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# CONFIDENTIAL

COVER SHEET

MEETING WITH  
ROY ASH

FEA, ERDA, AREAS OF NATURAL  
RESOURCES, ENERGY AND SCIENCE  
AND REMAINING FOREIGN ASSISTANCE  
ISSUES

Tuesday, December 17, 1974  
2:00 P. M.



1976 Budget  
Session With The  
President  
12/17/74

1976 Budget  
Session With The  
President  
12/17/74

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# CONFIDENTIAL

COVER SHEET

THE WHITE HOUSE

WASHINGTON

December 16, 1974

MEETING WITH ROY L. ASH

Tuesday, December 17, 1974

2:00 p.m. (60 minutes)

Oval Office

From: ~~Roy L. Ash~~

I. PURPOSE

To make final FY 76 budget decisions for the Federal Energy Administration, the Energy Research and Development Administration, several smaller agencies in the areas of natural resources, energy and science, and a few remaining foreign assistance issues.

II. BACKGROUND, PARTICIPANTS, AND PRESS PLAN

- A. Background: The FY 76 budget submissions for FEA, ERDA, several smaller agencies in the areas of natural resources, energy and science and a few foreign assistance areas have been reviewed and the results have been reported to the affected agencies. This meeting is to consider the issues raised during the above reviews that require Presidential consideration and determinations.
- B. Participants: Roy L. Ash, Paul O'Neill, Frank Zarb, Dale McOmber, & Donald Ogilvie
- C. Press Plan: David Kennerly photo

III. TALKING POINTS

- A. Frank Zarb, what is the first issue we should consider in the energy area?
- B. Frank Zarb, which of the smaller agencies in the areas of natural resources, energy and science should we consider first?
- C. Don Ogilvie, will you describe the foreign assistance issues we will be considering today?

Foreign Aid

Foreign Assistance

1976 Budget

Issue #6: Middle East Economic and Military Assistance

Statement of Issue

What amounts of military and economic assistance should be included in the Budget for Israel, Jordan, Egypt, and Syria?



	1974	1975		1976		
		<u>Budget</u>	<u>Est.</u>	<u>Alt.#1</u> <u>Agency Req.</u>	<u>Alt.#2</u> <u>OMB Rec.</u>	<u>Alt.#3</u>
(\$ millions)						
<u>Egypt</u>						
Supporting assistance	--	250	250	300	250	50
<u>Syria</u>						
Supporting assistance	--	( 75) <sup>a/</sup>	( 75) <sup>a/</sup>	90	75	25
<u>Jordan</u>						
Grant MAP	40	100	30	100	30	30
FMS credit	--	30	30	30	10	10
Supporting assistance	46	78	78	78	35	15
<u>Special Requirements Fund</u>						
Subtotal	--	100 <sup>a/</sup>	100 <sup>a/</sup>	25	25	25
	86	558	488	623	425	155
<u>Israel</u>						
FMS credit	300	300	300	300	300	300
Supporting assistance	50	50	250	100	50	50
Emergency Sec. Ass't.	2200	--	--	--	--	--
Grand Total	2636	908	1038	1023	775	505

a/ \$75 million of Special Requirements Fund is planned for Syria.

Background

Significant changes in the diplomatic situation in the Middle East have resulted in basic uncertainties regarding the immediate objectives of our assistance in the area.

- Negotiations have been stalled for several months.

- The Arab summit conference in Rabat designated the Palestine Liberation Organization, rather than Jordan, to negotiate with Israel for return of the West Bank.
- The Arab oil producers at the Rabat conference pledged \$2.3 billion annually in aid to Egypt, Jordan, and Syria in addition to the \$5.3 billion pledged in the past year.



	<u>Cash</u>	<u>Other Grants</u>	<u>Loans</u>	<u>Rabat Pledge</u>	<u>Total</u>
	(\$ millions)				
Egypt	1,320	1,650	868	1,000	4,838
Syria	640	340	224	1,000	2,204
Jordan	<u>181</u>	<u>4</u>	<u>45</u>	<u>300</u>	<u>530</u>
Total	2,141	1,994	1,137	2,300	7,572

These events affect the role and impact of U.S. assistance. Because the United States does not wish to signal any change from the current negotiating strategy at this time, however, the proposed assistance programs are designed to be neutral as regards signals of change.


Israel. The major unknown affecting future military assistance requirements is the U.S. response to Israel's request for \$1.5 billion annually in grant aid for a ten year military enhancement program. Since the October 1973 war the U.S. has agreed to provide about \$2.5 billion in arms and \$2.5 billion in financing, \$1.5 billion on a grant basis. An additional \$300 million in military sales credits will be provided in 1975. Although there has been no economic requirement for the general balance of payments support provided to date, a continued high level of mobilization or withdrawal from the Sinai oil fields could change this.

Jordan. The United States has provided aid to Jordan to keep Israel's longest border secure and to assure cooperation in negotiations. Military assistance helps to maintain army loyalty as the backbone of a moderate regime. Economic assistance has been justified as budget support despite the country's large foreign exchange holdings. Jordan's diminished role in the negotiations and the sharply increased Arab aid have diminished the need for high aid levels.

Egypt and Syria. Economic aid to both countries is designed to indicate U.S. interest in broadening and balancing its relationships in the area, and to provide incentives to enter into those relationships. The massive assistance flows from the Arab oil producers have diminished the incentive effect, however, and reduced the diplomatic leverage of U.S. aid. Disbursed or committed assistance will meet both projected foreign exchange deficits and likely development and reconstruction activities for several years,

given the sluggish administrative pace of those governments. U.S. assistance requested for 1975 will not begin to flow until 1976, due to delayed enactment of foreign assistance appropriations.

Alternatives

- 
- #1. Increase economic aid over 1975 proposed levels and maintain military aid at those levels, with a total of \$1,023 million (State req.).
  - #2. Maintain 1975 proposed levels, with the exception of reduced aid to Jordan, with a total of \$775 million (OMB rec.).
  - #3. Reduce aid to levels more justifiable in programmatic terms, with a total of \$505 million.

Analysis

Alternative #1:

- is designed to provide greater incentives for cooperation on a Middle East settlement.
- includes higher levels of economic aid to Egypt, Syria and Jordan, which were proposed before the extent of aid from Arab oil countries was appreciated.
- proposes levels of aid to Jordan difficult to justify in terms of that country's needs and its decreased role in negotiations.
- minimizes flexibility by raising assistance levels before we receive anything in return.

Alternative #2:

- is neutral as regards signals but communicates confidence in the established negotiating strategy.
- takes account of the diminished importance of Jordan in the negotiations and of the increased economic aid from Arab oil producers.
- does not take into account increased levels of oil producer assistance to Egypt and Syria.

Alternative #3:

- reflects changed diplomatic and economic conditions.

- takes into account the massive assistance flows from oil producer countries to Egypt, Syria, and Jordan.
- shifts our assistance strategy away from resource transfers toward a broader technical assistance orientation in which the United States has an advantage over Arab oil producers.
- shifts balance of payments support requirements onto the Arab oil countries.



Agency Request: Alternative #1 - increase assistance over 1975 Budget level. The NSC strongly supports the State request. The levels recommended reflect the judgment of Secretary Kissinger as to the mix of U.S. participation in security and development efforts in the area most likely to encourage the parties to continue their efforts to attain a lasting peace.

OMB Recommendation: Alternative #2 - maintain assistance at 1975 Budget level, with the exception of Jordan. State's decisions on economic assistance were made before the impact of the Rabat conference, discussed above, was appreciated. (DOD concurs in the lower military assistance level for Jordan.)



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FOREIGN ASSISTANCE

1976 Budget

Issue#12: Military Assistance to  
South Vietnam

Statement of Issue

How much grant military assistance for South Vietnam in 1975, 1976 and Transition Quarter should be requested in the 1976 budget?



	1975		1976	T/Q	Total Request
	<u>Approp.</u>	<u>Suppl.</u>	<u>Est.</u>	<u>Est.</u>	
	(\$ millions)				
Alt. #1 (NSC)	700	300	1293	355	2648
Alt. #2 (DOD)	700	-	1293	355	2348
Alt. #3 (OMB)	700	300	1000	250	2250

Background

Prior to December 3, there was agreement on the levels for military assistance to South Vietnam - \$700 million in 1975, \$1000 million for 1976 and \$238 million for the transition quarter. It was understood that DOD probably would wish to submit a supplemental request later for \$300 million for 1975 if a sizable attack occurs in the coming dry season.

Secretary Schlesinger, with Dr. Kissinger's agreement, has now decided to increase his 1976 recommendation to \$1,293 million, based on recent field visits by DOD staff (Ambassador Martin's estimate was \$1,950 million.). DOD states that the additional \$300 million for 1975 and \$293 million for 1976 will be required whether or not there is a major enemy attack this spring. DOD is, therefore, prepared to assert now the need for \$1,293 million for 1976, as well as an increase of \$117 million for the transition quarter (from \$238 million to \$355 million). However, Secretary Schlesinger does not wish to include a request for the \$300 million supplemental for 1975 in the 1976 Budget on the grounds that the chances for securing additional 1975 funds from the Congress are poor at this time but should be more favorable later after the anticipated North Vietnamese offensive. Secretary Schlesinger also recommends that the President indicate in his Budget Message that additional funds will probably be needed in 1975 although they are not being requested now.

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E.O. 12356, Sec. 3.4 (b)  
White House Guide Lines, Feb. 24, 1983

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By DAD NARS, Date 6/27/85

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Alternatives

- #1. Request \$1293 million for 1976 and \$355 million for the transition period. Propose a \$300 million supplemental for 1975 in the 1976 Budget.
- #2. Request \$1293 million for 1976 and \$355 million for the transition period. Make no provision for a 1975 supplemental except by reference in the Budget Message (DOD rec.).
- #3. Request \$1000 million for 1976 and \$250 million for the transition period. Propose a \$300 million supplemental in the 1976 Budget (OMB rec.).

Analysis

The only apparent advantages of a 1976 request of \$1293 million would be to signal (1) to the Congress that \$700 million annually clearly is not enough to fund the war and (2) to Hanoi our intention to support South Vietnam. This approach, however, risks antagonizing the Congress at a time when the case for an 85% increase might be more difficult to make than later when an offensive is under way. As for the 1975 supplemental, failure to request the \$300 million 1975 supplemental in the Budget could make a 1976 request of \$1293 million appear unreasonably high compared to the \$700 million appropriated for 1975.

Alternative #3 would assert the validity of a \$1000 million level for both 1975 and 1976, while leaving open the option to amend the 1976 request upward later if justified by events in South Vietnam.

DOD Recommendation: Alternative #2 -- Request \$1293 million for 1976 and \$355 million for the transition period. Defer the 1975 supplemental.

NSC Recommendation: Alternative #1 -- Request \$1293 million for 1976 and \$355 million for the transition period. Include a \$300 million supplemental request for 1975 in the 1976 Budget.

OMB Recommendation: Alternative #3 -- Request \$1000 million for 1976 and \$250 million for the transition period. Include a \$300 million supplemental request for 1975 in the 1976 Budget.

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EX-IM Bank

THE WHITE HOUSE

WASHINGTON



MEMORANDUM FOR: THE PRESIDENT

FROM: Roy L. Ash

SUBJECT: 1976 Budget decisions: Export-Import Bank  
of the United States

The agency request and my recommendations with respect to 1976 budget amounts for the Export-Import Bank are presented in the tabulation attached (Tab A). We have not yet had an opportunity to discuss my recommendations with the Bank.

One key issue has been identified for your consideration (detail at Tab B).

Program Level

The Export-Import Bank recommends a \$17.3 billion program level, an 84 percent increase over the estimated 1975 level, in order to meet all potential new business.

OMB recommends a \$10.4 billion program level, a 10 percent increase over 1975, in order to encourage greater selectivity in lending and to moderate the federal government's demand on the domestic credit market.

Decision: Approve agency recommendation \_\_\_\_\_  
Approve OMB recommendation \_\_\_\_\_

Attachments

## EXPORT-IMPORT BANK OF THE UNITED STATES

1976 Budget

Summary Data

	Limitation on Program Activity <u>a/</u>	Program Activity at 100%	(In millions)	
			Employment, end-of-period	Total
			Full-time Permanent	
1974 actual.....	5,265	8,991	399	405
1975 January budget.....	6,403	13,570	420	425
enacted.....	... <u>b/</u>	...	...	...
supplemental recommended..	0	0	0	0
OMB recommendation.....	6,403	13,570	420	425
1976 planning ceiling.....	xxx	xxx	xxx	xxx
agency request.....	9,457	17,275	500	521
OMB recommendation.....	5,698	10,400	420	425
Transition period				
agency request.....	2,364	4,319	500	521
OMB recommendation.....	1,425	2,600	420	425
1977 OMB estimate.....	5,698	10,400	420	425

a/ Eximbank's statutory limitation includes guarantees and insurance counted at 25 percent of face value.

b/ Congressional action is uncompleted.

## EXPORT-IMPORT BANK OF THE UNITED STATES

1976 Budget

Statement of Issue

What level of Eximbank lending should be permitted in 1976?

Eximbank Program Levels  
(\$ billion)

	1974	1975		1976	
		Budget	Est.	Alt. #1 Req.	Alt. #2 OMB Rec.
Direct Loans	3.9	3.6	3.5	6.1	3.9
Discount Loans	0.9	2.0	1.3	2.3	1.4
Guarantees and Insurance	4.2	8.0	4.6	8.9	5.1
Total Program	9.0	13.6	9.4	17.3	10.4
Outlays*	1.2	1.3	1.3	1.8	1.1

Background

The Eximbank provides direct credits to support U.S. exports, and refinances (discounts) and insures export loans by U.S. banks and exporters. Direct loans are currently charged a 7 or 8 percent interest rate. The Bank normally provides credits for 30 to 45 percent of the value of an export transaction, the balance being covered by a cash downpayment and commercial financing.

The Bank has grown rapidly over the past five years. This has been the result of its aggressiveness in seeking new business and of the fact that its interest rate remained low as commercial export credit rates were rising. With generous program limits, there was no incentive for the Bank to be selective in its use of funds. As a result, Exim has tended to become the lender of first resort at the expense of private credit.

In 1974, the Bank for the first time in several years found itself constrained by its budget ceiling. Forced to begin restraining demand for its financing, Exim raised its interest rates (from 6 percent to 7 and 8 percent) and began supporting a smaller portion of export transactions. Nevertheless, the Eximbank has continued to seek increases in its ceilings to

\* Eximbank outlays are excluded by statute from the Budget totals.

allow it to extend credits to all comers regardless of demonstrable need for subsidized financing.



The Eximbank's 1976 budget request of \$17.3 billion represents an increase of 92 percent over the 1974 level, 27 percent over the 1975 Budget, and 84 percent over the estimated 1975 level. This growth is considerably higher than that of exports as a whole. The budget request follows a pattern established over the past few years: sizable increases in the proportion of exports financed by the government and budget limits that exceed the business which can actually be done by the Bank without significantly relaxing loan criteria.

### Alternatives

- #1. \$17.3 billion. Provide authority sufficient to meet the demand for loans under current Eximbank lending policies (Agency req.).
- #2. \$10.4 billion. Limit program growth to established growth in exports thereby keeping pressure on Exim to limit its program to priority uses (OMB rec.).

### Analysis

The Eximbank request would result in Exim financing 22 percent of the value of all nonagricultural exports in 1976, compared with 12 percent in 1970, 14 percent in 1974 and an estimated 13 percent in 1975. The Bank argues that it must continue to meet demand, especially since "our nation is facing the specter of large outflows of payments for energy and raw materials" over the next few years.

The request must be considered in terms of both its domestic impact and its impact on the international economic position of the United States. Domestically, Exim's subsidy diverts credit from other priority uses such as homebuilding, business investment, and State and local governments. Also, because the goods are exported rather than consumed at home, Exim's subsidy has a less favorable effect on inflation and business activity than an equivalent subsidy applied to production for domestic use.

In terms of our international position, the United States must export all it can, but artificially swelling the level of exports through a subsidy does nothing to lower the real cost to the economy of energy and raw materials imports. Further, credit such as Exim provides does not get repaid for 8 to 15 years, causing a capital outflow until repayment occurs and a weakening of the near-term balance of payments. Finally, interest subsidies tend to give some foreign buyers an advantage over their U.S. competitors. Pan Am and TWA have recently complained of this in airline competition.



In our view, Exim is justified in providing below-market interest rates only if necessary to meet foreign government credit competition. Efforts are now underway to reduce this competition among the U.S., Europe and Japan. In early October, an agreement in principle was reached by these countries not to provide official credits to support exports to each other or to the oil-rich countries, although in practice Exim disagreement with details of the agreement has made it ineffective. Work on a more specific "gentlemen's agreement" limiting official rates and maturities is now at an advanced state. Continuing budgetary constraints would encourage Exim to play a more positive role in these negotiations.

The OMB recommendation would provide such a constraint by increasing Exim's program ceiling by the expected rate of growth in U.S. exports. This will require added discipline on the part of the Bank to restrain demand for its loans, perhaps by increasing its interest rate or by developing a screening procedure to better identify transactions where commercial financing is unavailable.

Agency Request: Alternative #1, a \$17.3 billion program.

OMB Recommendation: Alternative #2, a \$10.4 billion program.



Energy

THE WHITE HOUSE  
WASHINGTON



MEMORANDUM FOR: THE PRESIDENT

FROM: Roy L. Ash

SUBJECT: 1976 Budget Decisions - Energy Research and  
Development Administration

The agency request and my recommendations with respect to the overall 1976 budget amounts for the new Energy Research and Development Administration (ERDA) are attached (Tab A). The recommended budget for specific energy research and development programs - together with a summary of all ERDA programs - is attached (Tab B). Also attached is an overview of our energy research and development strategy (Tab C). One issue has been identified for your consideration (Tab D).

Since ERDA has not yet been officially established, we have conducted the budget discussions on ERDA programs chiefly with the Chairman of the AEC, but also with representatives of Interior, NSF, and EPA--agencies that will be contributing programs to ERDA. Because he has only just been confirmed as ERDA Administrator, Dr. Seamans is unlikely to have an opportunity for in-depth review of his budget prior to completion of the overall 1976 budget. As a result, Dr. Seamans should be permitted to consider reprogramming or budget amendment actions next spring after he has completed his overall assessment of the ERDA budget. In general, however, I believe the 1976 budget for ERDA is adequate to reflect Administration commitment to a strong, balanced energy R&D effort and should provide a reasonable basis for Dr. Seamans to discharge his new responsibilities.

My major recommendations in the FY 1976 ERDA budget are as follows:

Energy Research and Development

The recommended budget for energy R&D, summarized at Tab B, includes increases in the following major areas:

. Nuclear

- Breeder program: Continue development of the Liquid Metal Fast Breeder Reactor (LMFBR) including the construction of the Clinch River Breeder Reactor (CRBR)



demonstration plant. However, because of the \$1 billion growth in the cost estimate for the CRBR project, the new ERDA Administrator will need to conduct a complete review of the LMFBR program before any final decision to proceed with the CRBR demonstration plant.

- Fusion: Conduct research and development on Controlled Thermonuclear Fusion at the level requested by AEC including the initiation of a \$215 million test reactor project. This funding level should result in significant progress in a technology which potentially may be the ultimate major solution to U.S. power needs (beyond the year 2000).
- Laser uranium enrichment: Accelerate the development of technology for using lasers to enrich uranium for civilian power reactor fuel. Although technically difficult, the laser separation process could lead to major reductions in the cost of enriching uranium and to recovering more fuel from mined uranium.

#### Non-Nuclear

- Fossil fuel: Continue the growth in programs aimed at producing clean liquid and gaseous fuels from coal, burning coal directly without environmental damage, and improving the technology for coal extraction, both underground and above ground.
- Solar: Expand further research and development efforts in solar energy. Principal thrusts are in heating and cooling of buildings, solar thermal production of energy, wind power and photo voltaics (converting solar radiation directly to electricity in solar cells).
- Oil, gas, and shale: Maintain programs to supplement industry's efforts to develop improved methods of oil and gas extraction and oil shale conversion.
- Stack gas cleaning: Continue the important development efforts in environmental control with emphasis on improved technologies for stack gas desulphurization to permit use of high sulphur coal.
- Conservation R&D: Continue efforts in conservation R&D with major programs in electric transmission distribution and storage, automotive propulsion and improved buildings and materials technology.

## Non-Energy R&D ERDA Programs

The recommended budget for non-energy R&D programs of ERDA, also summarized in attachment B, covers the following principal program areas:



### Defense Programs

- Continue research and development and underground testing of nuclear weapons at about the FY 1975 level of effort (FY 1976 outlays \$535 million).
- Produce nuclear weapons for DOD at slightly below the FY 1975 funding level (FY 1976 outlays \$489 million). Require decrease in overhead costs consistent with reduced production output.
- Continue research and development on Adm. Rickover's program to develop improved propulsion reactors for Naval ships including Trident and high speed attack submarines (FY 1976 outlays \$239 million).
- Continue operation of four production reactors which make plutonium and tritium for nuclear weapons. Have AEC renegotiate its current contract with the Washington Public Power Supply System to seek a \$30 million increase in revenues from the sale of steam from the N Reactor (Richland, Washington). In return for a more equitable cost sharing, offer the Northwest utilities a several year extension of operations for N Reactor beyond the presently scheduled shutdown in October 1977.

### Uranium Enrichment and Other Programs

- Continue to expand the capacity of the current AEC plants which provide enriched uranium fuel for civilian power reactors (FY 1976 outlays \$745 million). Increase the price charged by the Government for uranium enrichment to a level comparable to that which a commercial enterprise would require (increase in FY 1976 revenues will be \$86 million for a new uranium enrichment revenue total of \$661 million) to encourage private entry into the building of future uranium enrichment capacity.
- Continue the operation of AEC's four large high energy physics accelerators at a slightly higher rate of utilization in order to provide a more productive scientific output (FY 1976 outlays \$182 million).



## Agency Appeals

### AEC

AEC originally appealed for the restoration of \$77 million of FY 1976 program outlays for its portion of the ERDA budget. The appeals covered a large number of relatively small items. However, in subsequent discussions with Chairman Ray, she listed critical appeals totalling \$32 million primarily for civilian power reactor development, design of a radioactive waste storage facility, weapons research and development, physical research, and environmental effects research.

We have reviewed Chairman Ray's compromise solution and are in general agreement that these are the priority areas for any restoration of funds. However, in order to avoid a possible impact on the production of nuclear weapons, we would recommend that within the \$32 million an additional \$5 million be provided for the nuclear weapons program. This can be accommodated by reducing the amounts added to physical research and environmental effects research without a major program impact.

Outside of these appeals, the only major program issue remaining for the AEC programs is the proposed construction of a new experimental device for high energy physics research designated the Positron-Electron Project (PEP). We would continue to recommend against starting this major \$72 million facility in the 1976 Budget and the Science Adviser concurs in its deferability. This issue is covered under Tab D.

AEC also originally appealed OMB's decision to add \$116 million of revenues by (a) increasing the charge for uranium enrichment (\$86 million) and (b) increasing the price charged for steam from the N Reactor (\$30 million) at Hanford, Washington. (This reactor is used to produce weapons material but sells excess steam to the Bonneville Power Administration.) However, AEC no longer objects to showing the increased charge for uranium enrichment in the FY 1976 budget, which will be included under proposed legislation. In addition, AEC and Bonneville appear to have reached a satisfactory basis upon which to negotiate an increased price for the steam from the N Reactor.

### Interior

The appeals for the Office of Coal Research (OCR), totalling \$25 million in outlays, are in three areas: coal demonstration plant program, transmission/distribution research, and administrative support costs.

OCR indicates that \$8 million is critical to ensure that the coal demonstration program is not held up because of inability to order long-leadtime items, and Interior has agreed not to further appeal other items if this additional allowance is approved. OMB would agree that this is the priority area for restoration of funds.



Appeals for the Bureau of Mines, totalling \$6 million in outlays, are for continuing a demonstration wood waste-to-oil project and for expanding its underground stimulation program for secondary and tertiary recovery of oil and gas. We believe these increases are without program merit. Interior will not further appeal.

In the Transmission/Distribution R&D program an increase of \$3.5 million in outlays is appealed primarily to keep FY 1976 at the FY 1975 program level. Interior will not appeal to you for a further increase with approval of this allowance.

#### NSF

An additional \$11 million in outlays is appealed for solar R&D over an OMB mark of \$53 million which has already allowed substantial increases relative to FY 1975. Thus, no additional allowance is recommended. No further appeal is anticipated.

The Agency appeal for geothermal R&D is \$11 million in outlays over its initial allowance of \$16 million. The present OMB mark, while below the 1975 level of \$20 million, allows for continuing research on advanced technology subsystems but relies more on the private sector to apply technology. NSF will not appeal.

#### Summary of ERDA FY 1976 Budget and Appeal Actions

	<u>Req.</u>	<u>Director's Review</u>	<u>Agency Appeal</u>	<u>Revised OMB Recom.</u>
AEC programs.....	3,554	3,313	+193	+32
Interior programs.....	423	349	+39	+12
EPA programs.....	16	9	-	-
FEA programs.....	3	3	-	-
NSF programs.....	66	73	+22	-
Total Outlays.....	4,062	3,747	+253	+44



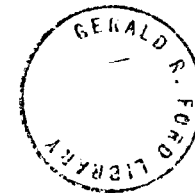
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION

1976 Budget

Summary of Resources and Personnel

	(in millions)		Employment, end-of-period	
	Budget Authority	Outlays	Full-time Permanent	Total
1974 actual <sup>1/</sup> .....	2,490	2,326	6,742	7,016
1975 January Budget .....	3,431	3,128	7,105	7,436
enacted .....	3,545	3,231	XXX	XXX
OMB recommendation .....	3,496	3,135	7,400	7,731
1976 agency request (AEC-NRC + DOI + NSF + EPA + FEA) .....	4,508	4,062	8,134	8,785
OMB recommendation .....	4,204	3,791	7,611	7,950
Transition period				
OMB recommendation .....	1,172	1,108	7,611	7,950
1977 OMB estimate .....	4,639	4,539	7,828	8,167

<sup>1/</sup> Estimates for 1974 and 1975 are computed from personnel and resources associated with those programs designated for transfer to ERDA.





TAB B

Summary of Energy and ERDA Programs

(Outlays in \$ millions)

	<u>FY 1974</u>	<u>FY 1975</u>	<u>Agency Request</u>	<u>Directors Review</u>	<u>FY 1976 Appeal</u>	<u>Revised OMB Recommendation</u>
<u>Energy R&amp;D Programs</u>						
Fission (inc. laser uranium enrichment)	540	682	761	747	+24	+5
LMFBR	(354)	(449)	(449)	(457)	(8)	(0)
Fusion	99	147	202	207	-	-
Fossil fuel	79	231	404	344	+17	+8
Solar	9	23	91	54	+11	0
Oil, Gas, Shale	13	28	43	38	+6	0
Environment Control (inc. stack gas cleaning)	58	52	80	49	-	-
Conservation	36	55	132	79	+15	+4
Geothermal	7	20	27	21	+11	0
Other	5	10	15	15	-	-
<u>Total Energy R&amp;D</u>	845	1,248	1,755	1,553	+84	+17
Less Non-ERDA Programs	-135	-199	-320	-215	-	-
<u>Total ERDA Energy R&amp;D</u>	710	1,049	1,435	1,338	+84	+17
<u>Non-Energy R&amp;D Programs</u>						
Defense related	1,344	1,494	1,657	1,602	+17	+10
Uranium Enrichment production	342	497	731	734	-	-
Other	728	717	885	835	+36	+17
<u>Total All ERDA</u>	3,124	3,757	4,708	4,509	+137	+44
Less, Revenues	-798	-622	-646	-762	+116	0
<u>Total ERDA Budget</u>	2,326	3,135	4,062	3,747	+253	+44



TAB C

Overview Paper  
Energy R&D Crosscut Review  
1976 Budget



I. Introduction

A. Role of R&D in Overall Energy Policy

- . Although all the specifics of a national energy policy have not yet been agreed upon, it is now clear that, for reasons of national security as well as economic stability, the U.S. must move to become less dependent on foreign energy supplies.
- . R&D, although by no means the only potential contributor to achieving U.S. energy independence, can provide important new energy supply and utilization options for the future.
- . Thus, the overall goal of an energy R&D program is to assure development of a range of commercially viable and environmentally acceptable technological options to provide the capability to use more fully U.S. domestic energy resources.
- . Due to long development lead times, major payoffs from energy R&D will come after 1985. However, because of gradual depletion of domestic fossil energy resources currently in widespread use and an expected increase of 50% in total U.S. energy demand by 1985, it will be important to have new technologies available for possible commercialization in this time frame.

B. Motivation for Continuing to Invest in Energy R&D

1. Resource Considerations

Domestic Energy Consumption and Supplies  
(in  $10^{15}$  Btu or Quads)

<u>Fuel Source</u>	<u>Consumption 1972</u>	<u>Proven Reserves*</u>	<u>Recoverable Resources*</u>
Coal	12.5	10,746	33,000
Oil	34.1	272	590-1,920
Gas	22.1	257	1,038-1,701
Shale	0.0	551	1,053
Hydro	2.9	N/A	N/A
Nuclear	0.6	29,200	88,200
Solar	0.0	0.0	N/A
Geothermal	0.0	negligible	unknown
TOTAL	72.2**	40,000+	132,000+

- Although oil and gas, including imports, account for about 80% of domestic energy consumption, they represent less than 2% of U.S. domestic proved recoverable energy reserves and about 1% of recoverable resources.

- Even at \$11/barrel (in 1974 dollars), domestic production of oil and gas is likely to peak in the middle 1980's and decline thereafter, even with extensive use of advanced recovery technologies and aggressive exploration of OCS and Alaska.

- By contrast, coal and nuclear fuel supplies--which currently provide for only 18% of domestic consumption--account for the remaining 98% of energy reserves and 99% of resources.

\* Entries correspond to full energy content of resource and do not take account of efficiencies of utilization.

\*\*1985 demand is estimated to be between 103 and 118 Quads, depending on the prevailing world price of oil.

- Although domestic coal supplies are extensive and accessible, their use is severely limited by environmental constraints. Widespread use of coal without relaxing environmental regulations will require new clean conversion technologies (e.g., gasification, liquefaction) or those permitting direct use of coal (e.g., flue gas desulphurization).
- Current projections of nuclear plant capacity indicate that in 20 to 30 years, all usable supplies of uranium to fuel current generation of reactors would be fully committed. Tapping 98% of known U.S. nuclear resources, represented by U<sup>238</sup> and thorium, will require development of breeder reactors.
- Potentially large solar and geothermal resources are currently limited by technological and economic uncertainties associated with their recovery. Their economical use will require development of new or improved technolo-



## 2. Possible Benefits of Energy R&D

- . Could provide insurance for the future against unavailability of reasonably priced foreign and domestic oil, and gas and uranium.
- . Could make available lower cost, more efficient and environmentally preferable technologies to those currently available.
- . Could broaden range of energy resource utilization options available to U.S. at an earlier date than would otherwise be the case, and at a cost far below the cost to the U.S. if options are not available when needed.

- Could demonstrate U.S. resolve to become less energy dependent and, thus, increase--to some extent-- U.S. leverage in international matters related to energy.

C. Justification for Federal Participation

- Rationale for Federal involvement in energy R&D is to compensate for inability of market system to meet adequately, or in a timely fashion, certain important U.S. goals in the area of national security, environmental protection, and economic growth and stability. More specifically, Federal efforts may be needed:

- To increase the probability of success of the Nation's energy R&D effort by assuring program continuity despite short-term fluctuations in market incentives;
- To accelerate significantly achievement of U.S. capability to make use of the full range of its domestic energy resources;
- To ensure that the U.S. energy R&D effort gives adequate emphasis to all relevant national goals, particularly those which cannot be readily internalized into market incentives by other forms of Federal intervention;
- To supplement private sector investment at stages of R&D where appropriable benefits are not commensurate with the costs and risks (e.g., basic research, first demo plants);
- To compensate for structural imperfections in the market such as excessive fragmentation and undercapitalization, and including those which may result from Federal intervention justified on other public policy grounds (e.g., antitrust laws, utility price regulations, etc.); and



- To support Federal regulatory activities and procurement required for fulfillment of recognized missions of certain Federal agencies.

- While in principle Federal regulation is an alternative to Federal support of R&D, in practice, past attempts to promote technological innovation through regulation have tended to introduce long-term distortions in the market and, in some cases (e.g., auto emission regs.), have compromised other important goals (e.g., fuel efficiency) and created disincentives to development of long-term solutions (e.g., new auto engines).

- Though the need for continuing, for the present, a Federal role in supporting energy R&D is indicated, it is imperative that the Federal effort be structured to encourage private investment and to avoid unnecessary government expenditures which merely replace private efforts.

- Private sector participation in planning, financing, and executing the R&D program will reduce requirements for Federal support and will increase the likelihood that technologies will be commercially viable and rapidly introduced.

## II. Status of U.S. Energy R&D Effort

### A. Status of Development of Various Energy Utilization Technologies

- Table 1 summarizes the development status of the major new energy technologies.

### B. Recent Trends in Federal and Private Energy R&D Expenditures

- On June 29, 1973, a major acceleration of the Federal energy R&D program was announced. Supplemental funds were appropriated for FY 1974 and a major expansion





Table 1

DEVELOPMENT STATUS OF MAJOR NEW ENERGY TECHNOLOGIES

<u>Technology Area</u>	<u>Current Stage<sup>1</sup> of Development</u>	<u>Date of First<sup>2</sup> Commercial Demonstration</u>
<u>Nuclear</u>		
Light Water Reactors	Commercial	in service
Gas Cooled	Demonstration	1975
Liquid Metal Breeder	Pilot Devel.	1983
Other Breeders	Applied Res.	unknown
Fusion (CTR + Laser)	Basic Res.	post-2000
<u>Coal</u>		
Low Btu Gasification	Pilot Devel.	1975
High Btu Gasification	Pilot Devel.	1980
Liquefaction	Pilot Devel.	1980
Clean Combustion	Applied Res.	mid-1980's
<u>Geothermal</u>		
Dry Steam	Commercial	in service
Wet Steam & Liquids	Applied Res.	1980
Hot Dry Rock	Basic Res.	unknown
<u>Solar</u>		
Heating of Buildings	Demonstration	1974
Cooling of Buildings	Pilot Devel.	late 1970's
Photothermal	Pilot Devel.	early 1980's
Photovoltaics	Applied Res.	post-1990
<u>Oil, Gas and Shale</u>		
Advanced Oil Recovery	Pilot Devel.	late 1970's
Surface Shale Retort	Demonstration	late 1970's
In-Situ Shale Retort	Pilot Devel.	mid-1980's
<u>Control Technology</u>		
Limestone SGC	Demonstration	1974
Advanced SGC	Pilot Devel.	late 1970's
<u>Conservation</u>		
Advanced Auto ICE	Demonstration	1975
Light Weight Diesel	Pilot Devel.	early 1980's
Industrial Solar Steam	Applied Res.	early 1980's
Home Total Energy Systems	Pilot Devel.	late 1970's

1/ Definitions:

- Basic Research: Fundamental scientific problems have not been overcome.
- Applied Research: Laboratory experiments have verified that no fundamental scientific problems remain to be solved.
- Pilot Development: Pilot plant (approximately 1/100 scale) operations or prototype assembly have verified that major engineering problems associated with integrated systems have been solved.
- Demonstration: First near-commercial scale demonstration has successfully operated, although perhaps not in an economically competitive way because of first-of-a-kind costs.
- Commercial: Technology is commercially available and presently competitive with existing alternatives.

2/ Rapid commercial introduction could follow by 5-10 years, depending on relative economics.

of the program was approved by the Congress for FY 1975.

- The FY 1975 program includes over \$1.8 billion for direct energy R&D and an additional \$200 million for supporting basic and environmental, and health effects research. The estimated five-year cost of the program is \$11.3 billion in Federal funds with substantial additional funds expected from the private sector.
  - Program balance shifted away from nuclear: 63% nuclear and 37% non-nuclear in 1974; 49% nuclear and 51% non-nuclear in 1975.
  - Major R&D increases from 1974 to 1975: coal, geothermal, solar, nuclear fusion and fission, and environmental control.
  - No significant additional Federal funding in 1975 for end-use conservation (including automotive) and oil shale R&D.
- Though difficult to estimate accurately, private sector funding for energy R&D currently appears to be over \$1 billion annually and increasing substantially.
- A survey of 1,400 firms indicates increases in private spending on energy R&D of over 20% in both 1973 and 1974.
  - The energy R&D areas with the greatest growth rates in private support between 1972 and 1973 were coal (60%), oil shale (20%), and nuclear fission (40%).
- Table 2 compares the estimated dollar levels of Federal and private sector expenditures.



Table 2

Private and Federal Energy R&D Expenditures  
(Millions of Dollars)

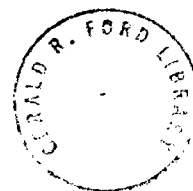
<u>Program Area</u>	<u>Private Funding (Lower Limits)* CY 1974</u>	<u>Federal Funding (OBS)</u>	
		<u>FY 1974</u>	<u>FY 1975</u>
1. <u>Conservation</u>	<u>150</u>	<u>46</u>	<u>88</u>
- End-Use	(56)	(4)	(8)
- Improved Efficiency	(40)	(21)	(59)
- Automotive	(54)	(21)	(21)
2. <u>Oil, Gas &amp; Shale</u>	<u>395</u>	<u>14</u>	<u>40</u>
- Oil & Gas	(390)	(12)	(29)
- Shale	(5)	(2)	(11)
3. <u>Coal</u>	<u>111</u>	<u>136</u>	<u>410</u>
4. <u>Environmental Control</u>	<u>217</u>	<u>66</u>	<u>65</u>
- Sulphur Oxides	(17)	(44)	(25)
- Other Fossil, Thermal	(61)	(15)	(40)
- Automotive	(139)	(7)	(0)
5. <u>Nuclear Fission</u>	<u>125</u>	<u>629</u>	<u>730</u>
6. <u>Nuclear Fusion</u>	<u>3</u>	<u>101</u>	<u>176</u>
7. <u>Other</u>	<u>6</u>	<u>34</u>	<u>105</u>
- Solar	(2)	(16)	(53)
- Geothermal	(2)	(9)	(34)
- Misc.	(2)	(9)	(17)
<b>TOTAL DIRECT ENERGY R&amp;D</b>	<b>1007</b>	<b>1026</b>	<b>1614</b>

\* Most recent available data. Figures are based on two NSF surveys of industry spending. Because of inevitable non-respondents, figures represent lower limits on private funding..

- Costs of R&D program are increasing due to inflation.

- Five-year Federal program previously estimated to cost \$11.3 billion in 1974 dollars extrapolates to \$12.6 billion in current year dollars, assuming decline to 7% inflation in FY 1977. (Recent cost estimate of \$1.7 billion for the LMFBR demo plant includes \$643 million for inflation.)

- Inflation, plus the economic downturn, are holding down private R&D funding by electric utilities and auto companies but profits clearly not limiting R&D by oil and coal companies.



- Private spending for R&D in the extractive and regulated industries has characteristically been around 1% or less of sales. In energy R&D, the private sector's \$1 billion plus government's \$2 billion for 1975 is still small relative to the expected \$275 billion energy industry sales for 1974.

- By comparison, in high technology innovative industries, private R&D funds have been 3%-4% and in those where a national interest is involved, Federal support has brought the investment much higher (e.g., to 8% in electronics and 18% in aerospace).

### C. Program Content of Current Federal and Private Sector Efforts

- Nuclear Fission: Efforts focused on advanced converter and breeder reactors:
  - Liquid Metal Fast Breeder Reactor (LMFBR), mostly with Federal funds. Utility consortium contributing \$250 million for first demonstration plant.

- Largely private development of advanced converter High Temperature Gas Cooled Reactor (HTGR) with government support, mainly in fuel cycle and safety.
  - Small federally-funded efforts on gas cooled and molten salt breeder concepts.
  - Federal and privately-funded efforts on new technologies for uranium enrichment.
- . Coal: Efforts focused on advanced mining technology, coal gasification and liquefaction, and direct combustion:
- A joint government/American Gas Association Pilot Plant Program in high Btu gasification (1/3 industry, 2/3 government funding).
  - Pilot plant projects for liquefaction; two government-funded, two cost-shared, and several exclusively industrial process development units (lab scale).
  - Joint Federal/industrial effort on advanced coal mining technology.
  - Mostly Federal effort in advanced direct combustion of coal.
- . Oil, Gas and Shale
- Small Federal effort in advanced oil and gas recovery. Large private sector effort.
  - Small Federal and private R&D or in-situ recovery of oil shale. No significant Federal R&D on surface technology because it is substantially developed.



• Conservation

- Small Federal efforts in end-use conservation, in residential/commercial, and industrial and transportation sectors. Private efforts significant but not large.
- Federal auto R&D on gas turbines, steam engines, stratified charge. Major private efforts in stratified charge, gas turbine, and improvements to current internal combustion engine.
- Federal efforts (mostly cost-shared) in electric transmission; distribution and storage small compared with industrial support.



• Other Energy Sources

- Federal solar program distributed across the various solar technologies, plus a congressionally mandated demonstration program in solar heating and cooling.
- Federal geothermal efforts concentrate on resource assessment, advanced components and uncertain resources (hot dry rock). Private sector proposes a 50 Mw demonstration plant.
- Fusion programs (both magnetic confinement and laser) largely funded by government with small private laser fusion efforts.

• Environmental Control Technology

- First generation sulphur removal technology development programs are now at demonstration phase and have been funded both by private sector as well as government.

### III. Energy R&D Program Strategy

#### A. Impact of Current Energy Policy on R&D Program

- . So far, the energy R&D program has not been hampered by the lack of a detailed national energy policy because:
  - longer-term payoff of most R&D allows some decoupling from near-term policy decisions.
  - developing technical options can be pursued without firm commitment to rate or scope of their commercial application.
  - existence of substantial national consensus for broadening and accelerating energy R&D programs.
- . However, U.S. cannot continue to plan R&D program without clear policies on imports, incentives, regulations, etc. Lack of such policies is beginning to impair both Federal and private R&D and demonstration efforts.
  - Colony group postponed first commercial oil shale plant citing rising costs plus uncertainty over government policy on stimulating development of shale.
  - NSF/FEA survey of industry R&D on synthetic fuels indicates commitment levels depend greatly on early resolution of uncertainties in Federal leasing, strip mining, and emission policies.
  - Uncertainty over NO<sub>x</sub> standard for autos tends to bias industry R&D towards less efficient engines which are sure to meet most rigid standard.
- . As R&D projects get into more expensive development and demonstration phases, where fewer options can be carried, it



becomes more critical to know which options are consistent with strategy and timing of overall energy policy.  
Examples:

- Natural gas deregulation might decrease the payoff in near-term of high Btu gas from coal program.
- If synthetic fuels were to become a key element in pre-1985 Federal energy strategy, a "crash" program on coal and oil shale conversion R&D (at expense of other R&D efforts) may warrant consideration.

B. Other Major Planning Uncertainties Affecting R&D Program Strategy

- Urgency: The expected time when new energy technologies, proposed for development, will be needed to expand useable energy resource base.
- Economics: Future commercial competitiveness of new energy technologies. There are two aspects:
  - Uncertainty in the cost of the energy from new technologies.
  - Uncertainty concerning the future prices of domestic and foreign fuel alternatives.
- Environmental: Types of pollutants to be regulated in the future and degree of regulation, as well as a lack of knowledge concerning the precise cost of control for pollutants already under regulation.
- Technical Risk: Sophisticated new technologies require solutions to difficult technical problems.





C. Criteria for Structuring Energy R&D Program

- . Priorities among specific R&D areas (e.g., nuclear, coal, solar, etc.) are determined by:
  - Potential impact of new technology on energy supplies.
  - Timing of impact.
  - Probability R&D will be successful.
  - Environmental consequences of new technology.
  - Severity of any barriers to rapid commercialization.
- . Additional criteria for Federal R&D efforts relate to extent to which Federal support is needed to supplement private efforts in order to ensure timely development of an important energy technology (see p. 4).



D. General Elements of Current Federal Energy R&D Strategy

- . Minimum Federal involvement in R&D projects with good potential for early commercial payoff and where substantial private sector resources and capability exist (e.g., oil and gas recovery, conservation, automotive, etc.).
- . Strong Federal support, on a cost-shared basis, for longer-term (10 years +) R&D programs aimed at making use of vast U.S. coal and nuclear resources (e.g., breeder nuclear reactor, coal liquefaction and gasification, etc.).
  - This includes partial Federal support of expensive, high-risk, first-of-a-kind demonstration plants.

- Continuing Federal support of programs in basic research, environmental and health effects research, and safety where there is no strong incentive for private sector efforts.
- Continuing Federal support, even without substantial industry cost-sharing, of very long-range, high-risk R&D programs which have potential for great payoff (e.g., fusion, central station solar electric).

D. Level of Effort Considerations

- The appropriate levels of effort for Federal energy R&D programs are determined principally by three factors:
  - Time at which certain technologies are desired for commercial introduction.
  - The expected level of private sector effort.
  - The acceptable level of risk of not completing developments at the desired times.
  - Capability of program to usefully absorb funds.
- There are, generally, three possible Federal strategies:
  - Crash: This strategy would entail the Federal Government funding all potentially promising technological options, through the demonstration phases, at the earliest possible time and with little or no reliance on private sector funding. Obviously, the most risk averse approach. Federal expenditures would be \$25-30 billion over the next 10 years.



- Accelerated but Orderly: This strategy would imply that the Federal Government ensure that no major resource utilization options are being ignored. Federal Government would support research with nonapplicable benefits and would share costs with private sector on expensive, high-risk projects that appear most promising. Federal expenditures would be \$15-20 billion over the next ten years.

- Minimum: Federal Government would only fund research in essential areas with nonappropriable benefits such as health effects research, support of regulatory activities, and basic research. Little or no government risk-sharing on pilot or demonstration plants. Federal expenditure would be \$3-5 billion over the next 10 years.

. Crash strategy would:

- Ensure results of R&D at earliest time.
- result in some inevitable waste due to pursuit of parallel technical approaches and rapid program buildings.
- make transfer of technologies into commercial use harder due to large government role in R&D and early demonstration.

. Minimum program would:

- not ensure that nuclear and coal options would both be viable by late 1980's.
- not result in exploring the potential of other major long-term options (geothermal, solar, fusion).



- FY 1975 strategy for Federal level of effort is accelerated but orderly. Current five-year program (\$11.3 billion Federal, plus industry investment) would provide for developing, by 1985, major technological options in coal (i.e., liquefaction and gasification) and nuclear (i.e., LMFBR), as well as exploring the feasibility of other major long-term options (e.g., fusion, solar electric, etc.).
- Major reductions (say -25%) from current annual level of Federal expenditure would result either in slowing down the overall effort by 3-5 years, or in dropping some major R&D approaches (which would increase risk of not achieving program objectives in a timely fashion).
- Major increases (say +25%) would permit acceleration of some of the longer-term options (e.g., solar) but, in general, would permit more technical approaches to be funded rather than significantly accelerate the results of major programs such as the LMFBR or coal liquefaction.



TAB D

Issue Paper  
Energy Research and Development Administration  
1976 Budget  
Issue #1: Positron-Electron Project

Statement of Issue

Should a major new experimental facility be provided for high energy physics research in the 1976 Budget or deferred?

Background

. High energy physics is at the frontier of scientific exploration into the basic nature of matter and energy. The U.S. program currently uses four large AEC accelerators and a major NSF supported accelerator as the primary experimental tools for this research: the FERMILAB (the newest and most powerful accelerator in the world--dedicated last May) near Chicago; the Stanford Linear Accelerator (SLAC); the Alternating Gradient Synchrotron (AGS) on Long Island; the Zero Gradient Synchrotron (ZGS) near Chicago; and NSF's Cornell accelerator.

. As part of the FY 1975 allowance, AEC and the Science Adviser were requested to conduct a study of the earliest reasonable time for shutting down the ZGS, which had been previously identified by AEC as the lowest priority of its four accelerators. The AEC/Science Adviser Report strongly recommends that the ZGS be kept open until CY 1979 to conduct important experiments. This is not an issue in the 1976 Budget.

. AEC believes that it is essential to continue to construct new experimental devices such as the \$72 M. Positron-Electron Project (PEP) at SLAC, which would allow the study of a new range of fundamental questions in physics in a presently inaccessible energy region through use of colliding beam storage rings.

. Potential competitors to PEP, only a year or so further downstream, are other "colliding beam" concepts involving major facilities.

Alternatives

#1. Initiate PEP facility project in FY 1976. (Agency req.)

#2. Defer initiation of next large machine (whether PEP or some competing project) to FY 1978 or later. (OMB rec.)



AnalysisBudget Authority/Outlays (\$M)

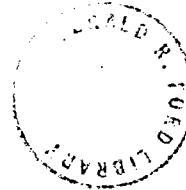
	1976		7/1-9/30 1976		1977		1978		1979		1980	
	<u>BA</u>	<u>O</u>	<u>BA</u>	<u>O</u>	<u>BA</u>	<u>O</u>	<u>BA</u>	<u>O</u>	<u>BA</u>	<u>O</u>	<u>BA</u>	<u>O</u>
(PEP construction, not including equipment and improvement)												
Alternative 1 (Agency request) .....	11	2	8	2	39	22	14	29	-	15	-	2
Alternative 2 (OMB recommendation) .....	-	-	-	-	-	-	11	2	39	17	22	27

Alternative #1: Pro: It is responsive to the high energy physics community's recommendations on new and existing accelerators. It permits more rapid exploitation of discoveries of new particles of matter which have recently excited high energy physicists. Con: It commits the Nation to 5 to 10 years of continued operation of SLAC after PEP becomes operational in 1979 and forecloses tradeoffs between PEP and its two competitors. It has an early budgetary impact.

Alternative #2: Pro: It recognizes that in a period of fiscal stringency and constraints on science spending, there is no urgency for a new basic research facility of this type in 1976. It takes into account the view of the Science Adviser that while PEP is of high priority it should be given a thorough review and further that the need for operating funds in science takes priority over major new facilities in FY 1976. (Elsewhere we have recommended that appeals on operating level be partly granted.) Con: It defers a new start by two more years.

Agency request: Alternative #1.

OMB recommendation: Alternative #2.



NRC



NUCLEAR REGULATORY COMMISSION

Comments

OMB recommended \$24 M less than the Commission request based primarily upon the sharp rate of growth of NRC programs at a time when the annual number of new reactors being ordered has leveled off. Upon reconsideration and review of the agency appeal, OMB recommends a potential restoration of \$10 M recognizing the desirability of getting NRC off to a good start and to place the Administration in a more positive position on nuclear power safety and effective regulation. The agency continues to press for its original request and will appeal. (Issue paper attached)

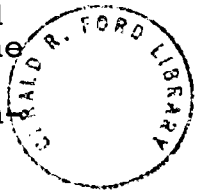
	Budget authority (in millions	Outlays of dollars)	Full-time permanent employment
1974 actual .....	108	105	1538
1975 current estimate .....	155	147	2056
1976 agency request .....	243	209	2652
1976 OMB recommendation (including \$10 M restoration)	225	195	2339
Affect of OMB recommendation on agency request .....	-18	-14	-313
Transition period .....	52	59	2339
1977 estimate .....	214	207	2489



NUCLEAR REGULATORY COMMISSION

Background

The Nuclear Regulatory Commission (NRC), established by the Energy Reorganization Act of 1974, inherits current Atomic Energy Commission (AEC) responsibilities for regulating the use of nuclear facilities and nuclear materials and for conducting a program of confirmatory assessment of the safety of nuclear reactors, whereas AEC's development responsibilities are transferred to the new Energy Research and Development Administration. NRC, like AEC today, is required to regulate nuclear facilities and materials in regard to their safety, environmental impact, safeguards and anti-trust implications and the financial qualifications of the applicant. NRC is also assigned new responsibilities under the Act primarily for environmental, safeguards and nuclear energy center siting research and studies. As the guardian of the public's nuclear health and safety, the Commission's budget is viewed as a sign of the Administration's commitment to adequate nuclear power safety and effective regulation.



Discussion

Since AEC is about to be disestablished, we have discussed the FY 1976 NRC budgetary situation with NRC Chairman-designate Anders. Mr. Anders has taken a hard line against any reductions in the NRC budget. He has strongly defended the regulatory activities, the reactor safety research, and the newly established NRC responsibilities for environmental, safeguards, energy siting, and other confirmatory research and studies. In addition to his defense on programmatic grounds, Mr. Anders cites his need to show others at the beginning of his new assignment that he will be a strong supporter of reactor safety research and regulatory activities.

The reductions originally recommended by OMB staff were based primarily upon the sharp rate of growth of NRC programs at a time when the annual number of new reactors being ordered has leveled off.

	(outlays-\$M)			
	FY 1974	FY 1975	FY 1976	
			Agency	OMB (incl. restoration)
Regulatory Activities ....	54	69	93	85
Reactor Safety Research ..	45	56	78	76
New Environmental, Safe- guards and Nuclear Energy Siting Research and Studies .....	-	3	25	21

	<u>FY 1974</u>	<u>FY 1975</u>	<u>FY 1976</u>	
			<u>Agency</u>	<u>OMB (incl. restoration)</u>
New NRC Superstructure and Program Support ....	6	9	13	13
Licensing Fee Refund ....	<u>-</u>	<u>10</u>	<u>-</u>	<u>-</u>
Total Outlays .....	105	147	209	195
Personnel .....	(1538)	(2056)	(2632)	(2339)

Although OMB recognizes that factors other than reactor numbers impact the NRC requirements, we believe that a 33% increase should be fully adequate for Mr. Anders to show himself to be an effective regulator and for the agency to meet its highest priority requirements. We are also concerned that an excessive increase might exacerbate the normal managerial problems encountered in establishing a new Federal agency.

#### Regulatory Activities

The principal justification cited by the agency for restoration of the \$4 M (127 positions) of the original \$9 M OMB cut in regulatory activities is the potential for these activities to impact the energy program beneficially in the near term. If required to take this reduction, NRC would stretch out reviews of additional, future standardized nuclear plants and pre-designated sites expected in FY 1976 and delay expanded safety review and standards development efforts on the breeder reactor, private sector enrichment plants and plutonium recycle. However, one-of-a-kind plants are now being delayed and cancelled by utilities and the breeder reactor, enrichment facilities and plutonium recycle have consistently slipped.

#### Reactor Safety Research

The primary justification cited by the agency for the reactor safety research program is to reduce the conservatism in current licensing of commercial reactor power plants and to improve plant availability. If required to take the original \$8 M OMB cut, NRC would delay the completion of the LOFT project--a \$40 M facility which will demonstrate experimentally the operation of emergency core cooling systems in hypothetical accident situations. Although of limited real value, the LOFT program has high public visibility and its delay would be sharply attacked by nuclear critics and nuclear vendors.

### New Responsibilities and NRC Superstructure

Although the original OMB recommendation for the NRC superstructure and new responsibilities in environmental, safeguards, and nuclear energy center siting research and studies has provided large increases, the agency has strongly urged that the OMB \$7 M cut (129 positions) be fully restored.

Mr. Anders has stated that the Act establishing his agency charges NRC with expanded tasks, and he is adamant that vigorous action on these new responsibilities be undertaken immediately. In support of this, the agency claims that these new functions received major attention during congressional consideration of the legislation establishing the NRC and that both nuclear power critics and proponents have been dissatisfied with past AEC performance in these areas.

### Conclusion

On further consideration of Mr. Anders' views and the desirability of getting NRC off to a good start, we recommend a potential restoration of an additional \$10 million and 73 positions in FY 1976. Otherwise, we believe that the Administration would be subject to attack in the Congress and by the public for failing to support adequately nuclear power safety and effective regulation.



NUCLEAR REGULATORY COMMISSION  
1976 Budget  
Summary Comparison of Agency Totals

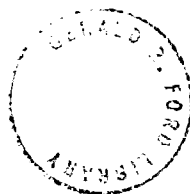
	1974 Act.	1975		1976		July 1- Sept. 30, 1976		1977 Est.	1978 Est.	1979 Est.	1980 Est.
		Req.	Recom.	Req.	Recom.	Req.	Recom.				
Budget authority (\$M)	108	162	155	243	225	63	52	214	218	221	231
Outlays (\$M) .....	105	154	147	209	195	64	59	207	215	219	228
OMB planning ceiling		(Not applicable to this agency. Agency established by Energy Reorganization Act of 1974.)									
End-of-period Employment:											
Full-time permanent	1538	2122	2056	2652	2339	2772	2339	2489	2639	2769	2869
Total .....	1655	2291	2215	2900	2515	3030	2515	2670	2820	2950	3050



Analysis of Changes  
(dollars in millions)

	<u>Budget authority</u>		<u>Outlays</u>	
	<u>Request</u>	<u>Recom.</u>	<u>Request</u>	<u>Recom.</u>
1975 enacted .....	137	137	131	131
Supplementary/reprogramming request (establishment of new independent agency with expanded responsibilities) .....	+25	+18	+23	+16
1975 agency req./OMB recom. Base .....	<u>162</u>	<u>155</u>	<u>154</u>	<u>147</u>
Full-year cost of new 1975 licensing, inspection activity and support .....	+8	+8	+8	+8
Augmented inspection activity and standards development in FY 1976 .....	+19	+9	+16	+8
Full-year cost of administrative and legal support for new independent agency .....	+3	+3	+3	+3
Augmented environmental, safeguards and nuclear energy siting research and studies (NRC new responsibilities) .	+20	+22	+16	+19
Augmented reactor safety research and procurement of new scientific computer dedicated to program .....	+41	+38	+22	+20
Non-recurring licensing fee refund .....	-10	-10	-10	-10
1976 budget total .....	<u>243</u>	<u>225</u>	<u>209</u>	<u>195</u>

	<u>Budget authority</u>		<u>Outlays</u>	
	<u>Request</u>	<u>Recom.</u>	<u>Request</u>	<u>Recom.</u>
Transition period budget total .....	52	59		
Augmented reactor safety research, inspection activity and standards development with FY 1976 computer purchase delivered in FY 1977 .....	.....	-11	.....	+12
1977 budget total .....	.....	214	.....	207



Nuclear Regulatory Commission

Outlays (in millions of dollars)  
 FY 1976

	<u>FY 1974</u>	<u>FY 1975</u>	<u>Agency Req.</u>	<u>Director's Review</u>	<u>Agency Appeal</u>	<u>Rev. OMB Rec.</u>
Regulatory Activities.....	54	69	93	84	88	85
Reactor Safety Research.....	45	56	78	70	78	76
New Environmental, Safeguards and Nuclear Energy Siting Research and Studies.....	-	3	25	20	25	21
New NRC Superstructure and Program Support.....	6	9	13	11	13	13
Licensing Fee Refund.....	<u>-</u>	<u>10</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total Outlays.....	105	147	209	185	204	195
Personnel.....	(1,538)	(2,056)	(2,652)	(2,266)	(2,522)	(2,339)



Small Agencies



THE WHITE HOUSE

WASHINGTON

MEMORANDUM FOR THE PRESIDENT

FROM: ROY A. ASH

SUBJECT: 1976 BUDGET DECISIONS: NATIONAL SCIENCE FOUNDATION

The agency request and my recommendations, with respect to 1976 budget amounts, for the National Science Foundation (NSF) are presented in the tabulation attached (Tab A). Also attached (Tab B) is a short background paper on the responsibilities and programs of NSF.

The OMB allowance for NSF in 1976 was \$744 million in BA and \$733 million in outlays. NSF appealed for total additional increase of \$14.5 million (BA): \$11 million for science education, \$3.0 million for institutional support, and \$0.5 million for program management. Based on discussions with NSF concerning its appeal, we would recommend an \$0.5 million increase for program management.



My major recommendations, in which NSF concurs, are:

- For basic research project support, an increase of +\$32 million (BA)--over \$341 million in 1975--to sustain the current level of NSF support, particularly in those scientific disciplines which relate to long-term national growth (e.g., chemistry and materials research) and which have experienced declining support in mission agencies.
- For national research centers and programs (i.e., Arctic and Antarctic programs, astronomy and oceanographic/atmospheric research), an increase of +\$34 million (BA)--over \$138 million in 1975--to offset increased costs already incurred and to purchase needed equipment and replacement aircraft (\$18 million) for the U.S. Antarctic program.

- For the program of Research Applied to National Needs, a decrease of -\$61 million (BA)--from \$135 million in 1975--reflecting the transfer of solar and geothermal energy R&D programs to the newly created ERDA.

There is one unresolved issue for your consideration, as follows (detail at Tab C).

#### Support for Science Education

NSF has appealed for an \$11 million restoration over the OMB recommendation of \$54 million in obligations for support of science education programs.

The \$11 million recommended reduction from the 1975 level reflects OMB's view of the lower priority science education activities as compared with support of scientific research--and particularly those activities directed toward general science literacy at the primary and secondary school level. Thus, in a period of budgetary restraint, a reduction is recommended.



While not disagreeing that some science education activities are of relatively lower priority among all its programs, NSF believes that Federal programs in science education are an effective vehicle for greatly improving educational methods and meeting selected educational needs. More important, the Congress is strongly supportive of science education and the NSF insists that unless this program is maintained at the 1975 level of support, the Congress will add funds at the expense of basic research support.

Decision: Approve Agency Recommendation \_\_\_\_\_  
 Approve OMB Recommendation \_\_\_\_\_  
 See Me \_\_\_\_\_

There is also one potential issue requiring further analysis and your agreement on the approach to be taken.

In addition to Dr. Stever's above appeal as head of the NSF, he (as Science Adviser) has written to you expressing his concern about the current outlook for Federal R&D in the 1976 budget, namely that:

- defense-related R&D is increasing by 14 percent (largely to meet increased development costs).
- civilian programs are only increasing by 6 percent (less than potential cost increases).

These trends are reflected in the following table:

	Obligations (current est. in \$ billions)			Percent Change
	<u>1974</u>	<u>1975</u>	<u>1976</u>	
Defense	9.0	9.6	10.9	14
Space	2.6	2.5	2.8	12
<u>Civilian</u>	6.3	7.0	7.4	6
Total	17.8	19.1	21.1	10



This is a reversal of trends over the period from 1969 through the 1975 budget (when civilian programs grew by 100 percent) and in Dr. Stever's opinion is "likely to be viewed with some alarm by the public if portrayed as reflecting a Presidential priority for defense .... expenditures at the expense of other national problems."

Dr. Stever goes on to agree (as does OMB) that there is reason to slow the growth of civilian R&D since some programs "have grown so fast there is need for stock-taking in a tight budget year."

Beyond the ability to rationalize the slow down in civilian R&D growth, Dr. Stever does express his particular concern about steady erosion of Federal support for basic research which provides fundamental new knowledge for the future.

The current outlook for support of basic research in the 1976 budget is a 4 to 5 percent dollar growth (from \$2.5 billion in 1975 to \$2.6 billion in 1976) but over the years, since the peak of 1967, Dr. Stever points out that real (constant dollar) support of basic research will decline by 15 percent through 1976. As a result, Dr. Stever argues for a \$110 million (BA) increase spread among several agencies for research on food and nutrition; physical sciences and engineering; climate research; and basic health-related research.

Our current analysis indicates that in the context of mission agency priorities and budget constraints, such increases are generally not adequately justified. Furthermore, despite cutbacks in basic research support, there is no significant evidence that the U.S. competitive position in science has deteriorated. Thus, a further increase in funds for basic research in the 1976 budget is deferable in a tight budget year.



An alternative approach, should you desire to increase Federal support of basic research in FY 1976, would be to provide such an increase in the budget of the NSF. This would be in keeping with the Foundation's historical--and publicly recognized--role in balancing the overall Federal effort in basic research. It would also demonstrate that, while nearer term civilian R&D programs are being justifiably held back in 1976, this Administration is investing in the future through basic (relatively less expensive) research.

If you wish to adopt this approach--and depending on final decisions affecting other agencies support of basic research--we will explore with Dr. Stever the possibility of a \$50 to \$100 million (BA) increase in the NSF budget for basic science (\$20 to \$40 million in outlays).

Consider further increase in NSF budget for basic research \_\_\_\_\_

Do not consider any further increase \_\_\_\_\_

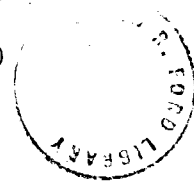
See Me \_\_\_\_\_

National Science Foundation  
1976 Budget

Summary Data

	(\$ in millions)		Employment, end-of-period	
	<u>Budget Authority</u>	<u>Outlays</u>	<u>Full-time Permanent</u>	<u>Total</u>
1974 actual . . . . .	579*	652	1174	1352
1975 January Budget . . . . .	788	675	1335	1695
enacted . . . . .	768	670	xxxx	xxxx
outlay reduction . . . . .	-20	-10	xxxx	xxxx
OMB recommendation . . . . .	748	660	1315	1675
1976 Planning Ceiling (excluding ERDA transfer) . . . . .	740	733	xxxx	xxxx
agency request . . . . .	901	828	1385	1745
OMB recommendation . . . . .	744	733	1290	1650
agency recommendation . . . . .	758	738	1290	1650
Transition period				
agency request . . . . .	187	254	1385	1745
OMB recommendation . . . . .	165	220	1290	1650
agency recommendation . . . . .	165	220	1290	165
1977 OMB estimate . . . . .	741	750	1290	1650

\*1974 Obligations were \$646 million



Background on NSF

The National Science Foundation (NSF), established in 1950, is the Federal lead agency for the general support of the basic sciences through:

- award of project grants and contracts, largely to universities and non-profit institutions, for basic research in all scientific disciplines (totaling \$341 million in 1975).
- support of a number of national research programs and national centers, e.g., U. S. Antarctic and Arctic Programs, National Center for Atmospheric Research, four national astronomy centers, International Decade of Ocean Exploration (totaling \$138 million in 1975).

In 1975, NSF will provide about 20 percent of total Federal funding of basic science--an increase from 12 percent in 1968, reflecting, in part, decreased support of basic research by mission agencies--particularly DOD, NASA.

In the immediate post-Sputnik era, NSF also initiated the buildup of resource development programs such as science education, graduate school development grants, and research traineeships--as did some mission agencies, particularly NIH. This program buildup was a part of the Federal response to the perceived national need:

- for more scientists and engineers beyond those produced by the normal demand of the market place.
- for more and stronger institutions for graduate education in all regions of the country.

The resource development programs in NSF reached a peak of \$225 million in 1968 and have been phased down to a level of \$84 million in 1975 (largely for science education)--a level reflecting strong congressional support for such programs.

NSF's responsibilities have been further expanded to include:

- in 1972, a program of Research Applied to National Needs (RANN) focusing research on selected national problems outside the purview of or cutting across responsibilities of mission agencies, e.g., solar energy and



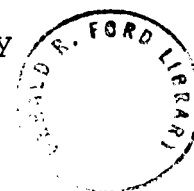
crosscutting studies of independent regulatory agencies (totaling \$143 million in 1975 with \$93 million for energy research).

- in 1973, science advisory and coordinating responsibilities formerly vested in the Office of Science and Technology (OST).

These several NSF missions in basic research, science education, and policy planning make it a visible symbol to the Congress and the public of an Administration's support of basic science in the U. S.

OMB strategy, since 1969, has been to review NSF resource allocations, in light of overall Federal research funding, to:

- ensure the vitality and competitiveness of a strong U.S. research base. OMB has used the NSF budget partially to offset the effects of reductions in mission agencies (e.g., DOD reductions in radio and optical astronomy) and to ensure reasonable balance and stability in Federal support of basic research.
- encourage basic research programs that can provide a more adequate scientific base for the understanding and long-term solution of problems of society and the economy, e.g., energy, environment.
- provide limited support for specific problem-focused basic and applied research through the stage of feasibility testing--not otherwise provided for by mission agencies (e.g., solar energy, much of which is now to be transferred to ERDA).



Issue Paper  
National Science Foundation  
Science Education Program



Statement of the Issue

What should be the level of the NSF Science Education Program in 1976?

Background

. In the post-Sputnik era, the NSF science education programs--along with graduate traineeship and academic institutional development grant programs--were initiated to meet the perceived need for additional and more capable scientists and institutions for graduate training.

. By the late 1960's, the U.S. had developed an adequate supply of scientific and technical manpower and sufficient institutional capability and, thus, these programs have been phased back. Because of strong congressional support (e.g., constituency ranges from primary and secondary schools through graduate schools), the NSF program has leveled off to between \$60 and \$70 million since 1973. To better utilize this reduced funding, in light of the needs of the 1970's, program objectives have been redefined and are:

1. To assure that the U.S. has an appropriate level and mix of scientific and technical manpower with greater participation by women and minorities.
2. To improve the understanding of science among a broad range of students at various educational levels (i.e., science literacy).
3. To increase the effectiveness of science education through technological, instructional and organizational changes.

Analysis

The current situation, with respect to NSF's appeal, is as follows (including \$4 million deferred from 1975):



\$ in millions)

	<u>Obligations</u>	<u>Outlays</u>
NSF 1975 Program level	61	64
NSF 1976 Recommendation	65	63
OMB 1976 Recommendation	54	60

NSF Recommendation

NSF believes that since its program objectives were redefined at the instigation of OMB, there exists a commitment to maintain the 1976 funding level. In addition, although the main job of building academic institutions has been achieved, NSF believes that a science education program can achieve considerable leverage as a way of stimulating improvement in the educational system and of meeting selected needs as they arise. Dr. Stever insists that he must have a program level in 1976 at the appropriated level of 1975 (\$65 million) to mollify the strong Congressional pressure.

OMB Recommendation

In the view of OMB, the Federal role in many aspects of objective 2 (i.e. increasing general science literacy) and objective 3 (i.e. improving educational effectiveness) is more appropriately addressed in the context of the total educational process than just in science programs.



COUNCIL ON ENVIRONMENTAL QUALITY

COMMENTS

See attached discussion paper

	Budget		Full-time
	authority	outlays	permanent
	(in thousands of dollars)		employment
1974 actual	2,466	2,603	44
1975 current estimate	2,500	2,500	50
1976 agency request	3,000	3,000	50
1976 OMB recommendation	2,700	2,700	50
1976 agency recommendation	2,800	2,800	50
Effect of OMB recommendation on agency request	-300	-300	--
Transition period	675	675	50
1977 estimate	2,700	2,700	50



DISCUSSION OF RECOMMENDATIONS

CEQ is requesting an increase of \$500 K to cover the full-year cost of the pay raise, the increased costs of other administrative services, and to restore the amount available for contract studies to roughly the 1973 level. CEQ points out that if the total appropriation for the agency is held to the 1975 level of \$2.5 M, the necessity of absorbing uncontrollable costs such as statutory salary increases and GSA space reimbursements would leave only \$300 K for the contract study program, compared to \$400 K available for this purpose in 1975 and \$700 K in 1974.

With respect to the level of funding for contract studies, OMB had recommended adding enough to the appropriation to keep the program at the current (1975) level of roughly \$400 K. This would require an increase in the agency's budget from \$2.5 M to \$2.6 M in FY 1976. CEQ objected and insists that a minimum of \$2.8 M is essential; it wants a \$600 K contract level in FY 1976. OMB discussed a compromise of \$2.7 M (giving a contract studies level of \$500 K) but CEQ still believes \$2.8 M is necessary.



The requested increase also would provide an additional amount of \$30 K for support of the Citizen's Advisory Council on Environmental Quality. Past practice has been for CEQ and the American Conservation Association to contribute \$50 K and \$100 K respectively. The proposal for 1976 is for CEQ and ACA to contribute \$80 K apiece. OMB recommends against increasing the Federal share. This Council is under consideration for extension which OMB also recommends against because it has served its purpose. If the Council is not extended, OMB recommends that these funds be used for contract studies. This Council has been given financial support by the Rockefeller family.

CEQ has ten ungraded positions authorized in its substantive legislation. The average salary in 1976 for these ten positions is \$33 K. OMB believes that this rate is becoming very high and recommends advising the agency to start phasing these positions into the regular GS series. Part of CEQ's appropriation authorization expires this year and an extension will be needed for 1976 and 1977. OMB believes that the provision authorizing the ungraded positions should be repealed when the Act is extended.

Decision: Approve agency recommendation (\$2.8 M; \$80 K for Advisory Council) \_\_\_\_\_

Approve OMB recommendation (\$2.7 M; \$50 K for Advisory Council) \_\_\_\_\_

FEDERAL ENERGY ADMINISTRATION

A summary of the agency request  
and OMB recommendation is  
included in the discussion  
which follows.



Federal Energy Administration

	<u>Est. 1975</u>	<u>FEA req. 1976</u>	<u>Original OMB recom. 1976</u>	<u>FEA appeal 1976</u>	<u>OMB revised recom. 1976</u>
BA (\$M)	124.8	146.9	100.6	127.8 (+27.2)	110.1 (+9.5)
positions	3050	1951	1609	1802 (+193)	1715 (+106)

FEA request/OMB recommendation

- . OMB's original recommendation was \$46.3M less than requested by the FEA.
- . This reduction was accomplished by:
  - holding FY76 contract funds level with FY75 (\$46.5M as opposed to \$77.3M request); and,
  - agreeing to FEA's reduction in fuel allocation program personnel, but not agreeing to replace them with as many personnel in the areas of energy resource development, policy and analysis, and administrative overhead.

FEA appeal/OMB revised recommendation

- . FEA appealed for an increase of \$8.3M for 193 additional positions, and for \$18.9M in contract funds.
- . OMB recommends an increase in its original recommendation of \$3.2M for 106 additional positions, and \$6.3 for contracts, all of which would provide FEA with the necessary flexibility to carry out high priority energy initiatives.
- . FEA has agreed to this revised recommendation, which increases FEA's FY75 budget authority to \$110.1M.



## Federal Energy Administration

	<u>Budget authority</u> (\$1000)	<u>Outlays</u> (\$1000)	<u>Employment</u> (FTP/Total)
1975 current estimate ....	124,835	118,343	3,050
1976 agency request .....	146,965	175,425	1,951
OMB recom. ....	100,600	129,160	1,609
agency reclama. ....	127,775	-	1,802
OMB rev. recom. ....	110,050	138,510	1,715
Transition period			
agency request .....	36,681	38,490	1,951
OMB recom. ....	25,150	27,960	1,609
OMB rev. recom. <sup>1/</sup> ...	27,500	30,310	1,715
1977 estimate .....	110,050	126,765	1,715

<sup>1/</sup> adjusted to account for increase in OMB revised recommendation for FY 1976.



TENNESSEE VALLEY AUTHORITY

Comments

OMB recommendation would provide for continuing ongoing construction at the same level as FY 1975, consistent with other water resources programs. It further allows for a \$5B increase in the debt ceiling on outstanding bonds-power program.

New water construction starts are now under consideration by the President.



	Budget authority (in thousands of dollars)	Outlays (in thousands of dollars)	Full-time permanent employment
1974 actual.....	45,700	401,100	14,001
1975 current estimate....	77,400	800,000	14,082
1976 agency request.....	20,119,000	950,000	16,050
1976 OMB recommendation..	5,087,800	929,200	15,100
Effect of OMB recom- mendation on agency request.....	-15,031,200	-20,800	-950
Transition period.....	25,100	220,000	15,100
1977 estimate.....	100,000	213,900	16,500

FEDERAL POWER COMMISSION

A summary of agency request and OMB recommendation is included in the discussion of unresolved issues which follows.





FEDERAL POWER COMMISSION

	Est. 1975	Original FPC 1976 Request	Original OMB recom.	FPC 1976 Appeal	OMB revised recom.
BA	33.2	47.3	35.5	37.5 (+2.0)	36.0 (+.5)
Positions	1320	1693	1398	1398	1398

Issue

In view of FPC's appeal, should OMB's fiscal year 1976 recommendation of \$35.5M for FPC be revised?

Background

- OMB originally recommended an increase of \$2.3M and 78 positions over FY 1975 for FPC, based on detailed analysis of historical and projected workload.
- FPC agreed to OMB's increase of 78 positions, but has appealed for restoration of \$2.0M for salaries and other overhead expenses.
- OMB offered to increase its original recommendation by \$.7M, on the grounds that \$.4 to \$.7M could be justified to give FPC added flexibility to cover unpredictable future overhead costs.
- FPC did not agree, indicating it could settle for no less than the full \$2.0M increase.

Alternatives

- #1 +2.0M increase (FPC position)
- #2 +0.5M increase (Revised OMB recommendation)
- #3 no addition (Original OMB recommendation)



Analysis

- FPC estimates of the percentage of authorized positions filled over the entire year of FY 1976 are too high based on past experience in FPC and comparable Federal agencies. This unwarranted assumption accounts for nearly half of the appeal (\$.8M).
- The \$1.2M remainder of FPC's appeal is to cover estimated additional costs for space rental, supplies, travel, and

automated data processing. Because of uncertainty over rapidly rising costs for space rental and supplies, the request for a \$.5M increase in these areas is justified. However, the requested increase of \$.7M for travel and automated data processing is not justified because basic planning factors such as the number of employees or general level of program activity are not increasing significantly.

#### Recommendation

Alternative #2 - increase of \$.5M. Although the \$1.5M increase not recommended might seem to be a small amount, including it in FPC's FY 1976 budget will raise the base from which FPC will expect future increases.



FEDERAL POWER COMMISSION

	<u>Budget Authority</u> (in thousands of \$)	<u>Outlays</u> (in thousands of \$)	<u>Full-Time Permanent Employment</u>
1975 current estimate	33,163	36,803	1320
1976 agency request	47,306	46,531	1693
OMB recom.	35,436	35,210	1398
agency appeal	37,458	37,225	1398
OMB revised recom.	35,976	35,740	1398
unresolved difference	(1,482)	(1,485)	(none)
Transition period			
agency request	10,858	10,897	1693
OMB recom.	8,150	8,098	1398
agency appeal	9,623	9,573	1398
OMB revised recom.	8,634	8,578	1398
unresolved difference	(989)	(995)	(none)
1977 estimate	35,976	35,740	1398



FEDERAL METAL AND NONMETALLIC MINE  
SAFETY BOARD OF REVIEW



Comments

No change from agency request.

	Budget authority (in thousands of dollars)	Outlays (in thousands of dollars)	Full-time permanent employment
1974 actual.....	60	39	2
1975 current estimate.....	60	58	2
1976 agency request.....	60	60	2
1976 OMB recommendation....	60	60	2
Effect of OMB recom- mendation on agency request.....	--	--	--
Transition period.....	15	15	2
1977 estimate.....	--	--	--

INDIAN CLAIMS COMMISSION

<p>Comments</p> <p>No change from agency request.</p>
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	Budget authority (in thousands of dollars)	Outlays	Full-time permanent employment
1974 actual.....	1,164	1,161	39
1975 current estimate....	1,324	1,324	42
1976 agency request.....	1,400	1,400	42
1976 OMB recommendation..	1,400	1,400	42
Effect of OMB recom- mendation on agency request.....	--	--	--
Transition period.....	350	350	42
1977 estimate.....	934	934	42

NATIONAL GALLERY OF ART



Comments

OMB recommendation would:  
 - continue basic operations of the National Gallery of Art  
 - begin staffing new East building and conservation laboratory.  
 Agency is unlikely to appeal.

	Budget authority (in thousands of dollars)	Outlays (in thousands of dollars)	Full-time permanent employment
1974 actual.....	6,237	5,973	377
1975 current estimate.....	6,933	7,060	389
1976 agency request.....	7,896	7,862	428
1976 OMB recommendation...	7,598	7,564	410
Effect of OMB recom- mendation on agency request.....	-298	-298	-18
Transition period.....	1,946	2,176	410
1977 estimate.....	7,798	7,798	434

SMITHSONIAN INSTITUTION

Comments

OMB recommendation would:

- strength visitor services and maintenance of collection
- meet major Bicentennial commitments
- continue the upgrading of the National Zoo.

Agency is unlikely to appeal.



	Budget authority (in thousands of dollars)	Outlays	Full-time permanent employment
1974 actual.....	69,600	77,500	2,646
1975 current estimate.....	85,600	100,000	3,018
1976 agency request.....	122,100	114,500	3,347
1976 OMB recommendation...	94,300	100,000	3,168
Effect of OMB recom- mendation on agency request.....	-27,800	14,500	-179
Transition period.....	25,000	31,000	3,168
1977 estimate.....	96,300	100,000	3,188