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Highlights

An Analysis of the Ford Administration's FY 1978 ERDA Budget to Congress

by
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The following are among the highlights of an analysis prepared by the Natural Resources Defense Council of President Ford's proposed FY 1978 budget for the Energy Research and Development Administration (ERDA):

* ERDA's proposed FY 1978 energy budget continues the Ford Administration's heavy emphasis on nuclear power development. In its January 19, 1977, headline the trade press Energy Daily terms the Ford budget a "Nuclear Bonanza." Approximately 50% of ERDA's proposed R&D budget is allocated to fission power development. In contrast, the budget calls for expending only 5% on energy conservation, 8% on solar energy, and 3% on geothermal energy. Moreover, of the $627 million budgetary increase proposed for ERDA, fully 56% is allocated to nuclear fission. Thus, new funding is not being allocated preferentially to previously underfunded

technologies but is rather being absorbed predominately by the established nuclear development efforts.

* More than half of ERDA's budget for fission energy development is allocated to one technology -- the liquid metal fast breeder reactor (LMFBR) program. Commitment to the liquid metal fast breeder reactor, at $854.7 million in budget authority, is stronger than ever. The funding allocated to the LMFBR (21%) is greater than that allocated to solar, geothermal and conservation technologies combined (16%).

* The Ford budget for alternative energy sources is weighted towards development of centralized electric generating systems, at the expense of decentralized systems. Less than a third of the solar budget is allocated to solar thermal applications, such as solar heating and cooling which itself was cut back from FY 1977 levels.

* ERDA data showing the amounts by which program funding requests were cut back first by ERDA and then by the Office of Management and Budget (OMB) before being proposed by President Ford reveal that almost all programs experienced substantial cuts except the LMFBR program. Cuts were very severe in the areas of energy conservation (41%), fossil energy development (34%), and solar energy (23%). In contrast, LMFBR program funding was only cut by 3% in the budget process.

Budgetary constraints on ERDA are thus being resolved by proceeding with the LMFBR program and cutting back on the options to it.

* If nuclear fission R&D retains high priority in the coming years, the share of ERDA's budget going to fission may actually show increases due to two factors. First, ERDA has been seeking for over a year to launch a new and potentially very large program aimed at supporting the "back end" of the fission fuel cycle, including fuel reprocessing and plutonium recycle. This program would assist such commercial ventures as Allied-General's Barnwell Nuclear Fuel Plant. The proposed Ford budget contains $78 million to help launch the program, much of which is for designing the contemplated facilities. Annual support in the hundreds of millions range in the years ahead is very possible if this effort is continued. Second, ERDA's priority program, the LMFBR, continues to experience large cost overruns. The two principal facilities of the program, the proposed Clinch River Breeder Reactor (CRBR), and the Fast Flux Test Facility (FFTF), now have estimated costs which are, respectively, 3 and 10 times higher than the original estimates presented to Congress.

TABLE 1

U. S. ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION

FY 1978 BUDGET REQUEST

	(In Millions) BUDGET AUTHORITY			(In Millions) BUDGET OUTLAYS		
	FY 1977	FY 1978	Increase	FY 1977	FY 1978	Increase
Energy Research, Development & Demonstration						
Energy RD&D Programs	$2,643	$3,305	$ 662	$2,179	$2,752	$ 573
Supporting Research	337	385	48	312	360	48
Financial Incentive Activities	30	325	295	4	10	6
Subtotal	3,010	4,015	1,005	2,495	3,122	627
Basic Research and Technology Development						
High Energy Physics	224	269	45	200	237	37
Nuclear Physics	81	86	5	75	84	9
Life Sciences and Biomedical Applications	44	39	-5	42	38	-4
Naval Reactor Development	200	243	43	241	248	7
Space Applications and Other	24	36	12	24	30	6
Subtotal	573	673	100	582	637	55
Uranium Enrichment Activities						
Uranium Enrichment Activities	1,482	1,685	203	1,246	1,447	201
Revenues	-699	-966	-267	-699	-966	-267
Subtotal	783	719	-64	547	481	-66
National Security						
Weapons Activities	1,184	1,466	282	1,146	1,316	170
Special Materials Production	551	671	120	442	597	155
Subtotal	1,735	2,137	402	1,588	1,913	325
Program Management and Support	288	297	9	163	305	142
GRAND TOTAL	$6,389	$7,841	$1,452	$5,375	$6,458	$1,083

rce: ERDA, FY 1978 Budget to Congress, Statistical Highlights (January 17, 1977), pp. 2-3

TABLE 2

U. S. ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION

FY 1978 BUDGET REQUEST

ENERGY RESEARCH, DEVELOPMENT AND DEMONSTRATION PROGRAMS

	(In Millions) BUDGET AUTHORITY			(In Millions) BUDGET OUTLAYS		
Energy RD&D Programs	FY 1977	FY 1978	Increase	FY 1977	FY 1978	Increase
Conservation	$ 161	$ 160	$ -1	$ 125	$ 140	$ 15
Fossil Energy	483	598	115	445	500	55
Solar Heating and Cooling	86	45	-41	61	61	0
Solar Electric and Other	204	260	56	122	173	51
Geothermal Energy	55	88	33	49	68	19
Fusion Power Development	416	513	97	322	431	109
Liquid Metal Fast Breeder Reactor	686	855	169	595	736	141
Nuclear Fuel Cycle and Safeguards	406	636	230	336	503	167
Other Fission	146	148	2	122	137	15
Special Foreign Currency Funds	0	2	2	2	3	1
Subtotal	2,643	3,305	662	2,179	2,752	573
Supporting Research						
Environmental and Biomedical Research	181	210	29	175	198	23
Basic Energy Sciences	156	175	19	137	162	25
Subtotal	337	385	48	312	360	48
Financial Incentive Activities						
Geothermal Resources Development Fund	30	30	0	4	7	3
Synthetic Fuels Projects	0	295	295	0	3	3
Subtotal	30	325	295	4	10	6
Total Energy Research, Development and Demonstration Programs	$3,010	$4,015	$1,005	$2,495	$3,122	$ 627

rce: ERDA FY 1978 Budget to Congress, Statistical Highlights (January 17, 1977), pp. 4-5

fission energy R&D. Additional funds that could be identified with each of the major energy technologies are aggregated in the remaining categories, i.e. Environmental Control Technology, Environmental Research and Basic Energy Sciences. If one combines the "Liquid Metal Fast Breeder Reactor," "Nuclear Fuel Cycle and Safeguards" and "Other Fission" into one category, the total energy R&D budget breaks down as follows:

Table 3

Technologies	FY 1978 B/A ($ in millions)	FY 1978 B/O ($ in millions)	Percentage of Total B/A	Percentage of Total B/O
Conservation	160	140	4.0	4.5
Fossil 3/	893	503	22.2	16.1
Solar	305	234	7.6	7.5
Geothermal 4/	118	75	2.9	2.4
Fusion	513	431	12.8	13.8
Fission 5/	1,639	1,376	40.8	44.1
Other (Special Foreign Currency Fund & Supporting Research)	387	363	9.6	11.6
TOTAL	$4,015	$3,122	100.0	100.0

3/ Includes $295 million in budget authority and $3 million in budget outlays for synthetic fuels demonstration projects.

4/ Includes $30 million in budget authority and $7 million in budget outlays for the Geothermal Resources Development Fund (loan guarantees).

5/ Excluded are funds for Uranium Enrichment Activities (Category III, in Table 1)

The best means of guaging ERDA's relative emphasis of the various energy programs is focusing on the amounts allocated directly to those programs. In Table 4 the percentage funding going to each technology is presented with the unallocated "Other" category in Table 3 omitted. This is equivalent to assuming that the funds in the Table 3 "Other" category are allocated among the six technologies on a pro rata basis, an assumption which should be reasonably accurate.

Table 4

	FY 1978		Percentage of Total	
	B/A	B/O	B/A	B/O
	($ in millions)			
Conservation	160	140	4.4	5.1
Fossil[6/]	893	503	24.6	18.2
Solar	305	234	8.4	8.5
Geothermal[7/]	118	75	3.3	2.7
Fusion	513	431	14.1	15.6
Fission[8/]	1,639	1,376	45.2	49.9
TOTAL	3,628	2,759	100.0	100.0

Table 4 indicates that 50% (45%) of ERDA's support for the six energy technologies is allocated to nuclear fission, whereas only 16% (16%) is allocated to conservation, solar and geothermal combined.

6/ Same as fn. 3 in Table 3, p. 4.

7/ Same as fn. 4 in Table 3, p. 4.

8/ Same as fn. 5 in Table 3, p. 4.

A. Conservation

Only 5.1% of the energy R&D budget is allocated to energy conservation (Table 4). Of this, as seen from Table 5, only 64% (64%) of the energy conservation budget is directed toward end use conservation and technology to improve efficiency. Thus, end use conservation represents only 3.2% (2.8%) of the energy R&D budget.

B. Fossil

$412.0 million ($503.7 million) of the fossil energy funding, or 82.4% (84.2%), is directed toward coal R&D.[9/] Petroleum and natural gas represent 10.5% (8.9%) and in-situ technology (oil shale, in-situ coal gasification, etc.) represents the remaining 7.0% (6.9%).

C. Solar

As seen from Table 6, 64.0% (73.4%) of the solar funding is for solar electric applications. Only 29.3% (18.1%) of the solar budget is directed toward direct thermal applications (space heating and cooling). In other words, less than one-third of the solar budget is directed toward R&D with more near-term application.

D. Geothermal

If one excludes the $7 million ($30 million) for the geothermal resources development fund (loan guarantees), only 2.5% (2.4%) of total energy R&D is devoted to geothermal R&D and resource exploration (Table 4).

9/ Excludes the $295 million in budget authority and $3 million in budget outlays for fi[illegible]

Table 5

FY 1978 ERDA BUDGET TO CONGRESS
PROGRAM TOTAL

(In Millions)

	FY77 Estimate		FY78 Estimate	
	B/A	B/O	B/A	B/O
Conservation Research and Development				
Electric Energy Systems and Energy Storage				
Electric Energy Systems	$ 26.5	$ 20.7	$ 25.3	$ 21.8
Energy Storage Systems	33.5	27.5	32.6	28.7
Total Electric Energy Systems and Energy Storage	60.0	48.2	57.9	50.5
End Use Conservation and Technology to Improve Efficiency				
Industrial Energy Conservation .	15.4	12.4	11.4	10.2
Buildings and Community Systems	26.6	22.6	21.6	18.7
Transportation Energy Conservation	27.7	24.0	36.5	31.4
Improved Conversion Efficiency .	23.7	12.7	32.6	29.2
Total End Use Conservation and Technology to Improve Efficiency	93.4	71.7	102.1	89.5
Energy Extension Service	7.5	5.0	0	0
Total Conservation Research and Development	$160.9	$124.9	$160.0	$140.0

Source: ERDA, FY 1978 Budget to Congress, Statistical Highlights (January 17, 1977), p. 6.

Table 6

FY 1978 ERDA BUDGET TO CONGRESS
PROGRAM TOTAL

	FY77 Estimate		FY78 Estimate	
	B/A	B/O	B/A	B/O
SOLAR ENERGY DEVELOPMENT				
THERMAL APPLICATIONS				
HEATING AND COOLING OF BUILDINGS	$ 86.5	$ 61.0	$ 44.9	$ 61.2
AGRICULTURAL AND INDUSTRIAL PROCESS HEATING	7.8	5.0	10.3	7.6
TECHNOLOGY SUPPORT AND UTILIZATION	11.5	7.2	9.0	6.0
SOLAR ELECTRIC APPLICATIONS . . .	174.9	105.4	223.8	150.
FUELS FROM BIOMASS	9.7	4.5	17.0	9.
TOTAL SOLAR ENERGY DEVELOPMENT	$290.4	$183.1	$305.0	$234.6

Source: ERDA, FY 1978 Budget to Congress, Statistical Highlights (January 17, 1977), p. 9.

E. Fusion

Of the total fusion budget, $304.2 million ($370.9 million) or 71% (72%) is for magnetic confinement technology. The remaining 29% (28%) is for laser fusion R&D. The principal application of the laser fusion technology is for military purposes, i.e. weapons effects simulation, weapons physics modeling, and military power systems.

F. Fission

As seen from Table 7, the Liquid Metal Fast Breeder Reactor (LMFBR) program budget is $736.0 million ($854.7 million) representing 53% (45%) of the fission energy budget (including Fuel Cycle and Safeguards R&D). The LMFBR program alone absorbs 24% (21%) of the entire energy R&D budget of $3.1 billion ($4.0 billion)(Table 3). The true figures are somewhat higher. Hidden in the category "Nuclear Fuel Cycle and Safeguards R&D" are substantial sums directly and indirectly supportive of the LMFBR program. Also the Environmental Research and Basic Energy Sciences budgets should be prorated among the various technologies. A significant fraction of these funds is identified with the nuclear programs, including the LMFBR. All told, the LMFBR program is allocated in excess of one-fourth of all energy R&D funding for FY 1978.

A second noteworthy feature of ERDA's proposed fission energy budget is the launching of an essentially new and, if continued, multibillion dollar program aimed at supporting fuel reprocessing and

TABLE 7

FISSION ENERGY R&D

FY 1978 ERDA BUDGET TO CONGRESS
PROGRAM TOTAL (w/o Pending Supplementals)

(IN MILLIONS)

	FY77 ESTIMATE B/A	FY77 ESTIMATE B/O	FY78 ESTIMATE B/A	FY78 ESTIMATE B/O
LIQUID METAL FAST BREEDER REACTOR				
LARGE PLANTS	$ 7.8	$ 7.5	$ 11.0	$ 9.8
CLINCH RIVER BREEDER REACTOR PROJECT	237.6	171.0	234.8	231.7
FAST FLUX TEST FACILITY	53.9	51.1	56.6	54.6
TEST FACILITIES	93.8	87.7	117.0	101.0
SAFETY	59.8	57.0	125.8	78.9
ENGINEERED COMPONENTS	50.1	53.0	86.9	67.0
PHYSICS	10.7	10.5	12.2	11.9
MATERIALS	11.4	11.3	13.7	12.7
FUELS	121.4	120.8	162.1	123.4
REACTOR ANALYSIS	16.5	15.8	25.3	22.2
OTHER CAPITAL EQUIPMENT	22.7	8.5	9.3	22.8
TOTAL LIQUID METAL FAST BREEDER REACTOR	$685.7	$594.2	$854.7	$736.0
NUCLEAR FUEL CYCLE AND SAFEGUARDS RESEARCH AND DEVELOPMENT				
FUEL CYCLE RESEARCH AND DEVELOPMENT				
URANIUM RESOURCE ASSESSMENT	$ 36.0	$ 29.8	$ 64.8	$ 54.7
SUPPORT OF NUCLEAR FUEL CYCLE	59.0	52.4	140.0	105.6
WASTE MANAGEMENT (COMMERCIAL)	87.7	68.1	175.0	122.0
TOTAL FUEL CYCLE RESEARCH AND DEVELOPMENT	182.7	150.3	379.8	282.3
U-235 PROCESS DEVELOPMENT	96.4	77.7	158.7	120.9
ADVANCED ISOTOPE SEPARATION TECHNOLOGY	47.2	42.2	57.1	51.0
NUCLEAR MATERIALS SECURITY AND SAFEGUARDS	31.4	29.4	40.7	36.7
TOTAL NUCLEAR FUEL CYCLE AND SAFEGUARDS RESEARCH AND DEVELOPMENT	$357.7	$299.6	$636.3	$490.9

TABLE 7 - continued

FISSION ENERGY R&D

FY 1978 ERDA BUDGET TO CONGRESS
PROGRAM TOTAL (w/o Pending Supplementals)

(IN MILLIONS)

	FY77 ESTIMATE		FY78 ESTIMATE	
	B/A	B/O	B/A	B/O
OTHER FISSION				
WATER COOLED BREEDER REACTOR. . .	$ 48.9	$ 38.0	$ 41.6	$ 43.6
GAS COOLED THERMAL REACTOR. . . .	16.4	16.1	17.0	16.0
GAS COOLED FAST BREEDER REACTOR .	13.6	13.1	16.0	14.0
LIGHT WATER REACTOR TECHNOLOGY. .	12.5	10.0	13.0	11.6
TECHNOLOGY DEVELOPMENT AND SPECIAL PROJECTS	12.9	11.9	16.1	14.7
NUCLEAR ENERGY ASSESSMENTS. . . .	7.7	6.7	16.3	12.4
NRC SAFETY FACILITIES	28.3	21.0	27.8	22.6
TOTAL OTHER FISSION.	$140.3	$117.6	$147.8	$134.9

plutonium recycling. Of ERDA's $379.8 million budget for Nuclear Fuel Cycle R&D, at least $78 million is allocated to this new program.[10/]

For over a year the nuclear division at ERDA has been searching for a way to launch this new program of support for the back (or plutonium) end of the nuclear fuel cycle. ERDA's plan stalled temporarily last year when it became widely appreciated that the technologies to be promoted by the plan would greatly increase the risk of nuclear weapons proliferation by making plutonium, the principal nuclear bomb material, far more accessible to both national and subnational groups. Now, however, through some twist of logic ERDA has succeeded in promoting its plan as an antiproliferation measure. This disturbing conclusion is reflected in the September 7, 1976, report of the White House Nuclear Policy Review Group ("Fri Report"), which was stimulated by the growing concern about the relationship between nuclear power and nuclear proliferation. The Fri Report reportedly offered President Ford two options, one of which called for the "contained spread of reprocessing" and multibillion dollar federal support to assist industry to gain experience with reprocessing and plutonium use. This "contained spread" option (and not the alternative non-reprocessing option favored by arms control experts) was apparently the one selected by President Ford in the closing days of his Administration and has received strong support in the FY 1978 ERDA budget. The funds for alternative fuel cycle R&D compare so pitifully with those earmarked for reprocessing that the Arms Control & Disarmament Agency's outgoing Chief remarked that the Ford budget still followed "the traditional track we have been pursuing for the last 20 years." (See attached news reports.)

10/ Office of Management and Budget, Issues '78 (January 1977), p. 38. $78 million is allocated to "Reprocessing R&D and Facility

One likely recipient of federal aid, should ERDA's program be continued, is the Barnwell Nuclear Fuel Plant, a fuel reprocessing plant now being built near Barnwell, South Carolina, by Allied Chemical, Gulf Oil and Royal Dutch/Shell. In terms of required funding, the plant is about one-fourth finished and Allied and its partners have asked the federal government to pay the $750 million necessary to complete the facility.

II. Comparison With FY 1977 Budget

Unlike some other federal agencies, ERDA was permitted a substantial budget increase for FY 1978. In terms of outlays its proposed FY 1978 budget for Energy RD&D is $573 million higher than in FY 1977. The rates at which its various energy programs absorbed this increase is shown in the following table, the data for which are taken from Table 2, above:

Table 8

	% of Increase
Conservation	2.6%
Fossil	9.6
Solar	8.9
Geothermal	3.3
Fusion	19.0
Fission	56.4
LMFBR	(24.6)
Fuel Cycle and Safeguards	(29.1)
Other Fission	(2.6)
	100%

As can be seen, nuclear fission programs absorbed over half of ERDA's budget increase. New funding is thus not being allocated preferentially to previously underfunded energy technology such as conservation, solar and geothermal. Rather, new funding is being absorbed predominantly by the established nuclear technologies.

More than anything else, the nuclear fuel cycle and the LMFBR (breeder reactor) program are responsible for the increase in fission reactor R&D funding. Fully 25% of the $573 million increase in the budget for Energy RD&D goes to the LMFBR program alone.

Both the Fast Flux Test Facility (FFTF) and the Clinch River Breeder Reactor (CRBR), the principal facilities of the LMFBR program, continue to experience large cost overruns despite continued assurances by ERDA officials that the previous estimates were realistic. The FFTF was authorized in 1966 at $87.5 million. It is now 5 years behind schedule and additional delays are expected. The latest GAO estimate of the cost of the FFTF program is $1.153 billion, over 10 times the original estimate. Similarly, the total CRBR cost was last officially placed at $1.95 billion. In 1973 CRBR costs were estimated for Congress at $700 million.

III. Cuts in ERDA Division Requests for FY 1978

Table 9 presents information on the funding requested for each ERDA program by the responsible division within ERDA, the ERDA request to the Office of Management and Budget (OMB), and the President's request to Congress in his FY 1978 budget. It is very instructive to compare the varying degrees to which ERDA

division requests were cut back during this Executive agency review process. Table 10 presents percent cut back in the amount sought by each ERDA program.

Table 9[11/]

ERDA FY 1978 BUDGET REQUESTS

Program	Budget Outlays ($ millions) ERDA Division Request	ERDA Request To OMB	Pres. Request To Congress
Conservation	$238	$218	$140
Fossil	757	650	500
Solar	304	292	235
Geothermal[12/]	96	96	68
Fusion	503	479	431
LMFBR	759	758	736
Nuclear Fuel Cycle R&D[13/]	319	319	282

11/ Source: ERDA, FY 1978 Budget History ("Holifield") Tables: Comparing Division Requests With Requests Submitted To the Office of Management and Budget and To the Congress.

12/ Excludes budget outlays for the Geothermal Resources Development Fund (loan guarantees) which were reduced from $7.1 million (division and ERDA requests) to $6.6 million (OMB request).

13/ The budget summary in the Holifield Tables is different from the summary in the Statistical Highlights. The Holifield Tables do not include U-235 Process Development, Advanced Isotope Development or Nuclear Materials Security and Safeguards in this summary estimate, accounting for the difference between $282 here and the $490.9 in Table 7.

Table 10

Program	% By Which Division Request Cut
Conservation	41
Fossil	34
Solar	23
Geothermal	29
Fusion	14
LMFBR	3
Nuclear Fuel Cycle R&D	12

As these figures indicate, all aspects of the ERDA energy R&D program experience major cuts in program expectations except the LMFBR (fast breeder reactor) program. Budgetary constraints on ERDA are thus being resolved by proceeding with the LMFBR program and cutting back on other energy programs. These cutbacks are particularly severe in the non-nuclear energy programs, particularly energy conservation. The severe cuts in funding for energy conservation are particularly ironic in light of ERDA's recent claims that conservation was being elevated to highest priority. In short, given ERDA's priority commitment to the LMFBR program, the tremendous costs and cost overruns of the LMFBR appear to be cutting deeply into the funding available for developing non-nuclear energy sources.

The New York Times
January 17, 1977
p. 6

Cost of Ford's Plan for Combating Spread of Nuclear Arms Is Put at $2.8 Billion Over the Next 3 Years

By DAVID BURNHAM
Special to The New York Times

WASHINGTON, Jan. 16—An unusual analysis by the White House Office of Management and Budget estimates that the Ford Administration's plan to reduce the spread of nuclear weapons to nations around the world would cost $2.8 billion over the next three years.

The projected expenditure spelled out in the analysis—a copy of which has been obtained by The New York Times—has stirred some objections by officials within the Administration and critics outside it.

The plan to combat the proliferation of nuclear armaments was announced publicly by President Ford three days before the November election after a lengthy and sometimes heated debate within the Administration that pitted the nuclear advocates in the Energy Research and Development Administration against the Arms Control and Disarmament Agency.

The central stated policy of the plan—which, if carried out, might lead eventually to a diminution of the use of nuclear power—was President Ford's statement "that the United States should no longer regard reprocessing of used nuclear fuel to produce plutonium as a necessary and inevitable step in the nuclear fuel cycle."

Shortage of Cheap Uranium Seen

Because of the anticipated shortage of cheap natural uranium and the planned development of the fast breeder reactor that is designed to use plutonium as its basic fuel, the reprocessing of used nuclear fuel to extract its plutonium has been regarded as an essential element in long-term use of nuclear reactors. However, plutonium can also be used in making nuclear weapons.

According to the analysis of the Office of Management and Budget, the various Government actions required to carry out President Ford's policy would cost $531 million during the current fiscal year, slightly more than $1 billion in the 1978 fiscal year and $1.2 billion in the fiscal year 1979.

The largest part of this expense, according to the analysis, is the $1.2 billion the Federal Government plans to spend in enlarging its plants that enrich or strengthen natural uranium to the point where it can be used to fuel reactors. This enlargement is viewed as necessary mainly to discourage other nations from feelingthey must build their own reprocessing plants, a step that moves them closer to the ability to make nuclear weapons.

Safe Waste-Disposal Necessary

Another major part of the cost of the Ford Administration proposal is the $521 million the Office of Management and Budget estimated would be required in the next three years to develop a program to demonstrate measures for the safe long-term disposal of nuclear wastes.

Like the President's policy statement last fall, the budget to put the program into effect was a subject of considerable dispute among the various agencies of the Administration that are concerned about nuclear power and proliferation of nuclear arms.

In response to an inquiry, for example, Fred C. Ikle, the outgoing director of the Arms Control and Disarmament Agency, said he was disappointed by some parts of the budget compromise worked out by the White House. "The budget recommendations continue to reflect the more traditional track we have been pursuing for the last 20 years," Dr. Ikle said in an interview last week.

"We in the Arms Control and Disarmament Agency would have liked a much more vigorous thrust for such areas as alternative nuclear technologies, spent fuel storage capacity and funds to help the less-developed countries find nuclear sources of energy," he said.

J. Gustav Speth, a lawyer in the Washington office of the Natural Resources Defense Council, said the proposed budget "contradicts the signal that the President tried to send out to the American people and the world just before the election."

Mr. Speth, whose organization has played a major role in legal challenges to the use of plutonium, also charged that the budget for the antiproliferation program "seems designed to commence the use of plutonium a year or two from now rather than immediately as had been originally planned."

Mr. Speth, in an interview, was particularly critical of $90 million set aside by the Administration plan to continue development of technologies for separating plutonium from spent fuel and the $180 million allotted for designing facilities for such purposes as solidifying nuclear wastes.

Both Mr. Speth and Dr. Ikle criticized as far too small the $3 million the State Department will use to help less-developed nations develop nonnuclear energy resources and the $69 million the energy agency was granted to conduct research on alternative methods of extracting energy from spent fuel without producing plutonium.

Mr. Speth also made a broader criticism. "How can the Ford Administration say it is trying to curb the proliferation of nuclear weapons when it spends so much money developing the technology that surely will lead to the spread of plutonium?" he asked.

An official at the Office of Management and Budget, who asked not to be identified, defended President Ford's proposals and the projected budget for carrying them out. "This is a balanced effort to deal with an extremely complex world problem," he said.

He added that it was not proper "to make the assumption that reprocessing spent fuel is antithetic to the nonproliferation of weapons."

The Washington Post

December 27, 1976

p. A4

OMB Urges Ford To Aid Private Atomic-Fuel Plant

By Robert Gillette
Los Angeles Times

White House budget officials have recommended that President Ford approve a $12 million program for next year to help a private corporation complete a nuclear fuel reprocessing plant in South Carolina that many authorities regard as a white elephant.

The plant, located at Barnwell, near Columbia, S.C., is designed to process the highly radioactive spent fuel of nuclear power reactors by chemically extracting plutonium and leftover uranium from it. The plutonium and uranium could then be recycled into new reactor fuel.

Owned by Allied General Nuclear Services, Inc., a joint venture of the Allied Chemical Corp. and the General Atomic Co. (itself a subsidiary of Gulf Oil and Royal Dutch Shell), the plant is the only one of its kind in the United States likely to be operating in the next decade. The plant has cost $270 million and its future is much in doubt.

Industry and government experts see the economics of such recycling as marginal at best. In addition, the prospect of a commercial plutonium industry here and abroad has brought fears that trade in plutonium may stimulate the spread of nuclear weapons.

On Oct. 28, President Ford cited the "special dangers associated with plutonium" and urged other nations to "exercise maximum restraint" in using and selling plutonium technology.

To meet Nuclear Regulatory Commission regulations, Allied General will need two supplementary facilities at its plant, estimated to cost $525 million, before it can receive an operating license from the NRC. The $12 million program tentatively approved by the White House Office of Management and Budget would allow the Energy Research and Development Administration to begin planning and design work on the two additional facilities as a federal demonstration project.

One facility, expected to cost $400 million, would solidify highly radioactive wastes, prior to eventual shipment to a federal repository, which does not yet exist. The second facility, to cost $125 million, would convert liquid plutonium nitrate into solid plutonium oxides, a form considered safer and more convenient for storage.

The $12 million program is subject to final approval by President Ford as well as to alteration by the incoming Carter administration.

OMB officials declined to comment on the proposal.