Technical Information Management

Program Mission

The Technical Information Management (TIM) program is DOE's leader of e-government initiatives for disseminating information resulting from the Department's $7.5 billion annual research and development (R&D) program. The Office of Scientific and Technical Information (OSTI), in the Office of Science, manages the TIM program. The TIM program provides electronic access to worldwide energy scientific and technical information to DOE researchers, U.S. industry, academia, and the public through a set of cutting-edge, internet-based information products for technical reports, scientific journals, and preprints – the three main sources in which scientific and technical information is recorded. As shared knowledge is the enabler of scientific progress, TIM assures quick and precise access to knowledge. The TIM program also coordinates technical information-related activities at sites throughout the DOE complex, which includes developing and implementing information exchange policies and standards; maintains a classified information program that collects, preserves, and exchanges, in a secure environment, 100,000 classified, sensitive and limited circulation documents; and serves as DOE's leader in the international exchange of scientific and technical information. Collectively, these activities provide accountability for the scientific knowledge resulting from DOE's R&D programs.

Program Goals

To provide accountability for and increase the productivity of energy R&D by making full-text research information available through state-of-the-art electronic products, providing public access to the three major sources in which scientific and technical information is recorded: technical reports, scientific journals, and preprints. Specific goals include:

- Advance scientific knowledge and its application through the collection, organization, preservation, and dissemination of 65 percent of the scientific and technical information resulting from the Department's R&D programs and
- Provide energy-related scientific and technical energy information, collected worldwide, to the Department, U.S. industry, academia, and the public.

Program Objectives

- Lead DOE e-government initiatives for collecting, organizing, preserving, and disseminating 65 percent of the full-text scientific and technical information emanating from DOE's $7.5 billion R&D investment to a larger audience at a reduced cost;
- Fulfill U.S. obligations to the Energy Technology Data Exchange (ETDE), an international information exchange from which U.S. researchers gain access to 60,000 new foreign research results and records per year;
- Provide secure exchange and preservation of 50 years of the Department's classified R&D information managed by the TIM program;
- Update and maintain DOE's R&D Tracking System - a reporting and accountability tool to demonstrate the output of DOE's R&D investment.

Significant Accomplishments and Program Shifts

SCIENCE ACCOMPLISHMENTS

The OSTI-managed TIM program continues to make progress toward strategic priorities, which include building the world's most comprehensive collection of physical sciences information and providing greater free, electronic, public access to full-text gray literature (literature not commercially available), journal literature, and preprints.

- **DOE-Generated R&D Report Literature – DOE Information Bridge**

  The free, publicly accessible DOE Information Bridge, which contains searchable, full-text access to over 70,000 technical reports (over 5 million pages), enables users to bypass expensive and time-consuming bibliographic searches and requests for paper reports. In FY 2002, the Information Bridge will be kept current with the latest R&D results and is expected to have a 50 percent increase in its user base.

- **Electronic Scientific Journals – PubSCIENCE**

  PubSCIENCE, developed and implemented by OSTI through negotiations with over 40 professional societies, universities, and journal publishers, provides searchable bibliographic records with hypertext linkages to full-text journal articles at publishers' web sites. PubSCIENCE currently provides access to citations of 1.8 million articles in over 1,400 journals.

- **Preprints – PrePRINT Network**

  The PrePRINT Network provides searchable access to over 2,400 preprint sites worldwide with over 300,000 preprints in full text. In early FY 2001, an alert service component was released which enables researchers to set up a personalized profile and receive notification of new additions in their area of interest.

- **EnergyFiles**

  EnergyFiles, the virtual library of energy science and technology, is a comprehensive resource of on-line information systems, including those developed by the TIM program and other government organizations. EnergyFiles provides both researchers and the general public with ever-expanding desktop access to over 500 scientific and technical information resources, searchable by 14 subject categories. Users may now search full-text heterogeneous information sources with a distributed, single query search tool called Energy Portal.

- **Archive of Science and Technology – Classified and Unclassified Information**

  The TIM program's physical facility is the one place where the Department's collection of scientific and technical information can be found. The requested funding level allows for continued storage of 1.2 million historical technical reports.

- **Foreign R&D Results**

  As an international leader in the area of scientific and technical information exchange, OSTI acquires foreign research results through representation in the International Energy Agency's Energy Technology Data Exchange (ETDE). Funding at the requested level enables the Department to acquire approximately 60,000 new international research records on behalf of the domestic science community through the ETDE partnership.

- **DOE Research in Progress**

  The DOE R&D Tracking System is the Department's centrally managed database that tracks key information about each R&D project sponsored or performed by DOE. The R&D Project Summaries Database, the web-based public version of the DOE R&D Tracking System, provides open access to DOE R&D project summaries and supports the Department's interest in ensuring that scientific and technical information resulting from DOE's efforts is effectively managed and easily accessible to U.S. industry, educators, and the public.

Funding Profile

(dollars in thousands)

	FY 2000 Comparable Appropriation	FY 2001 Original Appropriation	FY 2001 Adjustments	FY 2001 Comparable Appropriation	FY 2002 Request
Technical Information Management					
Program Support	1,600	1,600	-4	1,596	1,600
Program Direction	7,151 [a b]	7,000	+136 [a b]	7,136	7,370
Subtotal, Technical Information Management	8,751	8,600	+132	8,732	8,970
General Reduction for Safeguards and Security	0	-165	165	0	0
Omnibus Rescission	0	-19	19	0	0
Total, Technical Information Management	8,751	8,416	+316	8,732	8,970

Public Law Authorization:

Public Law 95-91, “Department of Energy Organization Act”

Public Law 103-62, “Government Performance and Results Act of 1993”

[a] Excludes $165,000 for Safeguards and Security activities transferred to consolidated Safeguards and Security program in FY 2001.

[b] Includes $316,000 in FY 2000 and FY 2001 for Program Direction related Safeguards and Security (S&S) activities transferred from consolidated S&S program in FY 2001.

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Technical Information Management					
Oak Ridge, TN					
Office of Scientific and Technical Information..	8,751	8,732	8,970	+238	+2.7%
Total, Technical Information Management	8,751[a b]	8,732 [b]	8,970	+238	+2.7%

Site Description

The Office of Scientific and Technical Information (OSTI) is located on a 7-acre site in Oak Ridge, Tennessee. The OSTI facility is a 132,000 square foot secure, fire-protected, humidity-controlled building housing federal and contractor staff and over 1.2 million classified and unclassified documents. The physical facility is approximately 60 years old and is in need of large-scale capital improvements to ensure the safety and health of its occupants. The large collection of documents represents a critical component of the mission of the TIM program, which is to provide timely, accurate technical information to DOE researchers and the public by collecting, preserving, and disseminating scientific and technical information. This information is the primary deliverable from DOE's $7.5 billion annual R&D expenditure as reported in technical reports, scientific journals, and preprints.

[a] Excludes $165,000 for Safeguards and Security activities transferred to consolidated Safeguards and Security program in FY 2001.

[b] Includes $316,000 in FY 2000 and FY 2001 for Program Direction related Safeguards and Security (S&S) activities transferred from consolidated S&S program in FY 2001.

Program Support

Mission Supporting Goals and Objectives

Scientific and technical information is the principal deliverable from research and development (R&D). DOE researchers, whether with laboratories, universities or contractors, record their research results in three main sources: technical reports, scientific journals, and preprints. The TIM program leads DOE e-government initiatives for disseminating R&D information, making 65 percent of the three types of literature searchable and retrievable through web-based tools: DOE Information Bridge for technical reports; PubSCIENCE for scientific journals; and PrePRINT Network for preprints. Each of these systems is less than three years old and has achieved notable success.

For report literature, TIM coordinates a Department-wide program along with researchers, librarians, and program managers that results in reports being collected, preserved, and disseminated. The DOE Information Bridge, TIM's web product for reports, includes over 5 million pages in 70,000 reports, all searchable. The Government Printing Office has found this product so valuable that it has sponsored making this web site available to the public. For DOE-sponsored research in progress, TIM maintains the DOE R&D Tracking System, a Department-wide tracking system for R&D projects sponsored or performed by DOE. Its public counterpart, the R&D Project Summaries Database, provides open access to DOE R&D project information. For DOE-sponsored R&D that is recorded in journal literature, TIM has developed and implemented PubSCIENCE through negotiations with over 40 professional societies, universities, and journal publishers. PubSCIENCE provides searchable bibliographic records with hypertext linkages to full-text journal articles at publishers' web sites. For preprints, TIM has developed the PrePRINT Network, which provides access to over 2,400 worldwide preprint servers in disciplines of interest to DOE. Preprints in the areas of physics, materials, chemistry, mathematics, biology, environmental sciences and other areas related to DOE's research interests are accessible through the Network.

TIM collects information from over 7,000 DOE research entities; serves DOE's research community of 30,000 scientists and engineers; manages a 50-year archive of 1.1 million unclassified and 100,000 classified documents; and fulfills U.S. obligations under an international information exchange agreement, resulting in 60,000 new foreign R&D summaries being available to the U.S. research community each year, a collection that would not otherwise be available from any other source.

Funding Schedule

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Program Support	1,600	1,596	1,600	+4	+0.3%
Total, Program Support	1,600	1,596	1,600	+4	+0.3%

Detailed Program Justification

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
Access to Scientific and Technical Information	**1,200**	**1,094**	**1,098**

The TIM program continues to make progress toward strategic priorities, which include building the world's most comprehensive collection of physical sciences information and providing greater free, electronic, public access to full-text gray literature (literature not commercially available), journal literature, and preprints. The TIM program will streamline the collection, management, organization, and dissemination of DOE R&D results by continuing transition from predominantly paper-based environment to electronic information exchange and locator technology. Activities supported include the following:

- DOE Information Bridge. As technology and common standards advance, it becomes more timely and economical to exchange information in electronic media. Hailed as a "model" for other interagency collaborations by the Chairman of the Joint Committee on Printing, the public version of the DOE Information Bridge is available through a partnership with the Government Printing Office (GPO). **Performance will be measured by** increasing the number of new full-text reports available through the DOE Information Bridge by 10 percent.
- PubSCIENCE. Scientific research is a cumulative and synergistic process where continued advances are dependent on previous research findings. The pace of these advances is largely dependent on researchers' and librarians' ability to locate and retrieve information pertinent to their research areas. **Performance will be measured by** increasing the number of bibliographic citations in core science journals accessible via PubSCIENCE by 20 percent. For no additional cost beyond that spent on paper subscriptions, the Department will receive access to many additional science journals.
- PrePRINT Network. The PrePRINT Network is a searchable gateway to preprint servers that deal with scientific and technical disciplines of concern to DOE. Such disciplines include the great bulk of physics, materials, and chemistry, as well as portions of biology, environmental sciences and nuclear medicine. With a single query, users can search one or a collection of existing preprint servers. The Network pulses the search engines of such servers, compiles the results, and returns them to the users. **Performance will be measured by** increasing the number of worldwide preprint servers accessible via the PrePRINT Network by 25 percent.

(dollars in thousands)

FY 2000	FY 2001	FY 2002

- EnergyFiles, the virtual library of energy science and technology, is a comprehensive resource of on-line information systems, including those developed by the TIM program and other government organizations. It puts energy science and technology information at users' fingertips. EnergyFiles provides both researchers and the general public with ever-expanding desktop access to over 500 scientific and technical information resources, searchable by 14 subject categories**.** EnergyFiles has conquered a major obstacle confronting multi-source libraries through the innovative application of emerging technologies. Users may now search full-text heterogeneous information sources with a distributed, single query search tool called Energy Portal.
- Capital Equipment. Capital equipment funding is included for computer hardware to support electronic information exchange efforts.

R&D Tracking System..... **0** **202** **202**

The DOE R&D Tracking System is the only Department-wide R&D reporting and accountability tool. The DOE R&D Tracking System is the Department's centrally managed database that tracks key information about each R&D project sponsored or performed by DOE. The System is used for a variety of needs including responding to the annual Office of Science and Technology Policy (OSTP) data call, facilitating the Department's tracking of R&D projects, and reducing the time spent in responding to ad hoc data calls from within and outside the Department. The R&D Tracking System provides an on-line mechanism for Program Offices and the DOE Laboratories to review, manage, update, and analyze the Department's multi-billion dollar R&D program. The R&D Project Summaries Database, the web-based public version of the DOE R&D Tracking System, provides open access to DOE R&D project summaries and supports the Department's interest in ensuring that scientific and technical information resulting from DOE's efforts is effectively managed and easily accessible to U.S. industry, educators, and the public.

Foreign R&D Records **200** **100** **100**

Other industrialized nations are also investing in energy R&D, and the resulting technical information is globally recognized as a valuable commodity that can be exchanged in order to save taxpayer dollars and avoid duplicative research. As an international leader in the area of scientific and technical information exchange, OSTI acquires foreign research results through representation in the International Energy Agency's Energy Technology Data Exchange (ETDE). The ETDE agreement involves the exchange of energy-related information among 18 industrialized nations. Funding at the requested level enables the Department to acquire approximately 60,000 new international research records on behalf of the domestic science community through the ETDE partnership.

Electronic and Paper Document Storage..... **200** **200** **200**

The TIM program's physical facility is the one place where the Department's collection of scientific and technical information can be found. With the transition to the electronic information age, the repository function for the nation's energy-related science base must adapt to the new media. Interagency standards and agreements must be developed, adopted, and implemented while conserving resources and

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
promoting information access and retrievability. The requested funding level allows for continued storage of 1.2 million historical technical reports. The TIM program also houses a comprehensive repository of energy- and weapons-related classified information in a secure environment.			
Total, Program Support	**1,600**	**1,596**	**1,600**

Explanation of Funding Changes from FY 2001 to FY 2002

	FY 2002 vs. FY 2001 ($000)
Program Support	
■ There are no significant funding changes from FY 2001 to FY 2002.	+4
Total Funding Change, Program Support	+4

Program Direction

Mission Supporting Goals and Objectives

Program Direction funding provides staffing and resources to both direct and execute the Technical Information Management (TIM) program mission. Federally-staffed functions include policy development and integration; U.S. and DOE representation in interagency and international information exchange agreements; management of safeguards and security activities; and collecting, preserving, organizing, and disseminating 65 percent of the information resulting from DOE's R&D investment, including re-engineering mission-critical systems to take full advantage of electronic information technology. As a result of the capabilities TIM uses to fulfill Department-wide responsibilities, it also provides, on a cost-reimbursable basis, specialized scientific and technical information systems or services to individual DOE program offices.

Program Direction is divided into the following categories:

- **Salaries and Benefits** provide for Federal staff involved in the functions described above.
- **Travel** provides for program-related travel to coordinate and implement partnerships within DOE and with other Federal agencies and partners to exchange electronic information and provide access to taxpayer-sponsored R&D results.
- **Support Services** provide key integration of information technology into the TIM program and on-site service in such areas as facility operations, local area network support, and information systems maintenance and upgrades.
- **Other Related Expenses** represent maintenance and utilities costs for the Office of Scientific and Technical Information facility and equipment for office automation and work requirements.

Funding Schedule

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Oak Ridge, TN					
Salaries and Benefits	6,200	6,450	6,600	+150	+2.3%
Travel	80	80	80	0	0.0%
Support Services	250	136	170	+34	+25.0%
Other Related Expenses	321	160	200	+40	+25.0%
Total, Oak Ridge, TN	6,851	6,826	7,050	+224	+3.3%
Full Time Equivalents	81	81	80	-1	-1.2%
Headquarters					
Salaries and Benefits	290	300	310	+10	+3.3%
Travel	10	10	10	0	0.0%
Support Services	0	0	0	0	0.0%
Other Related Expenses	0	0	0	0	0.0%
Total, Headquarters	300	310	320	+10	+3.2%
Full Time Equivalents	3	3	3	0	0.0%
Total Technical Information Management					
Salaries and Benefits	6,490	6,750	6,910	+160	+2.4%
Travel	90	90	90	0	0.0%
Support Services	250	136	170	+34	+25.0%
Other Related Expenses	321	160	200	+40	+25.0%
Total, Program Direction	7,151	7,136	7,370	+234	+3.3%
Full Time Equivalents	84	84	83	-1	-1.2%

Detailed Program Justification

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
Salaries and Benefits	**6,490**	**6,750**	**6,910**

In the TIM program, Federally-staffed functions include policy development and integration; U.S. and DOE representation in interagency and international information exchange agreements; management of safeguards and security activities; and collecting, organizing, preserving, and disseminating information resulting from DOE's R&D investment. More specifically, Federal staff implement programs and practices involving all National Laboratories and over 7,000 other DOE research entities producing scientific and technical information (STI). Federal staff conduct negotiations and programs with science journal publishers to provide the DOE research community access to electronic journals via PubSCIENCE. Federal staff will facilitate an increase in the comprehensiveness of access to the three main sources of scientific information: reports, journals, and preprints. In FY 2002, increased funding supports cost of living escalation and a reduction of one FTE.

Travel	**90**	**90**	**90**

Travel funding supports a nationwide program involving National Laboratories and thousands of research entities, including coordination of common exchange standards. Alternatives to travel such as teleconferencing will continue to be utilized when possible.

Support Services	**250**	**136**	**170**

Provides for testing systems and concepts related to the TIM program, web-based tools and services, and internal and external automatic data processing as well as the minimum level of support services needed for mailroom operations, environment, safety and health support, computer systems development, and hardware and software installation, configuration, and maintenance activities. Also includes support services needed for safeguards and security activities. In FY 2002, increased funding supports implementation of TIM program initiatives.

Other Related Expenses	**321**	**160**	**200**

Expenses reflect facility maintenance costs, training for federal employees, telecommunications enhancements designed to support information dissemination, and acquisition of computer hardware and software necessary to accomplish network upgrades. In FY 2002, increased funding supports increased utilities cost and training.

Total, Program Direction	**7,151**	**7,136**	**7,370**

Explanation of Funding Changes from FY 2001 to FY 2002

	FY 2002 vs. FY 2001 ($000)
Salaries and Benefits	
■ The increase supports cost of living escalation and a reduction of one FTE.	+160
Support Services	
■ The increase provides for additional support services to implement TIM program initiatives. Support services provide key integration of information technology in such areas as facility operations, local area network support, and information systems maintenance and upgrades.	+34
Other Related Expenses	
■ The increase includes increased utilities costs and employee training.	+40
Total Funding Change, Program Direction.....	+234

Support Services

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Technical Support Services					
Test and Evaluation Studies	150	90	120	+30	+33.3%
Total, Technical Support Services	150	90	120	+30	+33.3%
Management Support Services					
ADP Support	100	46	50	+4	+8.7%
Total, Management Support Services	100	46	50	+4	+8.7%
Total, Support Services	250	136	170	+34	+25.0%

Other Related Expenses

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Training	10	10	15	+5	+50.0%
Rental Spaces/Utilities	200	140	155	+15	+10.7%
Software Procurement/Maintenance Activities/Capital Acquisitions	111	10	30	+20	+200.0%
Total, Other Related Expenses	321	160	200	+40	+25.0%

Capital Operating Expenses & Construction Summary

Capital Operating Expenses

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Capital Equipment	0	200	200	0	0.0%
Total, Capital Operating Expenses	0	200	200	0	0.0%