

**DEPARTMENT OF ENERGY**  
**FY 1999 CONGRESSIONAL BUDGET REQUEST**  
**OFFICE OF ENERGY RESEARCH**  
**SCIENCE**  
(Tabular dollars in thousands, Narrative in whole dollars)

**ENERGY RESEARCH ANALYSES**

**PROGRAM MISSION**

The mission of the Energy Research Analyses (ERA) program is to evaluate the quality and impact of Department of Energy research programs and projects.

The GOAL of the ERA program is to:

Provide Department of Energy program managers and senior managers with objective assessments of research projects and programs in order to evaluate the quality and impact of these efforts, to identify undesirable duplications and gaps, and to provide analysis of key technical issues in support of long range energy research planning, science and technology planning, and technical and performance evaluation of departmental programs and objectives.

The OBJECTIVES related to these goals are:

1. To PROVIDE THE BASIS FOR JUDGMENTS ON THE QUALITY OF RESEARCH AND ITS IMPACT. Using merit review with peer evaluation, provide departmental program managers and their superiors with detailed information about the technical strengths and weaknesses of projects that comprise the research and development (R&D) program as a basis for judgment of the quality of the research and its impact.
2. To PROVIDE INDEPENDENT VIEWS OF FUTURE R&D NEEDS IN AREAS OF INTEREST TO THE DEPARTMENT. Evaluate the status of science and technology areas of potential importance to the Department's mission, and to lay out appropriate fundamental and applied research and development to hasten the advance towards potential energy applications.

## **PROGRAM MISSION - ENERGY RESEARCH ANALYSES (Cont'd)**

3. To DEVELOP STRATEGIC AND PERFORMANCE PLANS. Use advice from outside experts, advisory committees, departmental managers, national laboratory managers, industrial scientists and managers, and officials of other government agencies to formulate strategic and performance plans for the Office of Energy Research and for the Science and Technology business line of the Department.
4. To CONTRIBUTE TO DOE AND INTERAGENCY PROGRAM ANALYSIS AND PLANNING FOR GOVERNMENT SCIENCE AND TECHNOLOGY. Participate in committees, task forces, working groups, and workshops of the Department of Energy and organizations such as the National Science and Technology Council, the National Science Foundation, the National Academy of Sciences, and private sector organizations such as the Industrial Research Institute, and the Electric Power Research Institute.

### **PERFORMANCE MEASURES:**

1. Quality and value of peer review evaluations, as indicated by satisfaction of investigators and program managers and actions taken to improve or replace projects that have significant shortcomings, and to capitalize on the strengths of stronger projects.
2. Satisfaction by customer program managers with assessments of science and technology needs, as indicated by changes or additions to make DOE programs and projects more productive and relevant to DOE missions.
3. Quality and acceptance of strategic and performance plans, as indicated by their use by the Director of the Office of Energy Research and by program offices in multi-year program planning, program management, and in effectively justifying programs.
4. Influence on government science and technology planning and analysis, as indicated by contributions to DOE, interagency, and outside recommendations on science policies and plans.

### **SIGNIFICANT ACCOMPLISHMENTS AND PROGRAM SHIFTS:**

1. Independent peer reviews verified the quality and relevance of over 100 DOE projects and tasks in FY 1997. These levels of effort will be scaled down in FY 1998 and FY 1999 to accommodate the reduced funding.
2. A new Office of Energy Research Strategic Plan is being developed in FY 1998 that will be implemented in FY 1999 to guide the Office of Energy Research into the first quarter of the next century.

ENERGY RESEARCH ANALYSES

PROGRAM FUNDING PROFILE

(Dollars in thousands)

	FY 1997 Current <u>Appropriation</u>	FY 1998 Original <u>Appropriation</u>	FY 1998 Adjustments	FY 1998 Current <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
Research.....	\$1,955	1,500	-\$28 a/	\$1,472	\$1,000
Subtotal Energy Research Analyses.....	1,955	1,500	-28 a/	1,472	1,000
Adjustment.....	-415 b/	-144 c/	0	-144 c/	----
Adjustment.....	0	-28 a/	28 a/	0 c/	----
TOTAL.....	<u>\$1,540</u> d/	<u>\$1,328</u>	<u>\$0</u>	<u>\$1,328</u>	<u>\$1,000</u>

a/ General reduction for contractor training.

b/ Share of Energy Supply, Research and Development general reduction for use of prior year balances (\$249,000) and FY 1997 emergency flood supplemental rescission (\$166,000). The total general red at the appropriation level.

c/ Share of Science general reduction for use of prior year balances assigned to this program. The total at the appropriation level.

d/ Excludes \$43,000 which has been transferred to the SBIR program and \$2,000 which has been transf

Public Law Authorizations:

Section 209, Public Law 95-91, DOE Organization Act

ENERGY RESEARCH ANALYSES  
PROGRAM FUNDING BY SITE  
(Dollars in thousands)

<u>Field Offices/Sites</u>	<u>FY 1997 Current Appropriation</u>	<u>FY 1998 Original Appropriation</u>	<u>FY 1998 Adjustments</u>	<u>FY 1998 Current Appropriation</u>	<u>FY 1999 Budget Request</u>
Albuquerque Operations Office					
Los Alamos National Laboratory	\$0	\$0	\$0	\$0	\$0
Chicago Operations Office.					
Argonne National Laboratory	0	0	0	0	0
Brookhaven National Laboratory	0	0	0	0	0
Oak Ridge Operations Office					
Oak Ridge National Laboratory	480	600	0	600	0
Oakland Operations Office					
Lawrence Berkeley National Laboratory	37	0	0	0	0
Richland Operations Office					
Pacific Northwest National Laboratory	250	250	0	250	0
All Other Sites a/	1,188	650	-28 b/	622	1,000
Subtotal	<u>1,955</u>	<u>1,500</u>	<u>-28 b/</u>	<u>1,472</u>	<u>1,000</u>
Adjustment	-415 c/	-144 d/	0	-144 d/	----
Adjustment	0	-28 b/	28 b/	0	----
TOTAL	<u>\$1,540 e/</u>	<u>\$1,328</u>	<u>\$0</u>	<u>\$1,328</u>	<u>\$1,000</u>

a/ Funding provided to laboratories, universities, industry, other Federal agencies and other miscellaneous contractors.

b/ General reduction for contractor training.

c/ Share of Energy Supply, Research and Development general reduction for use of prior year balances assigned to this program (\$249,000) and FY 1997 emergency flood supplemental rescission (\$166,000). The total general reduction is applied at the appropriation level.

d/ Share of Science general reduction for use of prior year balances assigned to this program. The total general reduction is applied at the appropriation level.

e/ Excludes \$43,000 which was transferred to the SBIR program and \$2,000 which was transferred to the STTR program.

**ENERGY RESEARCH ANALYSES**  
**(Tabular dollars in thousands, narrative in whole dollars)**

**I. Mission Supporting Goals and Objectives:** The Energy Research Analyses (ERA) program assesses research projects and programs in order to judge the significance of these efforts and to identify undesirable duplications and gaps. Peer reviews of individual research projects using outside experts are performed. Technical assessments to determine the direction of future research and state-of-the-science reviews are also performed. The program also provides analyses in support of long range energy research planning, science and technology planning, and technical evaluation of DOE programs and objectives.

**II. Funding Schedule:**

<u>Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Energy Research Analyses .....	\$ 1,955	\$ 1,433	\$ 973	\$ -460	- 32.1%
SBIR/STTR .....	<u>0</u>	<u>39</u>	<u>27</u>	<u>-12</u>	<u>- 30.8%</u>
Total .....	<u>\$ 1,955</u>	<u>\$ 1,472</u>	<u>\$1,000</u>	<u>\$ -472</u>	<u>- 32.1%</u>

**III. Performance Summary- Accomplishments**

-Evaluate the quality and relevance of research projects in Energy Research, Fossil Energy, and Energy Efficiency by independent peer reviews and assess additional technical needs in Energy Research, Fossil Energy, and Energy Efficiency (e.g., advanced composite materials). Evaluate critical planning and policy issues of DOE science and technology through reviews by expert groups outside the Department such as the National Academy of Sciences and the JASON group.

<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
	\$1,955	\$1,433
		\$973

## ENERGY RESEARCH ANALYSES

<b>III. <u>Performance Summary- Accomplishments</u></b>	<b><u>FY 1997</u></b>	<b><u>FY 1998</u></b>	<b><u>FY 1999</u></b>
<p><u>-SBIR/STTR Funding</u>            In FY 1997, \$43,000 and \$2,000 were transferred to the SBIR and STTR programs, respectively. The FY 1998 and FY 1999 amounts are the estimated requirement for the continuation of these programs.</p>	0	39	27
Total, Energy Research Analyses	\$1,955	\$1,472	\$1,000

EXPLANATION OF FUNDING CHANGES FROM FY 1998 to FY 1999:

Significant decrease in the number of peer reviews conducted.	\$-460,000
SBIR and STTR funding is decreased due to a decrease in operating expenses.	<u>\$ -12,000</u>
Total Funding Change, Energy Research Analyses	<u><u>\$-472,000</u></u>