action but had also produced several distinctive approaches which may prove to be definitive in shaping the character of the emerging national energy policy.

LEGISLATIVE ACTIONS

Half a dozen energy-related bills and resolutions had been enacted into law, two more were enacted but were vetoed, another dozen had been passed by one or both Houses, six more have been favorably reported from committee, and four others were scheduled for Senate decision before the August recess begins. (See Appendix I for a list of these and their status.)

Bills already enacted include the Tax Reduction Act (Public Law 94-12) which repealed the long standing oil and gas depletion allowance for major companies; approval of \$50 million in supplemental funds for improved nuclear safety measures for the Nuclear Regulatory Commission (Public Law 94-18); and several measures to improve the Nation's railroad system and service (Public Law 94-5 and Public Law 94-25). Executive authority in national emergencies, including authority for allocation of energy and other scarce materials, as provided under the Defense Production Act of 1950, was extended through December 31, 1975, by Public Law 94-9.

Congress passed, but the President vetoed, a bill to control strip mining and provide for reclamation of strip mined areas (H.R. 25/S. 7) and a bill suspending the President's authority to impose oil import fees for 90 days (H.R. 1767).

Pending in conference when Congress left for the July 4th recess was another bill which provides Congressional review of Presidential decisions to remove controls on oil (H.R. 4035 and S. 621) as well as ERDA and NRC authorizations for fiscal year 1976, and the transition, together totalling about \$5.9 billion.

The House has passed a multipurpose energy bill (H.R. 6860) which includes a volumetric foreign oil import limit, tax incentives and disincentives for industrial oil and gas conservation and a civil penalty for automobile firms in the event they do not comply with targets for improved gasoline fuel efficiencies. Pending on the calendar for action after the July 4th recess is a companion bill (H.R. 7014) which includes standby emergency energy authorities, a quantitative limit on

how much gasoline can be used, limits on the use of oil and gas for industrial purposes, oil price decontrol and limitation, and provisions for national strategic petroleum reserves to be coordinated with the also pending H.R. 49 and H.R. 5915 on the same subject.

A number of Senate bills which have already passed that body and are now before the House contain provisions similar to those in H.R. 7014, among them S. 622, providing standby energy authority, S. 621 which includes a price increase limitation, S. 1518, a motor vehicle information and cost savings act, and S. 323 to protect franchised dealers in petroleum products.

The Senate has before it—in addition to the bills already passed and now pending in the House—five key bills which are on or ready for the calendar and four more which are being readied for markup and floor debate before the August recess.

These are the natural gas production and conservation act (S. 692); a "Truth in Energy" act (S. 1883); an auto fuel economy act (S. 1883); a bill to extend the Emergency Petroleum Allocation Act to March 1, 1976 (S. 1849), and the House multipurpose energy bill (H.R. 6860). In addition to these, a Senate coordinating group for the Majority Conference has identified the following, not yet on the calendar but targeted for action before the August recess: S. 677 (S. Rept. 94-260) on strategic reserves, reported June 26, 1975; S. 521 on the Outer Continental Shelf, S. 1777 on Coal Conversion, and S. 740 on a National Energy Production Board.

THREE DISTINCTIVE FEATURES

The volume of activity alone is, of course, no true index of progress. The 93d Congress was no less involved with energy issues. Some 2,000 energy-related bills and resolutions were introduced, over a thousand collective days of hearings were held, some 40 energy-related laws were enacted and several dozen more were passed by one or both of the Houses.

What seems distinctive now, early in the first session of the 94th Congress is that recent action has produced several new approaches which may prove to be definitive in setting the direction in which the new national energy policy will move—among them the adoption of a composite approach to energy policy, the repeal of the depletion allowance for large oil and gas firms, and the emergence of the use of quantitative ceilings as a major management tool in restraining and reshaping energy demand.

The Composite Approach to Formulating Energy Policy.—Responding to the Administration's omnibus legislative package announced January 15, 1975, Congress has begun to approach the complex collection of basic energy issues and their legislative options comprehensively. Among the several comprehensive Congressional proposals, the most prominent were the Congressional Majority proposals, a joint House and Senate economy-energy statement issued by the Democratic majority leadership on February 27, 1975, and a similar composite energy program announced by the Democratic members of the House Ways and Means Committee on March 3, 1975. (See Appendix II for a tabular summary of the main provisions of these Administration and Congressional proposals.)

Repeal of the Depletion Allowance.—After sixty years in which this provision was a key factor in the U.S. petroleum industry's exploration, production and pricing policies, Congress repealed the 22 percent depletion allowance in its entirety for all major oil and natural gas producers, identified as those producing more than 2,000 barrels of oil per day, or 12 million cubic feet of natural gas per day, postponing its abolition for independent companies who do not have retail outlets and produce less than these amounts, on a graduated schedule until 1984.

While a number of major companies have announced that removal of the depletion allowance would require reconsideration and reduction in their capital investment plans, there is some indication that the reductions would take place in projected capital ventures other than exploration and investment.

Whatever the role of the depletion allowance has been in the past, its recent repeal clears the way for a fresh look at oil and other fossil fuel production incentives whose effectiveness as stimulants to increased domestic production can be more easily measured and identified.

Quantitative Ceilings as a Major Energy Policy Management Approach.—Perhaps the most unique feature of the Congressional energy initiatives during this period has been the emergence of the use of quantitative limits as a major management tool in conserving energy, redirecting demand and stimulating increased production. This approach is a distinctive alternative to the Administration's heavy reliance on a market oriented approach.

Four key bills have incorporated quantitative control concepts of this type: The House Ways and Means energy bill, H.R. 6860, approved June 19, 1975, would place quantitative limits—subject to some flexibility—on the volume of crude oil and oil products which could be imported. The complementary House Commerce Committee bill, H.R. 7014, favorably reported on June 26, 1975, includes a quantitative ceiling on the volume of gasoline which may be consumed.

The Senate National Petroleum and Natural Gas Conservation and Coal Substitution bill, S. 1777, and the National Energy Production Board bill, S. 740, both of which have been targeted by the Congressional leadership for floor action before the August recess, are oriented toward quantitative limitation concepts. The Coal Substitution bill would limit the number of oil and gas fired power plants and industrial boilers to those existing now and would require them to convert to coal by 1980; and require all new power plants and industrial boilers to be capable of burning coal and to convert to coal by 1985. The National Energy Production Board, to be patterned after the War Production Board of World War II, would be charged with establishing quantitative energy production goals and programs whose priority claims on scarce materials and capital would have the effect of placing quantitative limits on all less essential claims on energy and materials.

None of these quantitative limitations necessarily require the imposition of price ceilings, although price ceilings are also a feature of the Congressional alternatives, nor would they foreclose the options of how low or how high such price ceilings, if adopted, might be set.

What is unique is that these particular ceilings are set in volumetric, not percentage, terms. Even the long standing mandatory oil import

control program did not have limits fixed in quantitative volumetric terms. The volumetric formula used in the mandatory oil import control program, in force between 1959-1973, was intended to limit U.S. imports to a more or less fixed proportion of U.S. production. A crude oil-oil products import level was set initially at a little over 12 percent of estimated U.S. consumption. After 1963, the quota was calculated at about 12 percent of U.S. production.¹ However, the pressure of increasing U.S. demand for oil products coupled with flattening domestic U.S. petroleum production induced exceptions and adjustments in the program to such a degree that by March 1973, just before the President removed the mandatory oil imports quotas, foreign crude-product imports totalled 6,575,000 barrels a day (3,162,000 in crude and 3,413,000 in refined petroleum products) as compared with 9,175,000 barrels a day of crude from domestic production.²

Enactment of legislation setting a quantitative ceiling on oil imports would mark a major change in U.S. oil policy and require significant conservation in the use of oil and a shift to other fuels.

The quantitative ceiling on oil imports survived a strong effort to strike it out entirely in an early vote on June 10, and was approved as amended, by the House on June 19, 1975, but has still to be debated by the Senate.

These activities and selected related non-legislative events are summarized in the following status report, under the general functional headings of:

- I. Measures designed to reduce dependence on foreign oil imports.
- II. Measures to protect against interruptions in supply.
- III. Measures to restrain and redirect the use of energy.
- IV. Measures to increase energy supplies.

I. REDUCE DEPENDENCE ON FOREIGN IMPORTS OF OIL

During the year and a half since the Arab oil embargo in mid-October 1973, a consensus has been reached within Congress and the Administration that the country's growing dependence on imports of foreign oil is undesirable, that it should be curbed and, hopefully, reduced.

This consensus on the broad objective, however, has not yet been matched with a consensus on means. The Administration believes that oil imports can and should be reduced through imposition of import tariffs, fees and/or excise taxes, coupled with removal of price controls on domestic oil and gas, relying on the higher prices to lower imports through lowered consumption. Higher prices would also serve, it is argued, to stimulate increased domestic production of not only oil and gas but alternative energy sources as well.

The Democratic proposals in general place more reliance on quantitative controls, through various types of import quotas and other energy management measures. Decontrol of oil and gas prices may be permitted, but only gradually and at a much slower rate than the Administration desires.

During the first half of the 94th Congress there has been a great deal of legislative activity and debate on import tariffs, quantitative oil im-

¹ *The Oil Import Question*, Cabinet Task Force on Oil Import Control, February 1970, p. 121.

² *Monthly Energy Review*, Federal Energy Administration, February 1975, pp. 6, 8.

port controls and other management tools directed at reducing oil imports. There has also been a great deal of debate on legislative action on oil and gas pricing policy but, as discussed in sections III and IV below, the debate has centered less on its role as a deterrent to imports than as a measure either to constrain demand or to stimulate increased domestic supplies.

A. OIL IMPORT TARIFFS AND OTHER FEES

Following up on the Administration's comprehensive energy plan, formally announced January 15, 1975, and introduced as S. 594 and H.R. 2633 and H.R. 2650 on February 5, 1975, President Ford imposed a \$1 a barrel tax on imported oil, effective February 1, to rise to \$3 in two additional \$1 increases scheduled for March 1 and April 1, 1975.

At the same time he stated that "I am prepared to use Presidential authority to limit imports, as necessary, to guarantee success" in reducing imports. Title IX of the Administration bill, directed at ensuring price stability should foreign prices fall, would provide specific authority to use tariffs, quotas and variable fees to control imports as well as to establish a floor price for domestic oil.

Congress responded immediately with a bill, H.R. 1767, introduced in the House on January 20, 1975, to suspend for a 90 day period the authority of the President under section 232 of the Trade Expansion Act of 1962, or any other provision of law, to increase tariffs or to take any other import adjustment action with respect to petroleum or petroleum products and to negate any such action which may be taken by the President after January 15, 1975.

The bill passed the House by a vote of 309 to 114, February 5, and was approved by the Senate February 19, by a vote of 66 to 28.³

It was vetoed by the President on March 5, 1975, but only after he announced that in the interests of accommodation and to provide additional time for Congressional action he would postpone the additional \$2 tariff on oil imports until May 1.

On April 30, he again announced a further delay in import fees until June 1 to give Congress further time to develop its alternatives. Subsequently, as discussed in Section IV below, on May 27, 1975, after Congress had recessed without agreement on comprehensive legislation, the President announced the imposition of the next \$1 fee on imported crude oil and \$.60 on imported refined products, effective June 1, 1975.

Meanwhile, a vote to attempt to override the veto was postponed while intensive committee review of the Democratic alternative programs went forward in both the House and Senate.

B. QUANTITATIVE OIL IMPORT CONTROLS

Two major omnibus alternative energy policy approaches were announced by members of the Democratic majority six weeks after the Administration's program was announced. One entitled "The Congressional Program of Economic Recovery and Energy Sufficiency, was announced by the Majority leaders of both House and Senate, Febru-

³ Action then pending on S.J. Res 12, introduced Jan. 12, 1975, to prohibit for 60 days the imposition of tariffs, fee and quotas on oil imports and the lifting of all price controls on domestic oil, reserving Congressional right to approve or disapprove within 30 days, was transferred to the calendar under subjects on the table Feb. 20, 1975.

ary 27, 1975; and the other was prepared by eight task forces made up of the Democratic members of the House Ways and Means Committee, issued March 3, 1975.

The two proposals, although favoring quantitative controls as preferable to increased import tariffs, differed on how, when and to what degree such controls would be applied.

The most specific active legislative proposal mandating quantitative oil import controls is included in H.R. 6860, a clean bill reported from the Ways and Means Committee by the fairly close vote of 19-16, on May 15, 1975, after a marathon, almost non-stop series of hearings and open mark-up sessions, beginning March 3, 1975.

With quantitative import control provisions stronger than those included in H.R. 5005, originally introduced March 17, 1975, the proposed legislation would impose mandatory quotas on oil imports. These were set at 6.0 million barrels per day in 1975 and 1976, 6.5 million barrels per day in 1977, 6.0 million b/d in 1978 and 5.5 million b/d thereafter. These levels are lower than the level of imports prevailing prior to the oil embargo and, together with a civilian strategic reserve and a program for standby emergency conservation measures, would, it was believed, provide adequate protection against an oil embargo.

As described in the Committee's report (H. Rept. 94-221):

Your committee does not intend that these import quotas be an energy conservation measure in themselves. Rather, the levels of the quotas are designed to reflect the energy conservation and conversion measures elsewhere in the bill, and the purpose of the quotas is to make sure that all oil savings resulting from the conservation and conversion program are reflected in reduced imports. The President, therefore, is given the authority to vary the level of the quota. Because of the greater uncertainty about the level of demand and domestic supply farther into the future, the President is given more flexibility in later years. The bill gives the President the authority to vary the basic quota by up to one million barrels per day in 1975, 1976, and 1977, 1.5 million barrels per day in 1978 and 1979, and 2 million barrels per day in 1980 and thereafter. If the quotas are at all restrictive, to prevent oil importers from receiving excessive profits from the import licenses provided under the quota system and to allocate oil imports as efficiently as possible, import licenses are to be distributed through public auctions. Also, to ensure that users of imported fuel oil have time to convert to other energy sources, import restrictions for residual and distillate fuel oil are set at a minimum of 2 million barrels per day for the years 1975-1977 out of the overall quotas for those years.

Oil import tariff.—The bill imposes a tariff on oil imports of 2 percent ad valorem for crude oil and 5 percent ad valorem for petroleum products. These are approximately the levels of the import license fees that were in effect in January 1975 under the national security provision of the Trade Expansion Act. The authority of the President to impose oil import tariffs or quotas under that Act (except in the case of war) is terminated, but the President is given the authority to

increase the oil import tariff to 10 percent ad valorem or \$1.00 per barrel, whichever is higher. For a two-year period, however, the tariff on residual and distillate fuel oil is limited to 5 percent. Your committee believes that the tariff will be a significant conservation measure.

The Chairman of the Ways and Means Committee had intended to seek House passage before the Memorial Day recess, and floor debate had been scheduled for May 21 and 22, subject to clearance by the Rules Committee. The Democratic leadership decided on May 20th to postpone debate until after the recess, hoping to be able to consider the proposals jointly with the House Commerce Committee's complementary companion bill, H.R. 7014, not then reported from committee.

When it became clear that the House Commerce Committee would not be able to report H.R. 7041 in time for joint consideration, the House proceeded to consider the Ways and Means bill alone, in the general understanding that other complementary and supplementary measures were pending in other committees, but scheduled for reasonably early debate. Specifically, in addition to the allocation, pricing, investment plowback, conservation, strategic reserves and standby emergency authorities included in H.R. 7041, there was also legislation pending which would enlarge non-nuclear research and development, deal with nuclear safety regulation and amend the Clean Air Act.⁴

General debate began June 9, 1975, under a rule, H. Res. 505, which permitted consideration of the more than 100 pending amendments title by title.

The quantitative import quota provision came under attack almost immediately, with a recommendation that it be stricken entirely from the bill.⁵ The motion was rejected by a vote of 185 ayes to 224 noes, on June 10, 1975, and Title I was retained with a modification which increased the ceilings permitted for 1979 from 5.5 million barrels a day to 6 million b/d, and for 1980, from 5.5 million b/d to 6.5 million b/d. The adjustment was based primarily on the prediction that, even with positive action to bring about substantial savings in consumption and positive incentives to increase domestic production, total domestic oil production was likely to at best remain at present levels but could still continue to decline as old fields went out of production faster than new fields could be brought into flow. The vote approving the increase, on June 11, 1975, was 211 ayes to 200 noes and, at these levels, quantitative quotas were retained in the final bill which was approved on June 19, 1975, by 291 ayes to 130 noes.

The Congressional Majority proposals, although favoring quantitative import controls, were not specific about when, how, to what degree they should be imposed. Instead, authority to "recommend import quotas, allocations and even rationing in event of emergency" is to be given to a new National Energy Production Board. Described in the proposals as "the core of the recommendations," it is intended to be an independent agency of the government patterned after the War Production Board of World War II and, "subject to Congressional review, would have authority and funding to break energy bottlenecks

⁴ See statements made during the opening debate, June 9, 1975, by Mr. Long, p. H5108-9, Mr. Ullman, p. H5118, and Mr. Preyer, p. H5137.

⁵ See section IV—H, for more details of the debate on this issue.

and to take all actions necessary to accelerate the production of and conversion to domestic energy sources." It would also oversee establishment of a national system of oil strategic reserves and storage.

The Senate Committee on Interior and Insular Affairs held hearings March 20 and April 14 and 15 on S. 740, a bill to establish a National Energy Production Board. As introduced, the bill does not mention control of imports or establishment of import quotas among the responsibilities and authorities to be vested in the Board.⁶

The bill is among eight measures targeted for Senate floor action before the August recess.

II. PROTECT AGAINST DISRUPTIONS IN IMPORTS

The continuing heavy dependence on imported oil coupled with declining domestic production heightens the importance of reaching early agreement on and enactment of special measures to protect against another interruption of imports such as that produced by the Arab embargo. The principal measures designed to provide such protection which are under current congressional consideration are development and production of oil from the naval petroleum reserves and standby allocation, rationing and other emergency energy conservation measures.

A. ALLOCATION AND RATIONING AUTHORITY

Standby emergency allocation, rationing and other emergency conservation legislation, closely circumscribed by elaborate Congressional review and veto rights, was passed by both Houses during the 93rd Congress, vetoed in March, 1974, reintroduced in April, and was still being heatedly pursued when that Congress adjourned in late December 1974.

S. 622, which was approved by the Senate on April 10, 1975, by a vote of 60 to 25, contains rationing and other emergency energy conservation standby provision virtually identical to the vetoed bill, as does Title I, Part A, of H.R. 7014, which was reported favorably on June 24, 1975 by the full House Committee on Interstate and Foreign Commerce. The Administration's somewhat simpler alternative proposals are included in S. 594 (and H.R. 2650) as Title VIII. The Democratic leadership plans to schedule H.R. 7014 for full House debate in July.

The petroleum allocation authority and resulting system mandated in the Petroleum Allocation Act of 1973, and administered by the Federal Energy Administration, will lapse August 31, 1975, unless extended, as has been proposed in a number of bills. Section 122 of S. 622 would extend the Act until March 1, 1976, and other provisions of the bill call for substantial changes in the Act. H.R. 7014 also includes several very substantial proposed revisions of the allocation authority, in Sections 304 and 401-404. S. 1849, a clean bill to extend the Emergency Petroleum Allocation Act of 1973 from its present expiry date of August 31, 1975 to March 1, 1976, was ordered reported from the Senate Committee on Interior and Insular Affairs on June 23, 1975 (S. Report 94-220).

⁶ See section IV-C for further details.

The President and FEA officials have repeatedly indicated their preference for dismantling the system set up under the 1973 Act and prefer to rely on fuels and materials authorities and systems created under the Defense Production Act of 1950, as amended. S. J. Res. 48, signed into law as Public Law 94-9 on March 21, 1975, extends that authority until December 31, 1975.

The Administration and Democratic majority pending bills described above are designed to limit the emergency stand-by authorities which would be confined to "specific temporary emergency actions." These would be invoked either when there is "interruption in the supply of imported petroleum or as a result of Acts of God or sabotage" creating energy shortage conditions which threaten United States national security or when they are needed to fulfill obligations of the United States under an international agreement.

It is of interest, therefore, that other critical shortages are already emerging which, although scarcely definable as sabotage, Acts of God or embargo, may require the use of continuing allocation authority. An immediate example is the impending shortage caused by reductions in Canadian oil exports to the United States.

Canadian oil exports to the United States have dropped from over one million barrels per day a year ago to about 800,000 barrels per day at present. A further reduction to 650,000 B/D on July 1 is being contemplated and Canada has announced that it intends to completely phase out oil exports to the United States by 1983. Assuming that this schedule will be followed, the Federal Energy Administration has begun preliminary planning for the allocation of Canadian crude supplies as their availability becomes more and more limited.

As a part of its preliminary plan, FEA has asked that the public and industry present their views concerning the necessity for, and provisions of, a Canadian oil allocation program. Specifically, FEA has asked for information on (1) the present degree of dependence of individual refiners and other industry on Canadian crude and the availability of alternative energy supplies; (2) projected future dependence on Canadian imports and plans to meet refinery requirements in the event of a cut-off; (3) costs and practicability of reducing Canadian dependence by various means; and (4) analysis of the markets serviced by the refiners involved, including access of consumers to alternate energy sources. A public hearing was held May 14th.

B. NATIONAL STRATEGIC PETROLEUM RESERVES

A logical counterpart to continued dependence on oil imports, even at a decreasing rate, is the creation of some kind of strategic reserve capability to be drawn on in the event of serious interruption or depletion of supply. In the United States the petroleum industry has in the past maintained inventories of less than 40 to 50 days supply to deal with seasonal demands and operating requirements. However, this is only normal working inventory and cannot by any means be said to constitute a reserve capability.

In developing a reserve capability, there are two basic options open: Oil can be bought and stored in salt domes and tanks or developed in place and then shut in, to be drawn on when needed.

The most far reaching proposals introduced in the current Congress to provide this capability are those in Titles I and II of the Adminis-

tration bill (S. 594 and H.R. 2650). Elk Hills Naval Petroleum Reserve (NPR No. 1) in California, would be opened up for production under Navy control. It is believed production could reach 160,000 barrels per day in 1975 and 300,000 barrels per day by 1977. The oil produced would be used to top off Defense Department storage tanks with the rest sold or exchanged for refined products used by DOD. Surplus revenues would be used to finance further exploration, development and production of the reserves, particularly NPR No. 4, a 24-million acre tract in Alaska, with at least 20 percent of production earmarked for military needs and strategic storage.

Military storage facilities maintaining a reserve of 300 million barrels and civilian stored reserves of up to one billion barrels of oil are projected. Production surplus to this amount would be available for sale in the civilian market. It is expected that NPR No. 4 would be able to produce a minimum of 2 million barrels per day by 1985, which would allow about 1,600,000 barrels a day for civilian consumption. In addition, the President would be authorized to require domestic importers or refiners to maintain stored petroleum reserves at levels to be determined by the President.

Two competing and conflicting House bills were pending on the House Calendar at the time of the July 4th recess. Debate is scheduled for the second week in July.

H.R. 49, reported from the Committee on Interior and Insular Affairs by a unanimous vote on March 18, 1975, would provide for the development of national petroleum reserves, (including all or part of naval petroleum reserves), and would transfer administrative authority over all four naval reserves from the Navy Department to the Interior Department (No. 1—Elk Hills; No. 2—Buena Vista Hills, in Kern County, Calif.; No. 3—Teapot Dome, Wyo.; and No. 4—on the North Slope of Alaska).

The bill would authorize the Interior Department to establish national petroleum reserves on federal public lands (exclusive of National parks, National wildlife refuges, wild and scenic river areas, national wilderness areas and Alaskan lands not included in the No. 4 Naval Petroleum Reserve) and would allow the Interior Department to prepare plans for the development and production of oil and gas on the national reserves, excluding the No. 4 Alaskan reserve.

The plan would become effective within 60 days unless either House vetoed it, or took no action. The Secretary of Interior would be required to consult with the Secretary of Defense before including all or part of any naval petroleum reserve in a national reserve.

The bill would also allow the Interior Department to contract to sell oil and gas produced from the national petroleum reserves and to explore for oil and gas in the naval petroleum reserve in Alaska, but the Secretary would be barred from any development or production of this reserve without express authorization from Congress. Independents would have equal contract opportunity.

The Committee on Armed Services requested and received sequential referral of H.R. 49. The Committee reported its own bill (H.R. 5919) in the form of a substitute to H.R. 49 by a vote of 28 to 3 on April 18, 1975. The Armed Services bill would allow the full exploration, development and production of U.S. naval petroleum reserves, and would place the revenue derived from the production in a special

fund to be applied to the petroleum needs of the Department of Defense and for the establishment of a study group to investigate the feasibility of creating a military National Strategic Petroleum Reserve. The measure also provides for the production of petroleum reserves for a period not to exceed three years, at a rate not to exceed 200,000 barrels per day. All oil produced from these reserves would be sold or exchanged for the exclusive use of the military.

Production authorization for Elk Hills would be conditioned upon the Secretary of the Navy reaching an agreement with the private owner to continue operation of Elk Hills under a unitized plan contract.

In its report, the Armed Services Committee stated that our national security requires the assurance that U.S. Armed Forces have enough fuel to supply their needs in time of national emergency of war and that the reserves must be "completely protected from depletion before any alternate oil sources in them may be established."

Initially scheduled for floor debate April 29, 1975, H.R. 49 and H.R. 5919 were withdrawn pending completion of the Ways and Means and Commerce comprehensive energy bills.

As reported by the House Committee on Interstate and Foreign Commerce, Title II, part B of H.R. 7014, would establish a National Civilian Strategic Petroleum Reserve of one billion barrels of petroleum products and create as part of such a reserve an Early Storage Reserve of 150,000,000 barrels of petroleum products to protect against near-term disruptions of imports. The President is directed to prepare a plan incorporating these features and to submit it for Congressional review and approval. Drawdown of these supplies would be permitted only if the President determines it necessary due to a severe supply interruption. Import restrictions would not apply to any products purchased for storage in the Reserve, a provision confirmed in H.R. 6860, the Ways and Means bill.

The Senate Interior and Armed Services Committees have held joint hearings on proposals to develop Elk Hills and the Administration's storage proposal. S. 677, a bill to establish a system of strategic petroleum reserves—civilian, military and industrial—was ordered reported from the Senate Interior Committee on June 13, 1975, and is scheduled for floor debate in July. The National Energy Production Board, which would be created by S. 740, is authorized and directed to prepare and carry out a Naval Petroleum Reserves Development and Production Program for NPR's 1, 2, and 3 and an Alaska Naval Petroleum Reserve Exploration (but not development) Program, covering NPR 4, to be submitted for Congressional review with the right to disapprove.

III. RESTRAIN AND RESHAPE ENERGY DEMAND

There is general agreement between Congress and the Administration that in the immediate and near term, major savings must come from voluntary or mandatory efforts to restrain consumption of petroleum and petroleum products and to encourage, or order, conversion to other forms of energy.

However, there is no similar agreement on the means to be used. The Administration's energy-conservation proposals rely primarily on

higher prices, jawboning for voluntary compliance, modest subsidies for building and industrial conservation efforts and relaxation of auto emission and other clean air requirements. In general, the various House and Senate bills which have been reported out or are in markup reflect a preference for specific incentive and disincentive taxes and subsidies for specific conservation targets plus selected mandatory conservation measures.

The following sections summarize briefly some of the legislative and other action to date on (a) pricing as a demand constraint; (b) restraining consumption of gasoline; (c) improved auto fuel efficiency measures; (d) modification of buildings to conserve energy; (e) conversion to coal to save oil and gas; (f) other industrial conservation measures; and (g) encouragement and improvement of mass transit facilities to conserve gasoline.

A. PRICING AS AN ENERGY DEMAND CONSTRAINT

A key feature of the Administration's overall energy policy approach is the claim that higher oil and natural gas prices are not only necessary to encourage increased production of domestic supplies, but are also the best means to bring about reduced consumption of petroleum products. The energy conservation function is discussed briefly in this section; price-related actions intended to encourage supply are treated in Section IV.

On June 1, 1975, the Administration's previously announced second \$1 per barrel fee on imported oil took effect, raising the total to \$2 a barrel on crude oil imports, with a \$0.60 fee per barrel on imported refined products. This has the effect of increasing the acquisition cost to domestic refiners of crude imports by an equivalent amount. In addition, the President has submitted draft tax legislation which would place an excise tax of \$2 per barrel on all domestic crude oil (the price of which is to be decontrolled entirely over a period of two years), an import fee of \$2 on all imported crude oil and petroleum products "to help reduce the demand for oil," and a 37-cent per 1,000 cubic feet excise tax on natural gas, the wellhead price of which would also be deregulated. (See Section IV-B-4 for further details.)

The Administration has claimed a dampening of demand is already occurring, although by the end of April the full impact of the first \$1 import fee was not yet reflected in the refiners acquisition cost. (This is because not all foreign oil purchased and reported to FEA in a given month actually enters the country in that month. Import fees are only incurred by refiners when oil physically enters the country in that month.)

It is too soon to judge whether oil and oil product demand will be as responsive to additional rises in price as the Administration believes it will be, and in any event it is extremely difficult either (a) to separate out the dampening due to the recession or (b) to calculate what the otherwise unrestrained level might have been, a free floating statistical exercise which has been undertaken in connection with all the omnibus proposals.

A comparison of the levels of consumption for imported crude over the past several years, during periods of price increases much sharper than would result from the President's program, does not provide

much encouragement that price alone can reduce U.S. demand. As shown in the following table, imports of crude which were 2,046,000 barrels a day in January 1972, when the posted price was \$2.48, rose to 3,740,000 b/d in October 1973, after two price increases to \$5.12. Once the embargo imposed in mid-October 1973 was lifted in April 1974, consumption rose to more than the pre-embargo level. In October 1974, at refiners import acquisition prices of \$12.44—an import price level which had been sustained for nine months—crude imports totalled 3,936,000b/d. In December 1974, crude imports were still high, 3,964,000 b/d at a price of \$12.82 per barrel. At the end of February 1975 crude imports had risen slightly to 4,061,000 b/d, at a refiners import acquisition price of \$13.05, and eased to 3,837,000 b/d in March.

OIL PRICES, OIL IMPORTS (CRUDE AND PRODUCT) TOTAL U.S. OIL PRODUCTS CONSUMPTION, U.S. CRUDE PRODUCTION JANUARY 1972 THROUGH MARCH 1975 (SELECTED MONTHS 1972, 1973)

[In thousands of barrels of oil per day]

Year and month	Imports, price per barrel ¹	Domestic, uncontrolled well head price	Imports, crude	Imports, refined products	Total oil imports	Total U.S. consump- tion oil products	U.S. crude production
1972 January-----	\$2.48 -----		2,046	2,721	4,767	16,735	9,114
1973:							
August-----	3.07 -----		3,593	2,913	6,906	17,414	9,161
October-----	5.12 -----		3,740	2,785	6,525	17,095	9,172
November-----	5.18 -----		3,452	3,412	6,864	18,434	9,144
December-----	5.04 -----		2,891	3,055	5,746	17,429	9,041
1974:							
January-----	9.59 -----	\$9.82	2,382	2,973	5,355	17,270	8,907
February-----	12.45 -----	9.87	2,248	2,973	5,221	17,371	9,156
March-----	12.73 -----	9.88	2,462	2,753	5,215	16,045	8,950
April-----	12.72 -----	9.88	3,267	2,703	5,970	15,919	8,952
May-----	13.02 -----	9.88	3,908	2,454	6,362	15,740	8,903
June-----	13.06 -----	9.95	3,925	2,218	6,143	16,191	8,777
July-----	12.75 -----	9.95	4,091	2,140	6,231	15,853	8,698
August-----	12.68 -----	9.98	3,924	2,281	6,205	15,803	8,717
September-----	12.53 -----	10.10	3,758	2,180	5,938	16,318	8,622
October-----	12.44 -----	10.75	3,936	2,361	6,297	17,121	8,651
November-----	12.53 -----	10.90	3,997	2,581	6,578	17,129	8,458
December-----	12.82 -----	11.08	3,964	2,623	6,587	17,688	8,471
1975:							
January-----	12.77 -----	11.28	3,934	2,324	6,298	17,425	8,577
February-----	¹ 13.05 -----	11.39	4,061	2,136	6,197	17,338	8,496
March-----	13.28 -----	11.47	3,834	1,938	5,772	16,635	8,394
April-----	13.28 -----	² 11.57 -----					
May-----	² 13.11 -----						
June-----							

¹ Beginning in 1974, includes fees and transportation to refineries.

² Preliminary.

Source: FEA publications.

It should also be noted that during the same period prices of domestically produced crude oil which could be sold on the free market rose rapidly, within the framework of a two tier price system which allowed "stripper well", "new" oil and "released" oil to be exempt from price control.⁷

⁷ Production of crude petroleum is subject to three basic price rules: (1) Monthly production up to the level of 1972 is controlled at a price of about \$5.25 per barrel. Crude petroleum determined under this rule is termed "old." (2) Production over the level of 1972, termed "new" oil, and production from wells yielding 10 barrels or less a day, termed "stripper well" oil, are not price controlled and can be sold at the existing market price. (3) For each barrel of new oil that is produced in a given month, a like amount of the old oil production for the month is released from price controls, and hence is called "released" oil.

By January 1975, the price of uncontrolled domestic crude (which accounted then for about one third of domestic production) had risen to \$11.28, only \$1.35 below the reported import price at that time of \$12.63, before the imposition of the first \$1 import fee.

It is important to look at these prices not solely in terms of their levels but also in relation to the quantities of crude oil involved: In December 1974, despite the dampening effect of slack economic activity, demand was strong enough so that refiners were willing to and did buy 6.7 million b/d of crude oil—2.8 million b/d of uncontrolled domestic and 3,964,000 b/d of imported oil—at the high prices already then prevailing for uncontrolled domestic oil and imported crude.

This was a million barrels a day more than the total amount available and bought by refiners from supplies of price controlled domestic crude—5.6 million b/d at the ceiling price of \$5.25.

After the ninth consecutive month of rising well-head prices, the price for domestic uncontrolled crude had risen from \$9.95 a barrel, in July 1974, to \$11.57 in April 1975, and the refiners acquisition price for imported crude, in that month, had risen to \$13.17 a barrel.

In January 1975, the Administration instituted an equalization program, the "Old Oil Entitlements Program,"⁸ which has been used to spread this price differential more evenly between refiners dependent on the more expensive crude and those with access to the crude supplies still under price control.

B. RESTRAINING CONSUMPTION OF GASOLINE

The private automobile occupies a central place in the American lifestyle and economy. Consumption of gasoline to fuel that lifestyle accounts for almost forty percent of the total demand for oil products in the United States and, prior to the Arab embargo in October 1973, it was anticipated that gasoline consumption would probably continue to rise at the rate of more than 5 percent annually for the country as a whole. Measured in its equivalent of barrels of oil per day, motor gasoline was being consumed in March 1975 at the rate of 6 million barrels of oil per day and being consumed in cars which had been increasing in weight, air conditioning and gadgetry and had decreased in fuel mileage efficiency. The 1958 model year cars averaged about 14 miles per gallon. This had dropped to a low for the 1973 model year average of only 11.6 mpg.⁹ A joint EPA-Department of Transportation study published in October 1974 ("Potential for Motor Vehicle Fuel Economy Improvement: Report to Congress") estimated 1974 model year average fuel efficiencies as 14 mpg and 1975 model year efficiency at 15.9 mpg, a 13.5 percent improvement in 1 year.

To make any real dent in this gargantuan consumption sector, much less hold the total volume at or near present levels, requires strong measures, and, despite their lack of political appeal, there are a few which are being readied for or have already been subjected to floor debate.

⁸ See section IV-B-2, for additional details on this use of the "Old Oil Entitlement Program."

⁹ These figures refer to sales weighted average fuel economy by model year, as calculated by EPA, defined as the average fuel economy of all cars sold in a given model year, taking into account the number of cars sold in a given weight class. U.S. Environmental Protection Agency, "A Report on Automotive Fuel Economy," February 1974, p. 12.

One active bill dealing head-on with the issue of restraining gasoline demand is H.R. 7014, which has been reported by the House Interstate and Foreign Commerce committee and is scheduled for floor debate in July.

Title IV, Part A contains a series of amendments to the Emergency Petroleum Allocation Act of 1973, including a "Mandatory Gasoline Allocation Savings Program" which requires that gasoline consumption be restricted to 1973-1974 levels and that no growth in gasoline consumption above these levels be permitted for three years. In addition, the President is given discretionary authority to further reduce gasoline availability by 1 percent increments if such reductions in consumption can be achieved consistently with the objectives of the Emergency Petroleum Allocation Act of 1973. This is intended as an interim measure imposed until conservation measures become effective in reducing consumption.

A Retail Distribution Control Measures Amendment provides a mechanism designed to minimize any motorist inconvenience which might possibly arise from the Mandatory Gasoline Allocation Savings Program and assure gasoline availability during non-business working hours.

Another provision, the Direct Controls on Refinery Operations Amendment and Inventory Controls Amendment, would provide the President with additional authorities he may require to manage the Mandatory Gasoline Allocation Savings Program.

The Ways and Means bill, HR 6860, in Title II, had originally proposed approaching this particular task somewhat less directly, using a tax incentive-disincentive system to encourage reduced use of gasoline. As described in the Committee Report:

The bill imposes a gasoline tax of 3 cents per gallon beginning next year and provides that if gasoline consumption increases over the record 1973 level, an additional 5 cents per gallon (with a 20-cent maximum) will go into effect for each one percent by which consumption exceeds the 1973 level. Thus, if voluntary conservation and the effect of price increases for gasoline which have already taken place do not restrain the growth of gasoline consumption, additional restraint will automatically be provided through the imposition of a gasoline tax. The gasoline tax can be expected to have some effect in discouraging driving in the short run and, in the longer run, encourage persons to live nearer their place of employment or to make greater use of mass transit. However, the principal impact of the gasoline tax will be to work in conjunction with the auto efficiency tax to encourage the shift to smaller, more efficient cars.

In order to offset the adverse effect on the overall economy of a gasoline tax, which generates revenues of approximately \$1 billion for each one cent of tax, and to offset the impact of higher gasoline prices on individuals who consume the average amount of gasoline, a tax credit is provided for tax in excess of the first 3 cents. The credit offsets approximately two-thirds of the average amount of gasoline tax paid when the tax is fully effective, and other credits and exemptions increase the offset to 80 percent of the gross tax. The general

credit for personal use of gasoline is in the form of a refundable income tax credit equal to the tax on 40 gallons of gasoline a month (480 gallons a year) to each individual age 16 or over. The credit will be reflected in income tax withholding. By the use of this tax credit, the deterrent to gasoline use created by the gasoline tax is retained because the tax credit is independent of the amount of gasoline purchased. Your committee believes that this current refundable credit approach will offset any adverse effects on the economy generally that a tax increase of this magnitude might otherwise have and that making the credit independent of the amount of gasoline purchased is simpler and more efficient than a system of rationing or of a basic tax exemption using coupons.

Special exemptions are also provided for certain types of individuals who must rely on the use of automobiles far more than the average, such as migrant workers or construction workers who must work at a variety of jobs during the year. Farmers, tax-exempt educational, charitable, and religious institutions and State and local governments are exempt from the gasoline conservation tax as they are under the present gasoline tax. Commercial aviation is exempt from the tax, and taxicabs are given a credit equal to three-quarters of the possible 20-cent increase if they permit shared ridership. The impact on the possible 20-cent increase on business generally also is reduced by providing a tax credit equal to 50 percent of the tax. (Businesses may deduct the other half of the tax.)

The energy savings from the gasoline tax is estimated to be 1.1 million barrels a day by 1985. Your committee believes that unless further mandatory or voluntary conservation actions are taken, a 5-cent increase in the gas tax will be triggered in 1977, followed by a 10-cent increase in 1978, and the final 5-cent increase in 1979.

Title II was stricken in its entirety from the bill, on June 11, 1975, by a vote of 209 to 187, in the initial round of votes. Its legislative history, however, particularly the rationale presented for the exemptions from the tax, may be of interest in the event end-user gasoline rationing may be considered to be necessary.

Another provision of H.R. 6860 directed at conserving gasoline is a repeal of the present excise tax on radial tires. Radial tires improve the mileage obtained by automobiles by between 3 and 5 percent, but they are more expensive than other types. To reduce the price differential and encourage greater use of these tires, the bill repeals the present excise tax of 10 cents per pound on radial tires (about \$3.00 per tire).

On June 13, 1975, the House approved by a standing vote of 73 to 31 an amendment to H.R. 6860 which would provide a tax credit of up to \$750 (25 percent of the first \$3,000 cost) for the next three years to those who buy electric cars for highway use. It was argued that this would help sell 50,000 vehicles that "guzzle no gas".

The President has strongly and repeatedly rejected the use of either rationing or a gasoline tax as a means of restraining the use of gasoline, relying on voluntary cooperation and somewhat higher prices for

gasoline, caused by a pass-through of his import and excise fees, to produce the savings of 450,000 barrels of oil equivalent in gasoline he hopes to achieve by the end of 1975.

Early in June, the Federal Energy Administration received, and is now studying, a 12 volume, 3,000 page government task force report on gasoline rationing, outlining a contingency rationing plan which would provide about 40 gallons of gasoline a month for every licensed driver, available by presentation of transferable coupons. The task force estimated rationing could be fully operational within 90 days of a decision to go ahead. The program would cost an estimated \$400 million to launch, would require 93,000 employees to administer, at an estimated annual cost, once put into effect, of nearly \$2 billion. The task force recommended that price controls be imposed at all levels to prevent windfall profits accruing to the oil industry.¹⁰

C. IMPROVED AUTO FUEL EFFICIENCY

A promising area for substantial gasoline savings without sacrificing mobility appears to be in retooling car designs to obtain greater mileage per gallon of gasoline. Allowing for gradual attrition and junking of old models—and no net increase in total number of cars—a requirement that all new models be built to run 24 miles a gallon could cut gasoline consumption in half by 1985 without drastic change in life styles.

Among the various legislative proposals under current consideration, the strongest is found in S. 1883, reported from the Senate Commerce Committee on June 5, 1975.

The bill amends the Motor Vehicle Information and Cost Savings Act by adding two new titles as described below:

The new Title V of the Motor Vehicle Information and Cost Savings Act would establish a mandatory fuel economy standards program within the Department of Transportation. The 1980 goal of the program would be to increase by 50 percent over 1974 models the average fuel economy of new passenger automobiles manufactured for sale in, or imported into, this country. A 100-percent improvement would be the goal for model year 1985.

The effect of this would be to establish mandatory standards of 21 miles per gallon by 1980 and at least 28 miles per gallon by 1985. Calculations by the Department of Transportation of the likely impact of the standard mandated by S. 1883 are savings of 225,000 barrels per day in 1977 relative to 1975, 790,000 per day by 1980 and more than 2,000,000 by 1985. This latter figure is roughly one-third of current crude-plus-product imports and the equivalent of about the entire anticipated flow of oil expected from the Alaska Pipeline.

The Secretary of Transportation would be authorized, with the consent of Congress, to adjust the 1980 and 1985 goals up or down to the maximum feasible levels. A mandatory fuel economy standards program would also be established for light duty trucks, but light duty trucks would not be subject to the 50- and 100-percent improvement goals for model years 1980 and 1985. Standards for these vehicles would be set by the Secretary of Transportation at maximum feasible levels.

¹⁰ As reported in the Washington Post, May 30, 1975.

The standards would apply to a manufacturer's average annual production, leaving the manufacturer maximum flexibility to meet the standards. Civil penalties would be imposed on manufacturers who fail to achieve these standards, but these penalties could be waived or modified. A fuel economy labeling program for new cars and new light duty trucks would also be required.

The new title VI of the Motor Vehicle Information and Cost Savings Act would create an automotive research and development program within the Department of Transportation, coordinated with the Energy Research and Development Administration (ERDA) to develop production prototypes of advanced automobiles which would have high fuel efficiency while complying with Federal requirements with respect to emissions, safety, and any other requirements. This program is designed to develop, from the ground up, automobiles that meet all government requirements in the most economic way.

The House Commerce Committee bill, H.R. 7014, contains strong incentive-disincentive provisions, similar to those in S. 1883, aimed at increasing auto fuel efficiency.

Part A of Title V, of H.R. 7014, calls for mandatory automobile fuel economy standards. Each manufacturer's average fuel economy for all of his production (including imports) in a model year must meet the following standards:

Model year :	<i>Miles per gallon</i>
1978 -----	18.5
1979 -----	19.5
1980 -----	20.5
1985 -----	28.0

Standards for model years 1981-84 are set administratively by the Secretary of Transportation. The standard for 1985 may be modified administratively, subject to Congressional veto.

Standards are required to be adjusted downward to reflect any decrease in fuel economy which results from more stringent motor vehicle emission standards.

A one-half miles per gallon (mpg) margin of error is provided for, thus not penalizing a manufacturer who misses the standard by less than $\frac{1}{2}$ mpg. If a manufacturer exceeds the standard by more than $\frac{1}{2}$ mpg, he is permitted a one-year carry back or carry forward or both.

Violations of the fuel economy standard subject the manufacturer to a civil penalty of \$50 per unit of automobile production in the model year times the number of miles per gallon by which the manufacturer misses the standard.

Trucks and multipurpose vehicles are not included in determining the manufacturer's average fuel economy; however, DOT is directed to establish separate standards for these vehicles.

Fuel economy labeling of automobiles is required.

These provisions have been approved, as Section 311 of Title III of the Ways and Means bill, H.R. 6860, and were approved as a substitute for the original provisions by a vote of 306 to 86.

As originally proposed, in H.R. 6860, an auto efficiency tax was to be imposed on any U.S. auto manufacturer or importer whose new auto fleet averages less than 18 miles per gallon (mpg) in the 1978 model year, 19 mpg in 1979, and 20 mpg in 1980. The tax itself was to be 2 percent of the manufacturer's sales price on cars that are up to 1 mpg

below the standards and was to be applied at higher rates to less efficient cars.

The Committee had considered heavier taxes on fuel-inefficient automobiles, as well as the possibility of providing tax credits for fuel-efficient cars. It decided not to impose a heavier tax because of the danger of a major loss of jobs in the automobile and related industries, and because it did not want to stimulate increased imports of foreign cars.

A Senate bill, S. 1518, reported from the Senate Commerce Committee May 22, 1975, would also amend the Motor Vehicle Information and Cost Savings Act (Public Law 93-492) to incorporate within it "a concern for fuel efficiency of motor vehicles." This concern takes the form of authorizing for appropriation \$5,000,000 for fiscal year 1976 and additional amounts totalling \$16,500,000 in subsequent years through September 30, 1978, in order to set up diagnostic inspection demonstration projects with a capacity to determine a car's fuel efficiency capability as well as whether it meets emission standards. Citing the cost benefits which would be associated with enforcement of mandatory standards (which the bill does not set, but which development of diagnostic equipment would help enforce), the report (S. Rept. 94-155) stated:

The most recent study on air quality and emission controls done by the National Academy of Sciences has determined that the societal loss due to auto emissions is between \$2.5 billion and \$7 billion per year.

The Environmental Protection Agency data indicates that emission tune ups could save as much as 375,000 barrels of crude oil per day nationally.

On the cost side, the States of Pennsylvania and New Hampshire which currently have the most comprehensive inspections, charge about \$4.65 for the inspection. Several studies have been conducted to determine the costs associated with State owned and operated lane type inspection facilities. One study concludes that separate safety and emissions inspection facilities are significantly more expensive than multipurpose facilities combining safety and emissions inspection under one roof. Where a comprehensive approach is taken, the study concludes that fees between \$2 and \$6 are feasible depending on the level of inspection.

President Ford, in his State of the Union address to Congress, January 15, 1975, stated that before he had decided on the measures to be adopted to conserve energy, "I considered rationing and higher gasoline taxes as alternatives. In my judgment, neither would achieve the desired results and both would produce unacceptable inequities."

Instead, he announced that he was submitting "legislation to modify and defer automotive pollution standards for five years which will enable us to improve new automobile gas mileage by 40 percent."

Section 503 of Title V of the Administration Bill (S. 594/H.R. 2650), amending the Energy Supply and Environmental Coordination Act of 1974 (ESECA), would stabilize the auto emission requirements for five years at the level of California's 1975 standards for hydrocarbons and carbon monoxide emissions, holding at national 1975 standards for oxides of nitrogen. An accompanying White House fact

sheet announced that, "The Secretary of Transportation has obtained written agreements with each of the major domestic automobile manufacturers which will yield a 40 percent improvement in fuel efficiency on weighted average for all new autos by 1980 model year. *These agreements are contingent upon relaxation of Clean Air Act auto emission standards* [italics added]. The agreement provides for interim goals, Federal monitoring and public reporting of progress."

The only mandatory provision relating to fuel efficiency in the Administration bill is found in Title XII, "The National Appliance and Motor Vehicle Energy Labelling Act of 1975," which authorizes the President to require appliance and motor vehicle labels to give the consumer information that will permit comparison of relative energy consumption.

D. MODIFICATION OF BUILDINGS TO CONSERVE ENERGY

Almost coequal with transportation as a major consumer of total energy in the United States is space conditioning of residential and commercial buildings. About 12 percent of total energy is used for residential heating and cooling and 9 percent for similar commercial uses. When heating and cooling of industrial buildings is added, more than 25 percent of all the energy used in the United States is consumed in heating and cooling the buildings where people live and work.

The Ways and Means bill includes several measures designed to speed up the conservation of energy in this consumption sector. As summarized in the Committee Report (H. Rept. 94-221), these include:

Tax credit for home insulation. An important way to conserve energy is to install such energy-saving items as insulation, storm windows and thermal glass in homes. To encourage a major effort during the next three years, your committee has included in the bill a 30 percent tax credit for up to \$500 of expenditures on insulation, storm windows and similar energy-saving items for principal residence. The maximum credit, then, would be \$150. It is expected that this tax credit will save between 50,000 and 100,000 barrels of oil per day by 1985.

Tax credit for residential solar energy equipment. Eventually, solar energy will have to become a major source of energy, since the sun is one of the few nondepletable resources. To stimulate a more rapid development of solar energy, your committee has included a tax credit for homeowners who install solar heating or cooling equipment. The credit is to be 40 percent on the first \$1,000 of such expenditures and 20 percent on the next \$1,000, so that the maximum credit is to be \$600. While probably only several thousand households will actually make use of this tax credit, so that the revenue loss will be minimal, these homeowners will be the vanguard of the shift to alternative sources of energy.

Investment credit for insulation and solar energy equipment. As noted above, a new tax credit is provided for insulation and solar energy equipment for homeowners and tenants. In the case of businesses, the investment credit is made applicable through 1977 for insulation and through 1980 for

solar energy equipment. These investments are not now eligible for the investment credit, because they are considered to be parts of the building or its structural components. At the same time, the investment credit is removed from room air conditioning units and space heaters, which are less efficient than central units. Central units do not receive the credit because they are part of the building and not equipment.

In initial votes on these provisions on June 13, 1975, the House retained the tax credit for insulation and, by a vote of 244 to 132, raised the solar energy credit to 25 percent of the first \$8,000 of cost. The House also extended residential solar energy credit to equipment meeting "interim" rather than "definitive" HUD standards and allowed credit for solar installations shared by several houses.

Title X of the Administration bill (S. 594/H.R. 2650) would establish mandatory thermal (heating and cooling) efficiency standards for all new homes and commercial buildings to be developed, discussed, reviewed and promulgated over a period of about four years before becoming mandatory. It was anticipated that this program would save the equivalent of 500,000 barrels of oil per day in 1985. The Secretary of Housing and Urban Development in consultation with engineering, architectural, consumer, labor and industry representatives would be responsible for developing thermal efficiency standards. Standards for residential dwellings would be promulgated and implemented within one year, and performance standards for commercial and other residential buildings developed and implemented as soon thereafter as practicable. State and local governments would assume primary responsibility for enforcing standards through local building codes.

In addition, Title XI of S. 594 would establish, within the Federal Energy Administration, a grant program for States to assist low income persons, particularly the elderly, in winterizing their homes. Title XI is modeled after a successful pilot project that was conducted in the State of Maine during 1974. Annual appropriations of \$55 million would be authorized to fund the three-year grant program, and enable States to purchase winterization materials for dwellings of low-income persons.

S. 622, which passed the Senate April 10, 1975, as the "Standby Energy Authorities Act," included as Title II a statement of policy and several recommendations for a more permanent energy conservation program over the near and longer term.

Entitled "Energy Conservation Policy," Title II includes the finding that:

The Congress hereby declares that it is in the national interest for, and shall be the continuing policy of, the Federal Government to foster and promote comprehensive national fuels and energy conservation programs and practices in order to better assure adequate supplies of energy to consumers, reduce energy waste, conserve natural resources, and protect the environment.

The proposed legislation requires that the Administrator of FEA, in cooperation with the Secretaries of the Departments of Housing and Urban Development, Commerce, Interior, Transportation, Health, Education, and Welfare, Treasury, and the heads of other appro-

priate Federal agencies shall, "within three months of the effective date of this Act," promulgate, among other measures, regulations which specify standards for energy efficiency and conservation and establish thermal performance standards for all new Federal construction and all new homes and buildings financed under any Federal loan guarantee or mortgage program, and low interest loans and loan guarantee programs to improve the thermal efficiency of individual residences by installation of insulation, storm windows, or other improvements.

These, and any other energy conservation measures so promulgated, are subject to a Congressional right to review and disapprove.

The Senate inserted in the Senate draft of the Emergency Housing Act of 1975 (S. 1483) a stiff energy conservation buildings standards title, in contrast to the mild hope for encouragement of energy conservation expressed in Section 10 of the House version, H.R. 4485. Title II would direct the Secretary of HUD to establish energy conservation standards for new residential and commercial buildings. These energy standards would be implemented and enforced by States and local governments through their building codes or other legal requirements governing construction. A financial sanction was laid down in a provision that where States or local governments fail to adopt and enforce such standards, direct and indirect, Federal financial assistance would be barred, except for grants made to States by formula. The provisions were almost identical with Title X of S. 594. They had earlier been introduced as a new bill, S. 1283.

However, at the insistence of the House, this title was dropped in the final conference compromise, and the bill was subsequently vetoed.

E. CONVERSION TO COAL TO CONSERVE OIL AND GAS

In 1974, some 35 percent of electric power generation and 80 percent of industrial energy supply were fueled by oil or natural gas. Only 44 percent of electric power and 20 percent of industrial energy supply were provided by coal. Yet the country has hundreds of years of coal supply and only 35 years or so of oil and gas reserves.

Over the past 10 years or so, and up to the oil embargo of 1973-4, coal was losing ground to oil and gas on the basis of both economics and environmental protection. Hundreds of existing coal-fired utility generators were converted to oil or gas, and essentially no new coal-fired facilities for industry were built.

After the oil embargo, the 93rd Congress passed the Energy Supply and Environmental Coordination Act (ESECA) requiring that electric power plants capable of burning coal on the date of passage be ordered to do so and that power plants "in the early planning stages" be required to have the capability of burning coal. ESECA also authorizes but does not require the Federal Energy Administration to order that industrial boilers with the appropriate capabilities burn coal. Authorities under ESECA are limited, so that its total impact on fuel consumption will be small.

Measures under active consideration in the 94th Congress affecting production and utilization of coal focus on broadening ESECA to apply to additional power plants, and extending its authorities with respect to industrial boilers, on the one hand, while modifying the Clean Air Act to permit the additional burning of coal without viola-

tion of national health-related air quality standards on the other hand.

In the Senate, hearings are under way on S. 1777, the National Petroleum and Natural Gas Conservation and Coal Substitution Act of 1975. These hearings are being carried out under the auspices of the Senate's National Fuel and Energy Policy Study (S. Res. 45, 92d Congress) by the Committee on Public Works, the Committee on Interior and Insular Affairs, and the Committee on Commerce. S. 1777 would require that all new fossil fuel-fired power plants and major fuel burning installations be capable, after January 1, 1979, of burning coal as their primary fuel, that existing fossil fuel-fired power plants and industrial boilers be burning coal by January 1, 1980, and that all new fossil fuel-fired power plants and industrial boilers be burning coal by January 1, 1985. This bill is scheduled to be reported to the Senate by about the end of July.

Concurrently, the Senate Committee on Public Works, in its Environmental Pollution Subcommittee, is marking up a bill to amend the Clean Air Act to clarify Congressional intent with respect to the "no significant deterioration" provision of the Act and to take into more specific account the impact of air quality control requirements of the added burning of coal that will occur as a result of the amendments of ESECA.

On the House side, the Committee on Interstate and Foreign Commerce has reported favorably H.R. 7014, the Energy Conservation and Oil Policy Act of 1975. Title VI of this bill would enlarge the powers of FEA under ESECA to order power plants and industrial boilers to burn coal but would not require all fossil fuel-fired boilers to convert. H.R. 7014 does not deal with the Clean Air Act, but the Committee's Subcommittee on Public Health and Environment is currently marking up a draft bill for that purpose.

The Administration's bills (S. 594/H.R. 2860) also addressed themselves to these issues.

Title IV and V contain amendments to the Clean Air Act and the Energy Supply and Environmental Coordination Act of 1974 (ESECA).

The amendments to ESECA would expand and extend the Federal Energy Administrations authority to issue and enforce orders prohibiting power plants and other major installations from burning petroleum products and natural gas. One of the amendments to the Clean Air Act would eliminate the regional requirement which prohibits major fuel burning sources from burning coal where the violation of health-related standards is caused by other sources. Another amendment would permit certain isolated plants to use intermittent control systems on an interim basis where they do not pose a threat to public health.

Title VI would delete the "significant deterioration" requirement from the Clean Air Act. The Administration argues that "there may be more appropriate ways to deal with the issues associated with significant deterioration than through the Clean Air Act, and Congress should undertake a prompt and comprehensive review of this issue."

Both the Administration and both houses of Congress agree that these initiatives designed to increase utilization of coal to replace oil and natural gas will demand a greatly enlarged production of coal. Estimates of the amount needed range from 1 to 1.4 billion tons by

1985. For this extra production, a large number of new mines must be opened and rail and water transportation facilities expanded and improved.

H.R. 7014 would provide loan guarantees to small coal producers to open new underground mines which produce low sulfur coal. H.R. 6860, as approved by the House, provides for a five-year amortization for railroad facilities—rolling stock, roadbed improvements, and loading-unloading facilities—plus a five-year amortization for coal slurry pipelines, coal conversion equipment, shale oil conversion equipment and deep coal mining equipment.

F. OTHER INDUSTRIAL CONSERVATION MEASURES

The industrial sector consumes about 40 percent of the U.S. energy budget. It has been estimated that up to 30 percent of industrial energy consumption is wasted. Industrial energy consumption patterns are extremely complex and are effected by choice and availability of fuel type and costs, raw materials, state of the economy and type of industrial processing. Because of the complexities within the industrial sector, it is difficult to reasonably define baseline energy consumption conditions on which to found regulatory or incentive measures considered in the building and transportation sectors.

A bill passed by the Senate (S. 622) would provide the President with the authority to promulgate, by regulation, interim energy conservation plans that could include "standards and programs to increase industrial efficiency in the use of energy" (Sec. 202). The bill also provides that FEA shall, within three months of the effective date of the Act, promulgate regulations which specify standards for energy efficiency and conservation for various areas including the industrial sector. (Sec. 203)

Other legislative proposals are more specific in defining industrial energy conservation programs. S. 1908, introduced on June 10, 1975, would promote through Federal assistance and research and development of energy efficient industrial technologies, target increases in efficiency of at least 15 percent by 1980 and 30 percent by 1985. Also H.R. 7014, as reported by the House Commerce Committee would provide Federally defined "energy efficiency targets" for each of 2000 "largest energy consuming manufacturers." The FEA would then conduct continuing evaluations of the progress made by industry in achieving compliance with the energy efficiency targets.

Other legislative approaches, as found in S. 1149, introduced on March 11, 1975, would provide for accelerated Federal research and development efforts related to new energy efficient industrial processes.

The Administration bill, S. 594/H.R. 2650, includes a number of provisions in addition to those which would encourage conversion from oil or natural gas to coal, which could contribute to energy conservation. Title VII would eliminate prohibitions against off-peak pricing so that utilities may charge lower prices to consumers during off-peak hours, and eliminate prohibitions against utilities' fuel adjustment clauses to ensure that utility rates accurately reflect increasing fuel costs.

Title V of the Ways and Means bill, H.R. 6860, entitled "Encouraging Business Conversion for Greater Energy Savings," includes an excise tax on business use of petroleum and petroleum products.

As summarized in the Committee report:

To spur conservation and conversion in this area, the bill includes an excise tax on oil and gas used as fuel in a trade or business. When it is fully effective, the taxes are to be \$1 per barrel on crude oil and 18 cents per thousand cubic feet (mcf) on natural gas. These are one-half of the rates of the excise tax on crude oil and natural gas proposed by the administration. Unlike the administration proposal, however, the tax is not imposed immediately but rather is phased in between 1977 and 1980 for natural gas and between 1977 and 1982 for crude oil. The gradual phase in spreads out the inflationary impact of the excise tax. It also reflects the fact that energy conservation and conversion take time. Putting this tax in place with a phase-in rate schedule puts businesses on notice that they will be able to reduce their costs significantly by initiating energy conservation and conversion measures.

In certain cases industries have special problems in converting alternative sources, and the bill exempts some of these from the tax and in other cases delays imposition of the tax for existing facilities.

During floor debate, the provisions which sought to discourage the business use of petroleum and petroleum products were approved with a number of amendments, among them one which exempted from the business tax industries engaged in manufacturing, processing and finishing glass products; industries which generate their own electric power; and the textile and apparel industries.

During the floor debate on June 19, 1975, a provision for a tax credit for recycling (Section 533) was dropped. The sponsor of the motion to delete the provision emphasized that it was the means, not the end, which should be disapproved, that the proposed credit would benefit companies already in the business of recycling, at a cost estimated at \$1,000,000,000 over the next five years, without stimulating any increase in total recycling. A comprehensive solid waste program, under current consideration in the Subcommittee on Transportation and Commerce, of the House Commerce Committee, was expected to be reported out "by the end of the summer" at which time recycling incentives would be considered in the context of a broader range of measures to encourage greater reuse of materials.

G. IMPROVED MASS TRANSIT SYSTEMS

Use of railroad and other mass transit facilities is recognized as a major potential source of fuel savings enabling conservation of gasoline otherwise used for personal transport use and more efficient use of other motor fuels. However, it is also increasingly realized that until improved mass transit is actually in place and available, it cannot serve to divert present auto users from reliance on personal transport.

During the first six months of the 94th Congress, the following bills were either enacted into law or had passed one or both houses:

Public Law 94-5, approved February 2, 1975, authorizes an additional \$347 million to insure the continuation of essential rail services

in the Northeast and Midwest under the regional Rail Reorganization Act (P.L. 93-236); increases from \$85 million to \$282 million Federal grants to bankrupt railroads in the Northeast and Midwest to keep them in operation until a plan being developed by the U.S. Rail Association becomes effective; increases from \$150 million to \$300 million loan guarantees to bankrupt railroads to maintain and improve rail facilities until the new system is in operation and gives the Secretary of Transportation more flexibility in deciding how and when the guarantees will be used.

An Amtrack Supplemental Authorization (S. 852/HR 4975), which passed the House April 24, 1975, and the Senate on May 13, 1975, provides a \$63 million supplemental authorization for fiscal year 1975, of which increased operating costs due to inflation accounted for about \$50 million. It was signed as Public Law 94-25 on May 25, 1975.

The Senate tried, unsuccessfully, to add a \$700 million allotment to repair thousands of miles of railroad track, first, to the \$5.3 billion emergency jobs appropriations bill (H.R. 4481), and, second, to the fiscal year 1975 supplemental appropriations bill (H.R. 5899), losing out in conference.

The rationale—that of linking expenditures to decreasing present unemployment and to link a full-employment goal with increased energy savings and increased domestic energy production—is a key element in the longer term Senate proposal for a National Energy Production Board, described below in Section IV, Part C.

IV. STIMULATE INCREASED PRODUCTION OF DOMESTIC ENERGY SUPPLIES

Two major legislative measures enacted or still under debate on this key energy goal are: (1) Removal of the depletion allowance for oil and gas and adjustment of selected foreign tax credits; and (2) the use of price policy as a primary stimulus for increased production, including decontrol of prices of both oil and natural gas and related offsetting provisions to manage windfall profits.

Abolition of the depletion allowance, which for sixty years has been a key feature in the U.S. petroleum industry's production and pricing policies, is a landmark event, the consequences of which for both energy investment and price have not yet been fully identified. Enacted as part of a tax reduction bill intended to stimulate the economy, removal of the depletion allowance eliminated what had traditionally been thought of as a prime incentive to encourage increased investment in oil and natural gas while at the same time permitting reasonably low domestic prices for their end products in the United States.

Coupled with the sudden escalation in prices for oil produced abroad, repeal has had the effect of requiring a revision in both attitude and approach to the question of U.S. energy pricing policies.

This is not to say that these are the only measures under current consideration which could serve to increase domestic energy supplies. As listed in Appendix II and Subsections C to H below, there are a number which have already been considered by one or both Houses and will be important in the evolving new U.S. energy policy and program. For example, nuclear and other powerplant siting procedures to speed up decisions on new energy facilities; revision of rate structures for

utilities to aid in providing more capital; increasing the share of the states in oil shale and other energy related revenues from public lands; agreement on the environmental and health safety standards to be required in the future production of coal; a new consensus on terms for offshore oil and gas development; capital and other incentives to encourage increased use of solar energy for heating and cooling—all of these could have the effect of stepping up domestic production.

It may be noted, however, that their effectiveness as stimulants to increased domestic energy production will to a substantial degree depend on the outcome of the debate on quantitative import quotas and prices, and their status is described only briefly at this time.

A. REMOVAL OF THE DEPLETION ALLOWANCE AND CHANGES IN SOME FOREIGN OIL TAX CREDITS

Historically, the primary Congressionally endorsed stimulus to domestic production of oil and natural gas was the depletion allowance. Beginning with the first income tax law in 1913 and modified as a flat percentage level in 1926, the depletion allowance permitted subtraction of 27.5 percent of gross income from production of oil and gas at the wellhead, in recognition of the fact that extraordinary capital costs and risks were involved in exploration and development of oil to replace that depleted by each year's production. The allowance was a flat deduction and did not include any mandatory requirement that it would in fact be invested in new exploration and development of oil.

Oil had quickly been realized to be a much more convenient and mobile substitute for coal and certainly a much more desirable fuel for military use, and successive Congresses developed supporters for continuing the allowance, which was claimed to be a strong incentive for further investment and production. Despite opposition to it in three administrations—Roosevelt's, Truman's and Kennedy's—except for 1969 when it was reduced somewhat, to 22 percent, open support in Congress for its removal was not strong until last year.

The sudden sharp rise in the price of imported oil and the consequent astronomic increase in income and profits accruing to the U.S. industry caused an equally sharp change in attitude. A reasonably stiff bill—with a three year phase out of the depletion allowance combined with a windfall profits and investment plow-back credit—was reported from the House Ways and Means Committee May 4, 1974, but the 93d Congress adjourned before agreement could be reached on the rules under which the bill would be put to vote.

The 94th Congress came into Washington in a different mood. A strong and vocal group of Congressmen overrode more senior colleagues in the House Democratic Caucus to insist that depletion repeal be included in the tax reduction bill and won. As finally enacted, the new law, Public Law 94-12 (H.R. 2166), includes the following changes which greatly reduce the hitherto almost untouchable oil and natural gas investment incentives:

On the crucial issue of oil and gas depletion, the new law:

—Repealed the 22 percent depletion allowance on oil and gas production retroactive to January 1, 1975.

- Retained the 22 percent allowance until July 1, 1976, for natural gas sold under federal price regulations (or until the controlled price was raised to take account of repeal of depletion).
- Retained the allowance for natural gas sold under fixed-price contracts until the price was raised.
- Provided a permanent small producer exemption that allowed independent oil companies to continue taking the depletion allowance on a basic daily output of oil and natural gas.
- Allowed an initial small producer exemption retaining a 22 percent depletion allowance for producers with an average daily production of 2,000 barrels of oil or 12 million cubic feet of natural gas or an equivalent quantity of both oil and gas.
- Reduced the daily production eligible for depletion by 200 barrels a day for each year between 1976 and 1980, leaving the small producer exemption at a permanent level of 1,000 barrels of oil per day or 6 million cubic feet of natural gas.
- Reduced the depletion rate available on the small producer exemption to 20 percent in 1981, 18 percent in 1982, 16 percent in 1983 and to a permanent 15 percent rate in 1984.
- Kept the depletion rate at 22 percent until 1984 for production of up to 1,000 barrels a day through costly secondary or tertiary recovery methods used to extract remaining oil and gas from wells that were mostly pumped out.
- Limited the deduction taken under the small producer exemption to 65 percent of the taxpayer's income from all sources.
- Denied the small producer exemption to any taxpayer that sold oil or gas through retail outlets or operated a refinery processing more than 50,000 barrels of oil a day.

Former tax breaks involving foreign income were also changed. The new law:

- Limited the amount of foreign tax payments on oil-related income that an oil company could take as a credit against U.S. taxes to 52.8 percent of its 1975 income from foreign oil operations. The limit would be reduced to 50.4 percent in 1976 and 50 percent thereafter.
- Allowed use of excess credits within those limits only to offset U.S. taxes on foreign oil-related income, not on income from other foreign sources.
- Denied oil companies after 1975 the use of the per country limitation option that allowed a company to compute its maximum foreign tax credits on a country-by-country basis.
- Required recapture of foreign oil-related losses that were deducted from income subject to U.S. taxes by taxing an equivalent amount of subsequent foreign oil-related profits as if earned in the United States (and therefore not eligible for deferral until transferred to the United States). The credit for foreign taxes on the subsequent profits also would be reduced in proportion to the amount treated as U.S. profits.
- Denied the foreign tax credit for any taxes paid to a foreign country in buying or selling oil or gas from property that the nation had expropriated.
- Denied the investment tax credit for drilling rigs used outside the northern half of the Western Hemisphere.

- Denied deferral of taxes on half of the profits from exports of natural resources and energy products by domestic international sales corporations (DISCs).
- Repealed, effective in 1976, certain existing exemptions from a 1962 law requiring current U.S. taxation of profits earned by subsidiaries set up by U.S. corporations in tax haven countries that imposed little or no taxes.
- Allowed deferral of U.S. taxes on all earnings by a foreign subsidiary if less than 10 percent of its income was defined as tax haven income.

The additional revenues which would accrue to the Treasury (and, at the same time, be withdrawn from the major oil producers' cash flow) are estimated at around \$3.7 billion in 1975: About 1.7 billion by denial of the depletion allowance; some 1.5 billion by changes in the foreign tax credits; and about \$500 million by requiring that the foreign income of all multinational corporations, including the oil companies, be taxed in the year earned.

While these amounts are substantial, they are only a small fraction of the volume of capital investment in oil development in the United States which had been planned for 1975 by the oil companies before the tax changes were enacted: \$26.2 billion for the oil industry as a whole, of which \$8 billion was to be in drilling and exploration and \$2.1 billion in production.¹¹ Industry claims of drastic negative effect on new domestic investment of the loss of up to \$3.7 billion from these particular changes have not received much post-enactment congressional sympathy, especially since there remain many write-off and investment credit provisions under which actual development expenses can be and are being charged off as regular business costs.

An interesting aspect of the testimony and floor debate on removal of the depletion allowance was the argument that, although the intent of the original legislation providing generous percentage depletion allowances was to encourage increased exploration and development of new oil and gas supplies, in fact, the volume of such exploration over the years did not appear to be particularly related to the amount or to the level of the depletion allowance.

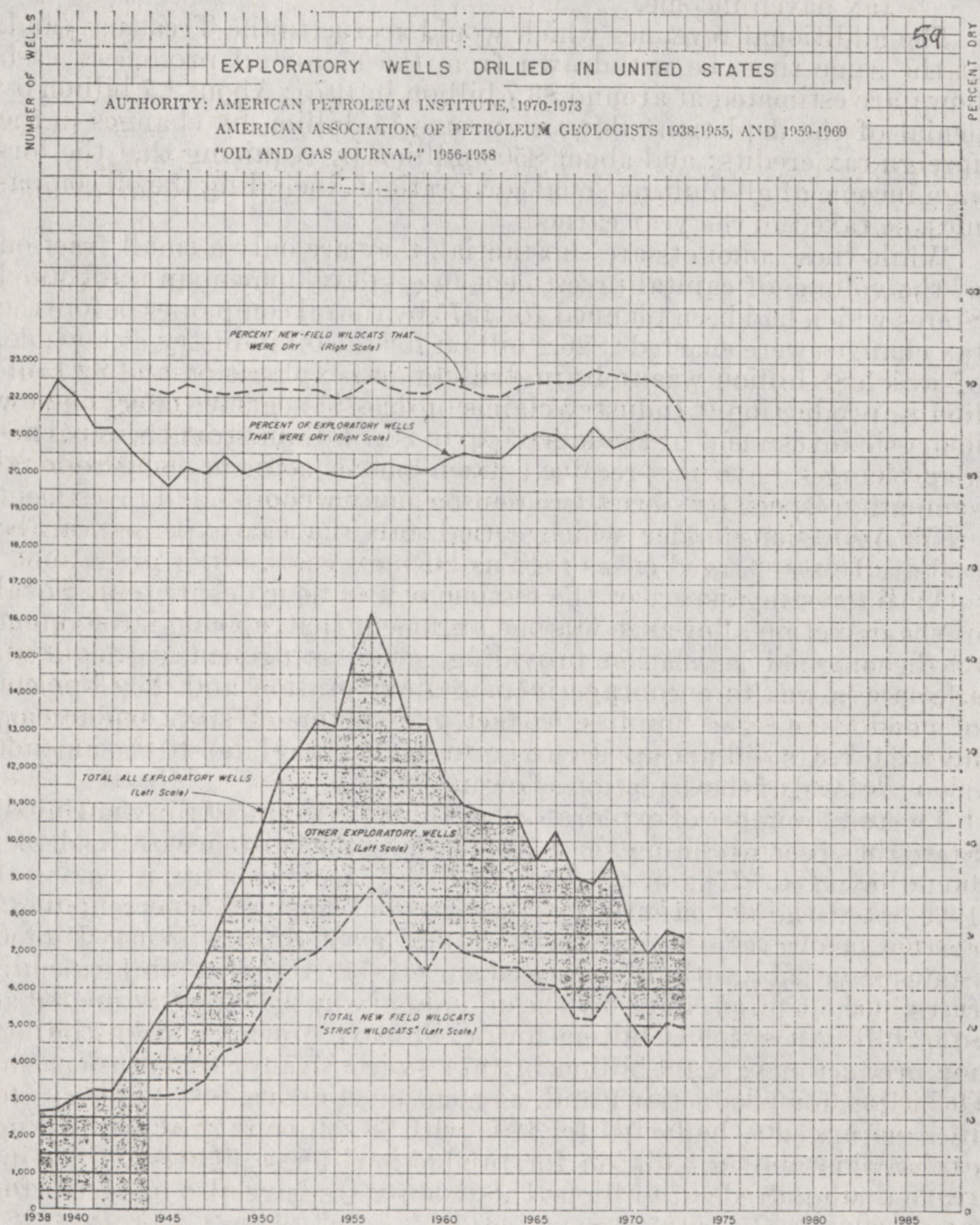
The total number of exploratory wells drilled annually in the United States has been declining since 1956, despite the existence of the depletion allowance.¹² The first major cut took place in the tax revisions of 1969 when the depletion allowance was cut from 27.5 percent to 22 percent. However, the industry's capital expenditures in the United States have substantially increased since 1971. Actual capital expenditures in the United States by the oil industry in 1973 were estimated at \$15.3 billion (with \$6.6 billion for drilling exploration and \$1.7 billion for production); \$21.1 billion in 1974 (with \$7.7 for exploration and \$2 billion for production) and, as mentioned above, \$26.2 billion had been estimated as budgeted for 1975 with \$8 billion tagged for drilling exploration and \$2.1 billion for production. These figures do not include the hundreds of millions U.S. companies have also budgeted for

¹¹ *Oil and Gas Journal*, Feb. 3, 1975, p. 37.

¹² See chart on page 30.

projects abroad, and may be compared with total oil industry capital investment in development of oil in the United States of \$7.7 billion in 1971 and \$12.7 billion in 1972.¹³

While a number of major companies have announced that removal of the depletion allowance would require reconsideration and reduction in their capital investment plans, there is some indication that the reductions would take place in projected capital ventures other than exploration and investment.¹⁴



Source: TWENTIETH CENTURY PETROLEUM STATISTICS 1974, Degolyer and MacNaughton, p. 27

¹³ *Oil and Gas Journal*, Feb. 3, 1975, p. 37.

¹⁴ *Energy Notes*, Feb. 24, 1975. Morgan Stanley and Co., Inc., reprinted in Congressional Record, Mar. 22, 1975, p. S 4804 to 4807. See also *Wall Street Journal*, June 9, 1975, p. 1, 25.

If industry capital investment decisions on domestic exploration programs made by the major oil firms have been based primarily on factors other than the level of the depletion allowance, its removal may not have any particularly depressant effect per se on future domestic exploration programs. In any event, 80 percent of the exploratory drilling in the United States is done by independents, for many of whom the 22 percent depletion allowance has been largely maintained for some time to come.

Whether the changes in foreign tax credits are sufficient to encourage a shift of exploration and development resources away from the up-to-now less costly operations abroad to the United States remains to be seen.

Whatever the role of the depletion allowance has been in the past, its recent repeal clears the way for a fresh look at oil and other fossil fuel production incentives whose effectiveness as stimulants to increased domestic production can be more easily measured and identified.

B. PRICE POLICY AS A STIMULUS TO INCREASED DOMESTIC ENERGY PRODUCTION

There are two important differences between the administration proposals and the Congressional Majority proposals in this energy policy field, on the face of it 180 degrees apart: The Administration wants an oil price policy which permits a floor but no ceiling; the Majority wants an oil policy which sets a ceiling but no floor.

The Administration is seeking price authority that will permit decontrol of oil over a period of 25 months with no ceiling price limit, but will provide authority to establish a floor price for oil—at \$7 to \$8.40 a barrel¹⁵—if needed. Major Congressional proposals are seeking price changes which in general would permit controlled decontrol of the price of oil, with an upper ceiling at or about \$11.50. The level is intended to be set at the free market price before the first one dollar import tariff was imposed. For the time being, they reject the idea of a floor, leaving the door open, however, for later thorough review. The House and the Senate are not yet agreed on the timing of the controlled decontrol or on whether some part of the two tier price system on oil should be retained.

As noted in Part III, the Administration's primary energy policy position has been to rely on deregulation of the price of domestically produced oil and natural gas and its consequent effect within the domestic market to produce not only reduction in consumption of these products but also to provide the price incentive which the Administration believes will result in increased supplies of oil and natural gas. The import tariffs on imported oil and oil products were intended to tilt domestic purchases of oil and natural gas toward domestically produced products and thus provide an additional stimulus for increasing domestic supplies from increasingly expensive exploration and development operations in continental and offshore U.S. sources.

In addition, it was anticipated that, as the deregulated prices approached the (at the time) concurrent costs of developing "new"

¹⁵ Secretary of the Treasury Simon, in discussing a minimum long-term supply price before the Ways and Means Committee on Mar. 17, 1975, said that if the depletion allowance were removed he felt the "long-term supply price" would have to be raised from a then estimated \$7 to \$8 per barrel to about \$8.40 per barrel. *Hearing, Transcript*, p. 1665.

energy supplies (i.e. coal gasification and/or liquifaction, oil shale, geothermal and solar), this would further encourage the shift away from oil and gas and stimulate increased private investment in these areas.

In contrast, the policy proposals backed by the Democratic Majority, "The Congressional Program of Economic Recovery and Energy Sufficiency," issued February 27, 1975, stated on the question of price control:

We reject the fundamental premise of the President's program that the only way to achieve energy conservation is deliberately to raise the price of all petroleum products to all American consumers by heavy indiscriminate additions in taxation. The \$3 per barrel tariff on oil imports will not reduce imports; it simply will make them more costly to American consumers.

As its goal the Administration seeks a reduction of energy consumption by one million barrels per day in 1975. To achieve it, energy prices would be greatly increased, first by taxing all crude oil and natural gas and then by removing the present controls on the market price of oil and gas.

The price of energy is not determined by free forces of supply and demand but rather by the governments of the nations that produce energy. The policy question is whether the U.S. or the OPEC governments will set energy prices in this country. The Administration wishes to decontrol old oil and new natural gas, giving the control of price to OPEC and letting U.S. energy prices follow the prices established by it. . . .

The oil price control program should be modified also to create sufficient incentives to produce all oil that can be recovered economically through secondary and tertiary recovery, substantially increasing the amount of oil ultimately produced from the average field. Perhaps the most effective plan would be to include some decontrol treatment for secondary and tertiary recovery as "new" oil.

Exploiting fully natural gas potential is equally critical and the Federal Power Commission must be mandated to provide price certainty at levels high enough to reflect future costs and to eliminate regulatory delays, reducing any incentive to withhold gas because of the uncertainty over government pricing policy.

The Congressional program therefore recommends measures to reform and simplify natural gas regulation, but continue interstate price controls on old natural gas, and establish a statutory formula ceiling that reflects cost of production. This should assure that the price is high enough to encourage maximum domestic production, but still below the OPEC cartel level.

In support of its program, the Administration has made price deregulation proposals, both under existing executive authority and as proposed in S. 594/H.R. 2650, which would, if approved, accomplish at least five interrelated results: (1) Increase the cost of imported oil

by imposing tariffs and fees, to raise its price relative to domestic oil and encourage production of domestic oil; (2) spread price increases on crude oil among all refiners by using the FEA "Old Oil Entitlements Program"; (3) decontrol the price of "old" oil; (4) decontrol the price of natural gas sold in interstate trade; and (5) establish (or authorize establishment of) a floor price for oil to insure price stability over the longer run.

The Administration's proposals on each of these are discussed below together with the related Congressional responses and alternatives.

1. Increase the cost of imported oil by the amount of the tariff or fee imposed

As of June 1, 1975, when the President imposed the second \$1 import fee, the additional cost of imported oil amounted to \$2.00. World wide oil prices in June, 1975, ranged generally between \$11 and \$12 and OPEC ministers meeting in Gabon on June 8, 1975, reportedly discussed imposing a possible additional \$2.00 increase in September of this year. By February 1975, when not all of the first \$1.00 import fee had been fully passed through to the import price, U.S. refiners were already paying \$13.05 for crude imports arriving at the rate of 4 million barrels of oil a day. This price had risen to \$13.17 by March, the latest month for which FEA had import price figures at the time of writing. If OPEC prices are raised, the price U.S. refiners might have to pay could be at least \$3 higher than the present rate: At least one additional dollar in the June import fee and perhaps \$2 additional dollars reflecting the OPEC hike.

Many of the Democratic House and Senate measures introduced since the President's January 15th energy-economy package was presented have been designed mainly to block or prohibit him from taking further action on import fees, decontrolling old oil or setting a price floor.¹⁶

In addition to these, however, many others have included very specific alternatives, particularly on price decontrol of oil and natural gas, as discussed below, and, at least one, H.R. 6860, approved by the House on June 19, 1975, includes a provision for an import fee:

Part II of Title I, "Import Treatment of Oil," establishes a rate of duty on crude petroleum of 2 percent ad valorem, and on petroleum products of 5 percent ad valorem. As described in the Committee report (H. Rept. 94-221):

The differential between the rates on crude petroleum and on petroleum products is designed to favor the importation of crude oil over the importation of products and thus, to develop, utilize, and thereby protect domestic refinery capacity. The President may adjust the rates of duty established by the bill whenever he finds such adjustments necessary to carry out the purposes of this bill, in the light of overall considerations of the national interest.

¹⁶ S. 622 gave Congress 10 days to veto Presidential proposals in this area, extending the time under existing law an additional five days; S. 621, passed 20 days later on May 1, 1975, gave Congress 30 days to disapprove administration price plans and also gave Congress time to disapprove import fees and cancel those already imposed. See also H.R. 1767, to suspend the President's authority to impose oil import fees for 90 days, vetoed March 4, 1975, and S.J. Res. 12, H.R. 4035, to provide Congressional review of Presidential decisions on oil products, passed by the House on June 5, 1975, would allow Congress 15 days to nullify an Administration move to remove the price ceiling on old oil.

Your committee's bill limits such presidential adjustments, however, so that no rate of duty may exceed 10 percent ad valorem or \$1 a barrel (whichever is greater), nor fall below 2 percent ad valorem. This is to enable the President to restore the present fees of up to \$1.20 per barrel if he concludes this is in the national interest, so long as the price of oil is \$12 or more per barrel. Even if the price should fall appreciably, the tariff can be as high as \$1 per barrel because of the specific alternate of \$1 per barrel where that is higher than the 10-percent ad valorem amount.

One further limitation on the President's authority to adjust the rate provides that for 2 years after the date of enactment, the President may make no adjustment which results in a rate of duty of more than 5 percent ad valorem on any distillate fuel oil or residual oil imported for use as fuel, other than in the propulsion of motor vehicles. This is designed to provide assurance that the already high prices of heating oil and of residual fuel used to generate electric power will not go still higher in the immediate future because of the imposition of further duties.

The bill expressly nullifies any presidential adjustment of imports of petroleum and petroleum products under authority granted him under the Trade Expansion Act of 1962 (sec. 232(b)), effective 60 days after the date of enactment of the bill. This is the same time interval allowed before the President may increase his duty to 10 percent. As a result, the rate of duty for crude oil could, under this bill, stay at approximately present levels if the President exercises this authority immediately after the enactment of this bill.

2. *Spread price increase through the FEA "Old Oil Entitlements Program"*

Among the administrative actions undertaken by the President, pending congressional action on the more comprehensive tax and price decontrol measures he has proposed, was one involving the Federal Energy Agency's old oil entitlements program.

As announced in the White House Fact Sheet, January 15, 1975:

FEA's "Old Oil Entitlements" program will be utilized to spread price increases on crude among all refiners, and to lessen disproportionate regional effects, such as New England, or in any specific industries or areas of human need where oil is essential.

Pursuant to this decision, beginning January 1, 1975, refiners relatively well supplied with price-controlled "old" oil at \$5.25 a barrel (that is, with amounts in excess of a "national average" calculated at about 35 percent of their total supply) were required to purchase "entitlements" at prices which began at \$5 a barrel in January and were increased to \$7.29 in April, from refiners more dependent upon free market oil.

The effect of this has been to expose and accustom all U.S. refiners—in vertically integrated firms as well as independents—to crude oil acquisition costs much higher than the controlled price for "old" domestic oil of \$5.25 a barrel.

Much has been made of the fact that decontrolling the price of "old" oil would produce a shock wave of inflation even if spread over the 25 months proposed by the Administration. Through the operation of the entitlements program, it would appear that some \$5 to \$7 per barrel of that inflationary shock wave is already being absorbed.

This is not to say that further price increases in the resultant refined products may not take place, nor should it be implied that the higher prices are the result of the old oil entitlements program. On the contrary, the entitlements program only spreads crude oil price increases which occurred as a result of other factors—primarily the OPEC price increases and their influence on the price of domestic crude not subject to price controls. Nonetheless, it should not be overlooked that for a much longer period than is generally recognized, U.S. refiners have been paying and are accustomed to pay average crude oil prices well in excess of the domestic controlled price.

The House Commerce Committee bill, H.R. 7014, favorably reported on June 24, 1975, endorses the concept of continuing oil entitlements program, but would exempt the first 50,000 barrels per day for refiners whose total refining capacity did not exceed on January 1, 1975, and does not thereafter exceed, 100,000 barrels per day.

S. 621, passed by the Senate on May 1, 1975, includes an entitlements exemption for refiners within the capacities listed above.

3. Decontrol the price of old oil

As announced by the President on January 15, 1975, the Administration has already taken steps to remove price controls on domestic oil, to permit domestic crude prices to rise to the prevailing world price levels. The FEA proposal, announced in the Federal Register May 2, 1975, would reduce the amount of "old" oil now subject to price controls for each property by 4 percent a month for the next 25 months. A public hearing was held May 14, 1975, and the Administration announced it intended "early in June" formally to submit the proposal for Congressional right of review and disapproval as provided by Section 4(g) of the Emergency Petroleum Allocation Act of 1975. In accordance with that provision, Congress will have five days during which each House is in session to disapprove the proposed change in the oil price regulations, if either House so desires. As of June 30, the proposal had not yet been submitted.

As noted, a number of bills are pending in Congress to restrain the President from taking this action. In addition, there are substantive bills proposing alternative formulas for what could be called "controlled" decontrol of crude oil subject to a quantitative price ceiling.

S. 622, which passed the Senate April 10, 1975, by a vote of 60 to 25, provides in Sections 107, 122, and 123 for the following, which would permit decontrol of crude oil prices but within specific ceiling limits:

Extends the Emergency Petroleum Allocation Act from August 31, 1975, to March 1, 1976: makes any increases in the price of "old" oil (oil from wells existing in 1973 produced at a rate equal to 1972 production) and any proposed exemptions of crude oil, residual fuel oil, or a refined petroleum product from price controls subject to congressional review and approval; permits the pricing of oil recovered by

secondary or tertiary methods up to \$7.50 a barrel; sets a maximum price for "new" domestic crude oil at a level not to exceed that prevailing on January 31, 1975;¹⁷ exempts small refiners (100,000 barrels a day) for the first 50,000 barrels from the entitlements program under the oil allocation regulations.

In S. 621, passed by the Senate May 1, 1975, by a vote of 47 to 36, the Senate changed its position and accepted an amendment that would allow oil produced from secondary and tertiary methods to sell at the highest price set by FEA for oil that is now exempt from price regulation. An attempt to re-impose the \$7.50 ceiling was defeated.

The House Commerce Committee energy bill, H.R. 7014, includes a crude oil pricing provision tied in with a delayed inflation adjustment formula. Old oil would be subject to a decline adjustment factor of one percent per month which would gradually reduce the volume of such oil subject to the old price ceiling of \$5.25 per barrel, recognizing declining field production rates. As described in the official summary:

Part A of Title III contains a crude oil pricing provision. Oil presently classified as "old oil" by F.E.A. regulations are subject to a decline adjustment factor of 4 percent per month which would gradually reduce the volume of such oil subject to the old oil ceiling price of \$5.25 per barrel. This adjustment recognizes and reflects declining field production rates. By taking this factor into consideration in establishing the amount of old oil which is subject to price control, the provision encourages recovery techniques to augment production which would not be encouraged under present regulations.

To give incentives to producers to enhance production from 1972 producing properties, production in excess of this declining volume subject to the \$5.25 per barrel ceiling price is permitted to be sold at an average price of \$7.50 per barrel. The price of all other oil production, including stripper production and so-called "new oil," is rolled back from current market levels in excess of \$12.00 per barrel to a \$7.50 per barrel average. Four exceptions to the \$7.50 per barrel ceiling are permitted: (1) Production from the Outer Continental Shelf; (2) production from above the Arctic Circle; (3) production properties certified as having made bona fide application of tertiary recovery techniques; and (4) certain high cost properties. Production from properties qualifying for application of one of these exceptions is price ceilinged at an average \$8.50 per barrel price.

An inflation adjustment factor of $\frac{2}{3}$ percent per month, compounded of the respective \$7.50 and \$8.50 prices, is included. With regard to the \$7.50 price, the inflation adjustment factor becomes operative 45 months after date of enactment; with respect to the \$8.50 price, the inflation adjustment factor becomes operative 64 months after date of enactment, at which time the two prices have merged.

¹⁷ Wellhead prices for domestic uncontrolled oil in January 1975 were \$11.28 a barrel and prices for imported crude were averaged at \$12.77 that month, according to FEA.

No ceiling limits the escalation of the ceiling price under this inflation adjustment factor. No windfall profits tax is proposed.

The price provision was approved in the full committee by a vote of 22 to 21.

The bill proposes a number of amendments to the Emergency Petroleum Allocation Act, among them a reevaluation of Section 4(a)—on price control—which, in the words of the Subcommittee, “requires a thorough review of the pricing and allocation regulation by FEA with a view toward simplification of the system to meet current needs.”

4. Decontrol the price of natural gas sold in interstate trade

Natural gas shortages are producing curtailments of supplies to many industries and denial of supplies to many new residential customers.

The Federal Power Commission on June 6, 1975, released a staff report indicating that natural gas supply deficiencies for major interstate natural gas pipeline companies, for April 1975, through March 1976, are expected to be 45 percent higher than they were for the preceding 12 months.

Title III of the Administration bill proposes the deregulation of all “new” natural gas in interstate commerce. It defines new natural gas as natural gas sold or delivered by a producer to a natural gas company in interstate commerce (i) which is dedicated to interstate commerce for the first time on or after January 1, 1975 (ii) which is continued in interstate commerce after the expiration of a contract by its own terms for the sale or delivery of such natural gas existing as of such date, or (iii) which is produced from wells commenced after such date.

Under the proposal, wellhead price controls over new natural gas sold in interstate commerce would be removed. This action will enable interstate pipelines to compete for new onshore gas and encourage drilling for gas onshore and in offshore areas. In addition, however, in order to discourage further conversions to natural gas and to encourage greater natural gas conservation, the President is also proposing an excise tax of 37 cents per thousand cubic feet on natural gas which is equivalent to the proposed \$2.00 excise tax on oil, also designed to encourage conservation.

The Senate Commerce Committee approved a bill (S. 692), on May 6, to partially deregulate natural gas prices and the Report (S. Rept. 94-191) was filed June 12, 1975. The Committee’s action, which came on a 10 to 8 vote, focuses on providing exploration incentives—but primarily for the smaller, independent producers. So-called “new” gas produced on shore since January 1, 1975, by these producers would be exempt from price regulation, and subject only to a price ceiling determined by the equivalent value of oil at world prices (potentially \$1.94 per thousand cubic feet of gas) provided that \$1.50 of the price is a “plowback expenditure” for exploration. The Senate bill also permits higher interstate gas prices (within a range of 40 to 75 cents—compared with the present 51 cents plus Btu and tax adjustments per thousand cubic feet) for “new” gas produced by the large, integrated companies. However, the measure also would extend the FPC’s existing interstate regulation (at the proposed higher prices) to intrastate

markets as well—thus effecting a rollback of the current unregulated prices in the intrastate markets. Under the bill, both interstate and intrastate regulated prices for “new” gas would be subject to two percent automatic cost escalators for each such well. The so-called “old” gas which has been regulated for over twenty years would not be affected by the bill. The overall intent of the Committee proposal is to provide incentives in the most competitive sectors of the industry, and to tie the highest prices to the newest, or additional, uses of natural gas energy—thus simultaneously building in stimulation for exploration and for conservation through the price structure.

5. Establish a floor price for oil to insure price stability over the longer run

Title IX of the Administration’s bill, called the “Energy Development Security Act of 1975,” requests additional authority under which the President could take action to protect domestic producers of energy from the instability of foreign oil price fluctuations. In order to insure that foreign oil producing countries cannot undercut United States efforts to develop and exploit domestic petroleum resources by instituting massive price cuts, additional authority to provide investment certainty is needed.

The main features of the proposed legislation are:

Investigations by the Administrator of FEA to determine whether there has been a significant drop in the price of imported petroleum such that the economic viability of a substantial part of United States petroleum production and development is threatened or that such a price drop threatens to cause a substantial increase in petroleum consumption; and

Presidential authority to impose tariffs, quotas or variable import fees if such a drop occurs.

As mentioned earlier in this report, the Secretary of the Treasury has suggested that in the absence of the depletion allowance, \$8.40 might be an appropriate long term supply or floor price.

In another move reinforcing his concern for insuring price stability, the President on January 15, 1975, resubmitted a proposal made earlier, on October 8, 1974, to amend the Employment Act of 1946 to make explicit the goal of price stability, by substituting the phrase “to promote maximum employment, maximum production, and stability of the general price level” in place of the present language, “to promote maximum employment, production and purchasing power.”

S. 621, “The Petroleum Price Increase Limitation Act of 1975”, passed by the Senate May 1, 1975 (and substituted by the Senate for H.R. 4085, on June 11, 1975) requires congressional review and right of disapproval of any Presidential action which would create or maintain a floor under domestic energy prices. As of June 20, 1975, the bill was still in conference. Section 403 of H.R. 7014 denies the President the authority to prescribe any floor price for crude oil or any refined petroleum producer.

The basis for rejecting the prospect of establishing a basic minimum price for oil at this time—and for rejecting all the Administration’s price proposals—was strongly stated in the Senate Interior Committee Report (S. Report 94-32) accompanying S. 621.

The Committee finds that the benefits and advantages which have been claimed for the Administration’s energy tariff, tax

and pricing proposals have not been clearly or convincingly demonstrated. On the other hand, the opinion of the economic community is virtually unanimous concerning the dangers posed for the domestic economy by these proposals.

The Committee therefore believes that Congress must accept the responsibility to arrest the Administration's rush towards a major economic disaster. The proposal to decontrol domestic oil is one of the most potentially damaging features of this plan. . . .

The procedure embodied in S. 621 would provide for Congressional review and a right of disapproval of each proposed action. These procedures would also require that the justification and need for each action be explicitly stated, and that the impact of the action on the prices of fuels and other forms of energy, on domestic energy consumption and production, on the cost of living, and on the economic well-being, on employment or regions, socio-economic groups and industrial sectors be fully analyzed. The Committee believes that these are necessary if the Congress is to play its Constitutional role in the decisions that have substantial effects on the domestic economy. . . .

Section 103 of the Act specifically requires that the Congressional review procedure described in the Act shall apply to any proposal employed for the purpose or with the effect of establishing or maintaining a minimum price for any domestically produced fuel or other form of energy. Institutionalizing cartel-set energy prices by setting a price "floor" has been declared national policy by the President and the Secretary of State. In response to a question at a press conference on February 25, 1975, Secretary of State Henry A. Kissinger said:

First, the speech that I delivered—on I believe it was February 3d [before the National Press Club]—was done at the request of the President. It was approved in all its particulars by the President. It was gone over by the White House officials that are responsible for economic policy. It was gone over by Assistant Secretary of the Treasury—the Secretary of the Treasury being out of the country, in England, on that particular weekend. The speech on February 3d reflected the views of the President and reflected the views of the Administration.

Since then—and I have had occasion to review this whole matter with the President again this morning—there is no question that the United States supports a guaranteed price for alternative sources of energy.

Whether this price is achieved by subsidy or by tariff, or by some other method, is a matter for negotiation and is, indeed, a matter which we would leave to the decision of each country. And as far as the Department of State is concerned, we have no particular interest in how this guaranteed price is achieved—as long as it is achieved.

The Committee believes that the development of alternative energy sources must proceed at an expeditious pace. The Non-Nuclear Energy Research and Development Act of

1974 which originated in this Committee provides a comprehensive framework for this effort, including authority for price guarantees to facilitate research and development of alternative energy sources. The Committee does not believe that the case has, however, in any sense been made that the establishment of a price floor for all energy consumed in the United States, with its enormous attendant costs to consumers, is a policy the United States ought or need follow in order to achieve the development of these new energy options. Section 103 of the Act would require that any proposal to establish an energy price floor would first have to be fully justified and analyzed by the Administration and then reviewed by the Congress before it was implemented.

C. A NATIONAL ENERGY PRODUCTION BOARD

The Democratic Majority proposals issued February 27, 1975, recognized the importance of an "orderly but accelerated development of greater and more diversified domestic sources of supply." As described in the published report, "The Congressional Program of Economic Recovery and Energy Self Sufficiency":

The overall objective of national energy sufficiency recognizes the enormous undertaking involved in terms of capital investment and incentives, in terms of environment protection and national security. Switching from oil and gas to coal and other sources is just one aspect of the program although a most critical one and it alone will require a substantial commitment of national resources. A national program of this magnitude requires the establishment of an instrumentality at the highest level of government to make certain that the program is successful. Therefore at the core of the recommendations is the creation of a National Energy Production Board as an independent agency of the government. It would mobilize unutilized and under-utilized private and public resources to increase domestic energy production on an urgent basis. The National Energy Production Board would be patterned after the War Production Board of World War II and, subject to Congressional review, would have authority and funding to break energy bottlenecks, and to take all actions necessary to accelerate the production of and conversion to domestic energy sources. Much of the cost would be funded out of an Energy Trust. . . .

As the financial base for this trust, a 5 cent tax on gasoline at the pump would be imposed 30 days after enactment. This revenue would begin to pay for the urgent program of conservation and production.

Additional revenues for the Trust would be derived from energy taxes on inefficient uses of energy and by dedication of part of the funds paid for leases covering the Outer Continental Shelf.

It was anticipated that Trust fund receipts should and would be \$1 billion in 1976 and \$2 billion thereafter through fiscal year 1984.

S. 740, introduced February 18, 1975 (by Senators Jackson, Magnuson, Stevenson, Bayh and Leahy), provides the proposed legislative authority and administrative framework through which this broad objective would be carried out.

As introduced, the bill would establish a "National Energy Production Board to assure early development of energy resources on the public domain and other Federal lands and on the Outer Continental Shelf to overcome the dependence of the United States on foreign nations for energy supplies which are essential to national security, commerce, and a full-employment economy."

The independent nature of the Board is described in Title I, subject to cooperative liaison and "rights of review and comment" on proposals, which are listed in Title V: As described in the official summary of Title I:

The National Energy Production Board will consist of a Chairman and four members appointed by the President with the advice and consent of the Senate. The Chairman of the Board has cabinet rank (Level I of the Executive Schedule) and the members of subcabinet rank (Level II). The Board is established for a five-year term subject to extension by the Congress. No member may hold another position in the Executive branch, nor may a member, after service on the Board, represent any party other than the United States in a matter involving the Board. The Board will have power to make full use of competent personnel and enter into contracts to carry out its work.

Title V on Guidelines and Administration provides that:

The Energy Resources Council, the Governor of any affected State and the governing bodies of political subdivisions of affected local areas shall review proposals of the Board. In addition, right of review and comment shall be provided to private industry, labor, and environmental and consumer groups.

The duties, responsibilities and authorities of the Board are comprehensive and far reaching, but place certain of the programs mandated under congressional review with a right of disapproval and others in a status which requires express legislative authorization.

Two major overall duties are described in Title II, (1) general monitoring of all energy resource activities and (2) preparation and execution of a Federal oil and gas exploration program on Federal lands including the OCS.

The Board is empowered to monitor all activities of the Federal government and the private sector within the United States or in other parts of the world which have a bearing on the development of domestic energy resources or the availability of material, equipment or manpower for such development.

The Board is directed to prepare and carry out a Federal oil and gas exploration program designed to determine the extent, location and value of oil and gas reserves on Federal lands, including the Outer Continental Shelf. This program

shall involve prompt, comprehensive, and environmentally responsible activities, including exploratory drillings, in consultation with affected State and local governments.

Three programs, ordered to be developed by the Board are to be subject to Congressional review and right of disapproval within 60 days, the Naval Petroleum Reserves program (described in Section II above), a Federal Facilities Energy Program and an Expedited Energy Project Procedure to overcome delays and "institutional impediments."

The Federal Facilities Energy Program, as described in Title III, Section 303 of the bill, to be drawn up by the Board "within 90 days of the effective date of this section, would be based on and would include:

(1) an inventory of federally owned and federally controlled industrial and manufacturing plants and installations, including but not limited to naval shipyards, ship repair facilities, depots, arsenals, and other facilities and installations of the Department of Defense and industrial and manufacturing facilities of other departments, agencies, and instrumentalities of the Federal Government;

(2) an inventory and assessment of the capacity of various departments, agencies, and instrumentalities of the Federal Government, including but not limited to the Corps of Engineers of the Department of the Army, the Naval Ordnance Command of the Department of the Navy, the Bureau of Reclamation of the Department of the Interior, and the General Services Administration to participate in the management of Federal energy exploration, development and production programs;

(3) the identification and designation of idle, underutilized, or surplus Federal facilities and installation capable of, or capable of being adapted to, at reasonable cost, the production of materials and equipment essential for the production of energy and fuels, including but not limited to drilling platforms, drilling rigs, pipe for drilling operations and pipelines, and mining and transportation equipment, goods, and supplies;

(4) estimates of the cost of equipping, reequipping, tooling, or retooling such facilities and installations for the production of energy-related materials, goods, and equipment;

(5) estimates of the availability of the manpower required to staff such Federal installations and facilities;

(6) a plan for the conversion of designated appropriate federal facilities and installations for production of energy-related materials and equipment;

(7) a schedule for the conversion of designated Federal facilities and installations for the production of energy-related materials and equipment.

Programs to be drawn up by the Board "within nine months," but which require express Congressional authorization are authorized in Title IV, officially summarized as follows:

The Board is directed to prepare, within nine months, Federal action programs to accelerate coal production from public lands of the United States, improvement and augmentation of the energy transportation system, including rebuilding railroad systems, coal slurry pipelines, oil and natural gas pipelines, and a Federal oil and gas production program. The Federal oil and gas production program shall include provisions for development and production of oil and gas reserves under Federal management, joint ventures and cost sharing with private industry and preferences for entry into the oil and gas production industry by independent producers. None of the programs authorized under the title may proceed without express legal authorization of the Congress.

D. INCREASED PRODUCTION OF COAL

All of the measures listed in Section III-E above, while directed at conserving oil and gas by encouraging or forcing conversion to the use of coal—would also have the effect of encouraging increased production of coal.

In addition to these, agreement on the terms under which strip mining would take place has been considered of major importance in achieving this goal.

Both the Administration and Congress have placed a high premium on rapidly stepping up the output of coal as a means of offsetting reductions in imports of oil and as a longer run substitute for oil and natural gas. The Administration's target is to double coal output in ten years—from the present 600 million tons per year (TPY), a goal which would require opening up about 140 new two-million TPY eastern underground mines, some 30 new two-million TPY eastern surface mines and 100 new 5-million TPY western surface mines. About half of present production is by the stripping process.

The Congressional Majority energy policy statement also endorsed increased use of coal but underscored its concern for "an energy production policy fully compatible with environmental concerns." It recommended the adoption of the Surface Mining Control Act, legislation "which recognizes the interests of states" in energy facilities siting, and called for establishment of "machinery to recognize and resolve the concerns of Coastal, Rocky Mountain states and others concerned with damage to the quality of life from potential exploitation of their regions and to provide adequate funding to minimize detrimental secondary effects."

While only about 5 percent of the approximate 3 trillion tons of coal resources in the United States is close enough to the surface to lend itself to stripping, nevertheless the leadtime from opening up a new mine to delivery of coal is shorter than that of opening up new deep mines,¹⁸ working conditions are safer, it usually results in a more complete recovery of deposits (90 percent as compared with 55 percent recovery in deep mines), and is generally cheaper in terms of cost per unit of production.

¹⁸ About 2 to 4 years for surface mining and 3 to 5 years for deep mining, according to the National Academy of Engineering, *U.S. Energy Prospects*, May 1974, p. 92.

Environmental costs of stripping, however, are high, and related costs of reclamation are also high. Water pollution occurs through acid drainage. There is loss of agricultural production on lands disturbed by stripping as well as a long delay in return to arable status unless thorough reclamation takes place, a process involving draining, grading and revegetation which would add from 5 to 60 cents per ton to the cost of mining, depending on terrain, soil, mining method and climate.

Both the Administration and Congress have sought to find an acceptable strip mining bill on which they could agree, and bills were introduced early in the first session of the 94th Congress seeking to resolve the differences which had prompted President Ford to veto the bill which passed both houses late in 1974. S. 652 and H.R. 3119, were introduced for the Administration, S. 7 and H.R. 25 for the Congressional Majority.

The Administration had requested 27 changes in last year's vetoed bill and Congress claimed to have met most of the "critical" changes in the melded version of S. 7 and H.R. 25, which passed the Senate, on May 5, and the House by a vote of 293 yeas to 115 nays on May 7.

Major provisions in the legislation as passed include: (1) Allowance of surface mining in alluvial valley floors, where such activities will not jeopardize irrigated agricultural activities. (2) Prohibition of surface mining in National forests. (3) Imposition of a tax in the amount of 35 cents/ton on surface-mined coal and 10 cents/ton on deep-mined coal. for the establishment of an abandoned mine reclamation fund. (4) Exemption of anthracite coal mines from the provisions of the bill. (5) Elimination of special unemployment compensation for persons dislocated from their jobs by the administration and enforcement of the bill's provisions.

On May 20, 1975, President Ford vetoed H.R. 25, the Surface Mining Control and Reclamation Act of 1975, citing unacceptable levels of lost coal production, unemployment, and the fact that "since 1971, 21 states which produce over 90 percent of the nation's surface mined coal have either enacted new environmental legislation governing surface mining or have strengthened laws already on the books," as three of the primary reasons for returning the measure to Congress.

In the course of House hearings held on June 3, prior to the House vote on the veto on June 10, 1975, it became clear that the Administration was no longer prepared to support even its own bill as introduced four months earlier.

The President, in his veto message, repeated the Administration's claim that "a production loss of 40 to 160 million tons would result in 1977" and that "as many as 36,000 people would lose jobs," but he admitted that his own bill would also result in production losses—as much as 80 million tons—and loss of a substantial number of jobs, placed at about 18,000 by other Administration spokesmen.

He tied his veto not only to the fact that "Congress has yet to act on a comprehensive energy program capable of achieving goals on which we all agree," but to the fact that Congress had not enacted the program which the Administration had proposed.

He said:

The bill I sent to the Congress in February would have also entailed production losses estimated between 33 and 80 million

tons. Even though these losses would have been substantial, we could have accepted them if Congress had enacted the comprehensive energy program I proposed. But, now the potential losses of H.R. 25 are intolerable.

At a press conference on May 19, 1975, FEA Administrator Frank Zarb, reiterated this point. Citing as first among other factors the drop in domestic production of oil in the first quarter of 1975 to 8.5 million barrels a day, down half a million barrels from the same period in 1974, he replied to the question "Does the President favor any surface mining at all?", as follows:

Mr. ZARB. The President sent up a bill in February, and for the most part, it had the elements of a bill that would be satisfactory to us. Even that bill had a penalty, but keep in mind two things that were somewhat different.

When that bill went forward, there was some reasonable expectation that at this moment we would be looking at the possibility of a comprehensive piece of legislation in the total energy area having been completed. That certainly is not the case.

If a national energy program was in place, and if we were already underway in reducing our consumption levels of oil, and if we were already underway in putting those measures into place to get additional production between now and 1980, then perhaps this bill might have been examined differently.

And when the vote to override failed by 3 votes—278 yeas to 143 nays—it also became apparent that Congress itself was not yet prepared to insist on a definitive bill, for reasons at least in part aligned to those outlined by the Administration.

E. NUCLEAR POWER

Estimates and plans for future energy supplies for the United States anticipate major expansion of nuclear power, the technology for which has been developed over the past three decades with very large infusions of public funds through the Atomic Energy Commission (AEC) and now through the Energy Research and Development Administration (ERDA).

However, during recent Congresses, issues have been raised concerning the general presumption that nuclear power will supply an increasing part of the Nation's energy through the year 2000, including such basic questions as to whether domestic supplies of uranium ore are sufficient to permit the hoped for expansion without using recycled plutonium and/or breeder reactors.¹⁹

During the first six months of the 94th Congress, ERDA and NRC authorizations were the only significant nuclear energy bills which had received either House or Senate approval, although supplemental appropriations for NRC, to provide an additional \$50 million for safety measures, had been approved, and enacted as Public Law 94-18.

¹⁹ The Subcommittee on Energy and the Environment of the House Committee on Interior and Insular Affairs held oversight hearings on nuclear energy April 28-29, May 1, 2, June 2, 5 and 6. See *Hearings*, Part II, Nuclear breeder development program, scheduled for publication in July, for a detailed discussion of estimates on uranium reserves and resources of the United States.

They provided, however, a forum for early floor debate on many questions which have already been addressed in extensive hearings on legislation which is nearing markup stage.

The following sections very briefly describe legislative activity and other events during this period involving: (1) ERDA and NRC organization and funding; (2) the breeder reactor; (3) plutonium recycling; (4) exports of nuclear materials and technology, and related safeguards issues; and (5) siting and licensing of nuclear plants. Additional details may be found in Annex III of this report, "Nuclear Power and the 94th Congress: A Midterm Report," by Dr. Warren Donnelly and Ms. Barbara Rather, from which this summary has been drawn.

1. ERDA and NRC organization and funding for nuclear power

On January 19, 1975, President Ford activated the Energy Research and Development Administration (ERDA) and the Nuclear Regulatory Commission (NRC). Both new agencies were created by the Energy Reorganization Act of 1974²⁰ which also abolished the old Atomic Energy Commission.

The NRC is to carry out the licensing and regulatory functions formerly assigned to the AEC, and is to devote its full attention to assuring the safety as well as the reliability of nuclear power. Creation of the NRC should end the concern that some have expressed in the past when one agency, the AEC, had the dual and conflicting responsibilities for development and for regulation of civilian nuclear power.

The ERDA brings together in one agency the major Federal energy research and development programs and bears the responsibility for leading the national effort to develop the technology needed to assure the United States ample and secure supplies of energy at reasonable prices. ERDA consolidates major energy research and development functions from the AEC, the Department of the Interior, National Science Foundation and Environmental Protection Agency. ERDA will also continue research and development for production of nuclear materials and for atomic weapons.

Organization should receive fresh attention after June 30, 1975, which is the latest date for the President to transmit to Congress such additional recommendations as he deems advisable for organization of energy and related functions in the Federal Government.²¹

As approved by the House on June 20, 1975, by a vote of 317 yeas to 9 nays on H.R. 3474, ERDA authorizations for fiscal year 1976 plus an amount to cover the three months' transition period from July 1, 1976, to October 1, 1976, were as follows:²²

[in billions]		
	Fiscal year 1976	Transition quarter
Operating expenses.....	\$3.462	\$1.030
Plant and capital equipment.....	.938	.195
Total.....	4.400	1.225

²⁰ Public Law 93-438, 88 Stat. 1233, approved Oct. 11, 1974.

²¹ This report is required by section 109(a) of the Energy Reorganization Act of 1974.

²² See H. Rept. No. 94-294, to accompany H.R. 3734, June 13, 1975, for the recommendations and comments of the Joint Committee on Atomic Energy.

Of this amount, less than half—approximately \$1.9 billion for fiscal years 1976 and about \$500 million for the transitional period—was approved for nuclear energy.

While only \$212 million of this amount (plus \$58 million for the transition period) was earmarked for the liquid metal fast breeder reactor, the overall LMFBR program cost for the period through the year 2020 is now estimated at \$10 billion, as compared with a late 1960's estimate in the range of \$3 to 4 billion, and the estimated total program cost of the Clinch River demonstration Breeder Reactor Project, an essential element of the whole fast breeder program, has already escalated from \$700 million to \$1.7 billion, although it will not be operational until the year 1982.

Authorizations approved by the House for the Nuclear Regulatory Commission, on June 20, totaled \$272 million for fiscal year 1976 and the transition period.

ERDA appropriations, approved by the House on June 24 (H.R. 8122) totaled \$5,023,000 for fiscal year 1976 and the transition, but excluded some fossil fuel and conservation funding still to be approved by another subcommittee. The NRC appropriations, approved in the same bill, totaled \$252 million.

2. *The breeder reactor*

A major controversial issue of energy and nuclear power policy in the 94th Congress is the future of the breeder reactor and ERDA's program to further develop this technology and to build a larger breeder demonstration on the Clinch River at Oak Ridge, Tennessee. Compared with previous Congresses, more Members are now raising questions about and challenging this program than in the past. The breeder is likely to receive additional attention later this year after four reports due by the end of June become available to the Congress and to the public.

These four studies include: ERDA's final environmental statement on the breeder program; a report on ERDA's administrative hearings on the breeder program; a GAO study on the cost of the breeder program; and a report from the Joint Committee on Atomic Energy's ad hoc Subcommittee that is studying the breeder.

In January 1975, an ERDA review group completed its report on the LMFBR program and confirmed the need to "... proceed expeditiously to develop the LMFBR at this time to assure the continued availability of the nuclear power option to meet the Nation's future energy needs." The report deemed prudent the objective of achieving commercial breeder availability by the early 1960's, although it noted some risk that this timing may be late in relation to need.²³

The report also found that known economically recoverable domestic uranium reserves would be committed to converter reactors within a few years; that the LMFBR program contained the essential elements for success and was in reasonable balance; and that foreign LMFBR programs would contribute important data and information, but that it would be impractical to substitute foreign reactor experience and technology for critical elements of the U.S. program.

In March 1975, ERDA proposed realignment of management of the Fast Breeder Reactor Project. The change would have ERDA assume

²³ U.S. Energy Research and Development Administration, *Report of the Liquid Metal Fast Breeder Reactor Program Review Group*, January 1975, 59 p., report ERDA-1.

direct management of the demonstration project in order to recognize the Government's expanded financial commitment and to assure that the project has single lines of authority and that its objectives are met.²⁴

At about the same time, the Natural Resources Defense Council issued a report sharply criticizing the breeder project²⁵ and proposed bypassing the breeder and moving directly into using solar, geothermal and fusion energy and energy conservation. The real LMFBR debate, according to NRDC, will center around whether it is possible to make this leap. NRDC believes the leap can be made and recommended that the Federal Government delay the LMFBR program for a decade as premature and because they see no penalty in such delay. Funds freed by the LMFBR cutback could finance accelerated development of solar, geothermal, fossil, fusion and conservation technologies.

The postponement would also provide time for data to be gathered and assessed which bears critically on the future desirability of the LMFBR program. Such data would include: (1) More accurate information on uranium availability and future energy demands; (2) information on the potential of solar, geothermal and fusion energy (which should increase "dramatically" with appropriate funding); and (3) information to answer critical health and safety problems of the LMFBR with more certainty than is now present.

The Joint Economic Committee, chaired by Senator Humphrey, held hearings on the LMFBR program on April 30 and May 8. In June, the Subcommittee on Energy and the Environment of the House Committee on Interior and Insular Affairs and the Ad Hoc Subcommittee to Review the National Breeder Program of the Joint Committee on Atomic Energy began hearings on the national breeder reactor program and related issues.

Secretary of Commerce Merton and Federal Energy Administrator Zarb told Washington newsmen that the breeder program should not be undertaken on a crash basis.²⁶

ERDA has announced that it has commissioned the National Academy of Sciences to conduct an 18-month independent analysis of all the risks and benefits associated with alternative conventional and breeder reactors as sources of power.²⁷

Bills concerning the breeder thus far in the 94th Congress have been limited to the ERDA authorizations. In the Senate, Senator Tunney on June 10 proposed an amendment to the ERDA authorization for Fiscal Year 1976 to eliminate funds for on-site construction of the breeder demonstration and to require an assessment and report to Congress by the Office of Technology Assessment on the breeder within a year.²⁸ In the House, the ERDA authorization was passed on June 20, after attempts to amend the bill to reduce or delay the breeder had not succeeded.²⁹

²⁴ Cf., ERDA press release No. 75-32, Mar. 11, 1975.

²⁵ Thomas B. Cochran, J. Gustave Speth and Arthur R. Tamplin. Bypassing the breeder. A report of misplaced Federal energy priority. Washington, D.C.: Natural Resources Defense Council, March 1975, 16 p.

²⁶ Victor K. McElheny, "Morton and Zarb join in suggesting a slowdown on nuclear breeder reactors and call for more research." *The New York Times*, June 10, 1975, p. 25.

²⁷ *Nucleonics Week*, June 12, 1975, p. 4. This newsletter attributed the origins of the study to a letter from NAS president Philip Handler to Senator Tunney.

²⁸ *Congressional Record*, June 10, 1975, p. S 10175.

²⁹ *Congressional Record*, June 20, 1975, pp. H5833-5887.

3. Plutonium recycle

Whenever nuclear fuel containing uranium-238 is exposed to neutrons, which is the condition within a nuclear reactor, some of the U-238 is transformed into plutonium. If more atoms are so transformed into plutonium than are fissioned to energize the reactor, then the reactor is called a breeder. Conventional nuclear powerplants do transform U-238 into plutonium, which in principle can be recovered and used as a nuclear fuel in the reactors by mixing it with ordinary uranium. Over the years, the AEC has funded some research and development to perfect this idea, known as plutonium recycle. In August 1974 the AEC published in draft an environmental statement on use of such fuels in light-water reactors.³⁰ The issue addressed is a method of operation of the nuclear power industry, including nuclear reactors and associated fuel cycle facilities and operations. If plutonium recycle is authorized for commercial practice, then the plutonium produced in conventional nuclear powerplants will extend the nuclear fuel resources of the Nation and also provide new income for the nuclear industry and reduce the amount of plutonium held in storage. If plutonium recycle is not authorized, then the energy recoverable from uranium reserves with present nuclear powerplants will not be increased, there would be less reason to process used fuels—which would reduce opportunities for theft or diversion of recovered plutonium, a new source of income for the nuclear industry would be foregone, but the chances of dangerous releases of plutonium to the environment would be substantially reduced.

The National Resources Defense Council in its analysis of plutonium cycles strongly opposed the concept as dangerous and unnecessary.³¹ The Nuclear Regulatory Commission addressed plutonium recycle early in 1975. On May 8, the NRC announced that before making a decision as to whether recycled plutonium may be used widely in fuel for light water reactors, it would ask for public comment regarding possible courses of action for evaluating the safeguards issue.³²

The Joint Committee on Atomic Energy in reporting the NRC's authorization for FY 1976 noted that undue delay by NRC will inevitably result in expensive inefficiencies and postponement of related (commercial) decisions. The Joint Committee urged the NRC to expedite its decisions on plutonium recycling and safeguards "... to the maximum extent without reducing the necessary scope and depth of its inquiry, regardless of its decision as to the separability of these two issues."³³

Plutonium recycle has attracted legislative attention. In February, 1975, Mr. Aspin introduced a Plutonium Recovery Control Act, to prohibit the licensing of certain activities regarding plutonium until expressly authorized by Congress and to require a comprehensive study of plutonium recycling by the Office of Technology Assessment.³⁴

³⁰ U.S. Atomic Energy Commission, *Draft generic environmental statement mixed oxide fuel (recycle plutonium in lightwater-cooled reactors)*, August 1974, 4 vols., report No. WASH-1327 (Known as the GESMO report.)

³¹ J. Gustave Speth, Arthur R. Tamplin and Thomas B. Cochran, *The plutonium decision. A report on the risks of plutonium recycle*. Washington, D.C.: Natural Resources Defense Council. September 1974. 29 p.

³² NRC press release No. 75-115, May 8, 1975.

³³ S. Rept. 94-174, to accompany S. 1716, June 4, 1975, p. 6.

³⁴ H.R. 3618, Feb. 25, 1975, and H.R. 4945 and H.R. 4946, Mar. 14, 1975. Referred to the Joint Committee on Atomic Energy. Mr. Aspin was joined by 48 cosponsors on the several bills. Cf., Mr. Aspin's statement in the *Congressional Record* of Feb. 26, 1975, pp. E738-739 and Mar. 14, 1974, p. E1159.

In the Senate, Senator Tunney introduced a Plutonium Recovery Control Act to likewise prohibit licensing of plutonium recycle except for military or research and development purposes, and to require OTA to undertake a three-year assessment.³⁵

4. Exports of nuclear materials and technology and related safeguards issues

Controlling exports of nuclear materials and technology and safeguarding these items from theft and diversion in the U.S. and abroad has been a concern of the 94th Congress. Reports of U.S. shipments of weapons grade uranium to South Africa, of West Germany's intention to export large-scale nuclear reactors, fuel processing plants and a uranium enrichment plant to Brazil, and recent international meetings to review safeguards problems have heightened this concern and prompted Congress to introduce and act on legislation as well as hold hearings on nuclear exports and safeguards.

The Export Reorganization Act of 1975³⁶ would reorganize functions of the Departments of Commerce and State, ERDA and the NRC to focus control of exports of nuclear materials and equipment in the Department of Commerce. However, Department of Commerce issuance of an export license would require certification by the NRC that the receiving country has safeguards at least substantially comparable to those that the NRC requires for domestic nuclear activities.

The Senate Committee on Government Operations held hearings on this proposed reorganization in late April, 1975. In the House, bills have been introduced to prohibit the transfer of atomic technology to foreign powers without the express approval of the Congress,³⁷ and to prohibit the transfer of nuclear materials to countries which have not ratified the Treaty on Non-Proliferation of Nuclear Weapons.³⁸

One provision of the Plutonium Recovery Control Act introduced in the House by Mr. Aspin would require the Office of Technology Assessment to conduct and complete within three years a comprehensive study of the recycling of plutonium to include an investigation of the risks of the unauthorized diversion or theft of plutonium.³⁹

During House debate on the NRC authorization bill for fiscal year 1976, Mr. Long of Maryland introduced an amendment to prevent the NRC from using any of its funds to license or authorize the export of nuclear fuel or technology to any country which furnishes or agrees to furnish uranium enrichment or nuclear fuel reprocessing plants to a country not a party to the NPT, or any country which is not a party to the NPT and which develops either an enrichment or reprocessing plant without concluding an arrangement with IAEA or Euratom requiring present and future nuclear facilities to be subject to safeguards established by either such agency against diversion of nuclear

³⁵ S. 1197, Mar. 17, 1975. Referred to the Joint Committee on Atomic Energy. The bill would require the OTA to conduct and complete within three years a comprehensive study of the recycling of plutonium for the purposes of determining the extent of the dangers to the public health and safety and the environment of such recycling. The study would include: (1) Investigation of the toxicity and carcinogenic characteristics of plutonium; (2) Investigation of the risks of unauthorized diversion or theft of plutonium; and (3) Consideration of the development of systems for the use of plutonium which will assure the protection of the public health and safety of the environment. Cf., Senator Tunney's remarks in the Congressional Record of Mar. 17, 1975, p. S3963.

³⁶ S. 1439, Apr. 15, 1975, by Senators Percy, Ribicoff and Glenn. Referred to the Committee on Government Operations.

³⁷ H.R. 622, Jan. 14, 1975; H.R. 2452, Jan. 30, 1975.

³⁸ H.R. 6032, Apr. 16, 1975; H.R. 7224, May 21, 1975.

³⁹ H.R. 3618, Feb. 25, 1975.

material. The provisions would not prevail if the President determines that the national security requires such a license or authorization and reports this determination to Congress at least 60 days prior to the issuance of such a license or authorization. Opponents of the amendment argued that it would not serve to advance U.S. policy towards non-proliferation. The amendment was defeated 139-117.⁴⁰

Concurrent resolutions have been passed which expressed congressional approval of proposed additional amounts of special nuclear material which may be distributed to the International Atomic Energy Agency⁴¹ and the European Atomic Community⁴² pursuant to the Atomic Energy Act, and the proposed two-year extension of the 1955 Agreement for Cooperation between the U.S. and Israel concerning the civil uses of atomic energy.⁴³ Hearings were held on these proposals on February 6, 1975, by the Subcommittee on Agreements for Cooperation of the Joint Committee on Atomic Energy.⁴⁴

Hearings on the export and safeguarding of nuclear materials and technology not related to specific legislation were held by committees of the House and Senate. The Subcommittee on Energy and Environment of the House Committee on Interior and Insular Affairs held hearings on the plutonium economy and nuclear theft on May 2, 1975, as part of its overall hearings on nuclear energy. The Subcommittee on Arms Control of the Senate Foreign Relations Committee held hearings on March 19, 1975, on issues relative to nuclear nonproliferation.

5. Siting and licensing of nuclear plants

President Ford in his State of the Union Message of January 15, 1975, spoke of nuclear power in the context of beginning to restore the Nation's surplus capacity in total energy. He mentioned a number of actions to energize the Nation's nuclear power program and said he would submit legislation to expedite nuclear licensing and the rapid selection of sites. He also recommended that the one-year investment tax credit of 12 percent be extended an additional two years to speed the construction of powerplants that do not use natural gas or oil, and proposed selective reform of State utility commission regulations. His program envisions that within the next 10 years there will be 200 major nuclear powerplants in the United States.⁴⁵

The Energy Reorganization Act of 1974 requires that the Nuclear Regulatory Commission make a national survey to locate and identify possible nuclear energy center sites defined as an area, not limited to land, large enough to support all the facilities used in the whole nuclear fuel cycle—uranium enrichment, fuel reprocessing, waste storage and other processes, in addition to the generating plant itself.

The survey is to include:

⁴⁰ Cf., debate in the *Congressional Record*, June 20, 1975, pp. H5892-5895.

⁴¹ S. Con. Res. 13, Feb. 11, 1975; and H. Con. Res. 115, Feb. 10, 1975. Approved by the Senate Feb. 19, 1975, and tabled in House Mar 17, 1975.

⁴² S. Con. Res. 14, Feb. 11, 1975; and H. Con. Res. 116, Feb. 10, 1975. Passed by Senate Feb. 19, and tabled in the House on Mar. 17, 1975.

⁴³ S. Con. Res. 15, Feb. 11, 1975, Mr. Pastore; and H. Con. Res. 114, Feb. 10, 1975. Passed by Senate February 19, 1975, and in the House Mar. 11, 1975.

⁴⁴ U.S. Congress, Joint Committee on Atomic Energy. Subcommittee on Agreements for Cooperation. *Proposals for international cooperation in nuclear energy*. Hearings, 94th Congress, 1st session, Feb. 6, 1975. Washington, U.S. Govt. Print. Off., 1975, 16 p.

⁴⁵ As of Mar. 13, 1975, ERDA reported 53 operating nuclear generating units, 63 being built, 13 with site work authorized, 92 with reactors ordered, 13 planned, plus two ERDA-owned units, for a total of 236 nuclear generating units. Cf., AEC press release No. 75-60, Apr. 29, 1975.

(a) A regional evaluation of natural resources, including land, air, and water resources, available for use in connection with nuclear energy center sites; estimates of future electric power requirements that can be served by each site; assessment of the economic impact of each nuclear energy site; and consideration of any other relevant factors;

(b) an evaluation of the environmental impact likely to result from construction and operation of such sites, including an evaluation of whether such centers will result in greater or lesser environmental impact than separate siting; and

(c) consideration of the use of federally owned property and other property designated for public use, but excluding national parks, national forests, national wilderness areas and national historic monuments.

The report is to be published and sent to the Congress and to the Council on Environmental Quality not later than October 11, 1975, and is to be updated from time to time thereafter by the NRC.

The Act also authorizes the NRC to adopt policies which will encourage the location of nuclear power reactors and related fuel cycle facilities on nuclear energy center sites insofar as practicable.

Legislation to improve nuclear licensing procedures and to provide for siting include H.R. 3995, introduced by Mr. McCormack on February 25, 1975; S. 894, introduced by Senator Jackson and 26 cosponsors on March 6, 1975; H.R. 7002, introduced by Mr. Price on May 14, 1975; and S. 1717, introduced by Senators Pastore and Baker on May 12, 1975. S. 984 would authorize the Secretary of the Interior to assist the States to develop and implement State land resource programs and, among other things, to encourage expeditious energy siting decisions. The other bills would improve licensing and siting in various ways.

F. OIL AND GAS DEVELOPMENT ON THE OUTER CONTINENTAL SHELF

Ever since President Nixon announced January 23, 1974, that the Interior Department would lease up to 10 million acres of the Outer Continental Shelf in 1975, there has been an increasing demand that OCS exploration and development procedures be changed.

The Senate is moving toward definitive markup of a bill that would revise the leasing system for Outer Continental Shelf (OCS) oil and natural gas.

The Senate Interior and Insular Affairs and Commerce Committees' staffs have completed two months of hearings, study and discussions on OCS legislation. The Interior Committee is scheduled to begin markup sessions on July 8, 1975, on a bill (S. 521) which amends the Outer Continental Shelf Lands Act, to create, among other things, a new and comprehensive method of leasing the offshore lands, which had been proposed in S. 426.

Key features of the proposed revised bill are:

—Creates six new bidding methods by which the Secretary of the Interior may offer a lease for sale. In addition to the existing combinations of cash bonus and royalty methods, the new methods authorize the use of diminishing or sliding royalties, and a fixed share, diminishing or sliding share, or percentage share of the net profits to the U.S. Additionally there is included a pro-

- vision that the net profit share methods must be used for at least 50 percent of the frontier areas offered for lease in a given year.
- Authorizes the Secretary to conduct or contract for exploration activities, including exploratory drilling to determine the presence or absence of commercial quantities of oil or gas prior to selling a lease.
- Changes the present limitation that a lease be no larger than 5,760 acres. Under the proposal the Secretary would be authorized to lease an entire geological structure or trap to the extent practicable.
- Requires that prior to development or production of oil and gas from the Outer Continental Shelf, the lessee must submit a development plan for the approval of the Secretary.

Other features of the proposed amendments to S. 521 include a Coastal State Fund for the purpose of compensating the coastal State for the adverse impacts, primary and secondary, economic, social and environmental in nature caused by OCS oil and gas activity; and an Off-shore Oil Pollution Settlements fund, which would be used to compensate for damages caused by oil or gas discharges. A holder of a lease or right-of-way is held strictly liable for such discharges, except those caused by an act of war or negligence on the part of the United States or other governmental agency. Recovery is limited to \$200,000,000 per incident and the holder is liable for the first \$15,000,000.

This legislation is also among pending major energy proposals which have been identified for expedited action by the Senate, before the August recess.

The House of Representatives has recently moved to consolidate OCS jurisdiction, which formerly was divided among the Interior and Insular Affairs, Judiciary, and Merchant Marine and Fisheries Committees, into a new Ad Hoc Select Committee on the Outer Continental Shelf, by the adoption of H. Res. 412.

The bill being considered by the Select Committee at the present time (H.R. 6218) is similar to S. 426. The Committee received an extensive briefing on June 9, 1975 from the Congressional Research Service of the Library of Congress, the Office of Technology Assessment, General Accounting Office, and the staffs of the National Ocean Policy Study and Senate Interior and Insular Affairs Committees. On June 7, 1975, the Committee held an eleven hour hearing on H.R. 6218 in New Orleans, La.; and three days of hearings were held in Washington, D.C. on June 17-19, 1975. The Select Committee visited England, Scotland, and Norway the last week in June to draw on the experience of these countries in the North Sea explorations. Additional hearings have been tentatively scheduled through the summer and early fall in New York/New Jersey area (July 18-19 and 25-26); Alaska/California area (August 2-10); Boston/Connecticut area (September 12-14); Maryland/Eastern Shore area (September 26); concluding in Washington, D.C. (October 15-16).

G. SOLAR AND OTHER NONNUCLEAR ENERGY RESEARCH AND DEVELOPMENT

Continuing a Congressional initiative for greater federal support for solar energy begun in the 93d Congress, during the first six months

of the 94th Congress both the House and the Senate have pushed for additional resources in this energy field.⁴⁶

A tax credit of up to \$2,000 (25 percent of the first \$8,000 cost) for converting homes to solar heat was approved by a vote of 244 to 132 on June 13, 1975, in the course of debate on the Ways and Means energy bill, H.R. 2860. The residential solar energy credits are permitted for insulation of equipment meeting "interim" rather than "definitive" HUD standards and may be provided for solar equipment shared by several houses.

Title II of S. 622, passed by the Senate on April 10, 1975, provides that energy conservation plans may include "low interest loans and loan guarantee programs to improve the thermal efficiency of individual residences by installation of insulation, storm windows, or other improvements, or by the application of solar energy heating and cooling equipment which meets the specifications developed under section 8 of the Solar Heating and Cooling Demonstration Act of 1974."

The Senate Select Committee on Small Business began hearings, expected to extend over a period of several months, on "Solar Energy: How Much? How Much from Small Business: How Soon? Why not More? Why not Sooner?" At the first of these hearings, held May 13 and 14, 1975, witnesses from the private sector testified who urged inclusion of heating-and-cooling systems contractors in the projected solar demonstration projects to be financed under Public Law 93-409, and provided examples of discrimination against small business in the emerging solar energy industry.

A staff study prepared as background for the hearings tabulated a large number of estimates by government agencies and private research firms, prepared between 1972 and 1975, on U.S. energy consumption projected for estimated solar energy contributions, by technology, 1980-2020.⁴⁷ A preliminary finding was that official estimates of contribution which can be provided by solar technologies appear to have begun to go up quite rapidly. The joint NSF/NASA solar energy panel, which in 1972 had estimated that by the year 2000 only 5 percent of total national electricity supply would be generated by solar energy (including wind, ocean thermal differences and other solar induced energy sources), in 1975 reportedly had raised this estimate to as much as 50 percent of projected electric power generation, made up of 25 percent wind generated, 9 percent photovoltaic, and 16 percent from ocean thermal differences, assuming, however, no limit on capital availability for concurrent development of all three technologies.

The NSF/NASA projection assumed that a little more than 40 percent of total U.S. energy would come from electricity in 2000, and would add up to an estimated 76 quads, or a little more than the equivalent of 30 million barrels of oil a day. About half of this could come from solar energy.

Meanwhile, FEA has contracted with Florida Technological University for a study to provide regulatory and legislative recommendations designed to expand the market for solar water heating equipment, Florida law already requires new single family homes to be con-

⁴⁶ Public Law 93-409, "The Solar Heating and Cooling Demonstration Act of 1974"; Public Law 93-383, "Housing and Community Development Act of 1974"; Public Law 93-473, "The Solar Energy R&D and Demonstration Act of 1974"; and Public Law 93-316, "The NASA Authorization Act."

⁴⁷ *Congressional Record*, May 8, 1975, pp. S7730-40.

structed in such a manner as to be adaptable to the installation of solar water heating equipment, and further state and local ordinances may result from the study. Before the introduction of cheap natural gas as an energy source, more than 25,000 solar water heaters were in use in the Southeastern states, including Florida.

Nonnuclear research and development authorizations, as approved by the House on June 20, 1975, included among the total ERDA authorizations of \$5.6 billion for both fiscal year 1976 and the transition period, some \$367 million for fossil energy development, \$194 million for solar, geothermal and advanced energy systems, and, \$40 million for research and development in energy conservation.

H. QUANTITATIVE QUOTAS AS AN INCENTIVE FOR BOTH CONSERVATION AND FOR INCREASED DOMESTIC ENERGY PRODUCTION

The Administration's energy policy has emphasized the central role of a pricing policy designed to increase the cost of oil and natural gas as a dual measure for both cutting back on consumption and encouraging increased production of domestic supplies.

During the course of the floor debate on H.R. 6860, a parallel alternative concept was put forward, namely, that quantitative limitations on petroleum imports would also serve a dual role, both to promote conservation of energy and to encourage increased domestic production of not only oil and natural gas but also alternative energy resources.

It should be noted that this rationale was a new phenomenon in the evolution of the Ways and Means energy proposals. As a number of opponents of the bill sharply pointed out, the Committee Report had downplayed the role of quotas as a direct constraint on consumption, arguing that its role would be rather to insure that petroleum savings otherwise achieved would be reflected in savings in imports.

However, this premise was promptly challenged by both opponents and proponents of the quantitative import limitation provision, early in the debate and even before the tax on gasoline was removed from the bill:

Mr. KETCHUM. I find it absolutely amazing that the committee majority continues to believe that quotas on imports are not going to produce a major crunch. Just listen to this language from the committee report:

"Your committee does not intend that these import quotas be an energy conservation measure in themselves . . . a comprehensive program of quota restrictions is necessary to be sure that the conservation achieved by other provisions in the bill will result in a reduction in foreign imports rather than a reduction in domestic production."

This premise is so false that it defies comprehension. Domestic production is declining and this pious hope will not stem the decline. On the contrary, other actions already taken by Congress, such as the repeal of the depletion allowance, and actions being contemplated such as a windfall profits tax insure a drop in domestic energy activity. The FEA estimates that, at best, there would be a 1 million barrel a day increase in petroleum production, if a massive development program were underway and oil sold at \$11 a barrel. These are opti-

mistic assumptions by anyone's standards. At the same time, assuming a 4-percent increase in demand a year, we will need between 7 and 9 million barrels a day of imported oil, figures well above the 6 million barrel a day quota. So how in the name of heaven can the supporters of this bill say that the quotas would not have a tremendous impact? ⁴⁸

* * * * *

Mr. CONABLE. This quota supposedly has enough flexibility so that it will not bite, but if the gasoline tax is eliminated I do not think there is any doubt that the quota, as a quantitative limitation would in fact come into play and cause serious problems in the administration of the resulting scarcity. ⁴⁹

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Mr. OTTINGER. We have in the bill which is coming up from the Commerce Committee provided allocations, so that if import quotas create some shortfall and it may well do that at some time in the future, we will be able to manage that and the President will have the authority to make the necessary allocation.

We have got to take some hard decisions in this House and any way we turn is hard. If the decision is to go to the price route, it means everybody is going to pay huge increases in price for everything in our economy. If we decide to do nothing to conserve, we are going to have this absolutely horrendous transfer of assets to the OPEC countries. Quotas and allocations with price controls is by far the best alternative.

I think this is at the heart of the bill. Regardless of what people do on the gasoline tax, if we have a quota in place we will have a meaningful congressional energy policy. ⁵⁰

The Congressman who fought the hardest to strike all of Title I, on oil import quotas, was the first to argue that its effect would in fact be so rapidly to drive up domestic oil production as to "drain America first":

Mr. GIBBONS. Now, oil is a very precious commodity. If we call up the Federal Energy Agency and ask them how much oil there is in the United States within the 50 States, the safe 50, they will tell us there are about 4,000 days of oil left in this country.

If we call up the U.S. Geological Survey and say, "How much oil is left in this country, oil we know is here and oil we hope is here and how long will that last at the present rate of consumption?" They will tell us oil we know is here and oil we hope is here and oil we know is on the Outer Continental Shelf, all that oil will last for all of 35 years.

Now, how old will we be when that oil runs out and how old will our children and grandchildren be when that oil runs out? What kind of heritage will we be leaving for ourselves and what kind of heritage will we be leaving for our children

⁴⁸ *Congressional Record*, June 10, 1975, p. H5218.

⁴⁹ *Ibid.*, p. H5231.

⁵⁰ *Ibid.*, p. H5238.

and for our grandchildren? What kind of position are we putting the United States in as far as bargaining just down the road? What kind of position are we putting the United States in as far as national security is concerned?

Our answer to all those questions has got to be that we are putting them in the worst possible position that we could dream of. What worse position could we get ourselves in than to use up our most precious natural resource before and at a much more rapid rate than we should be exhausting it.

If we put on quotas, that is the only result that can happen. The only reason for quotas is to protect domestic production and to make domestic production run at its top rate, while the rest of the world goes on with its oil resources.⁵¹

Proponents agreed that the effect of quotas firmly applied would indeed provide a "bite" and a "crunch" but pointed out that, with or without quotas, oil as a finite resource was being depleted in the U.S. and throughout the world, that quotas served notice both to OPEC and to ourselves that the U.S. must move swiftly to develop not just remaining oil but also all available sources alternative to oil.

Mr. BELL. Mr. Chairman, I just wanted to point out something else which I think has not been mentioned. When we talk about draining the resources of our country, we also should be considering the fact that we are encouraging other oil companies in this country to go out and explore. By this proposal we are encouraging this, which is also a very important facet of this program it seems to me.⁵²

* * * * *

Mr. CORMAN. If we must cut back on those imports or, at least, hold them where they are, then clearly the sensible way to do it is through an import quota. It will be the incentive for investing in domestic exploration and production. If we do it merely by price, we will further bloat the profits of the oil companies, and we will leave totally within their discretion where exploration money is spent.⁵³

* * * * *

Mr. KOCH. The only way we could find a feasible way of facing up to the problem is laying out the numbers of barrels, as we have here. Oil is a finite commodity. The gentleman says we have a glut of oil, but the world will be out of oil in 20 or 30 or 35 years. There is no long-range glut of oil, and in terms of history that is a very short time.

This country peaked out in production 5 years ago, and production has gone down each year since. The best possible way of developing alternative sources and assuring that there will be a market is to establish this kind of quota system. This is the heart of the bill.⁵⁴

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Mr. GREEN. Every country in the world is running out of oil, and we have to find alternate sources of energy. That is

⁵¹ Ibid., p. H5230.

⁵² Ibid., p. H5231.

⁵³ Ibid., p. H5233.

⁵⁴ Ibid., p. H5235.

one of the things this bill has tried to do, to stop being energy hogs, to serve notice that we intend to discipline ourselves. We have very carefully tailored this quota, and we have time in the future, if we have made a mistake to correct it.

The quota that would be in effect this year will not be reached and if it were and we were in some kind of a tight bind and needed oil, we have given the President an additional 1 million barrels a day for the next 2 years, discretionary authority. By balance, I think we have built in the kind of flexibility we need to begin to come to grips with this problem. American oil is drying up with or without a quota. We cannot afford the dependence today. We must develop our own sources.⁵⁵ . . .

The fact of the matter is that we are going to run out of oil at some point, and unless we begin to develop alternate sources of energy in this country, we are in trouble.

Let us say it is 35 years, 13 years, or 42 years, or let us say it is 112 years. The fact of the matter is that we are going to run out of oil in this country, and we cannot, in the meantime, continue to be dependent and be placed in a position where the OPEC countries can strangle the United States of America. Unless we begin to put a quota on as to how much we are going to take, and unless we begin to develop alternate sources of energy in this country, we can quibble as to whether it is 35 years, 13 years, or 50 years, but we have to get down to doing the job that is necessary.⁵⁶

At the end of the two weeks of hard fought floor debate, as the House moved toward the final showdown vote on June 19, 1975, the Chairman of the Way and Means Committee summed up the message that was intended to be communicated through the measure and through the then still pending critical vote:

Mr. ULLMAN. Mr. Chairman, we are about to conclude a long and tedious debate on the subject of energy.

We know better now than we did in the beginning that there are no easy answers. There will be, I understand, a recommittal motion; but I would like to say to my colleagues that a recommittal has to be a dead end. There is no way we can go back to the committee and take a new turn. . . .

We begin by telling the OPEC countries and the world that we are putting a limit on the amount of oil we import. From now on we are not going to import oil without limit. We are telling the oil producing countries that there will no longer be an unlimited flow of petroleum into this country from abroad.⁵⁷ We are telling industry and utilities, through our excise tax provisions, that they simply must begin the job of

⁵⁵ Ibid., p. H5230.

⁵⁶ Ibid., p. H5236.

⁵⁷ Mr. Ullman spoke extemporaneously on the floor and was misquoted in one respect by the recorder; he used the word "companies," not "countries" in the second sentence. As phrased in the written text of his remarks, issued at the end of the debate, this paragraph reads: "The energy bill passed today is a message to the world that we are not going to import unlimited foreign oil. It's a message to the oil companies that they can't count on mounting supplies of OPEC oil for their refineries—that they must restructure their production. We are signalling industry and electric utilities that a massive shift away from oil toward other sources of energy must begin. And the energy bill includes a clear order to produce cars that don't waste so much gasoline."

converting to coal and nuclear energy. We are telling the automobile industry that they simply have to start building more efficient automobiles in this country.

We have credits here for the average citizen with respect to home insulation to conserve heat, which is very important.

We have tax incentives that I think are very important in developing the flow of capital into vital areas which will produce alternative energy sources.

We have a trust fund that goes specifically to developing alternative energy sources in a meaningful way. This also is very important . . .

Mr. Chairman, the way that legislation is passed in Congress is that we build a framework, we build a base and this is a base. We build over it in subsequent legislation. That is the way it ought to be with energy policy.

Soon to come along will be the energy bill from the Committee on Interstate and Foreign Commerce on which they have jurisdiction, and these two measures will work together. Then after that we will have the bill brought out by the gentleman from Washington (Mr. McCormack) on NASA and atomic energy. That is another ingredient added on to what we now have and will soon have. Together, they will all make up our energy policy.⁵⁸

Shortly afterward the final vote was taken and there were yeas 291, nays 130, not voting 12.

So the bill was passed.

⁵⁸ *Congressional Record*, June 19, 1975, pp. H5743-45.

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A P P E N D I X E S

A P P E N D I X I

Status of Active Energy Related Bills
(Through June 30, 1975)

ALPHEZIXES

A. ALPHEZIXES

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STATES OF ACTIVE ENERGY RELATED BILLS
SELECTED ENERGY RELATED LEGISLATION IN THE 94TH CONG.

Goal and task bill number, title	House report, date	House date passed	Senate report, date	Senate date passed	Public Law date signed
I. REDUCE DEPENDENCE ON FOREIGN OIL					
H.R. 1767—Suspend President's authority to impose oil import fees for 90 days.	94-1, Jan. 30, 1975	Feb. 6, 1975	94-11, Feb. 19, 1975	Feb. 19, 1975	Vetoed Mar. 4, 1975.
S.J. Res. 12—Prohibit oil import tariffs, fees, quotas for 60 days.			On calendar Feb. 20, 1975		
H.R. 6860 (H.R. 5005)—Energy Conservation and Conversion Act (establish oil import quotas title I).	94-221, May 15, 1975	June 19, 1975			
H.R. Res. 505—Rule for debate on 6860	94-255, June 3, 1975				
II. PROTECT AGAINST DISRUPTION IN OIL IMPORTS					
S. 622—Standby energy authorities	Referred to Interstate and Foreign Commerce, Apr. 15, 1975.		94-26, Mar. 5, 1975	Apr. 10, 1975	
S.J. Res. 48—Defense Production Act 1950, extended until Dec. 31, 1975.		Mar. 10, 1975		Mar. 6, 1975	Public Law 94-9, Mar. 21, 1975.
H.R. 7014—Energy Conservation and Oil Policy Act (titles II, III, IV).	Clean bill, introduced May 15, 1975; reported June 24, 1975.				
H.R. 5919—Establishes national strategic petroleum reserve (military).	94-156, Apr. 18, 1975				
H.R. 49—Develop petroleum reserves on public lands	94-81—pt. I, Mar. 18, 1975; Apr. 18, 1975, pt. II; Apr. 22, 1975, pt. III.				
H. Res. 416—Rule for considering H.R. 49 and 5919	94-167, Apr. 22, 1975		94-260, June 26, 1975		
S. 677—Establish national strategic petroleum reserves			94-220, June 23, 1975		
S. 1849—Extend Emergency Petroleum Allocation Act to Mar. 1, 1976.					
III. RESTRAIN AND RESHAPE ENERGY DEMAND					
H.R. 4485—Emergency Middle Income Housing Act (included building conservation as title III, dropped in conference report).	94-64, Mar. 14, 1975; C94-246, May 22, 1975.	Mar. 21, 1975; June 5, 1975; sustained June 25, 1975.	94-86, Apr. 18, 1975; C94-161, May 22, 1975.	Apr. 24, 1975, June 11, 1975.	Vetoed, June 24, 1975
H.R. 7014—Energy Conservation and Oil Policy Act (titles IV, V).	Clean bill, introduced May 15, 1975; reported June 24, 1975.				
H.R. 6860—Energy Conservation and Conversion Act (titles II, III, V)	94-221, May 15, 1975	June 19, 1975			
S. 622—Standby energy authorities (title II) energy conservation policy.	Referred to Interstate and Foreign Commerce, Apr. 15, 1975.		94-26, Mar. 5, 1975	Apr. 10, 1975	
S. 1730—Rail Transportation System, provide funds to repair.			94-134, May 13, 1975	May 16, 1975	
S. 281/H.R. 2051—Regional Rail Reorganization Act, amended 1975.	94-7, Feb. 19, 1975	Feb. 19, 1975	94-5, Jan. 27, 1975	Jan. 29, 1975	Public Law 94-5, Feb. 28, 1975.

SELECTED ENERGY RELATED LEGISLATION IN THE 94TH CONG.—Continued

Goal and task bill number, title	House report, date	House date passed	Senate report, date	Senate date passed	Public Law date signed
S. 852/H.R. 4975—Amtrak Improvement Act, supp. funds for fiscal years 1975-77.	94-119, Mar. 26, 1975	Apr. 24, 1975	94-65, Apr. 9, 1975	May 13, 1975	Public Law 94-25, May 25, 1975.
H.R. 4481—Emergency employment appropriations (included \$700,000,000 for railroad track repair, but deleted in final bill).	94-52, Mar. 7, 1975; C94-201, May 12, 1975; sustained June 4, 1975.	Mar. 12, 1975; May 12, 1975; sustained June 4, 1975.	94-91, Apr. 22, 1975	Apr. 25, 1975, May 16, 1975.	Vetoed May 28, 1975.
S. 1777—National Petroleum and Natural Gas Conservation and Coal Substitution Act.				Nearing markup	
H.R. 5899—Supplemental appropriations fiscal year 1975 (included \$700,000,000 for railroad track repair, but deleted in final bill).	94-141, Apr. 10, 1975, C94-23	Apr. 15, 1975, June 9, 1975.	94-137, May 14, 1975	May 20, 1975, June 11, 1975.	Public Law 94-32, June 12, 1975.
S. 1518—Motor Vehicle Information and Cost Savings Act.			94-155, May 22, 1975	June 5, 1975	
S. 349—Truth in Energy Act of 1975.			94-253, June 24, 1975		
S. 1883—Auto Fuel Economy Act of 1975.			94-179, June 5, 1975		
S. Res. 59—Energy conservation month.				Feb. 5, 1975	
IV. INCREASE DOMESTIC ENERGY SUPPLIES (INCLUDING ENERGY MANAGEMENT AND PRICING ISSUES)					
S. 71 H.R. 25—Strip Mining Control and Reclamation Act.	94-45, Mar. 6, 1975; C94-189, May 2, 1975.	Mar. 18, 1975; May 7, 1975; sustained June 10, 1975.	94-28 (S. 7), Mar. 5, 1975; 94-101, May 2, 1975.	Mar. 12, 1975, Mar. 20, 1975, May 5, 1975.	Vetoed May 20, 1975
H.R. 7014—Energy Conservation and Oil Policy Act (titles III and IV, oil price deregulation and conversion to other fuels).	94-346, June 24, 1975				
S. 692—Natural Gas Production and Conservation Act of 1975.			94-191, June 12, 1975		
S. 621—Petroleum price increase limitation (sets ceiling for all except "old" oil at Jan. 3, 1975 price, C. \$11-\$12 per barrel).			94-32, Mar. 7, 1975	May 1, 1975	
S. 622—Standby energy authorities (title I, increase ceiling on "old" oil produced by secondary, tertiary recovery, and title III, conservation to other fuels).	Referred to Interstate and Foreign Commerce, Apr. 15, 1975.		94-26, Mar. 5, 1975	Apr. 10, 1975	
H.R. 4035/H. Res. 351—Provide congressional review of Presidential decisions removing control on oil products.	94-65, Mar. 14, 1975	June 5, 1975		Substituted S. 621, June 11, 1975.	
H.R. 6860—Energy Conservation and Conversion Act (title IV, energy trust fund).	94-221, May 15, 1975	June 19, 1975			

H.R. 2166—Tax Reduction Act (includes increase in investment tax credit including public utilities, repeal of oil and gas depletion allowance, and changes in foreign tax credits from foreign oil extraction).	94-19, Feb. 25, 1975; C94-20, Mar. 26, 1975.	94-36, Mar. 17, 1975.	Mar. 22, 1975, Mar. 26, 1975.	Public Law 94-12, Mar. 29, 1975.
H. Con. Res. 218—1st concurrent resolution on the budget, fiscal year 1976: Natural resources, environment and energy outlays assumed, \$11,600,000,000.	94-145, Apr. 15, 1975; 94-198, May 9, 1975.	94-113	May 1, 1975, May 14, 1975.	May 5, 1975.
S. 994/H.R. 4224—Supplemental funds for improved nuclear safety measures, Nuclear Regulatory Commission, \$50,200,000.	94-100, Mar. 20, 1975.	94-50, Mar. 20, 1975.	Apr. 10, 1975.	Mar. 24, 1975.
H. Res. 412—Create a Select Committee on the Outer Continental Shelf.			Apr. 22, 1975.	Public Law 94-18, Apr. 25, 1975.
H. Res. 427—Funding for study of OCS by select committee.	94-231, May 20, 1975.		May 22, 1975.	
S. 521—Outer Continental Shelf development.				
H. Res. 439—Disapproving proposed action by President to remove existing price controls relating to crude oil.	Approved, Interior Committee, May 14, 1975.	Ready for markup.		
S. 834—Amend the Mineral Leasing Act of 1920 to enable States to use funds from development of oil shale for purposes other than public roads and schools.		94-85, Apr. 18, 1975.	Apr. 22, 1975.	
S. 323—Protect franchised dealers in petroleum products.		94-120, May 13, 1975.	June 20, 1975.	
H.R. 3774/S. 598—Authorize ERDA appropriations for fiscal year 1976.	94-294, June 13, 1975.	94-104, May 6, 1975.	June 20, 1975.	
S. 1716/H.R. 7001—Nuclear Regulation Commission, 1976.	94-260, June 4, 1975.	94-174, June 17, 1975.	do.	
H.R. 8122—Fiscal year 1976 appropriations, public works for water and power development and energy research.	94-319, June 20, 1975.		June 24, 1975.	
S. 740—National Energy Production Board.		Nearing markup.		
S. Con. Res. 13/H. Con. Res. 115—Congressional approval of distribution of special nuclear material to International AEC.		94-8, Feb. 13, 1975.	Mar. 17, 1975.	Feb. 19, 1975.
S. Con. Res. 14/H. Con. Res. 116—Congressional approval of distribution of special nuclear material to Euratom.		94-9, Feb. 13, 1975.	do.	Do.
S. Con. Res. 15/H. Con. Res. 114—Congressional approval to extend an existing atomic energy agreement between the U.S. and Israel.		94-10, Feb. 13, 1975.	Mar. 11, 1975.	Do.

APPENDIX II

Summary of Major Omnibus Proposals

Appendix II
Summary of Major Omicron Proposals

A COMPARISON OF THREE CURRENT ENERGY PLANS

The three plans which are compared are:

1. "The President's Plan"—The summary includes some measures undertaken as administrative acts as well as the provisions of the Administration's omnibus energy bill, introduced in the Senate as S. 594 on February 5, 1975 and in the House as H.R. 2633 and H.R. 2650 on February 4, 1975. An official summary was reprinted in the *Congressional Record*, February 5, 1975, pp. S1421-26.

2. "Ways and Means"—The summary is taken from the suggested alternative proposals drawn up by eight task forces made up of the Democratic members of the House Ways and Means Committee and issued March 3, 1975. A text is reprinted in the *Congressional Record*, March 4, 1975, pp. H1370-1374. The draft proposals differ somewhat from the provisions of H.R. 5005 introduced by Mr. Ullman, March 17, 1975.

3. "Democratic Majority"—The summary is drawn from the recommendations prepared jointly by the Democratic Policy and Steering Committee of the House and Democratic Policy Committee of the Senate as the Democratic Majority's comprehensive proposals covering both energy and economic recovery. Entitled, "The Congressional Program of Economic Recovery and Energy Sufficiency," it was announced February 27, 1975 and was printed by the Senate Democratic Policy Committee for use by Members of Congress.

(69)

A COMPARISON OF 3 CURRENT ENERGY PLANS

Goal and task	President's plan	Ways and Means	Democratic majority
I. Reduce dependence on foreign oil-----	Essential-----	Agree—but not so fast and not through tariffs-----	Agree—but economic restoration is Nation's highest priority.
By what means?-----	Import fees, tariffs, and excise taxes: Rely on price and market to lower imports, through lowered consumption.	Quantitative controls: Import quotas, Federal Petroleum Purchasing Agency to buy all imports.	Conservation mainly: Let new National Energy Production Board decide whether import quotas or other means are needed.
How much and how fast?-----	1,000,000 bbl/d, end 1975; 2,000,000 bbl/d end 1976. But this still means rise in imports from 5,300,000 bbl/d, 1975 to 5,800,000 bbl/d, 1977 (administration figures).	1,000,000 bbl/d over 2 to 3 yr, an estimated 400,000 bbl/d 1976.	Believe total program will reduce "domestic consumption of imported petroleum" 500,000 bbl/d, 1st yr; 1,600,000 bbl/d, 2d yr; 5,000,000 bbl/d, 1980.
Reduce and limit imports to what levels?_	3,000,000 to 5,000,000 bbl/d by 1985-----	To about 25 percent of expected domestic oil output by "early 1980's" [estimated 4,000,000 bbl/d based on estimated domestic oil production of 15,800,000 bbl/d in 1985].	To about 10 percent of expected domestic energy consumption by 1985. [Estimated 4,500,000 bbl/d based on plan's target of holding energy consumption to 45,000,000 bbl/d in oil equivalent in 1975.]
II. Protect against disruption of imports----- By creating a system of strategic petroleum reserves.	Essential----- Fully explore, develop and produce all (4) naval petroleum reserves. Use oil and revenue gained to create a national petroleum reserve stockpile of not more than: 1,000,000,000 bbl for civilian use. 3,000,000 bbl—military use. Reserve 20 percent of production NPR No. 4 for strategic reserves; balance for the public economy. (Note: It is anticipated that NPR No. 4 will be able to produce a minimum of 2,000,000 bbl/d by 1985. 80 percent of this would be 1,600,000 bbl/d for current public consumption.) Require any domestic importer or refiner to maintain stored petroleum reserves as determined by President.	Agree----- Accumulate reserve stockpile by— Federal purchase of imports (outside any quota limit) and/or From naval petroleum reserves. Goal "during next few years": 50 percent of annual imports, (e.g., 6 mo. supply); at import level of 5,000,000 bbl/d, this would equal 600,000,000 bbl.	Agree----- Accumulate reserve stockpile by— Federal purchase of imports and from naval petroleum. From naval petroleum reserves, OCS and market place. Goal: 3,000,000 bbl/d for 6 mo by 1980. [Equals 500,000,000 bbl] and 3,000,000 bbl/d for full year by 1985 [equals 1,000,000,000 bbl.] National Energy Production Board would "oversee establishment".
Authorize standby energy authority including particularly:	Essential----- To deal with future embargoes, international commitments, other emergencies. To be invoked only if President finds emergency situation exists.	Agree----- But in addition: Mandatory allocation of oil needs to be continued in any case to insure shifts from oil and other conservation measures. Continue current legislative authority and FEA allocation system. (Public Law 93-159).	Agree----- But the allocation and other standby authority should be vested in the National Energy Production Board, and we should extend allocation system now to "accommodate" reduced dependence by "managing and controlling" excessive consumption.
Allocation of fuels-----			
End-user consumer rationing-----	Only in emergency, e.g., embargo-----	Agree----- Agree on goal but not on method.	Agree----- Agree on goal but not on method.
By what means in general?	Essential----- Rely mainly on increased prices, jawboning for voluntary compliance, modest subsidies and relaxed auto emission requirements.	Specific incentive and disincentive taxes and subsidies for specific conservation targets, plus selected mandatory conservation measures.	Similar to ways and means plus extended mandatory allocation program to manage and control excessive energy consumption.

By what means specifically?

Increase prices	(a) Import fees, tariffs on imported oil. (b) Excise taxes on domestic oil and gas. (c) Deregulate old oil. (d) Deregulate new gas. (e) Establish oil floor price.	(a) Reject. (b) Reject general tax—Propose specific taxes on gasoline, inefficient autos. (c) and (d) Reject as conservation measure—but—propose phased deregulation to encourage increased production. (e) Reject.	(a) Reject. (b) Reject. (c) and (d) Reject. (e) Reject—Recommend some price control to shield consumer from OPEC-inflated prices. Mandatory fuel and efficiency standards to improve 50 percent by 1980, 100 percent by 1985. Purchase rebates for low-use cars, excise tax for high-use car, R. & D. for low-fuel, low-polluting new auto prototype. 5 cents per gallon but primarily for revenue. Major loan guarantees, grant, tax credit program for insulation, etc., to upgrade 40,000,000 houses in 10 yr. Upgrade standards for new construction, especially Federal buildings.
Improve auto fuel efficiency	Relax clean air standards on cars; voluntary effort by industry to improve 40 percent by 1980.	Auto efficiency tax, beginning 1977 model year of \$0 to \$500 for 20 > —15 m.p.g. Tax credit for new auto purchase, graduated. “Consider” mandatory fuel standards by 1979 model year. 5 cents per gallon 1975, rising to 40 cents 1979. “Consider” tax credits for residential energy improvements including solar equipment, and rapid amortization commercial solar equipment. Investment credits for industrial retrofitting on large scale.	
Gasoline tax Insulate, retrofit residential and commercial buildings.	None. Design thermal efficiency standards for new buildings, to be promulgated through States (after about 4 yr). Finance 3-yr State “winterizing” program mainly for low-income homes—\$9,000,000 1975, \$55,-000,000 1976-77.		
Encourage conversion to coal	Relax clean air standards. Expand authority to require conversion to coal.	Relax clean air standards. Require switch to coal “ASAP.” 5-yr amortization of costs of new coal equipment.	“Discourage” use of natural gas in new plants. Tax credit and loans to retrofit for coal; “suggests” current clean air standards not be increased for such plants. Financing for improved transmission, extended lines. Better use of existing capacity, redesign rate structure.
More efficient electric utilities	Change “offpeak” pricing to encourage more balanced use. Permit increased rates submitted in this plan as method to expand supplies but effect could be restrained use.	“Encourage” experiments with utility rate design alternatives; establish rate restructuring under FPC.	
Encourage mass transit	Supports mass transit (included in budget request).	Supported as object of energy trust fund expenditures. Use highway trust fund to expand mass transit. Increase Federal aid to railroads.	Added funding for public transport, railroad rehabilitation, electrification.
IV Increase domestic energy supply: Oil and natural gas: Price incentives	Deregulate old oil. Deregulate new gas. Establish floor price for oil.	Accept phased deregulation of oil and natural gas—over several years. Alternative approaches are being considered covering time frame of 5 to 5 yr. Reject floor prices.	Accept phased deregulation of oil and natural gas—over several years. But maintain control to separate price of domestic energy from OPEC control. United States should determine its own energy prices. Reject floor price.
Tax incentives	Retain depletion allowance [however, windfall tax would reduce base]. Impose graduated tax (15 percent to 90 percent) which would phase out on all domestic crude to capture windfall profits. No plowback.	Eliminate depletion allowance on all crude oil as of Jan. 1, 1975 (H.R. 2166). Phase out small producers by Jan. 1, 1978. Eliminate depletion allowance for most natural gas. Graduated “windfall” profits tax plus plow back.	Eliminate depletion allowance on all foreign drilling. Retain D/A only for small producers who do not operate retail outlets. Excess profits tax, avoidable by “plowback” reinvestment. Proceeds to energy trust fund.

A COMPARISON OF 3 CURRENT ENERGY PLANS—Continued

Goal and task	President's plan	Ways and Means	Democratic majority
	No change in taxes which encourage U.S. companies to invest in oil/gas production abroad, but import fee of \$1.20 on product imports to be increased to \$2 per barrel after excise tax is enacted to keep excise tax from encouraging foreign refining.	"Neutralize" tax laws to remove incentives to invest abroad, several alternatives being considered.	Eliminate foreign tax subsidies so U.S. capital is not encouraged to invest abroad.
Alaskan oil and gas.....	Devote 80 percent NPR No. 4 output to current use (est. 1,000,000 bbl/d by 1985).	Not discussed in current proposal.....	Develop NPP's rapidly to make "estimated 10,000,000,000 to 40,000,000,000 bbl" available for "storage or commercial use."
Outer Continental Shelf.....	Legislation to be submitted for constructing a natural gas pipeline from Alaska. Accelerated development and production under existing law, including lease sales in Atlantic, Pacific, and Gulf of Alaska.	Not discussed in current proposal..... No mention.....	"Expedited consideration" of natural gas delivery system from Alaska. Revise OCS Act to accelerate "exploration consistent with public interest", public data bank, production under leases to prevent withholding, mandatory unitization.
Enlist more independent producers.	No special provision but antitrust legislation to be enforced against "price fixing and bid-rigging" (In Oct. 8, 1974, address, reaffirmed Jan. 15, 1975.)	No special provision except possible delay in eliminating depletion allowance for small producers. No special antitrust provision.	Change bidding system for all Federal leases "to permit greater participation by small companies." Similar possible concession on depletion allowance. Strengthen antitrust laws to promote free enterprise and competition.
Coal:			Enact the Strip Mining Control Act.
Environmental considerations.....	Strip mining—Modified version of vetoed bill. Design new program of coal leasing.	Strip mining reclamation and mine safety programs are listed as programs which could be funded from an energy trust fund.	

Tax incentives.....	No special provision, investment credit increased for all investors to 12 percent for 1 yr.	5-yr amortization new coal mining and coal using equipment and associated railroad expansion. 50-yr amortization gradings and bores "might be considered."	No special provision: mentions "Coal conversion incentives of major proportion," to induce shift of all electric utilities and heavy industrial boilers in 10 yr but coal mining not mentioned as candidate for major loans, etc.
Capital incentives.....	No special provision.....	"Capital must be raised for opening new coal mines."	No special provisions.
Nuclear.....	Expedited licensing and siting (separate legislation) and 1976 budget increase of \$41,000,000 for nuclear safeguards and waste management.	Tax incentives suggested to "encourage and facilitate expansion" if environmental issues are settled.	
Alternate fuels.....	National synthetic fuels commercialization program (announced Jan. 15, 1975) to produce 1,000,000 bbl/d synthetic fuels by 1985 from oil shale and coal. Rely on ERDA for continuing program in other fuels development.	Recycled oil—tax incentives to encourage. Solid wastes as fuel—tax and other incentives. Geothermal—expand definition of intangible drilling expense to include costs associated with geothermal. Solar energy—tax incentives to encourage retrofitting. Synthetic oil and gas; "Be alert" to possible encouragement measures. To be financed in part through an energy trust fund.	National Energy Production Board to directly undertake or finance on contract or joint venture; commercial demonstration of synthetic fuels oil shale; MHD; Geothermal; Solar.
Research and development.....	To be administered by and through ERDA and its budget.	To be financed in part through an energy trust fund, similar to highway trust fund, into which 5 cents gasoline tax would be paid.	To be financed in part through an energy trust fund, similar to highway trust fund, into which 5 cents gasoline tax would be paid.
Energy management measures designed to speed up development and production of energy supplies.	Reform utilities regulation to allow increased rates to finance capital expansion—readjust off-peak pricing—allow full pass through of all costs. Expedite energy facilities planning and siting: FEA prepares a national plan; States prepare related management plans.	No special provisions.....	Reform utilities rate structure and speed up FPC and State regulatory procedures, but reject any automatic pass-through on cost. Enact regional planning mechanism in which States can participate and resolve regional concerns through other agencies.

APPENDIX III

Nuclear Power and the 94th Congress: A Mid Term Report

By

Dr. Warren H. Donnelly and Barbara L. Rather, Congressional
Research Service

APPENDIX III

Neelam K. Bhatia and the 9th Congress: A Mid-Term Report

BY

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NUCLEAR POWER AND THE 94TH CONGRESS: A MID TERM REPORT

INTRODUCTION

Estimates and plans for future energy supplies for the United States anticipate major expansion of nuclear power, the technology for which has been developed over the past three decades with very large infusions of public funds through the Atomic Energy Commission (AEC) and now through the Energy Research and Development Administration (ERDA).

However, during recent Congresses, issues have been raised concerning the general presumption that nuclear power will supply an increasing part of the Nation's energy through the year 2000, including such basic questions as to whether domestic supplies of uranium ore are sufficient to permit the hoped for expansion without using recycled plutonium and/or breeder reactors.

During the first six months of the 94th Congress, ERDA and NRC authorizations were the only significant nuclear energy bills which had received either House or Senate approval, although supplemental appropriations for NRC, to provide an additional \$50 million for safety measures, had been approved, and enacted as P.L. 94-18. They provided, however, a forum for early floor debate on many questions which have already been addressed in extensive hearings on legislation which is nearing markup stage.

The following sections very briefly describe legislative activity and other events during this period involving: (1) ERDA and NRC organization and funding; (2) the liquid metal fast breeder reactor (LMFBR); (3) plutonium recycling; (4) exports of nuclear materials and technology and international safeguards issues; (5) nuclear safety; (6) siting and licensing of nuclear plants and related issues; (7) private construction of enrichment facilities; and (8) labor support for nuclear power.

ERDA AND NRC ORGANIZATION AND FUNDING FOR NUCLEAR POWER

On January 19, 1975, President Ford activated the Energy Research and Development Administration (ERDA) and the Nuclear Regulatory Commission (NRC).¹ Both new agencies were created by the Energy Reorganization Act of 1974² which also abolished the old Atomic Energy Commission.

The NRC is to carry out the licensing and regulatory functions formerly assigned to the AEC, and is to devote its full attention to assuring the safety as well as the reliability of nuclear power. Creation of the NRC should end the concern that some have expressed in the past when one agency, the AEC, had the dual and conflicting responsibilities for development and for regulation of civilian nuclear power.

¹ Executive Order 11834, Jan. 15, 1975.

² Public Law 93-438., 88 Stat. 1233, approved Oct. 11, 1974.

The ERDA brings together in one agency the major Federal energy research and development programs and bears the responsibility for leading the national effort to develop the technology needed to assure the United States ample and secure supplies of energy at reasonable prices. ERDA consolidates major energy research and developments from the AEC, the Department of the Interior, National Science Foundation and Environmental Protection Agency. ERDA will also continue research and development for production of nuclear materials and for atomic weapons.

Organization should receive fresh attention after June 30, 1975, which is the latest date for the President to transmit to Congress such additional recommendations as he deems advisable for organization of energy and related functions in the Federal Government.³

As approved by the House on June 20, 1975, by a vote of 317 yeas to 9 nays on H.R. 3474, ERDA authorizations for fiscal year 1976 plus an amount to cover the three months' transition period from July 1, 1976 to October 1, 1976, were to be \$5.6 billion.⁴

Of this amount, less than half—approximately \$1.9 billion for fiscal year 1976 and about \$500 million for the transitional period—was approved for nuclear energy.

While only \$212 million of this amount (plus \$58 million for the transition period) was earmarked for the fast breeder reactor, the overall LMFBR program cost for the period through the year 2020 is now estimated at \$10 billion, as compared with a late 1960s estimate in the range of \$3 to 4 billion, and the estimated total program cost of the Clinch River demonstration Breeder Reactor Project, an essential element of the whole fast breeder program, has already escalated from \$700 million to \$1.7 billion, although it will not be operational until the year 1982.

A breakdown of authorizations as recommended by the Joint Committee on Atomic Energy is shown in the following tables:

³ This report is required by Sec. 109(a) of the Energy Reorganization Act of 1974.

⁴ See H. Report No. 94-294, to accompany H.R. 3734, June 13, 1975, for the recommendations and comments of the Joint Committee on Atomic Energy.

NEW APPROPRIATIONS REQUEST FOR OPERATING EXPENSES

[In thousands of dollars]

Program	Estimated ERDA request		Adjusted appropriations request		Change	
	1976	Transition quarter	1976	Transition quarter	1976	Transition quarter
Fossil energy development.....	311,267	55,830	311,267	55,830	0	0
Solar, geothermal, and advanced energy systems.....	108,643	21,580	108,643	21,580	0	0
Conservation research and development.....	32,170	7,733	32,170	7,733	0	0
Physical research:						
High-energy physics.....	148,300	37,800	148,300	37,800	0	0
Nuclear science.....	78,100	19,400	81,100	19,400	+3,000	0
Material sciences.....	43,600	11,900	43,600	11,900	0	0
Molecular sciences.....	42,500	11,200	42,500	11,200	0	0
Total physical research.....	312,500	80,300	315,500	80,300	+3,000	0
Fusion power research and development.....	120,000	37,000	140,000	42,000	+20,000	+5,000
Fission power reactor development:						
Liquid metal fast breeder reactor.....	211,700	58,000	211,700	58,000	0	0
Cooperative power reactor demonstration.....	85,000	33,000	85,000	33,000	0	0
Water-cooled reactors.....	31,900	9,000	31,900	9,000	0	0
Gas-cooled thermal reactors.....	31,400	8,170	31,400	8,170	0	0
Gas-cooled fast breeder reactors.....	6,000	1,550	6,000	1,550	0	0
Molten salt breeder reactors.....	3,500	900	3,500	900	0	0
Reactor safety.....	45,775	12,145	45,775	12,145	0	0
Supporting activities.....	28,400	7,980	28,400	7,980	0	0
Total fission power reactor development.....	443,675	120,745	443,675	130,745	0	0
Naval reactor development.....	186,200	52,900	186,200	52,900	0	0
Space nuclear systems.....	30,900	8,000	30,900	8,000	0	0
Nuclear materials.....	828,940	236,494	828,940	236,494	0	0
Advanced isotope separation technology.....	24,200	7,300	24,200	7,300	0	0
Weapons.....	873,515	223,925	877,015	224,925	+3,500	+1,000
Laser fusion.....	54,000	15,100	60,000	16,600	+6,000	+1,500
Nuclear materials security.....	10,945	3,006	13,945	3,806	+3,000	+800
Biomedical and environmental research.....	156,515	40,500	163,015	41,650	+6,500	+1,150
Waste management.....	36,000	10,100	36,000	10,100	0	0
Operational safety.....	5,160	1,400	5,160	1,400	0	+0
Program support:						
Operational program direction.....	168,614	44,547	168,614	44,547	0	0
Community operations.....	7,650	1,914	9,817	2,204	+2,167	+290
Security investigations.....	12,290	2,825	12,290	2,825	0	0
Information services.....	9,480	2,686	9,555	2,704	+75	+18
EEO assigned facilities.....	1,984	516	1,984	516	0	0
Total program support.....	200,018	52,488	202,260	52,796	+2,242	+308
Cost of work for others.....	12,660	3,095	12,660	3,095	0	0
Revenues applied.....	-675,670	-94,700	-675,670	-94,700	0	0
Changes in selected resources.....	332,349	124,505	346,249	127,485	+13,900	+2,980
Unobligated balance brought forward.....	0	0	0	0	0	0
Net appropriations requested.....	3,403,987	1,017,301	3,462,129	1,030,039	+58,142	+12,738

NEW APPROPRIATIONS REQUEST FOR PLANT AND CAPITAL EQUIPMENT

[In thousands of dollars]

Program	Estimated ERDA request		Adjusted appropriations request		Change	
	1976	Transition quarter	1976	Transition quarter	1976	Transition quarter
New construction projects.....	195,120	47,200	224,870	51,900	+29,750	+4,700
Capital equipment not related to construction.....	232,347	56,676	240,347	58,926	+8,000	+2,250
Increase in prior-year's projects.....	462,250	84,600	473,250	84,600	+11,000	0
Unobligated balance brought forward.....	0	0	0	0	0	0
Net appropriations requested.....	889,717	188,476	938,467	195,426	+48,750	+6,950

The following table summarizes the NRC's request for authorization under its major programs and the Joint Committee's action thereon:

AUTHORIZATION OF SALARIES AND EXPENSES

[In thousands of dollars]

Program	NRC authorization request		Committee recommendations		Change		Page No.
	1976	Transition quarter	1976	Transition quarter	1976	Transition quarter	
Nuclear reactor regulation:							
Powerplant licensing.....	33,849	8,600	33,849	8,600	0	0	8
Standards development.....	11,142	2,801	11,142	2,801	0	0	9
Inspection and enforcement.....	20,788	5,500	20,788	5,500	0	0	9
Total nuclear reactor regulation....	65,779	16,901	65,779	16,901	0	0	9
Nuclear materials safety and safeguards..	10,955	2,707	10,955	2,707	0	0	9
Nuclear regulatory research.....	97,223	25,171	97,223	25,171	0	0	11
Program direction and administration....	24,015	6,221	24,015	6,221	0	0	12
Changes in selected resources.....	21,963	1,000	21,963	1,000	0	0	12
Total authorization.....	219,935	52,000	219,935	52,000	0	0	-----

ERDA appropriations, approved by the House on June 24 (H.R. 8122) totaled \$5,023,000 for fiscal year 1976 and the transition, but excluded some fossil fuel and conservation funding still to be approved by another subcommittee. The NRC appropriations, approved in the same bill, totaled \$252 million.

Section 307(b) of the Energy Reorganization Act requires ERDA, in collaboration with the Secretary of Defense, to conduct a thorough review of the desirability and feasibility of transferring to the Department of Defense or other Federal agencies the functions of the Administrator respecting military application and restricted data. This report is due within a year after the Administrator took office [January 19, 1975] and is to include analysis of alternatives and specific recommendations of the Administrator and the Secretary of Defense. This report is likely to attract legislative interest early in the second session of the 94th Congress.⁵

THE BREEDER REACTOR

A major controversial issue of energy and nuclear power policy in the 94th Congress is the future of the breeder reactor and ERDA's program to further develop this technology and to build a larger breeder demonstration on the Clinch River at Oak Ridge, Tennessee. Compared with previous Congresses, more Members are now raising questions about and challenging this program than in the past. The breeder is likely to receive additional attention later this year after four reports due by the end of June become available to the Congress and to the public.

These four studies include: ERDA's final environmental statement on the breeder program; a report on ERDA's administrative hearings on the breeder program; a GAO study on the cost of the breeder pro-

⁵ At the time the Atomic Energy Act of 1946 was before Congress, a major issue was the role of the military in the control and use of nuclear power. The outcome of this debate was to place development and manufacture of nuclear weapons into a civil agency separate from the Department of War and Navy. Whether the arguments made then still hold true some thirty years later remains to be seen.

gram; and a report from the Joint Committee on Atomic Energy's ad hoc Subcommittee that is studying the breeder.

The Joint Committee on Atomic Energy is aware of this opposition and recently described the situation as follows:⁶

There are those who sincerely question the LMFBR program and the need to proceed with the demonstration plant. Over the past several years, several groups and some individuals—many opposed to nuclear power generally—have raised serious questions about this program. Their questions fall basically into two categories:

(a) whether the benefits to be gained from the LMFBR outweigh the costs and risks associated with it; and

(b) whether the program is being implemented in a manner which protects the public interest.

Concern in both of these areas has been intensified by the fact that the costs required to carry the program forward have significantly increased. The overall LMFBR program has been restructured over the past year, and the total estimated program cost for the period through the year 2020 has grown to \$10 billion. . . . The cost estimate for the Clinch River demonstration project . . . has increased from \$0.7 billion to \$1.7 billion.

The special analysis of the budget, prepared by the Executive Branch in January 1975, for nuclear research and development during fiscal year 1976 noted that additional support is provided to the liquid metal fast breeder reactor. "Work on this fission technology will be increasingly oriented to the engineering requirements necessary to achieve highly reliable, safe, and economic breeder powerplants."⁷

In January 1975, an ERDA review group completed its report on the LMFBR program and confirmed the need to ". . . proceed expeditiously to develop the LMFBR at this time to assure the continued availability of the nuclear power option to meet the Nation's future energy needs." The report deemed prudent the objective of achieving commercial breeder availability by the early 1990's, although it noted some risk that this timing may be late in relation to need.⁸

The report also found that known economically recoverable domestic uranium reserves would be committed to converter reactors within a few years; that the LMFBR program contained the essential elements for success and was in reasonable balance; and that foreign LMFBR programs would contribute important data and information, but that it would be impractical to substitute foreign reactor experience and technology for critical elements of the U.S. program.

AEC issued the proposed final environmental statement for the Liquid Metal Fast Breeder Reactor Program on January 17, 1975.⁹

⁶ H. Rept. No. 94-294, to accompany H.R. 3734, June 13, 1975.

⁷ U.S. Executive Office of the President. Office of Management and Budget. *Special analyses, Budget of the United States Government*, fiscal year 1976, p. 259.

⁸ U.S. Energy Research and Development Administration. *Report of the Liquid Metal Fast Breeder Reactor Program Review Group*, January 1975, 59 p., report ERDA-1.

⁹ U.S. Atomic Energy Commission. Proposed final environmental statement. *Liquid Metal Fast Breeder Reactor Program*. December 1974, 7 vols. AEC report WASH-1525.

Two days later, ERDA took over responsibility for development of the final statement which is necessary before ERDA can make any final statement which is necessary before that agency can make any final decision on the future of the breeder program.

In March 1975, ERDA proposed realignment of management of the Fast Breeder Reactor Project. The change would have ERDA assume direct management of the demonstration project in order to recognize the Government's expanded financial commitment and to assure that the project has single lines of authority and that its objectives are met.¹⁰

Seven new members of the JCAE, led by Senator Tunney, wrote to chairman Pastore, on March 13, asking that additional hearings be held on the breeder.

The Joint Committee on Atomic Energy appointed an ad hoc subcommittee to review the liquid metal fast breeder program, chaired by Mr. McCormack.¹¹ The ad hoc subcommittee is to proceed at the earliest possible date with an extensive, in-depth review of the LMFBR program and related energy resource quest. The Joint Committee also announced it would not be feasible to delay authorization of the budget request for the LMFBR for further study, as had been proposed by some Members of Congress.

At about the same time, the Natural Resources Defense Council issued a report sharply criticizing the breeder project¹² and proposed bypassing of breeder and moving directly into using solar, geothermal and fusion energy and energy conservation. The real LMFBR debate, according to NRDC, will center around whether it is possible to make this leap. NRDC believes the leap can be made and recommended that the Federal Government delay the LMFBR program for a decade as premature and because they see no penalty in such delay. Funds freed by the LMFBR cutback could finance accelerated development of solar, geothermal, fossil, fusion and conservation technologies.

The postponement would also provide time for data to be gathered and assessed which bears critically on the future desirability of the LMFBR program. Such data would include: (1) More accurate information on uranium availability and future energy demands; (2) information on the potential of solar, geothermal and fusion energy (which should increase "dramatically" with appropriate funding); and (3) information to answer critical health and safety problems of the LMFBR with more certainty than is now present.

In April 1975, the NRC staff formally accepted for detailed review an application from the Project Management Corporation and the TVA for a permit to build the Clinch River Breeder Reactor Plant in Oak Ridge, Tennessee.

The Environmental Protection Agency reported to ERDA its review of the proposed final environmental statement on the breeder and said the developmental portion of the LMFBR program would probably be conducted without any unacceptable adverse impacts on the environment. EPA saw some uncertainty on safety of the demon-

¹⁰ Cf., ERDA press release No. 75-32, Mar. 11, 1975.

¹¹ JCAE press release No. 799, Mar. 20, 1975.

¹² Thomas B. Cochran, J. Gustave Speth and Arthur R. Tamplin. *Bypassing the breeder. A report of misplaced Federal energy priority.* Washington, D.C.: Natural Resources Defense Council, March 1975, 16 p.

stration project. It noted that information to assess commercialization of the LMFBR was inadequate to predict the ultimate environmental impacts with any certainty. EPA's analysis also indicated that a delay of 4 to 12 years in breeder development might be accommodated without "significantly reducing the uranium conservation value of the breeder."¹³

The Joint Economic Committee chaired by Senator Humphrey held hearings on the LMFBR program on April 30 and May 8.

On May 22, 1975, the Joint Committee on Atomic Energy released a letter from EPA Administrator Train reaffirming EPA's support of plants to develop the LMFBR technology.¹⁴ In the letter Mr. Train said EPA supported the Administration's plans to develop the LMFBR technology because EPA considered the LMFBR to be a viable candidate among the alternative nuclear and non-nuclear technological options that should be explored. EPA also said that the environmental impacts from a limited number of demonstration plants and supporting facilities and operations could be made safe through conservative design, operating, and siting practices. However while favoring early demonstration of breeder technology, EPA held to its analysis that the timing for possible commercial use would permit the developmental program to be stretched out if that were found to be desirable.

The Subcommittee on Energy and the Environment of the House Committee on Interior and Insular Affairs, chaired by Mr. Udall, began hearings on the nuclear breeder development program.

The Ad Hoc Subcommittee to Review the National Breeder Program of the Joint Committee on Atomic Energy also began hearings in June on the national breeder reactor program and related issues.

Secretary of Commerce Morton and Federal Energy Administrator Zarb told Washington newsmen that the breeder program should not be undertaken on a crash basis.¹⁵

ERDA has announced that it has commissioned the National Academy of Sciences to conduct an 18-month independent analysis of all the risks and benefits associated with alternative conventional and breeder reactors as sources of power.¹⁶

Bills concerning the breeder thus far in the 94th Congress have been limited to the ERDA authorizations. In the Senate, Senator Tunney on June 10 proposed an amendment to the ERDA authorization for Fiscal Year 1976 to eliminate funds for on-site construction of the breeder demonstration and to require an assessment and report to Congress by the Office of Technology Assessment on the breeder within a year.¹⁷ In the house, the ERDA authorization was passed on June 20, after attempts to amend the bill to reduce or delay the breeder had not succeeded.¹⁸

¹³ Letter, Sheldon Meyers, Director, Office of Federal Activities, EPA, to W. H. Pennington, ERDA, Apr. 23, 1975. Cf. also Edward Cowan. "EPA backs delay on atom breeders." *The New York Times*, Apr. 28, 1975, pp. 1, 57.

¹⁴ JCAE press release No. 812, May 22, 1975.

¹⁵ Victor K. McElheny. "Morton and Zarb join in suggesting a slowdown on nuclear breeder reactors and call for more research." *The New York Times*, June 10, 1975, p. 25.

¹⁶ *Nucleonics Week*, June 12, 1975, p. 4. This newsletter attributed the origins of the study to a letter from NAS president Philip Handler to Senator Tunney.

¹⁷ *Congressional Record*, June 10, 1975, p. S10175.

¹⁸ *Congressional Record*, June 20, 1975, pp. H5833-5887.

PLUTONIUM RECYCLE

Whenever nuclear fuel containing uranium-238 is exposed to neutrons, which is the condition within a nuclear reactor, some of the U-238 is transformed into plutonium. If more atoms are so transformed into plutonium than are fissioned to energize the reactor, then the reactor is called a breeder. Conventional nuclear power plants do transform U-238 into plutonium, which in principle can be recovered and used as a nuclear fuel in the reactors by mixing it with ordinary uranium. Over the years, the AEC has funded some research and development to perfect this idea, known as plutonium recycle. In August 1974 the AEC published in draft an environmental statement on use of such fuels in light-water reactors.¹⁹ The issue addressed is a method of operation of the nuclear power industry, including nuclear reactors and associated fuel cycle facilities and operations. If plutonium recycle is authorized for commercial practice, then the plutonium produced in conventional nuclear powerplants will extend the nuclear fuel resources of the Nation and also provide new income for the nuclear industry and reduce the amount of plutonium held in storage. If plutonium recycle is not authorized, then the energy recoverable from uranium reserves with present nuclear powerplants will not be increased, there would be less reason to reprocess used fuels—which would reduce opportunities for theft or diversion of recovered plutonium, a new source of income for the nuclear industry would be foregone, but the chances of dangerous releases of plutonium to the environment would be substantially reduced.

The National Resources Defense Council in its analysis of plutonium cycles strongly opposed the concept as dangerous and unnecessary.²⁰

As alternatives, NRDC proposed:

- (1) Phasing out nuclear power reactors because of human and societal hazards of fission reactors.
- (2) Continuation with light-water reactors without plutonium recycle for the foreseeable future premised on a judgment that plutonium is too dangerous because of its toxicity and explosive potential to be allowed in commerce.
- (3) Deferral of a decision on plutonium recycle for several years until present uncertainties regarding safeguards and plutonium toxicity are satisfactorily resolved.

The Nuclear Regulatory Commission addressed plutonium recycle early in 1975. On May 8, the NRC announced that before making a decision as to whether recycled plutonium may be used widely in fuel for light water reactors, it would ask for public comment regarding possible courses of action for evaluating the safeguards issue.²¹

It was also the NRC's provisional view that the following guidelines would be appropriate for resolving issues of deferral of future licensing actions related to the wide-scale, commercial use of plutonium in nuclear fuels:

- (1) There should be no additional licenses granted for use of mixed oxide fuel in light water power reactors except for experimental purposes.

¹⁹ U.S. Atomic Energy Commission. *Draft generic environmental statement mixed oxide fuel (recycle plutonium in light water-cooled reactors)*, August 1974, 4 vols., report No. WASH-1327 (Known as the GESMO report.)

²⁰ J. Gustave Speth, Arthur R. Tamplin and Thomas B. Cochran. *The plutonium decision, A report on the risks of plutonium recycle*. Washington, D.C.: Natural Resources Defense Council, September 1974, 29 p.

²¹ NRC press release No. 75-115, May 8, 1975.

(2) With respect to light water nuclear power reactor fuel cycle activities which depend for their justification on wide-scale use of mixed oxide fuel in light water nuclear power reactors, there should be no additional licenses granted which would foreclose future safeguards options or result in unnecessary "grandfathering." This would not preclude the granting of licenses for experimental and/or technical feasibility purposes.

If the NRC's provisional view is adopted, a final NRC decision on plutonium recycle would not be reached until early to mid 1978, depending on the timing and outcome of various safeguards studies under way and the time required to complete any necessary public proceedings.²²

This provisional decision generated controversy, leading NRC chairman Anders and Commissioners Rowden and Kennedy to point out that the decision to delay was provisional, not final; that the NRC had not expressed any view on recycling but was merely searching out the process to use in reaching a decision; and that the NRC was determined to avoid the kind of free-for-all that resulted after the 1971 court decision on Calvert Cliffs overturned AEC's approach to the National Environmental Policy Act.²³

The Joint Committee on Atomic Energy in reporting the NRC's authorization for fiscal year 1976 noted that undue delay by NRC will inevitably result in expensive inefficiencies and postponement of related (commercial) decisions. The Joint Committee urged the NRC to expedite its decisions on plutonium recycling and safeguards ". . . to the maximum extent without reducing the necessary scope and depth of its inquiry, regardless of its decision as to the separability of these two issues."²⁴

Plutonium recycle has attracted legislative attention. In February Mr. Aspin introduced a Plutonium Recovery Control Act, to prohibit the licensing of certain activities regarding plutonium until expressly authorized by Congress and to require a comprehensive study of plutonium recycling by the Office of Technology Assessment.²⁵

In the Senate, Senator Tunney introduced a Plutonium Recovery Control Act to likewise prohibit licensing of plutonium recycle except for military or research and development purposes, and to require OTA to undertake a three-year assessment.²⁶

²² NRC noted that the President's Council on Environmental Quality had recommended that a safeguards program cost-benefit analysis precede the final NRC action on the plutonium recycle question. The NRC said it took the CEQ's recommendation into account in arriving at its provisional view.

²³ *Nucleonics Week*, June 19, 1975, p. 4.

²⁴ S. Rept. 94-174, to accompany S. 1716, June 4, 1975, p. 6.

²⁵ H.R. 3618, Feb. 25, 1975, and H.R. 4945 and H.R. 4946, Mar. 14, 1975. Referred to the Joint Committee on Atomic Energy. Mr. Aspin was joined by 48 cosponsors on the several bills. Cf., Mr. Aspin's statement in the *Congressional Record* of Feb. 26, 1975, pp. E738-739 and Mar. 14, 1974, p. E1159.

²⁶ S. 1197, March 17, 1975. Referred to the Joint Committee on Atomic Energy. The bill would require the OTA to conduct and complete within three years a comprehensive study of the recycling of plutonium for the purposes of determining the extent of the dangers to the public health and safety and to the environment of such recycling. The study would include: (1) Investigation of the toxicity and carcinogenic characteristics of plutonium; (2) investigation of the risks of unauthorized diversion or theft of plutonium; and (3) consideration of the development of systems for the use of plutonium which will assure the protection of the public health and safety of the environment. Cf., Senator Tunney's remarks in the *Congressional Record* of Mar. 17, 1975, p. S3963.

EXPORTS OF NUCLEAR MATERIALS AND TECHNOLOGY AND RELATED INTERNATIONAL SAFEGUARDS ISSUES

Controlling exports of nuclear materials and technology and safeguarding these items from theft and diversion in the United States and abroad has been a concern of the 94th Congress. Reports of U.S. shipments of weapons grade uranium to South Africa, of West Germany's intention to export large-scale nuclear reactors, fuel processing plants and a uranium enrichment plant to Brazil, and recent international meetings to review safeguards problems have heightened this concern and prompted Congress to introduce and act on legislation as well as hold hearings on nuclear exports and safeguards.

The President's report.—In Section 14 of the Export Administration Amendments of 1974 the 93d Congress directed the President to review all laws and regulations issued by the Atomic Energy Commission, the Department of Commerce and other Government agencies governing the export and re-export of materials and technology needed in nuclear facilities.²⁷ Congress also directed the President to review domestic and international safeguards in anticipation of the Review Conference on the Treaty on the Non-Proliferation of Nuclear Weapons. The review was done for the President by ERDA with help of other agencies.²⁸

The President's report describes U.S. export controls and international and domestic safeguards programs and gives a detailed procedural description of rules, regulations, and practices that pertain in these areas.

With regard to export controls the President's report observed that:

- Current laws provide ample authority to control the export and re-export of nuclear materials, and technology for civil nuclear power facilities to prevent the proliferation of a nuclear capability for nonpeaceful purposes. Existing U.S. export policies and regulations are constantly being revised and strengthened and exports of significant quantities of strategic nuclear materials will not be approved unless the government of the recipient country has established a system of physical security measures acceptable to the United States.
- The U.S. is only one of many nuclear suppliers and cannot unilaterally delay proliferation by controls on exports. Major efforts are being made by the U.S. to gain universal acceptance of export control policies which will further inhibit proliferation.

The President's report reached the following conclusions concerning safeguards:

- Domestic safeguards need to be kept under continuing review for the purpose of strengthening them. In the future, additional safeguard measures will be required as the volume of material grows and the technical complexities of facilities increase.
- IAEA accountancy safeguards will detect and make an important contribution to deterring any efforts at diversion by States.

²⁷ Public Law 93-500 approved Oct. 29, 1974.

²⁸ Laws and regulations governing nuclear exports and domestic and international nuclear safeguards. H. Doc. 94-131, May 6, 1975, 55 p.

As the volume of materials and the nature of facilities elsewhere in the world grow in their technical complexities, improvements in the equipment, staffing, and frequency of inspection and funding of the IAEA system are and will continue to be needed. A high level of U.S. financial, diplomatic, and technical support will be necessary.

- With respect to subnational thefts, sabotage, and terrorism, improvements are needed in most national systems which complement and are an essential element of the IAEA system.
- It is necessary to convince the supplier nations that it is in their interest to assure that the proper safeguards and physical security measures are placed on all sales of nuclear material and equipment. Continued U.S. efforts in improving the international safeguards system are vital.

On January 15, 1975, The Nuclear Regulatory Commission (NRC) and the Energy Research and Development Administration (ERDA) commenced operations pursuant to Public Law 93-438. The NRC is responsible for measures to safeguard special nuclear materials held by domestic licensees and issues export licenses for nuclear powerplants and components, nuclear fuel and unfabricated source material, special nuclear materials, and byproduct materials. The Energy Research and Development Administration negotiates the international agreements for cooperation which are a prerequisite for any export license and provides technical information, and advice and consultation to other agencies concerned with exports of nuclear materials.

International developments.—On April 14, based on information released by Congressman Les Aspin, Thomas O'Toole reported in the *Washington Post* that the United States has shipped enough weapons-grade uranium to South Africa to fabricate seven atomic bombs. Although South Africa is not a signatory to the Non-proliferation Treaty, the U.S. Nuclear Regulatory Commission (NRC) states that the sales were approved only after South Africa agreed to safeguards that would prohibit the diversion of the uranium out of the research reactor it was provided for.

On May 5, the Review Conference of the Parties to the Treaty on Non-Proliferation of Nuclear Weapons opened in Geneva. It adjourned on May 30, 1975 after submitting a draft final declaration. In it, the delegates recommended that:

- intensified efforts be made towards the improvement, standardization, and universality of application of IAEA safeguards.
- safeguards be applied to all peaceful nuclear activities in importing States not party to the Treaty.
- in reaching decisions on exporting nuclear materials and equipment, States Party to the Treaty should give weight to adherence to the Treaty by recipient States.

On June 1, it was reported in the *Washington Post*²⁹ that West Germany will export large scale nuclear reactors, fuel processing plants and a uranium enrichment plant to Brazil. This technology could give Brazil, which is not a signatory of the Non-Proliferation Treaty, the capability to produce nuclear weapons. It is not known what safeguards arrangements have been negotiated between West Germany and

²⁹ Diuguid, Lewis H. "Brazil nuclear deal raises U.S. concern." *Washington Post*, June 1, 1975, p. A1, p. A2.

Brazil. The Germans, as signatories of the NPT must adhere to the treaty requirements, but the restrictions on supplies of enriched uranium need not apply if Brazil produces the fuel itself.

The *New York Times* on June 18, reported that the United States, Britain, the Soviet Union, West Germany, France, and Canada would open a secret conference on that day in London to discuss possible means of controlling sales of nuclear equipment and developing safeguards to prevent the spread of atomic weapons.³⁰

The conferees were expected to discuss the following:

- Whether to demand a pledge from non-nuclear countries that their peaceful atomic energy programs will not be used to produce nuclear weapons
- Possible agreements to place fuel-production cycles under controls in countries not now subject to international controls
- Newly developed safeguard instruments
- Whether to convene later in a more formal manner.

The State Department subsequently expressed concern that publication of the conference activities might cause some of its participants to withdraw or not to cooperate.

Legislative activity.—On the issues of safeguards and the export of nuclear materials and technology, hearings have been held, and legislation introduced and acted upon during the 94th Congress.

In the House, Mr. Long of Maryland introduced identical bills to prohibit the transfer of atomic technology to foreign powers without the express approval of the Congress.³¹

Mr. Diggs introduced identical bills in the House to prohibit the transfer of nuclear materials to countries which have not ratified the treaty on Non-Proliferation of Nuclear Weapons.³²

One provision of the Plutonium Recovery Control Act introduced in the House by Mr. Aspin would require the Office of Technology Assessment to conduct and complete within three years a comprehensive study of the recycling of plutonium to include an investigation of the risks of the unauthorized diversion or theft of plutonium.³³

During House debate on the NRC authorization bill for fiscal year 1976, Mr. Long of Maryland introduced an amendment to prevent the NRC from using any of its funds to license or authorize the export of nuclear fuel or technology to any country which furnishes or agrees to furnish uranium enrichment or nuclear fuel reprocessing plants to a country not a party to the NPT, or any country which is not a party to the NPT and which develops either an enrichment or reprocessing plant without concluding an arrangement with IAEA or Euratom requiring present and future nuclear facilities to be subject to safeguards established by either such agency against diversion of nuclear material. The provisions would not prevail if the President determines that the national security requires such a license or authorization and reports this determination to Congress at least 60 days prior to the issuance of such a license or authorization. Opponents of the amend-

³⁰ Binder, David "6 Nuclear lands meet on control." *The New York Times*, June 18, 1975.

³¹ H.R. 622, Jan. 14, 1975; H.R. 2452, Jan. 30, 1975. Referred to the Joint Committee on Atomic Energy.

³² H.R. 6082, Apr. 16, 1975; H.R. 7224, May 21, 1975. Referred to the Joint Committee on Atomic Energy.

³³ H.R. 3618, Feb. 25, 1975. Referred to the Joint Committee on Atomic Energy.

ment argued that it would not serve to advance U.S. policy towards non-proliferation. The amendment was defeated 139-117.³⁴

Concurrent resolutions were introduced by Senator Pastore and Representative Roncalio which expressed congressional approval of proposed additional amounts of special nuclear material which may be distributed to the International Atomic Energy Agency³⁵ and the European Atomic Community³⁶ pursuant to the Atomic Energy Act. Identical concurrent resolutions were also introduced in the Senate and House expressing the approval of the Congress to the proposed two year extension of the 1955 Agreement for Cooperation Between the U.S. and Israel concerning the civil use of Atomic Energy.³⁷

Hearings were held on these proposals on February 6, 1975 by the Subcommittee on Agreements for Cooperation of the Joint Committee on Atomic Energy.³⁸

S. Con. Res. 15 was considered and passed by the Senate on Feb. 19, 1975 and considered and passed by the House in lieu of H. Con. Res. 114 on March 11, 1975.

S. Con. Res. 13, and H. Con. Res. 115³⁹ and S. Con. Res. 14 and H. Con. Res. 116⁴⁰ were reported on February 13, 1975.

Both S. Con. Res. 13 and 14 were considered and passed by the Senate on February 19, 1975 and tabled in the House on March 17, 1975.

Hearings on the export and safeguarding of nuclear materials and technology not related to specific legislation were held by committees of the House and Senate. The Subcommittee on Energy and Environment of the House Committee on Interior and Insular Affairs held hearings on the plutonium economy and nuclear theft on May 2, 1975 as part of its overall hearings on nuclear energy. The Subcommittee on Arms Control of the Senate Foreign Relations Committee held hearings on March 19, 1975 on issues relative to nuclear non-proliferation.

The Export Reorganization Act of 1975⁴¹ would reorganize functions of the Department of Commerce and State, ERDA and the NRC to focus control of exports of nuclear materials and equipment in the Department of Commerce. However Department of Commerce issuance of an export license would require certification by the NRC that the receiving country has safeguards at least substantially comparable to those that the NRC requires for domestic nuclear activities. The NRC would also be required to file a nuclear proliferation assessment statement with the Arms Control and Disarmament Agency for each strategically significant nuclear export application. NRC would also provide training for safeguards techniques for customer

³⁴ Cf., debate in the *Congressional Record*, June 20, 1975, pp. H5892-5895.

³⁵ S. Con. Res. 13, Feb. 11, 1975; and H. Con. Res. 115, Feb. 10, 1975 Identical Bills. Referred to the Joint Committee on Atomic Energy.

³⁶ S. Con. Res. 14, Feb. 11, 1975; and H. Con. Res. 116, Feb. 10, 1975. Identical Resolutions referred to the Joint Committee on Atomic Energy.

³⁷ S. Con. Res. 15, Feb. 11, 1975, Mr. Pastore; and H. Con. Res. 114, Feb. 10, 1975, Mr. Roncalio.

³⁸ U.S. Congress Joint Committee on Atomic Energy. Subcommittee on Agreements for Cooperation *Proposals for international cooperation in nuclear energy*. Hearings 94th Congress, 1st session, Feb. 6, 1975. Washington, U.S. Govt. Print. Off., 1975, 16 p.

³⁹ S. Rept. 94-8 and H. Rept. 94-9.

⁴⁰ S. Rept. 94-9 and H. Rept. 94-10.

⁴¹ S. 1439, Apr. 15, 1975, by Senators Percy, Ribicoff and Glenn. Referred to the Committee on Government Operations.

nations it would study physical security and materials accounting safeguards and make recommendations to the President and Congress for ungrading these safeguards. NRC also would study and make recommendations on the feasibility of international management of all strategically significant aspects of the commercial nuclear fuel cycle.

The Senate Committee on Government Operations held hearings on this proposed reorganization in late April.

NUCLEAR SAFETY

Nuclear safety, and in particular the probability of a catastrophic release of radioactive materials from a nuclear facility, is an issue frequently raised about nuclear power.

Nuclear Safety Studies.—One response of the Atomic Energy Commission was to undertake a study to estimate the public risks entailed in potential accidents in nuclear power plants of the type now in use in the United States.⁴² This study culminated in the "Rasmussen Report" which was released in draft for comment by ERDA in August 1974. A final version is to be published by NRC later this year. The Rasmussen draft report concluded that the public risks from potential accidents in nuclear power plants are small.⁴³

The draft made several detailed findings as follows:

- The consequences of potential reactor accidents are no larger, and in most cases, are much smaller than people have been led to believe by previous studies. . .
- The likelihood of reactor accidents is much smaller than many nonnuclear accidents having similar consequences.
- Nonnuclear accidents, including fires, explosions, toxic chemical releases, dam failures, air plane crashes, earthquakes, hurricanes, and tornadoes, are much more likely to occur and can have consequences comparable or larger than nuclear accidents.
- Nonnuclear accidents to which society is already exposed are about 10,000 times more likely to produce larger numbers of injuries to people than nuclear plants.
- Nuclear plants are about 100 to 1,000 times less likely to cause costly, large dollar value accidents than other sources.

The Rasmussen report has generated controversy. The AEC's regulatory staff concluded that it generally overestimated the risks from some accidents while failing to address other significant accident probabilities, and that it underestimates the consequences of some accidents. The Environmental Protection Agency found that the study underestimated the health consequences of a major reactor failure and also criticized the comparative risks approach used.

Early in 1975 another landmark report was published, the Lewis Report.⁴⁴ This report was made for the American Physical Society and

⁴² The study was conducted by the AEC with the help of scientists drawn from AEC laboratories and other organizations. It was headed by Professor Norman Rasmussen of Massachusetts Institute of Technology.

⁴³ U.S. Atomic Energy Commission. "Reactor Safety Study: An assessment of accident risks in U.S. commercial nuclear power plants." August, 1974, 247 p. AEC report WASH-1400. Draft.

⁴⁴ Report to the American Physical Society by the Study Group on Light-Water Reactor Safety. American Physical Society, Apr. 28, 1975, various pagings. (To be published in the Reviews of Modern Physics.)

assessed technical aspects of the safety of light-water reactors. The APS study group, chaired by Professor Harold W. Lewis of the University of California, Santa Barbara, reported it had not uncovered reasons for substantial short-range concern regarding risk of accidents in light-water reactors. It thought a much better evaluation and consequent improvements of nuclear safety could be achieved if certain aspects of the ERDA safety research program were substantially improved and the results of that R&D put to use. Because of the serious consequences of a major release of radioactivity, the study group called for continuing major effort to improve reactor safety as well as to understand and mitigate the consequences of possible accidents.

As for questions of nuclear safety, witnesses before the National Nuclear Energy Debate hearings of the House Committee on Interior and Insular Affairs in April 1975 argued that the probability of such accidents was too high in comparison with possible benefits of nuclear power and that this risk and other limitations gave reasons why further use of nuclear power should be slowed down or stopped.

Witnesses expressing such views before the Energy and Environment Subcommittee of the House Committee on Interior and Insular Affairs included Ralph Nader, Dr. Henry Kendall and Daniel F. Ford of the Union of Concerned Scientists, Dr. Marvin Resnikoff of the Sierra Club, and G. Speth and T. Cochran of the Natural Resources Defense Council.

Within this context, several bills were introduced during the 94th Congress calling for study and review of nuclear hazards.

Mr. Fish proposed that the Joint Committee on Atomic Energy arrange with the National Academy of Sciences for a study of the civil power functions and special industrial operations of the Atomic Energy Commission, including: (1) licensing and regulation of nuclear power plants; (2) research, development and demonstration of nuclear power; (3) adequacy of plans for protecting the public against releases from an uncontrolled nuclear accident; and (4) adequacy of public participation in Commission activities and decisions.⁴⁵

Mr. Drinan introduced bills to direct the Office of Technology Assessment to undertake an independent comprehensive study and investigation of the entire nuclear fuel cycle and to report to Congress within 5 years.⁴⁶

Senator Tunney in a proposed amendment to the ERDA authorization for fiscal year 1976 (S. 598), proposed that the Office of Technology Assessment assess and report to Congress within a year on the breeder program and the Clinch River demonstration.⁴⁷

Some Members of Congress have concluded that the risks from catastrophic nuclear accidents and from theft of nuclear materials and

⁴⁵ H.R. 440, Jan. 14, 1975. Referred to the Joint Committee on Atomic Energy.

⁴⁶ H.R. 5406, Mar. 24, 1975, and H.R. 7553, June 3, 1975, the latter with 20 co-sponsors. Referred to the Joint Committee on Atomic Energy.

⁴⁷ Proposed amendment No. 553 to S. 598. *Congressional Record*, June 10, 1975, p. S. 10175. The assessment would include the following: national electrical energy demand projections; the availability of uranium and the factors which affect uranium supply; the optimal mix of nuclear reactors to extend uranium supplies; the advantages and disadvantages of each type breeder reactor; the costs and benefits of the LMFBR program; the environmental impacts of the LMFBR program; the safety implications of the design of the Clinch River demonstration plant; the utilization of foreign technology in the effort to extend uranium resources and in the development of the LMFBR; and the costs, benefits and feasibility of alternative energy resources.

sabotage of nuclear facilities are so great as to greatly overbalance any benefits from nuclear power. This view has been expressed in the introduction of bills calling for a temporary or permanent moratorium on nuclear power in the United States. In the 94th Congress, bills by Mr. Fish attracted some 21 cosponsors. He proposed termination of granting construction permits for nuclear power plants until a comprehensive five-year study of the nuclear fuel cycle is carried out by the Office of Technology Assessment and Congress acts upon the report. A similar bill was introduced by Mr. Nix.⁴⁸

Rail transport of radioactive materials.—The commercial reprocessing of used nuclear fuels inevitably will require rail transport of intensely radioactive shipments of spent fuel and perhaps separated radioactive wastes. The House in acting upon the Federal Railroad Safety Authorization Act of 1975⁴⁹ included an amendment proposed by Mr. Skubitz and Mr. Florio and adopted in committee that would require the Secretary of Transportation to examine the transportation of radioactive materials by rail and report to Congress by March 17, 1976. The report is to describe the regulations and handling criteria for radioactive material shipments by rail. In addition, the Secretary of Transportation is to include annual projections of radioactive materials shipments for fiscal years 1976 through 1980. Finally, the report is to evaluate the need for additional regulations and handling criteria.⁵⁰

Price-Anderson indemnification.—Last year President Ford vetoed an extension of the Price-Anderson indemnification provisions of the Atomic Energy Act of 1954 as revised.⁵¹ At the time, the Joint Committee on Atomic Energy decided not to seek to override the veto, but rather to resubmit legislation in 1975. Through mid-June no such legislation was submitted.

Two recent events pertinent to the indemnification include a reduction in the annual fee charged for commercial nuclear insurance, and completion of an NRC study that indicates a gap in the Price-Anderson coverage.

In May the Insurance Information Institute announced that the annual premium for insurance coverage by nuclear power reactors was being reduced 20 percent. According to the Institute, the two insurance pools that provide this coverage have yet to receive a claim for injury or damage to the public arising from the operation of a nuclear reactor since the inception of the pool operation in 1957.

On June 11 the NRC announced its staff had completed a study of compensation available to the public under the Price-Anderson Act to cover damages resulting from the theft or sabotage of nuclear materials. The staff concluded that such compensation is not covered by the Act, which they see as limited to nuclear incidents which may occur at licensed, indemnified facilities and along planned routes of shipments of nuclear materials. The study complied with a request of the Congressional Conference Committee last year during its action on the Energy Reorganization Act. While the NRC staff made no specific

⁴⁸ H.R. 4917, Mar. 14, 1975, and H.R. 6870, May 12, 1975. Referred to the Joint Committee on Atomic Energy.

⁴⁹ H.R. 5358, Mr. Staggers, Mar. 21, 1975. Referred to Interstate and Foreign Commerce Committee.

⁵⁰ Cf. floor debate, *Congressional Record*, June 23, 1975, pp. H5949-5955.

⁵¹ President Ford vetoed H.R. 15323 on Oct. 12, 1974.

recommendations, it outlined six alternatives for legislative consideration. These included: special legislation after such an incident; extension of Price-Anderson coverage to damages arising out of nuclear theft; a separate private insurance system; a system of assessing "deferred" premiums from licensees for such protection; an expanded government indemnity without insurance; and a government indemnification to cover losses arising from any terrorist activities. The report was sent to the chairman of the Joint Committee on Atomic Energy on June 9.⁵² Since this gap in coverage was anticipated last year by Senator Ribicoff, it seems likely that legislation to close this gap will be considered by the 94th Congress.

Uranium mill tailings.—The mining and milling parts of the uranium industry became privately owned early in the National atomic program. This trend was accelerated when the AEC deliberately withdrew from the milling of uranium. While this policy speeded the introduction of free enterprise into the nuclear industry, it led to a gap in responsibilities that has produced the still troublesome problem of the uranium tailings. When uranium is milled, most of the ore ends up on large tailing piles. For some ores, these piles contain radium and other naturally radioactive materials which can spread by wind erosion or run off of rainwater. Neither the AEC nor the States involved established regulations for the control and management of these piles, although the potential hazards from the tailings were well known to industrial hygienists. As the uranium industry went through a boom and bust cycle in the late 1950s, some of the milling companies went out of business, leaving unstabilized piles of tailings open to the elements. Good public health and environmental practices requires removal of some piles or stabilization of the piles, but this is an expensive process.

In the 94th Congress, Senator Moss and Representative Howe proposed to authorize ERDA to enter into a cooperative agreement with the State of Utah to remove and dispose of uranium mill tailings there. ERDA would pay 75 percent of the costs, and a total of up to \$10 million would be authorized. This bill was referred to the Joint Committee on Atomic Energy.⁵³

Air transport of plutonium.—The toxicity of plutonium has caused some concern over accidental release of this material from air transport should an accident occur. This concern culminated in an amendment to the NRC authorization for fiscal year 1976 by Mr. Scheuer⁵⁴ to forbid the NRC to license any shipments of plutonium by air, whether export, import or domestic shipment, except for materials in a medical device [pacemaker]. This restriction is to remain in force until the NRC has certified to the joint Committee on Atomic Energy that a safe container has been developed and tested which will not rupture under crash and blast-testing equivalent to the crash and explosion of a high-flying aircraft. The amendment was approved 165 to 79, with 189 Members not voting.⁵⁵

⁵² The Price-Anderson Act (Public Law 85-256, 71 STAT. 576, Sept. 2, 1957) focuses the liability for injury and damage from a nuclear accident upon the licensee and also provides a government indemnification to cover liabilities that may exceed commercial insurance coverage, which licensees have to carry, up to a ceiling of \$560 million per accident. It appears as section 170 of the Atomic Energy Act of 1954 as amended. NRC authority to enter into indemnification expires Aug. 1, 1977.

⁵³ S. 1199, Mar. 17, 1975, H.R. 7436, May 22, 1975. Referred to the Joint Committee on Atomic Energy.

⁵⁴ Mr. Scheuer's district includes Kennedy Airport in New York City through which plutonium has been shipped by air transport.

⁵⁵ Cf. debate, *Congressional Record*, June 20, 1975, pp. H5895-5897.

SITING AND LICENSING OF NUCLEAR PLANTS AND RELATED ISSUES

Since the late 1960s the planning, siting, licensing, construction and start up of nuclear power plants has taken several years longer than the time for a comparable conventional plant. Nuclear plants now take from 8 to 10 years to bring into operation in comparison with about six for conventional ones. Part of this delay is attributed to prolonged and complicated licensing requirements, and to intervention by public interest groups and opponents of nuclear power.⁵⁶ President Nixon called for comprehensive siting legislation and a reduction in the time to build and license nuclear power plants.

In his Special Message to the Congress on the Environment of February 15, 1971, President Nixon proposed legislation to help alleviate the siting problem for power plants through longer range planning by the utilities and through the establishment of State or regional agencies to license new bulk power facilities prior to their construction.

In his Message to Congress of April 18, 1973, President Nixon said he would resubmit legislation on siting including a requirement that the Government act on all completed license applications within 18 months after they are received. He also noted unreasonable delays and in developing nuclear power and said this situation must not continue.

In his energy crisis message of January 23, 1974, President Nixon said he had directed that new legislation be prepared to obtain advanced approval of adequate sites for energy facilities on a regional basis; better coordination of the various approvals required by all levels of government; and improved long range planning of energy facility requirements. He also said he had directed that steps be taken to reduce the licensing and construction cycle to 5-6 years for nuclear facilities without compromising safety and environmental standards. He said he would propose legislation to expedite the completion of nuclear power plants by separating the approval process for plant sites from the licensing of the reactor, and by encouraging the use of standardized plant designs, by permitting the establishment of an inventory of approved sites for nuclear plants.

President Ford in his State of the Union Message of January 15, 1975, spoke of energy and of nuclear power in the context of beginning to restore the Nation's surplus capacity in total energy. He mentioned a number of actions to energize the Nation's nuclear power program and said he would submit legislation to expedite nuclear licensing and the rapid selection of sites. He also recommended that the one-year investment tax credit of 12 percent be extended an additional two years to speed the construction of powerplants that do not use natural gas or oil, and proposed selective reform of State utility commission regulations. His program envisions that within the next 10 years there will be 200 major nuclear powerplants in the United States.⁵⁷

The Energy Reorganization Act of 1974 requires that the Nuclear Regulatory Commission make a national survey to locate and identify

⁵⁶ Licensing and intervention are not the principal or sole source of delay. Design problems, strikes, materials shortages, defective materials and parts, manpower shortages are other factors.

⁵⁷ As of Mar. 13, 1975, ERDA reported 53 operating nuclear generating units, 63 being built, 13 with site work authorized, 92 with reactors ordered, 13 planned, plus two ERDA-owned units, for a total of 236 nuclear generating units. Cf., AEC press release No. 75-60, Apr. 29, 1975.

possible nuclear energy center sites. Section 207 defines nuclear energy center sites to include major steps in the fuel cycle. The survey is to include:

(a) A regional evaluation of natural resources, including land, air, and water resources, available for use in connection with nuclear energy center sites; estimates of future electric power requirements that can be served by each site; assessment of the economic impact of each nuclear energy site; and consideration of any other relevant factors;

(b) an evaluation of the environmental impact likely to result from construction and operation of such sites, including an evaluation of whether such centers will result in greater or lesser environmental impact than separate siting; and

(c) consideration of the use of federally owned property and other property designated for public use, but excluding national parks, national forests, national wilderness areas and national historic monuments.

The report is to be published and sent to the Congress and to the Council on Environmental Quality not later than October 11, 1975, and is to be updated from time to time thereafter by the NRC.

The Act also authorizes the NRC to adopt policies which will encourage the location of nuclear power reactors and related fuel cycle facilities on nuclear energy center sites insofar as practicable.

Legislation to improve nuclear licensing procedures and to provide for siting include: H.R. 3995, introduced by Mr. McCormack on February 25, 1975; S. 984, introduced by Senator Jackson and 26 cosponsors on March 6, 1975; H.R. 7002, introduced by Mr. Price on May 14, 1975; and S. 1717, introduced by Senators Pastore and Baker on May 12, 1975. S. 984 would authorize the Secretary of the Interior to assist the States to develop and implement State land resource programs and, among other things, to encourage expeditious energy siting decisions. The other bills would improve licensing and siting in various ways.

State regulation of nuclear power.—The issue of State control over discharges from nuclear powerplants reached Federal courts in 1969 when the Minnesota Pollution Control Agency issued a waste disposal permit for a nuclear power plant which imposed certain restrictions upon emissions. This led to a court test which decided that the Atomic Energy Act of 1954 had preempted the control of nuclear power plants to the Federal government.⁵⁸ Since then legislation has been periodically proposed to provide the States with some such authority. In the 94th Congress, Mr. McCormack proposed legislation to empower the Nuclear Regulatory Commission to enter into agreements with State or regional agencies under which the agency shall conduct an environmental review of and issue or deny an application for a site certificate for any proposed nuclear power plant reactor site.⁵⁹ Mr. Fish also proposed legislation a bill to provide that nothing in the Atomic Energy Act of 1954 as amended shall be construed to prevent any

⁵⁸ The U.S. Court of Appeals for the Eighth Circuit made this decision, holding that the federal government had exclusive authority to regulate the construction and operation of nuclear power plants, and this included exclusive regulation of the levels of radioactive effluents discharged. Cf. *Northern States Power Co. v. Minnesota*, 320 F. Supp. 1972 (D. Minn., 1970).

⁵⁹ H.R. 3734, by Mr. McCormack, Feb. 25, 1975, referred to the Joint Committee on Energy.

State from regulating concurrently with the AEC [His bill was introduced before the NRC came into existence] the discharge or disposal of radioactive effluents if: (1) the requirements or standards are for the protection of the public health and safety; and (2) action permitted or tolerated by such State is not specifically prohibited by the Commission.⁶⁰

In another bill relating to State actions affecting nuclear power, Mr. McCormack would prohibit, under the Federal Power Act, the transmission of electrical energy into any state which enacts a law or regulation prohibiting the production of electric energy or atomic energy in the State.⁶¹

Public construction of nuclear power plants.—The financial problems of the public utilities have caused the cancellation, or postponement of over 60 percent of planned nuclear expansion. As one measure to improve the financial conditions, President Ford in his State of the Union Message recommended that the 1-year investment tax credit of 12 percent be extended for an additional 2 years to specifically speed the construction of powerplants that do not use natural gas or oil.⁶²

Another proposed legislative approach was made by Mr. Thornton in his National Power Resources Act.⁶³ This act would make it Federal policy to promptly develop, construct, and operate in cooperation with the private sector, needed nuclear power generation facilities. The bill would establish a National Power Resources Authority to: (1) select and acquire suitable sites for not less than 20 nuclear power plants, and to build and operate them; (2) invite participation by interested Federal, State and local agencies, by electric utilities and citizens groups, and by other interested groups and individuals in the selection of locations and to consider the development and construction of nuclear power facilities; and (3) to establish and maintain appropriate high standards of safety and environmental protection. The authority would be funded by an appropriation of \$10 billion.

Funding intervenors.—One issue during the final conference on the Energy Reorganization Act of 1974 was whether to include provision for the Nuclear Regulatory Commission to fund intervention of public interest and other groups in the regulatory process for issuing construction permits and operating licenses for nuclear facilities. This had been proposed by Senator Kennedy and others to redress an imbalance seen between sparsely funded intervenors on one hand and a well funded Federal agency on the other. The AEC subsequently decided in November 1974 that requests for financial assistance to intervenors in several proceedings then pending raised several broadly applicable questions which should be examined in a public rule-making proceeding and requested proposals for an independent study of the matter. In April the NRC announced selection of the Washington law firm to make this study which would take about three months.⁶⁴

⁶⁰ H.R. 441 by Mr. Fish, Jan. 14, 1975, referred to the Joint Committee on Atomic Energy.

⁶¹ H.R. 5598, Mar. 26, 1975. Referred to the Committee on Interstate and Foreign Commerce.

⁶² State of the Union—Address by the President of the United States. *Congressional Record*, Jan. 15, 1975, p. H137.

⁶³ H.R. 3809, Feb. 26, 1975. Referred to the Joint Committee on Atomic Energy.

⁶⁴ The firm selected was Boasberg, Hewes, Klores and Kass. Cf. *Energy Users Report*, Apr. 24, 1975, p. C-4.

As for legislation, on May 6 Senator Kennedy introduced a bill to provide for financial assistance to public intervenors in nuclear licensing proceedings.⁶⁵

PRIVATE CONSTRUCTION OF ENRICHMENT FACILITIES

By 1974 it was increasingly evident that the demand for enriched uranium from AEC's three gaseous diffusion plants would outstrip their output, particularly since the United States was supplying most of the enriched uranium to fuel nuclear power plants of free-world countries. Although the AEC was upgrading and improving its existing plants, the incremental production thus available simply was not enough. Indeed, on July 2, 1974, AEC temporarily suspended signing long-term contracts to provide enrichment service. Thereafter the AEC announced it would sign long-term contracts for another 15 domestic and 33 foreign nuclear power plants. Once these contracts are completed, the AEC, now ERDA, will stop entering into long-term contracts. By then private industry is expected to be able to provide the enrichment capacity needed.

On June 26, 1975, President Ford sent a uranium enrichment message to Congress which clearly backed the continued role of the United States as a major supplier of enrichment services on the world market. Highlights of the President's plan included:

- A legislative proposal, the Nuclear Fuel Assurance Act of 1975, which would authorize the Government to enter into certain cooperative arrangements with private industrial firms that wish to finance, build, own and operate plants to provide uranium enrichment services.
- A pledge by the President to foreign and domestic customers that the Government will assure that orders placed with private producers will be fulfilled as services are needed.
- Opportunities for foreign investment, with control of these plants remaining in U.S. hands.

All necessary controls and safeguards concerned with (a) preventing the diversion of nuclear materials and the spread of sensitive technology, (b) environmental impact, (c) safety, and (d) antitrust.

Since a private organization now needs only to obtain an NRC construction permit and operating license to build an enrichment facility, the purpose of the legislative proposals is to provide incentive for a very large capital investment.

The arrangements the President has in mind would provide for certain forms of Government cooperation and temporary assurances that could include:

- Supplying and warranting Government-owned inventions and discoveries in enrichment technology—for which the government will be paid.
- Selling certain materials and supplies on a full cost recovery basis which are available only from the Federal government.
- Buying enriching services from private producers or selling enriching services to producers to accommodate private plant start-up and loading.

⁶⁵ S. 1665, May 6, 1975. Referred to the Joint Committee on Atomic Energy.

- Assuring the delivery of uranium enrichment services to customers which have placed orders with private enrichment firms.
- Assuming the assets and liabilities (including debt) of a private uranium enrichment project if the venture threatened to fail—at the call of the private venture or the Government, and with compensation to domestic investors in the private ventures ranging from full reimbursement to total loss of equity interest, depending upon the circumstances.

To get this undertaking started, the President announced several administrative actions which included:

- Start of negotiations between ERDA and Uranium Enrichment Associates.
- An ERDA request for proposals from industrial firms interested in constructing, owning and operating enrichment facilities using centrifuge technology.
- Issuance of an environmental impact by ERDA

LABOR SUPPORT FOR NUCLEAR POWER

On June 13, 1975 President Ford released the recommendations of his Labor-Management Committee's recommendations for legislative and administrative measures to increase electric utility construction and output. The President accepted and endorsed these recommendations because they can make a significant contribution in reducing the Nation's dependence on oil imports and in conserving scarce natural gas supplies. He said he would act promptly to create a task force to tackle the problems of delays in completion of utility plants.⁶⁶

Concerning nuclear matters, the Committee recommended extension of the Price-Anderson nuclear indemnification provisions of the Atomic Energy Act of 1954, as amended. It also called for immediate improvement in the policies and actions regarding use of nuclear energy, saying:

The nations should make every effort to capitalize on the benefits of two decades and billions of dollars of public and private efforts in nuclear power development. While the initial investment costs for nuclear energy are high, it offers the cheapest form of electricity in the long run. Every effort must be made so that the percentage of electric power generation derived from nuclear sources by 1980/1985 is greatly increased from current levels. It is estimated that 10 to 15 million construction labor hours are required for each nuclear unit installed.

The Committee also called for government action to:

- Promote the public acceptance of nuclear power.
- Resolve the uncertainties regarding the nuclear fuel cycle.
- Streamline the nuclear regulatory licensing process to reduce the lead time for getting plants into production. The **current lead time is about 8 to 10 years.**

⁶⁶ White House press release June 13, 1975.

