

DEPARTMENT OF ENERGY
FY 1996 CONGRESSIONAL BUDGET REQUEST
ENERGY SUPPLY, RESEARCH AND DEVELOPMENT

OVERVIEW

ER LABORATORY TECHNOLOGY TRANSFER

The Energy Research Laboratory Technology Transfer Program (ER-LTT) focuses on opportunities at the Energy Research (ER) laboratories for increased collaborations with industry to link the ER science program and laboratories to technology applications, projects, and partnerships. ER-LTT projects rely upon "market pull" wherein the further development and application objective is defined by U.S. industry, rather than the Department. The program supports cost-shared collaborations where industry and the Department leverage their resources on a research and development project, reducing the risk to a point where industry will pursue the improved product or process development. The ER-LTT funds collaborations that build upon and are consistent with the technologies and missions resident in the ER laboratories, in the following six focus areas: advanced materials; advanced computing; advanced manufacturing; electronics and instrumentation; biotechnology and health; and energy and environment. The collaboration projects at each laboratory are focused in three of these critical technology areas where the laboratory's core competencies are strongest. The program's vision is to make the National laboratories user friendly sources of research and development collaboration with industry.

The program is designed to more effectively transfer technology from ER laboratories by supporting industry-driven, cost-shared Cooperative Research and Development Agreements (CRADAs). The program provides support for the industry collaboration office at each of the ER laboratories to develop and implement small quick response projects, particularly with small and minority businesses, for large multi-year CRADAs, and for major government-industry partnerships. The major partnerships will typically involve other agencies and cross major Departmental programs. They are jointly planned and managed by the industry and laboratory partners.

The FY 1996 budget request proposes to fund the industry collaboration offices, multi-year CRADAs, and one ongoing major partnership (American Textiles Consortium [AMTEX]), continue support of the Advanced Computational Technology Initiative [ACTI], and initiate support for one new major partnership (the PARTNERSHIP For A NEW GENERATION OF VEHICLES [PNGV]).

The performance measures used for the ER Laboratory Technology Transfer program include: (1) the number of small businesses helped by the industrial collaboration centers; (2) the number of industry-driven collaborations; (3) the share of project costs funded by industry; and (4) the results developed through CRADAs.

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 (Tabular dollars in thousands, narrative in whole dollars)

LEAD TABLE

ER Laboratory Technology Transfer

<u>Activity</u>	<u>FY 1994 Adjusted</u>	<u>FY 1995 Appropriation</u>	<u>FY 1995 Adjustment</u>	<u>FY 1995 Adjusted</u>	<u>FY 1996 Request</u>
Operating Expenses					
Laboratory Technology Transfer.....	\$36,456	\$56,513	-\$613	\$55,900	\$58,776
Technology Utilization.....	955	1,000	0	1,000	0 ^{c/}
Subtotal Program.....	<u>\$37,411</u>	<u>\$57,513</u>	<u>-\$613</u>	<u>\$56,900</u>	<u>\$58,776</u>
Adjustment.....	-717 ^{a/}	-318 ^{a/}	---	-318 ^{a/}	---
TOTAL PROGRAM.....	<u>\$36,694</u>	<u>\$57,195</u>	<u>-\$613</u>	<u>\$56,582</u>	<u>\$58,776</u>
Summary					
Operating Expenses.....	\$36,694	\$57,195	-\$613	\$56,582	\$58,776
TOTAL PROGRAM.....	<u>\$36,694^{b/}</u>	<u>\$57,195</u>	<u>-\$613</u>	<u>\$56,582</u>	<u>\$58,776</u>
Staffing (FTEs).....	(Reference Advisory and Oversight Program Direction)				

Authorization: P.L. 95-91, "Department of Energy Organization Act" (1977), Section 209

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

b/ Excludes \$559,000 which has been transferred to the SBIR program and \$19,000 which has been transferred to the STTR program.

c/ Technology Utilization is no longer a subprogram of the ER Laboratory Technology Program. It is now the Technology Partnerships program in the Office of the Deputy Under Secretary for Technology Partnerships and Economic Competitiveness. See separate budget for this new program.

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SUMMARY OF CHANGES

ER Laboratory Technology Transfer

FY 1995 Appropriation.....	\$ 57,513
- Adjustment.....	<u>- 613</u>
FY 1995 Adjusted.....	\$ 56,900
- Technology Utilization, previously a subprogram of the ER Laboratory Technology Transfer program, is now Technology Partnerships, a new separate program in the Office of the Deputy Under Secretary for Technology Partnerships and Economic Competitiveness.....	- 1,000
- Decrease funding for CRADA project support.....	- 3,624
- Decrease funding for AMTEX partnership.....	- 3,500
- Initiate support for PARTNERSHIP FOR NEW GENERATION VEHICLES (PNGV).....	<u>+10,000</u>
FY 1996 Congressional Budget Request.....	<u>\$ 58,776</u>

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KEY ACTIVITY SUMMARY

ER LABORATORY TECHNOLOGY TRANSFER

I. Preface: ER Laboratory Technology Transfer

This subprogram fulfills the legislative mandate in the Energy Policy Act of 1992 to more effectively transfer research and technology and supports the policies and guidelines of the Office of Science and Technology Policy. The program supports industry-driven, cost-shared research and development projects that focus on the results of the Energy Research science programs at the laboratories that are of interest to the private sector. The industry collaboration projects at each ER laboratory are focused in technology areas where the laboratory's core competencies are strongest. In addition to quick response projects, personnel exchanges and technical assistance that supports small business particularly, the program supports major industry-driven partnerships with entire industry sectors that involve other agencies and cross major Departmental programs (e.g., AMTEX, ACTI and PNGV).

II. A. Summary Table: ER Laboratory Technology Transfer

Program Activity	FY 1994 Adjusted	FY 1995 Adjusted	FY 1996 Request	\$ Change
ER Laboratory Technology Transfer.....	\$ 36,456	\$ 55,900	\$ 58,776	\$ 2,876
Total, ER Laboratory Technology Transfer	\$ 36,456	\$ 55,900	\$ 58,776	\$ 2,876

II. B. Laboratory and Facility Funding Table: ER Laboratory Technology Transfer

Ames Lab	\$ 365	\$ 665	\$ 700	\$ 35
Argonne National Lab (East)	4,993	8,381	10,800	2,419
Brookhaven National Lab	3,373	7,920	10,800	2,880
Continuous Electron Beam Accelerator Facility ...	200	450	200	-250
Fermi National Accelerator Lab	200	450	400	-50
Idaho National Engineering Lab	490	745	325	-420
Lawrence Berkeley Lab	4,424	8,626	10,800	2,174
Oak Ridge National Lab	4,958	9,664	10,800	1,136
Pacific Northwest Lab	16,031	7,712	10,800	3,088
Princeton Plasma Physics Lab	335	585	450	-135
Stanford Linear Accelerator Center	247	540	200	-340
All Other	840	10,162	2,501	-7,661
Total, ER Laboratory Technology Transfer	\$ 36,456	\$ 55,900	\$ 58,776	\$ 2,876

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

Program Activity	FY 1994	FY 1995	FY 1996
ER Laboratory Technology Transfer			
ER Laboratory Technology Transfer	No Activity.	No activity.	Initiate support of the PARTNERSHIPS for NEW GENERATION VEHICLES (PNGV) with industry driven CRADAs at ER laboratories in areas such as manufacturing improvements and lightweight materials.
	Increased support for industry collaboration offices at the 5 ER multi-program and 5 ER single purpose laboratories. Provided funding to support initiation of new personnel exchanges, new technology maturation projects, technical assistance/consultation and new small, quick response CRADAs, particularly with small business.	Increases support for industry collaboration offices at the 5 multi-program and 5 single purpose laboratories. Provides funding to support initiation of new personnel exchanges, new technology maturation projects, technical assistance/consultation and new small, quick response CRADAs, particularly with small business.	Support industry collaboration program offices at 5 multi-program laboratories and 5 single purpose laboratories. Initiate new quick response collaborations with small businesses and support personnel exchanges and technical assistance.
	Supported 48 new multi-year CRADA project starts. Continued support of 33 ongoing CRADA projects.	Supports 58 new CRADA project starts. Continues support of 62 ongoing CRADA projects.	Continue support of 102 ongoing CRADAs. No new starts.
	Supported AMTEX partnership.	Increase support for AMTEX partnership.	Decrease support for AMTEX partnership.
	No activity.	Initiates support of the Advanced Computational Technology Initiative (ACTI).	Continued support for the Advanced Computational Technology Initiative (ACTI).
	Continued support for program management and the development and performance of technology transfer evaluation activities.	Continues support for program management and the development and performance of technology transfer evaluation activities.	Continues support for program management and the development and performance of technology transfer evaluation activities.
	Funding in the amount of \$545,000 and \$18,000 has been transferred to the SBIR program and the STTR program, respectively.	Funding in the amount of \$1,107,000 and \$55,000 has been budgeted for the SBIR program and the STTR program, respectively.	Funding in the amount of \$1,176,000 and \$88,000 has been budgeted for the SBIR program and the STTR program, respectively.
	\$ 36,456	\$ 55,900	\$ 58,776

III. ER Laboratory Technology Transfer (Cont'd):

Program Activity	FY 1994	FY 1995	FY 1996
ER Laboratory Technology Transfer	\$ 36,456	\$ 55,900	\$ 58,776

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KEY ACTIVITY SUMMARY

ER LABORATORY TECHNOLOGY TRANSFER

I. Preface: Technology Utilization

The Technology Utilization subprogram is responsible for activities associated with the coordination, implementation and evaluation of the DOE's enhanced technology transfer program. As a voice for technology commercialization stakeholders, this subprogram serves as an advocate for technology transfer both internal and external to the Department. Activities include:

- Providing analytical and other support to the activities of the Technology Transfer Committee (TTC) made up of representatives from other parts of the department. The TTC is expected to further inter-program coordination through formation of a number of ad hoc and standing subcommittees and working groups. In addition to supporting the TTC, the Technology Utilization subprogram will also provide analytical and other support to the activities of a number of ad hoc task forces and working groups associated with Departmental technology transfer, commercialization and utilization activities.
- Providing analytical and other support as part of DOE contribution to activities with other Federal agencies, state and local governments, trade associations, universities, the Federal Laboratory Consortium and other relevant groups outside of DOE on technology transfer, commercialization and utilization activities.
- Developing, in coordination with Program Secretarial Officers, a Department-wide technology transfer education and training program, outreach activities and a performance measurement and reporting system.
- Performance of cross-cutting technology and utilization studies and pilot activities.

II. A. Summary Table: Technology Utilization

Program Activity	FY 1994 Adjusted	FY 1995 Adjusted	FY 1996 Request	\$ Change
Technology Utilization.....	\$ 955	\$ 1,000	\$ 0	\$ -1,000
Total, Technology Utilization	\$ 955	\$ 1,000	\$ 0	\$ -1,000

II. B. Laboratory and Facility Funding Table: Technology Utilization

Argonne National Lab (East)	\$ 25	\$ 95	\$ 0	\$ -95
Brookhaven National Lab	2	0	0	0
Lawrence Berkeley Lab	0	0	0	0
Oak Ridge Institute for Science & Education	330	100	0	-100
Pacific Northwest Lab	0	0	0	0
Sandia National Laboratories	0	0	0	0

II. B. Laboratory and Facility Funding Table: Technology Utilization

	FY 1994 Adjusted	FY 1995 Estimate	FY 1996 Request	\$ -Change
All Other	598	805	0	-805
Total, Technology Utilization	\$ 955	\$ 1,000	\$ 0	\$ -1,000

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

Program Activity	FY 1994	FY 1995	FY 1996
Technology Utilization			
Technology Utilization	<p>Continued to develop tailored model CRADAs and umbrella CRADAs for specific, identified, industry groups.</p> <p>Identified and performed analyses in support of the development of recommended policy solutions to potential and real barriers to technology transfer.</p> <p>Collected data, performed data validation and analysis, prepared and issued after approval of the Secretary the FY 1993 Annual Report to Congress on Technology Transfer Activities, Accomplishments and Plans.</p> <p>Continued to provide analytical and other support to several ongoing task force efforts, such as the machine tool industry working group, the intellectual property counsel staffing study and the ad hoc Classification Committee.</p>	<p>Continue to refine model CRADA language and develop master CRADAs for specific, identified, industry groups.</p> <p>Identify and perform analyses in support of the development of recommended policy solutions to potential and real barriers to technology transfer with targeted groups.</p> <p>Collect data, perform data validation and analysis, prepare and issue after approval of the Secretary the FY 1994 Annual Report to Congress on Technology Transfer Activities, Accomplishments and Plans.</p> <p>Continue to provide analytical and other support to several ongoing task force efforts, such as the machine tool industry working group, the intellectual property counsel staffing study and the ad hoc Classification Committee.</p>	<p>All Technology Utilization functions were transferred to the new Technology Partnerships program in the Office of the Deputy Under Secretary for Technology Partnerships and Economic Competitiveness. See separate budget request for this new program.</p>

III. Technology Utilization (Cont'd):

Program Activity	FY 1994	FY 1995	FY 1996
Technology Utilization (Cont'd)	<p>Continued to provide analytical and other support to several interagency technology transfer efforts.</p> <p>Continued to provide analytical, logistical and other support to developing program linkages with other agencies on technology transfer.</p> <p>Developed, delivered and evaluated two specialized, advanced, Department-wide technology transfer courses for DOE and M&D contractor staff involved with technology transfer.</p> <p>EPACT:</p> <p>EPACT Section 2203(c) "Supporting Research and Technical Analysis" and Section 3001(e) "Research Development, Demonstration, and Commercial Application Activities":</p> <p>Collected data, reviewed inputs, established the content and published Technology '93-'94.</p> <p>Collected data, reviewed inputs, established the content and published the R&D 100 Award brochure.</p> <p>Funding in the amount of \$14,000 and \$1,000 has been transferred to the SBIR program and the STTR program, respectively.</p>	<p>Continue to provide analytical and other support to several interagency technology transfer efforts.</p> <p>Continue to provide analytical, logistical and other support to developing program linkages with other agencies on technology transfer.</p> <p>Continue the development, delivery, and evaluation of new, Department-wide specialized technology transfer courses for DOE and M&D contractor staff involved with technology transfer.</p> <p>EPACT:</p> <p>EPACT Section 2203(c) "Supporting Research and Technical Analysis" and Section 3001(e) "Research Development, Demonstration, and Commercial Application Activities":</p> <p>Collect data, review inputs, establish the content and publish Technology '94-'95.</p> <p>Collect data, review inputs, establish the content and publish the R&D 100 Award brochure.</p> <p>Funding in the amount of \$20,000 and \$1,000 has been budgeted for the SBIR program and the STTR program, respectively.</p>	
	\$ 955	\$ 1,000	\$ 0
Technology Utilization	\$ 955	\$ 1,000	\$ 0