

DEPARTMENT OF ENERGY
FY 1991 CONGRESSIONAL BUDGET REQUEST
OFFICE OF ENERGY RESEARCH

OVERVIEW

ENERGY RESEARCH ANALYSES

The Office of Program Analysis (OPA) manages the Energy Research Analyses Program to fulfill one of the major responsibilities of the Director of the Office of Energy Research. The Department of Energy Organization Act (Public Law 95-91) states "...It shall be the duty and responsibility of the Director [of the Office of Energy Research] (1) to advise the Secretary with respect to the physical research program...[and] (2) to monitor the Department's energy research and development programs in order to advise the Secretary with respect to any undesirable duplication or gaps in such programs...". Accordingly, the Office of Program Analysis arranges for and participates in the assessments of research projects and programs in order to judge the significance of these efforts and to identify undesirable duplications and gaps.

There are two types of independent technical assessments performed by OPA on research programs throughout the Department. First, OPA staff perform comprehensive project by project evaluations of major programs using outside experts from industry, academia and the National Laboratories. These peer reviews of ongoing projects provide the basis for judgments on the quality of the research and its impact. DOE Principal Officers responsible for energy R&D recognize that without these reviews less technically competitive projects might be continued.

Second, technical assessments provide independent views on the directions that future R&D in specific areas should take to be more productive and relevant to DOE missions. Research assessments are performed by contractors and OPA staff drawing on the world's leading experts in the specific fields being addressed. State-of-the-science reviews by the Foreign Applied Sciences Assessment Center (FASAC) and JASON's are also performed. In addition, the Energy Research Advisory Board (ERAB) funded by this office addresses questions posed directly by the Secretary or the Director, Office of Energy Research, and provides views based upon their expertise.

In addition, OPA has the responsibility within DOE for providing financial support for management of the National Acid Precipitation Assessment Program (NAPAP) created by the Acid Precipitation Act of 1980 (P.L. 96-294). OPA provides funds under NAPAP for summarizing and synthesizing the state of the science in acid rain research and producing assessment reports useful for policy makers. The final report is to be prepared in FY 1990, but FY 1991 will be used to aggregate responses to the final report and assess ongoing monitoring/research of key areas.

DEPARTMENT OF ENERGY
 FY 1991 CONGRESSIONAL BUDGET REQUEST
 ENERGY SUPPLY RESEARCH AND DEVELOPMENT
 (dollars in thousands)

LEAD TABLE

Energy Research Analyses

Activity	FY 1989 Actual	FY 1990 Estimate	FY 1991 Base	FY 1991 Request	Program Change Request vs Base	
					Dollar	Percent
Operating Expenses						
Energy Research Analyses (OE)	\$3,760 a/	\$3,800	\$3,800	\$3,683	- 117	- 3
Subtotal Operating Expenses...	\$3,760	\$3,800	\$3,800	\$3,683	- 117	- 3
Total.....	\$3,760	\$3,800 b/	\$3,800	\$3,683	- 117	- 3
Operating Expenses.....	(\$3,760)	(\$3,800)	(\$3,800)	(\$3,683)	- 117	- 3

Authorization: Section 209, P.L. 95-91.

a/ Total has been reduced by \$40,000 which has been transferred to the SBIR program.
 b/ FY 1990 reflects final Gramm-Rudman-Hollings sequester adjustments.

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ENERGY SUPPLY RESEARCH AND DEVELOPMENT
OFFICE OF ENERGY RESEARCH
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SUMMARY OF CHANGES

Energy Research Analyses

FY 1990 Appropriation	<u>\$ 3,800</u>
FY 1991 Base	3,800
- Represents a slight decrease in assessment support.....	<u>- 117</u>
FY 1991 Congressional Budget Request.....	\$ 3,683

DEPARTMENT OF ENERGY
 FY 1991 CONGRESSIONAL BUDGET REQUEST
 ENERGY SUPPLY, RESEARCH AND DEVELOPMENT
 (dollars in thousands)

KEY ACTIVITY SUMMARY

ENERGY RESEARCH ANALYSES

I. Preface: Energy Research Analyses

The Office of Program Analysis manages the Energy Research Analyses program to fulfill one of the responsibilities of the Director, Office of Energy Research. The Department of Energy's Organization Act (Public Law 95-91) states "It shall be the duty and responsibility of the Director (Office of Energy Research) (1) to advise the Secretary with respect to the physical research program...and (2) to monitor the Department's energy research and development programs in order to advise the Secretary with respect to any undesirable duplication or gaps in such programs...". Accordingly, the Office of Program Analysis assesses research projects and programs in order to judge the significance of these efforts and to identify undesirable duplications and gaps.

II. A. Summary Table: Energy Research Analyses

Program Activity	FY 1989 Actual	FY 1990 Estimate	FY 1991 Request	% Change
Program Technology Assessment.....	\$ 2,573	\$ 2,800	\$ 2,785	- 1
Environmental Issues Support.....	1,187	1,000	898	- 10
Total, Energy Research Analyses	\$ 3,760	\$ 3,800	\$ 3,683	- 3

II. B. Major Laboratory and Facility Funding

Argonne National Laboratory	\$ 505	\$ 200	\$ 450	+125
Brookhaven National Laboratory	\$ 283	\$ 100	\$ 100	0
Oak Ridge National Laboratory	\$ 1,483	\$ 300	\$ 600	+100
Pacific Northwest Laboratory	\$ 300	\$ 500	\$ 300	- 40

III. Activity Descriptions: (New BA in thousands of dollars)

Program Activity	FY 1989	FY 1990	FY 1991
Energy Research Analyses			
Program Technology Assessment	<p>Performed technical assessments of membrane separations (ER, CE) and laser instrumentation (ER). Completed Basic Energy Sciences and High Energy Physics program accomplishments reports. Conducted peer reviews in Conservation & Solar Renewable programs. Supported ERAB, JASON, FASAC, Small Business Innovative Research (SBIR), and Energy Technology System Analysis program (ETSAP).</p>	<p>Perform technical assessment in Energy Research, Fossil Energy, and Conservation and Solar Renewable areas (e.g., catalysis, transportation, materials). Perform peer reviews for programs in Fossil Energy and Conservation and Solar Renewables. Support external R&D review through groups outside OPA; e.g., ERAB, JASON, FASAC, SBIR, and ETSAP.</p>	<p>Perform technical assessments in Fossil Energy (FE), Conservation & Solar Renewables (CE), and Energy Research areas (e.g., recyclable plastics, polymer composites). Perform peer reviews in FE and CE. Support external R&D review through groups outside OPA; e.g., ERAB, JASON, FASAC, SBIR, and ETSAP.</p>
	\$ 2,573	\$ 2,800	\$ 2,785
Environmental Issues Support	<p>Provided DOE share of NAPAP management and technical staff under P.L. 96-294. Draft portions of final assessment for 1990 concluding the 10-year NAPAP program. Completed analysis of advance models of aquatic chemistry and regional ozone estimates and aerosol health effects. Started assessment of the results of the direct-delayed aquatic response program.</p>	<p>Provide DOE share of NAPAP management and technical staff under P.L. 96-294. Draft portions of final assessment for 1990 concluding the 10-year NAPAP program. Complete analysis of advance models of aquatic chemistry and regional ozone estimates and aerosol health effects. Start assessment of the results of the direct-delayed aquatic response program.</p>	<p>Provide DOE share of support for management and technical staff for acid precipitation assessments. Complete remainder of final assessment and review of ongoing research and monitoring of acid precipitation. Support response to critical reviews of NAPAP final assessment, as well as scientific analyses of other environmental issues.</p>
	\$ 1,187	\$ 1,000	\$ 898
Energy Research Analyses	\$ 3,760	\$ 3,800	\$ 3,683