DEPARTMENT OF ENERGY
FY 1995 CONGRESSIONAL BUDGET REQUEST
ENERGY SUPPLY, RESEARCH AND DEVELOPMENT

OVERVIEW

ER LABORATORY TECHNOLOGY TRANSFER

Improving technology transfer and spinoff from the results of Federal research and development (R&D) at national laboratories can help to strengthen American industrial competitiveness and create jobs. DOE is implementing a program to increase collaboration among industry, government, and universities, and to expedite spinoff of Federal R&D. "Spinoff" is the further development and application of technology which was developed by an R&D program for another purpose. There are many such opportunities at the laboratories. All of the Laboratory Technology Transfer spinoff projects rely upon "market pull" wherein the further development and application objective is defined by U.S. industry, rather than the Department. In order to ensure that projects are commercially useful, cost sharing by industry participants is required for projects. The Laboratory Technology Transfer Program is designed to provide funds for spinoff projects that build upon and are consistent with the technologies and missions resident in the laboratories. The program strongly benefits U.S. competitiveness with a vision of making the national laboratories user friendly sources of R&D collaboration with U.S. industry.

The Energy Research (ER) Laboratory Technology Transfer Program is designed to more effectively transfer technology from ER laboratories by supporting cost-shared, spinoff Cooperative Research and Development Agreements (CRADAs) in accordance with the Department's technology transfer initiative, implemented in response to the National Competitiveness Technology Transfer Act of 1989 (NCTTA). The program provides support for industrial collaboration centers at each of the ER laboratories to develop and implement technology maturation projects; to prepare technology for eventual spinoff and collaborative development with industry; to support personnel exchanges between laboratory and industry; to provide technical assistance; and to develop small quick response CRADAs with small businesses. The program also supports a major multi-laboratory cost-shared spinoff partnership (the American Textiles Consortium (AMTEX) Partnership, a technology development program) that is jointly planned and managed by the industry and laboratory partners under the leadership of one laboratory.

The FY 1995 budget request proposes to increase funding for: (1) the industrial collaboration centers (including maturation projects, personnel exchanges, technology assistance/consultation and small business CRADAs), (2) spinoff CRADAs, and (3) program management to develop and perform enhanced technology transfer evaluation activities.

The program also supports the Department-wide technology utilization function. This includes activities associated with DOE's technology transfer program, outreach activities, performance measurement, and training. The FY 1995 request includes support for studies and analyses that support policy development, small business outreach, development of exhibits for presentation at an increasing number of conferences, development of more advanced training materials, and development of an integrated program system of performance measurement for DOE's technology transfer program.

The performance measures used for the ER Laboratory Technology Transfer subprogram 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 sales and market share of products or processes developed through CRADAs. Performance measures used for the Technology Utilization subprogram include: (1) the number of outreach events conducted; (2) the number of training courses developed, delivered or evaluated; and (3) the number of technology transfer evaluation metrics developed.

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(Tabular dollars in thousands, narrative in whole dollars)

LEAD TABLE

ER Laboratory Technology Transfer

Activity	FY 1993 Adjusted	FY 1994 Appropriation	FY 1994 Adjustment	FY 1995 Request
Operating Expenses				
Laboratory Technology Transfer	$8,947	$38,353	-$199	$52,513
Technology Utilization	987	1,000	0	1,000
Subtotal Laboratory Technology Transfer	9,934	39,353	-199	53,513
Adjustment	-260 a/	0	0	0
TOTAL	$9,674	$39,353	-$199	$53,513
Summary				
Operating Expenses	$9,674	$39,353	-$199	$53,513
TOTAL Program	$9,674 b/	$39,353	-$199	$53,513
Staffing (FTEs)	(Reference Advisory and Oversight Program Direction)			

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

a/ Amount of general reduction for use of prior year balances assigned to this program. The total will be taken at the appropriation level.

b/ Excludes $146,000 which has been transferred to the Small Business Innovative Research program and a general reduction for use of prior year balances of $260,000.

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SUMMARY OF CHANGES

ER Laboratory Technology Transfer

FY 1994 Appropriation	$ 39,353
- Adjustment	- 199
FY 1994 Adjusted	$ 39,154
- Increased support for industrial collaboration centers and initiation of technology maturation, personnel exchanges, technical assistance/consultation and quick response CRADA projects	+ 8,460
- Increased support of on-going spinoff CRADA projects and initiate 46 new spinoff CRADA project starts	+ 5,699
- Increased support for program management and evaluation activities	+ 200
FY 1995 Congressional Budget Request	$ 53,513

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(dollars in thousands)

KEY ACTIVITY SUMMARY

ER LABORATORY TECHNOLOGY TRANSFER

I. Preface: ER Laboratory Technology Transfer

This subprogram fulfills the legislative mandate to more effectively transfer research and technology from ER laboratories to industry, in accordance with the National Technology Initiative, the Energy Policy Act of 1992 and the Office of Science and Technology Policy policies and guidelines. The goal of the program is to link private sector and laboratories' capabilities to enhance U.S. competitiveness through collaborative technology research. By design, this program provides only partial funding for technology research projects and personnel exchanges with industry and universities. Mandatory cost-sharing by industry and other partners ensures that cooperative projects will focus on those that generate real interest in the private sector and facilitate the transfer of technology. The subprogram supports cost-shared spinoff CRADAs, the AMTEX partnership, personnel exchanges, technology maturation projects, technical assistance/consultation, small quick response spinoff CRADAs, particularly with small businesses, industrial collaboration centers, program management, and the development and performance of enhanced technology transfer evaluation activities.

II. A. Summary Table: ER Laboratory Technology Transfer

Program Activity	FY 1993 Enacted	FY 1994 Enacted	FY 1995 Request	% Change
ER Laboratory Technology Transfer	$ 8,947	$ 38,154	$ 52,513	+ 38
Total, ER Laboratory Technology Transfer	$ 8,947	$ 38,154	$ 52,513	+ 38

II. B. Major Laboratory and Facility Funding

AMES LAB	$ 0	$ 365	$ 700	+ 92
ARGONNE NATIONAL LAB (EAST)	$ 1,625	$ 4,943	$ 9,300	+ 88
BROOKHAVEN NATIONAL LAB	$ 1,022	$ 3,176	$ 7,700	+142
CONTINUOUS ELECTRON BEAM ACCELERATOR FACILITY	$ 0	$ 200	$ 500	+150
FERMI NATIONAL ACCELERATOR LAB	$ 0	$ 200	$ 500	+150
IDAHO NATIONAL ENGINEERING LAB	$ 0	$ 490	$ 1,400	+186
LAWRENCE BERKELEY LAB	$ 1,720	$ 2,659	$ 8,800	+231
OAK RIDGE NATIONAL LAB	$ 2,045	$ 4,051	$ 9,000	+122
PACIFIC NORTHWEST LAB	$ 2,100	$ 13,639	$ 12,100	- 11
PRINCETON PLASMA PHYSICS LAB	$ 0	$ 200	$ 600	+200
STANFORD LINEAR ACCELERATOR CENTER	$ 0	$ 200	$ 600	+200

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

Program Activity	FY 1993	FY 1994	FY 1995
ER Laboratory Technology Transfer	Supported industrial collaboration centers at the 5 multi-program laboratories. Provided funding to support new personnel exchanges, technology maturation projects, and new small, quick response spinoff CRADAs particularly with small business.	Increase support for industrial collaboration centers at the 5 multi-program and 6 single purpose laboratories. Provide funding to support initiation of new personnel exchanges, new technology maturation projects, technical assistance/consultation and new small, quick response CRADAs, particular with small business.	Increase support for industrial collaboration centers at the 5 multi-program and 6 single purpose laboratories. Provide 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.
	No new spinoff CRADA project starts.	Supports 49 new spinoff CRADA project starts.	Supports 46 new spinoff CRADA project starts.
	Continued support of 38 ongoing spinoff CRADA projects.	Continue support of 33 on-going spinoff CRADA projects.	Continue support of 48 on-going spinoff CRADA projects.
	Implemented the American Textiles Consortium (AMTEX) multi-laboratory partnership. Initiated 40 new AMTEX projects such as demand activated manufacturing, advanced manufacturing processes, waste reduction, automated quality control and energy conservation.	Continue support of AMTEX on-going projects.	Continue support of AMTEX on-going projects. Initiate support of the Domestic Oil and Gas Initiative in the amount of $4,000,000.
	Supported program management and the development and performance of technology transfer evaluation activities.	Continue 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 enhanced technology transfer evaluation activities.
	Funding in the amount of $133 was transferred to the SBIR program.	Funding in the amount of $572 has been budgeted for the SBIR program.	Funding in the amount of $1,050 has been budgeted for the SBIR program.
	$ 8,947	$ 38,154	$ 52,513
ER Laboratory Technology Transfer	$ 8,947	$ 38,154	$ 52,513

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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 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.

- Development, in coordination with Program Secretarial Officers, of a Department-wide technology transfer education and training program, outreach activities and a performance measurement and reporting system.

- Performance of cross-cutting technology utilization studies and pilot activities.

II. A. Summary Table: Technology Utilization

Program Activity	FY 1993 Enacted	FY 1994 Enacted	FY 1995 Request	% Change
Technology Utilization	$ 987	$ 1,000	$ 1,000	0
Total, Technology Utilization	$ 987	$ 1,000	$ 1,000	0

II. B. Major Laboratory and Facility Funding

ARGONNE NATIONAL LAB (EAST)	$ 25	$ 0	$ 50	>999
BROOKHAVEN NATIONAL LAB	$ 0	$ 3	$ 50	>999
LAWRENCE BERKELEY LAB	$ 0	$ 0	$ 50	>999
OAK RIDGE INSTITUTE FOR SCIENCE & EDUCATION	$ 420	$ 300	$ 40	- 87
PACIFIC NORTHWEST LAB	$ 105	$ 0	$ 50	>999
SANDIA NATIONAL LABORATORIES	$ 25	$ 0	$ 50	>999

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

Program Activity	FY 1993	FY 1994	FY 1995
Technology Utilization	Continued to develop tailored model CRADAs and umbrella CRADAs for specific, identified industry groups such as semi-conductor equipment's Manufacturers International.	Continue to develop tailored model CRADAs and umbrella CRADAs for specific, identified industry groups.	Continue to refine model CRADA language and develop master CRADAs for specific, identified, industry groups.
	Identified and performed analyses in support of the development of recommended policy solutions to potential and real barriers to technology transfer, such as U.S. competitiveness, product liability, advanced payments and in-kind contributions.	Identify and perform analyses in support of the development of recommended policy solutions to potential and real barriers to technology transfer.	Identify and perform analyses in support of the development of recommended policy solutions to potential and real barriers to technology transfer with targeted groups.
	Provided analytical and other support to DOE's participation in a second series of National Technology Initiative (NTI) conferences, including on-site logistics and technology fair support.	No activity.	No activity.
	Collected data, performed data validation and analysis, prepared and issued after approval of the Secretary the FY 1992 Annual Report to Congress on Technology Transfer Activities, Accomplishments and Plans.	Collect data, perform data validation and analysis, prepare and issue after approval of the Secretary the FY 1993 Annual Report to Congress on Technology Transfer Activities, Accomplishments and Plans.	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.
	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.	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.	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.

III. Technology Utilization (Cont'd):

Program Activity	FY 1993	FY 1994	FY 1995
Technology Utilization (Cont'd)	Provided analytical and other support to several interagency technology transfer efforts, mainly the Interagency Committee on Federal Laboratory Technology Transfer, its Executive Level Working Group, and several special activity groups that address issues such as technology transfer and trade agreements, conflict of interest information protection, and evaluation measures.	Continue to provide analytical and other support to several interagency technology transfer efforts.	Continue to provide analytical and other support to several interagency technology transfer efforts.
	Provided analytical, logistical and other support to developing program linkages with other agencies on technology transfer, including Memoranda of Understanding (MOUs). Provide analytical, logistical and other support to developing program linkages with states and industry groups on technology transfer, including MOUs. Performed data collection and analysis to develop a plan for establishing effective program linkages with state economic development offices, university technology transfer offices and industry/trade associations.	Continue to provide analytical, logistical and other support to developing program linkages with other agencies on technology transfer.	Continue to provide analytical, logistical and other support to developing program linkages with other agencies on technology transfer.
	Developed a uniform Departmental-wide technology transfer awareness program for all DOE and M&O contractor staff involved with technology transfer.	Develop, deliver and evaluate two specialized, advanced, Department-wide technology transfer courses for DOE and M&O contractor staff involved with technology transfer.	Continue the development, delivery, and evaluation of new, Department-wide specialized technology transfer courses for DOE and M&O contractor staff involved with technology transfer.
	Developed tailored outreach events and feedback for related target audiences.	No change.	No change.
	Developed technology transfer evaluation metrics.	No change.	No change.

III. Technology Utilization (Cont'd):

Program Activity	FY 1993	FY 1994	FY 1995
Technology Utilization (Cont'd)	Implemented National Technology Initiative follow-up plans: - Developed and utilized the blue-card technology transfer issues/problems related question and answer data base. - Produced a videotape series on the NTI for outreach and training. - Collected feedback from the labs on response to NTI conferences. - Produced an NTI interim report characterizing inputs received during the NTI first series of conferences. - Produced a "one year later" NTI strategy that addresses in part the major issues/problems identified from the first series of NTI conferences (1/93).	No activity.	No activity.
	EPACT:	EPACT:	EPACT:
	EPACT Section 2203(c) "Supporting Research and Technical Analysis" and Section 3001(e) "Research Development, Demonstration, and Commercial Application Activities":	EPACT Section 2203(c) "Supporting Research and Technical Analysis" and Section 3001(e) "Research Development, Demonstration, and Commercial Application Activities":	EPACT Section 2203(c) "Supporting Research and Technical Analysis" and Section 3001(e) "Research Development, Demonstration, and Commercial Application Activities":
	Defined implementation plan for Sections 2203(c) and 2001(e) of Energy Policy Act of 1992 (EPACT).	No activity.	No activity.
	Collected data, reviewed inputs, established the content and publish Technology '92-'93.	Collect data, review inputs, establish the content and publish Technology '93-'94.	Collect data, review inputs, establish the content and publish Technology '94-'95.
	Collected data, reviewed inputs, established the content and publish the R&D 100 Award brochure.	Collect data, review inputs, establish the content and publish the R&D 100 Award brochure.	Collect data, review inputs, establish the content and publish the R&D 100 Award brochure.
	Funding in the amount of $13 was transferred to the SBIR program.	Funding in the amount of $15 has been budgeted for the SBIR program.	Funding in the amount of $20 has been budgeted for the SBIR program.
	$ 987	$ 1,000	$ 1,000

III. Technology Utilization (Cont'd):

Program Activity	FY 1993	FY 1994	FY 1995
Technology Utilization	$ 987	$ 1,000	$ 1,000