ER LABORATORY TECHNOLOGY TRANSFER

PROGRAM MISSION

This program is transferred to the Computational and Technology Research program beginning in FY 1997. The mission of the Energy Research Laboratory Technology Transfer (TT) program is to conduct industry-driven technology research collaborations at ER laboratories to leverage expertise with industrial resources for mutual benefit. The program responds to Executive Order 12591 "Facilitating Access to Science and Technology," and a series of legislation, e.g., the National Competitiveness Technology Transfer Act of 1989, which requires Federal laboratories to collaborate with the private sector in broadening the Nation's technology base. The program allows ER laboratories, which are a significant part of the national research network, to contribute technological innovations to stimulate national economic growth, and to permit the government and the taxpayers to receive a return on the government investment in basic science by supporting jointly funded, pre-competitive technology research projects in promising critical technology areas. The projects provide leveraged benefit back to the laboratories' core competencies and the Department's public mission of energy, research, and the environment.

The GOAL of the TT program is:

To provide cost-effective and responsive access to ER laboratory expertise by private sector partners, particularly small business; increase the knowledge-based skills of the national laboratories and leverage their resources; and reduce technical risk to a point where industry will pursue the product or process development on its own.

The OBJECTIVES related to these goals are:

1. To STRENGTHEN DOE CORE COMPETENCIES by focusing collaborations with industry specifically in the areas of manufacturing, materials, energy and environment to advance laboratory capabilities.

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2. To CONTRIBUTE TO NATIONAL ECONOMIC COMPETITIVENESS by supporting peer reviewed, competitively selected collaborations which advance technologies emerging from basic science.

3. To CONTRIBUTE TO SMALL BUSINESS by supporting efficient deployment mechanisms to allow small businesses access to the technology base and resources of the national laboratories.

4. To REDUCE RISK OF TECHNOLOGY RESEARCH by supporting innovative, cost-effective approaches to technological challenges.

5. To BRIDGE BETWEEN BASIC AND APPLIED SCIENCE by supporting technology research projects which foster utilization of Energy Research's science base by other private and public research activities.

PERFORMANCE MEASURES:

Performance measures related to technology transfer activities include qualitative incremental reductions in technical risks as well as quantitative measures. The quality of the projects is evaluated through peer review, site visits, and workshops by the program staff. Quantitative performance measures include the total number of projects supported, the level of small business involvement, and level of industry cost share.

SIGNIFICANT ACCOMPLISHMENTS AND PROGRAM SHIFTS:

- This program was transferred to the Computational and Technology Research program in FY 1997.
- The concentration of partnerships in laboratory core competencies has increased the benefit back to the Department's public missions.
- The streamlining of the program and increasing delegation to the laboratories with resultant reduction in CRADA processing time by 50%.
- The rapid growth in technical assistance provided to small business.

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PROGRAM FUNDING PROFILE
(dollars in thousands)

Subprogram	FY 1996 Enacted Appropriation		FY 1997 Original Appropriation	FY 1997 Adjustments	FY 1997 Current Appropriation	FY 1998 Budget Request
ER Laboratory Technology Transfer.....	$ 16,672		$0	$0	$0	$0
Subtotal, ER Laboratory Technology Transfer....	16,672		0	0	0	0
Adjustment.....	-2,358	a/	0	0	0	0
TOTAL, ER Laboratory Technology Transfer....	$ 14,314	b/	$0 c/	$0 c/	$0 c/	$0 c/

a/ Share of Energy Supply, Research and Development general reduction for use of prior year balances assigned to this program. The total general reduction was applied at the appropriation level.

b/ Excludes $109,000 which was transferred to the SBIR program and $12,000 which was transferred to the STTR program.

c/ This program was transferred to the Computational and Technology Research program in FY 1997.

Public Law Authorization:

Pub. Law: 95-91, DOE Organization Act

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PROGRAM FUNDING BY SITE
(Dollars in thousands)

Field Offices/Sites	FY 1996 Enacted Appropriation	FY 1997 Original Appropriation	FY 1997 Adjustments	FY 1997 Current Appropriation	FY 1998 Budget Request
Chicago Operations Office					
Ames Laboratory	$20	$0	$0	$0	$0
Argonne National Laboratory	3,016	0	0	0	0
Brookhaven National Laboratory	2,168	0	0	0	0
Princeton Plasma Physics Laboratory	82	0	0	0	0
Oak Ridge Operations Office					
Oak Ridge Institute for Science and Education	33	0	0	0	0
Oak Ridge National Laboratory	2,734	0	0	0	0
Oakland Operations Office					
Lawrence Berkeley National Laboratory	2,289	0	0	0	0
Richland Operations Office					
Pacific Northwest National Laboratory	3,376	0	0	0	0
All Other Sites a/	2,954	0	0	0	0
Subtotal	16,672	0	0	0	0
Adjustment	-2,358 b/	0	0	0	0
TOTAL	14,314 c/	0 d/	0 d/	0 d/	0 d/

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

b/ Share of Energy Supply, Research and Development general reduction for use of prior year balances assigned to this program. The total general reduction was applied at the appropriation level.

c/ Excludes $109,000 which was transferred to the SBIR program and $12,000 which was transferred to the STTR program.

d/ This program was transferred to the Computational and Technology Research program in FY 1997.

ER LABORATORY TECHNOLOGY TRANSFER

I. **Mission Supporting Goals and Objectives:** The ER Laboratory Technology Transfer (TT) program links the basic science at ER national laboratories to applied technologies through leveraged collaborations with industries. The program is focused in critical technology research areas, e.g., intelligent manufacturing processes, tailored materials, and sustainable environments, to contribute technological innovations that will stimulate national economic growth, and to increase the return on the government investment in basic science. For example, research on intelligent processes such as sensor-computer-machine control systems will focus on high risk technological problems for ultimate commercial applications with high payoff. The potential for large payoff is based on the explosive growth in inexpensive computer technologies and the ability to incorporate them into control systems.

Research is conducted through peer-reviewed collaborations, including cost-shared Cooperative Research and Development Agreements (CRADAs), personnel exchanges, technology research and maturation projects, technical assistance/consultations to small business, and major government-industry partnerships with multiple partners. The program allows small business quick and easy access to technology at the energy laboratories with hundreds of small technical assistance projects each year.

Federal investment in public-private R&D partnerships is necessary to keep America competitive. There is no direct Federal funding of industry, the Federal investment has a clear benefit for both the government and industry, the unique knowledge in the energy laboratories forms the basis for the collaboration, and all projects are competitively selected based on peer review. The joint investments capitalize on two great strengths of this country: 1) the world class basic research of the National laboratories, and 2) the unparalleled entrepreneurial spirit of American industry.

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II. Funding Schedule:

Activity	FY 1996	FY 1997	FY 1998	$ Change	% Change
ER Laboratory Technology Research	$ 16,672	$ 0	$ 0	$ 0	--
Total, ER Laboratory Technology Research	$ 16,672	$ 0	$ 0	$ 0	--

III. Performance Summary - Accomplishments:

	FY 1996	FY 1997	FY 1998
-Projects link the basic research advances of Office of Energy Research national laboratories to applied technologies through leveraged collaborations with industry. The program focuses on critical technology areas, including tailored materials, intelligent manufacturing, and sustainable environments. For example, research on intelligent manufacturing, such as sensor-computer-machine control systems, focused on high risk technological problems for ultimate commercial applications with high payoff. Approximately 65 multi-year collaborations between Energy Research national laboratories and industry were supported.	$ 16,672	$ 0	$ 0
-SBIR/STTR Funding	0	0	0

In FY 1996, $109,000 and $12,000 were transferred to the SBIR and STTR programs, respectively.

EXPLANATION OF FUNDING CHANGES FROM FY 1997 to FY 1998:

This program was transferred to the Computational and Technology Research program beginning in FY 1997.