

# 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.

## Program Goal

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.

## Program Objectives

- *To Provide The Basis For Judgments on The Quality of Research And Its Impact.* Using merit review with peer evaluation for technology and research/development programs, 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.
- *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.
- *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 Science and for the Science and Technology business line of the Department.
- *To Contribute to DOE And Interagency Program Analysis And Planning For Government Science And Technology.* Support participation 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

- 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.

- 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.
- Quality and acceptance of strategic and performance plans, as indicated by their use by the Director of the Office of Science and by program offices in multi-year program planning, program management, and in effectively justifying programs.
- 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**

- Independent peer reviews assessed the quality and relevance of over 100 DOE projects and tasks in FY 1999.
- A new Office of Science Strategic Plan was developed in FY 1999 that will be implemented in FY 2000 to guide the Office of Science into the first quarter of the next century.
- A Department of Energy Science Portfolio was developed in FY 1999 to characterize the R&D efforts within the department with regard to basic research. This portfolio will be maintained to assist the Director of the Office of Science to better manage the Department's Science investments.

# Funding Profile

(dollars in thousands)

	FY 1999 Current Appropriation	FY 2000 Original Appropriation	FY 2000 Adjustments	FY 2000 Current Appropriation	FY 2001 Request
Energy Research Analyses					
Energy Research Analyses .....	976	1,000	-9	991	1,000
Subtotal, Energy Research Analyses	976	1,000	-9	991	1,000
Use of Prior Year Balances .....	-92 <sup>a</sup>	0	0	0	0
General Reduction.....	0	-4	4	0	0
Contractor Travel.....	0	-5	5	0	0
Total, Energy Research Analyses.....	884 <sup>b</sup>	991	0	991	1,000

**Public Law Authorization:**

Public Law 95-91, "Department of Energy Organization Act"

Public Law 103-62, "Government Performance Results Act of 1993"

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<sup>a</sup> 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.

<sup>b</sup> Excludes \$23,000 which has been transferred to the SBIR program and \$1,000 which has been transferred to the STTR program.

## Funding by Site

(dollars in thousands)

	FY 1999	FY 2000	FY 2001	\$ Change	% Change
Albuquerque Operations Office					
Sandia National Lab/Albuquerque .....	0	50	75	+25	+50.0%
Chicago Operations Office					
Brookhaven National Laboratory .....	48	50	0	-50	-100.0%
Fermi National Accelerator Laboratory ..	0	0	60	+60	+100.0%
Chicago Operations Office .....	231	0	0	0	0.0%
<b>Total, Chicago Operations Office.....</b>	<b>279</b>	<b>50</b>	<b>60</b>	<b>+10</b>	<b>+20.0%</b>
Oak Ridge Operations Office					
Oak Ridge National Laboratory .....	0	40	40	0	0.0%
Oak Ridge Institute for Science and Education .....	10	0	100	+100	+100.0%
<b>Total, Oak Ridge Operations Office .....</b>	<b>10</b>	<b>40</b>	<b>140</b>	<b>+100</b>	<b>+250.0%</b>
Oakland Operations Office					
Lawrence Berkeley National Laboratory .....	165	30	75	+45	+150.0%
Richland Operations Office					
Pacific Northwest National Laboratory .	250	250	300	+50	+20.0%
Washington Headquarters .....	272	571	350	-221	-38.7%
<b>Subtotal, Energy Research Analyses .....</b>	<b>976</b>	<b>991</b>	<b>1,000</b>	<b>+9</b>	<b>+0.9%</b>
Use of Prior Year Balances .....	-92 <sup>a</sup>	0	0	0	0.0%
<b>Total, Energy Research Analyses.....</b>	<b>884<sup>b</sup></b>	<b>991</b>	<b>1,000</b>	<b>+9</b>	<b>+0.9%</b>

<sup>a</sup> 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.

<sup>b</sup> Excludes \$23,000 which has been transferred to the SBIR program and \$1,000 which has been transferred to the STTR program.

## **Site Description**

### **Brookhaven National Laboratory**

Brookhaven National Laboratory (BNL) is a Multiprogram Laboratory located on a 5,200 acre site in Upton, New York.

### **Fermi National Accelerator Laboratory (Fermilab)**

Fermilab is located on a 6,800-acre site about 35 miles west of Chicago, Illinois.

### **Lawrence Berkeley National Laboratory**

Lawrence Berkeley National Laboratory is a Multiprogram Laboratory located in Berkeley, California. The Laboratory is on a 200 acre site adjacent to the Berkeley campus of the University of California. This activity contributes to the Energy Research Analyses program's formulation of long-term plans and science policy.

### **Oak Ridge Institute for Science and Education**

Oak Ridge Institute for Science and Education (ORISE) is located on 150 acres in Oak Ridge, Tennessee.

### **Oak Ridge National Laboratory**

Oak Ridge National Laboratory is a Multiprogram Laboratory located on a 24,000 acre site in Oak Ridge, Tennessee. Oak Ridge National Laboratory supports the Energy Research Analyses program in technical reviews of Department research programs. This activity includes technical support for peer review assessments and other studies and workshops as requested.

### **Pacific Northwest National Laboratory**

Pacific Northwest National Laboratory is a Multiprogram Laboratory located on a 640 acre site at the Department's Hanford site in Richland, Washington. Pacific Northwest National Laboratory carries out research in the areas of technical planning and economic analysis to contribute to the Energy Research Analyses program's formulation of long term plans and science policy. This activity includes assessments of international basic energy science programs and private sector investments in energy R&D.

## **Sandia National Laboratories**

Sandia National Laboratories (SNL) is a Multiprogram Laboratory, with a total of 3,700 acres, located in Albuquerque, New Mexico, with sites in Livermore, California, and Tonopah, Nevada. Sandia National Laboratory carries out research in the areas of technical program planning and merit review practices to contribute to the Energy Research Analyses program's formulation of best practices for long term plans, science policy and peer reviews. This activity includes assessments of best practices in research and development organizations.

## **All Other Sites**

Includes funds for research awaiting distribution pending finalization of program office detailed planning.

# Energy Research Analyses

## 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.

### Funding Schedule

(dollars in thousands)

	FY 1999	FY 2000	FY 2001	\$ Change	% Change
Energy Research Analyses .....	976	965	973	+8	+0.8%
SBIR/STTR .....	0 <sup>a</sup>	26	27	+1	+3.8%
Total, Energy Research Analyses.....	976	991	1,000	+9	+0.9%

### Detailed Program Justification

(dollars in thousands)

FY 1999	FY 2000	FY 2001
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#### Energy Research Analyses

- Evaluate the quality and relevance of research projects in Science, Fossil Energy, and Energy Efficiency by independent peer reviews and assess additional technical needs in Science, 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.....
 

976	965	973
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<sup>a</sup> Excludes \$23,000 which has been transferred to the SBIR program and \$1,000 which has been transferred to the STTR program.

(dollars in thousands)

FY 1999	FY 2000	FY 2001
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**SBIR/STTR**

- In FY 1999, \$23,000 and \$1,000 were transferred to the SBIR and STTR programs, respectively. The FY 2000 and FY 2001 amounts are the estimated requirement for the continuation of the SBIR and STTR programs. ....

	0	26	27
Total, Energy Research Analyses.....	976	991	1,000

**Explanation of Funding Changes from FY 2000 to FY 2001**

FY 2001 vs. FY 2000 (\$000)
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**Energy Research Analyses**

- There are no significant funding changes from FY 2000 to FY 2001 for Energy Research Analyses..... +8

**SBIR/STTR**

- Increase in SBIR/STTR due to increase in operating expenses. .... +1

Total Funding Change, Energy Research Analyses..... +9