

Congressional Budget Request

Energy Supply Research and Development

Volume 3

FY 1987



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Management and Administration
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DEPARTMENT OF ENERGY
FISCAL YEAR 1987 CONGRESSIONAL BUDGET REQUEST
ENERGY SUPPLY RESEARCH AND DEVELOPMENT
VOLUME 3
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DEPARTMENT OF ENERGY
FISCAL YEAR 1987 CONGRESSIONAL BUDGET REQUEST

SUMMARY OF ESTIMATES BY APPROPRIATIONS

(in thousands of dollars)

	<u>FY 1985 Actual BA</u>	<u>FY 1986 Estimate BA</u>	<u>FY 1987 Request BA</u>
Appropriations Before The Energy and Water Development Subcommittees:			
Energy Supply Research and Development	1,967,490	1,696,298	1,254,162
Uranium Enrichment	237,956	190,512	---
General Science and Research	724,860	655,928	773,400
Atomic Energy Defense Activities ..	7,322,321	7,231,664	8,230,000
Departmental Administration	128,602	150,319	151,082
Alaska Power Administration	3,233	3,245	2,881
Bonneville Power Administration ...	284,771	330,000	276,100
Southeastern Power Administration .	35,744	---	19,647
Southwestern Power Administration .	31,208	29,191	25,337
Western Area Power Administration .	218,230	195,910	240,309
Western Area Power Emergency Fund .	---	---	---
Federal Energy Regulatory Commission	54,543	41,989	20,325
Nuclear Waste Fund	327,669	499,037	769,349
Geothermal Resources Development Fund	<u>121</u>	<u>69</u>	<u>72</u>
Subtotal, Appropriations Before the Energy and Water Development Subcommittees	<u>\$11,336,748</u>	<u>\$11,024,162</u>	<u>\$11,762,664</u>

DEPARTMENT OF ENERGY
FISCAL YEAR 1987 CONGRESSIONAL BUDGET REQUEST

SUMMARY OF ESTIMATES BY APPROPRIATIONS

(in thousands of dollars)

	<u>FY 1985</u> <u>Actual</u> <u>BA</u>	<u>FY 1986</u> <u>Estimate</u> <u>BA</u>	<u>FY 1987</u> <u>Request</u> <u>BA</u>
Appropriations Before Interior and Related Agencies Subcommittees:			
Alternative Fuels Production	\$ 1,169,895	\$ ---	\$ ---
Clean Coal Technology	---	---	---
Fossil Energy Research and Development	289,048	311,954	82,767
Naval Petroleum and Oil Shale Reserves	156,874	13,002	127,108
Energy Conservation	457,436	427,512	39,433
Energy Regulation	27,139	23,423	21,850
Emergency Preparedness	6,045	5,750	6,044
Strategic Petroleum Reserve	2,049,550	107,533	---
Energy Information Activities	<u>60,919</u>	<u>57,724</u>	<u>59,651</u>
Subtotal, Interior and Related Agencies Subcommittees	4,216,906	946,898	336,853
Subtotal, Energy and Water Development Subcommittees	<u>11,336,748</u>	<u>11,024,162</u>	<u>11,762,664</u>
Subtotal, Department of Energy	15,553,654	11,971,060	12,099,517
Permanent - Indefinite Appropriations:			
Payments to States	<u>1,052</u>	<u>570</u>	<u>570</u>
Total, Department of Energy	<u>\$15,554,706</u>	<u>\$11,971,630</u>	<u>\$12,100,087</u>

DEPARTMENT OF ENERGY
 FY 1987 CONGRESSIONAL STAFFING REQUEST
 TOTAL WORK FORCE

	FY1985 FTE USAGE	FY1986 CONGR REQ	FY1987 -FY86	FY1987 CONGR REQ
ENERGY & WATER SUBCOMMITTEE				
HEADQUARTERS	4,865	4,965	-10	4,947
FIELD	9,133	9,185	111	9,296
SUBCOMMITTEE TOTAL	13,998	14,150	93	14,243
INTERIOR SUBCOMMITTEE				
HEADQUARTERS	1,353	1,304	-166	1,138
FIELD	907	896	-226	670
SUBCOMMITTEE TOTAL	2,260	2,200	-392	1,808
GRAND TOTAL	16,258	16,350	-299	16,051
ADJUSTMENT		-132	-198	-330
ADJUSTED TOTAL	16,258	16,218	-497	15,721

DEPARTMENT OF ENERGY
 FY 1987 CONGRESSIONAL STAFFING REQUEST
 TOTAL WORK FORCE

	FY1985 FTE USAGE	FY1986 CONGR REQ	FY1987 -FY86	FY1987 CONGR REQ
10: ENERGY SUPPLY RESEARCH AND DEV	937	934	-34	900
HEADQUARTERS	811	820	-28	792
FIELD	126	114	-4	108
15: URANIUM ENRICHMENT	69	66	1	67
HEADQUARTERS	58	55	1	56
FIELD	11	11	0	11
20: GENERAL SCIENCE AND RESEARCH	37	39	0	39
HEADQUARTERS	37	39	0	39
25: ATOMIC ENERGY DEFENSE ACTIVITI	2,618	2,702	131	2,833
HEADQUARTERS	456	918	9	927
FIELD	2,122	2,184	122	2,306
30: DEPARTMENTAL ADMINISTRATION	3,307	3,352	-9	3,327
HEADQUARTERS	1,721	1,726	0	1,726
FIELD	1,586	1,604	-5	1,601
34: ALASKA POWER ADMINISTRATION	37	38	0	38
FIELD	37	38	0	38
36: BONNEVILLE POWER ADMIN	3,910	3,480	0	3,480
FIELD	3,510	3,480	0	3,480
38: SOUTHEASTERN POWER ADMIN	38	40	0	40
FIELD	38	40	0	40
42: SOUTHWESTERN POWER ADMIN	186	186	0	186
FIELD	186	186	0	186
46: WESTERN AREA POWER ADMIN	1,181	1,160	0	1,160
FIELD	1,181	1,160	0	1,160
50: WAPA - COLDRADO RIVER BASIN	219	219	0	219
FIELD	219	219	0	219
52: FEDERAL ENERGY REGULATORY COMM	1,617	1,659	0	1,659
HEADQUARTERS	1,617	1,659	0	1,659
54: NUCLEAR WASTE FUND	238	292	0	292
HEADQUARTERS	123	147	0	147
FIELD	115	145	0	145
56: GEOTHERMAL RESOURCES DEV FUND	2	1	0	1
HEADQUARTERS	2	1	0	1
65: POSSIL ENERGY RESEARCH AND DEV	714	700	-161	539
HEADQUARTERS	151	135	-26	100
FIELD	563	565	-135	430
70: NAVAL PETROL & OIL SHALE RES	104	104	-9	95
HEADQUARTERS	23	23	0	23
FIELD	81	81	-9	72
75: ENERGY CONSERVATION	333	352	-134	218
HEADQUARTERS	208	227	-79	148
FIELD	125	129	-55	70
80: EMERGENCY PREPAREDNESS	74	71	0	71
HEADQUARTERS	74	71	0	71
81: ECONOMIC REGULATION	377	340	-50	290
HEADQUARTERS	377	340	-50	290
85: STRATEGIC PETROLEUM RESERVE	178	152	-32	120
HEADQUARTERS	40	27	-5	22
FIELD	138	125	-27	98
90: ENERGY INFORMATION ACTIVITIES	480	481	-6	475
HEADQUARTERS	480	481	-6	475
94: ADVANCES FOR CO-OP WORK	2	2	0	2
FIELD	2	2	0	2
GRAND TOTAL	16,258	16,350	-299	16,051
ADJUSTMENT		-132	-198	-330
ADJUSTED TOTAL	16,258	16,218	-497	15,721

DEPARTMENT OF ENERGY
Proposed Appropriation Language
Energy Supply, Research and Development Activities
(Including Transfer of Funds)

For expenses of the Department of Energy activities including the purchase, construction and acquisition of plant and capital equipment and other expenses incidental thereto necessary for energy supply, research and development activities, and other activities in carrying out the purposes of the Department of Energy Organization Act (Public Law 95-91), including the acquisition or condemnation of any real property or any facility or for plant or facility acquisition, construction or expansion; purchase of passenger motor vehicles (not to exceed [17] 18 for replacement only), [\$1,989,671,000] \$1,254,162, to remain available until expended [of which \$200,000,000]; in addition, \$584,158,000 shall be derived by transfer from Uranium Supply and Enrichment Activities provided in prior years[, and of which \$17,400,000 shall be derived by transfer from Operation and Maintenance, Southeastern Power Administration; and of which \$25,000,000 shall be available only for construction of]: Provided, That funds available under this head in Public Law 99-141 for the Advanced Science Center, the Center for Science and Technology, the Center for Energy and Biomedical Technology, the Energy and Mineral Research Center, and the Demonstration Center for Information Technologies [as described in the report accompanying this Act; together with not to exceed \$6,000,000, to be derived from revenues from activities of the Technical Information Services, which shall be credited to this account and used for necessary expenses and shall remain available until expended], shall be available for other expenses of energy supply, research and development activities. (Public Law 99-141, making appropriations for energy and water development, 1986.)

DEPARTMENT OF ENERGY
 FISCAL YEAR 1987 CONGRESSIONAL BUDGET REQUEST
 SUMMARY OF ESTIMATES BY APPROPRIATION BY MAJOR ACTIVITY
 ENERGY SUPPLY RESEARCH AND DEVELOPMENT
 (Budget Authority in Thousands of Dollars)

	FY 1985 Actual	FY 1986 Estimate	FY 1987 Request
Solar Energy	\$ 171,587	\$ 144,624	\$ 72,292
Geothermal	29,698	26,681	17,930
Hydropower	447	481	---
Electric Energy Systems	19,717	11,548	7,619
Energy Storage Systems	18,642	17,292	8,000
Nuclear Energy R&D	432,612	374,684	330,900
Remedial Action & Waste Technology ..	170,365	230,047	294,100
Civilian Waste R&D	25,806	16,064	6,500
Environmental, Safety and Health ...	38,053	46,921	76,098
Biological and Environmental Research	187,746	179,950	196,565
Liquified Gaseous Spill Test Facility	4,289	1,732	1,200
Magnetic Fusion	429,553	365,469	333,000
Basic Energy Sciences	410,000	433,770	441,370
Energy Research Analysis	2,970	2,598	3,550
University Research Instrumentation ..	4,950	6,254	5,000
University Research Support	10,059	10,296	10,075
Advisory and Oversight Program Direction	2,900	2,674	2,900
Multi-Program Laboratories Facilities Support	33,200	39,824	60,190
Small Business Innovation Research Program	24,724	---	---
In-House Energy Management	14,821	11,709	16,500
Technical Information and Management	13,442	12,413	10,775
Policy and Management	3,380	3,497	3,887
Subtotal, Energy Supply R&D ...	<u>2,029,690</u>	<u>1,939,528</u>	<u>1,899,951</u>
Less Use of Prior Year Balances and Other Adjustments	<u>-62,400</u>	<u>-243,230</u>	<u>-645,789</u>
Total, Energy Supply R&D	<u>\$1,967,490</u>	<u>\$1,696,298</u>	<u>\$1,254,162</u>

SUPPORTING SERVICES

DEPARTMENT OF ENERGY
FISCAL YEAR 1987 CONGRESSIONAL BUDGET REQUEST
ENERGY SUPPLY RESEARCH AND DEVELOPMENT
SUPPORTING SERVICES

VOLUME 3
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DEPARTMENT OF ENERGY
FY 1987 CONGRESSIONAL BUDGET REQUEST
PROGRAM OVERVIEW
TECHNICAL INFORMATION MANAGEMENT PROGRAM

The Department of Energy's (DOE) multi-billion dollar annual research and development (R&D) effort is characterized by over 5,000 research projects carried out on a decentralized basis at over 2,700 diverse sites by more than 40,000 people working in the R&D program. This research generates approximately 40,000 documents reporting on DOE-funded research per year.

The Technical Information Management Program (TIMP) was developed by DOE to manage the results from this extensive research effort by operating a centralized technical information program responsible for collecting these results, managing the processing and access to these results using various information technologies, and disseminating the results to DOE-funded researchers and program managers. This information is also used to obtain on a reciprocal basis comparable research information from foreign countries and to support the Department's international collaborative R&D programs.

The primary goals of TIMP are (1) to ensure cost effective and efficient management, control, and accountability of DOE-funded research results, and (2) to obtain worldwide energy R&D results for use by DOE and U.S. scientists, engineers, and program managers. As part of the overall Departmental program, TIMP is responsible for the management, control, and dissemination of classified and sensitive materials produced in its DOE R&D programs.

Significant recent accomplishments include:

- o Expanded international information exchange programs by concluding a bilateral agreement with the United Kingdom, initiating development of a centralized information system with the International Energy Agency (IEA) and proceeding on the development of a bilateral agreement with Japan.
- o Continued leadership role in fulfilling existing U.S. obligations to the International Atomic Energy Agency (IAEA), International Energy Agency (IEA), and seven nations with which the U.S. has bilateral agreements in force.
- o Continued management of the DOE master file on worldwide energy R&D. This energy database lets program managers, scientists, and engineers determine what research has already been completed before beginning new projects. Almost 200,000 such completed projects or efforts are added to the database each year.
- o Implementation of a system which will provide classified research results to authorized users on a nationwide basis utilizing encrypted and secure voice equipment.
- o Continued evaluation of the activities of DOE field sites to assure that Departmental technical information policies and procedures are followed.

- o Continued monitoring of the receipts of DOE-funded R&D deliverables that ensure contractors meet contract specifications.
- o Expanded comprehensiveness of the Research-In-Progress (RIP) database. With this database, DOE researchers determine what research is under way before starting new research projects.
- o Completed the reproduction and shipment of all unclassified DOE technical reports published during the period 1976-1986 to 170 Congressionally designated depository libraries.

Objectives for FY 1987

- o To fulfill U.S. commitments to international energy agencies and bilateral agreement signatories.
- o To continue to manage an effective scientific and technical information facility providing management of and access to R&D results for the DOE research program.
- o To introduce more cost-effective and efficient processes into the central Departmental scientific and technical information facility as new technology becomes available and resources permit.
- o To improve DOE accountability and reporting procedures for R&D contract deliverables.
- o To continue to manage classified and sensitive energy data most effectively in the interest of national security.
- o To continue to implement and expand technical information appraisal programs to ensure compliance with Departmental technical information policies and procedures.
- o To continue to provide standards, guidance, and support to the DOE technical information management infrastructure.

Accomplishment of the objectives of the centralized Technical Information Management Program is consistent with the Department's responsibilities regarding control, protection, and access to scientific and technical information as stated in 42 U.S.C. 7112, 7151 and 9703, and Executive Orders on national security information. The TIMP will continue to carry out its responsibility in the development and implementation of Departmental policy in the area of scientific and technical energy information exchange and provide a system which will help to minimize costly duplication of effort, protect information affecting national security, and increase scientific productivity.

DEPARTMENT OF ENERGY
 FY 1987 CONGRESSIONAL BUDGET REQUEST
 LEAD TABLE
 TECHNICAL INFORMATION MANAGEMENT PROGRAM
 ENERGY SUPPLY RESEARCH AND DEVELOPMENT
 (Tabular dollars in thousands)

	<u>FY 1985</u> <u>Appropriation</u>	<u>FY 1986</u> <u>Adjusted</u> <u>Appropriation</u>	<u>FY 1987</u> <u>Base</u>	<u>FY 1987</u> <u>Request</u>
Technical Information Management Program				
Operating Expenses	\$ 12,642	\$ 13,072	\$ 13,072	\$ 13,848
Capital Equipment	800	550	550	850
Subtotal	<u>\$ 13,442</u>	<u>\$ 13,622</u>	<u>\$ 13,622</u>	<u>\$ 14,698</u>
Less transfer of prior year unobligated authority from In-House Energy Management:				
Net Budget Authority	<u>\$ 13,442</u>	<u>-1,209</u> <u>\$ 12,413</u> ^{1/}	<u>-1,209</u> <u>\$ 12,413</u>	<u>-3,923</u> ^{2/} <u>\$ 10,775</u>
Total FTEs	<u>175</u>	<u>175</u>	<u>175</u>	<u>175</u>

Authorization: Section 31, P.L. 83-703

1/ This amount includes \$2,791,000 to be reprogrammed from FY 1986 In-House Energy Management funds.

2/ Reprogrammed from In-House Energy Management.

Department of Energy
 FY 1987 Congressional Budget Request
 Adjustments to FY 1986 Appropriations

	<u>FY 1986 Confer.</u>	<u>Grass- Rudman- Hollings Reduction</u>	<u>Subtotal</u>	<u>Comparability Adjustments</u>	<u>Adj. Approp. Total</u>
<u>Technical Information Management Prog.</u>					
Operating Expenses	\$ 9,200	\$ -348	\$8,852	\$2,791	\$11,643
Capital Equipment	800	-30	770	--	770
Total, Technical Information Management Program	\$10,000	\$ -378	\$9,622	\$2,791	\$12,413
Operating Expenses	\$ 9,200	\$ -348	\$8,852	\$2,791	\$11,643
Capital Equipment	800	-30	770	--	770

DEPARTMENT OF ENERGY
 FY 1987 CONGRESSIONAL BUDGET REQUEST
 SUMMARY OF CHANGES
 TECHNICAL INFORMATION MANAGEMENT PROGRAM
 ENERGY SUPPLY RESEARCH AND DEVELOPMENT
 (In thousands of dollars)

FY 1986 Adjusted Appropriation	\$ 9,622
Plus transfer of prior year unobligated authority from In-House Energy Management	+1,209
Plus obligational authority to be reprogrammed from FY 1986 In-House Energy Management	<u>+2,791</u>
FY 1986 Revised Appropriation	13,622
Built in increases and decreases	<u>0</u>
FY 1987 Base	\$13,622
Program Increases and Decreases	
o Increases for within grades and promotions.	+ 80
o Increase for software conversion	+ 301
o Provide for necessary equipment maintenance.	+ 75
o Escalation increases of contractual services.	+ 320
o Provide for necessary upgrade of capital equipment.	<u>+ 300</u>
FY 1987 Request	\$14,698
Less prior year unobligated authority from In-House Energy Management	<u>-3,923</u>
Net Authority	\$10,775

DEPARTMENT OF ENERGY
FY 1987 CONGRESSIONAL BUDGET REQUEST
NARRATIVE
TECHNICAL INFORMATION MANAGEMENT PROGRAM
ENERGY SUPPLY RESEARCH AND DEVELOPMENT

The major program responsibilities covered by the funding requirements for the TIMP are:

- (1) The development and implementation of specific DOE-wide policies, procedures, and guidelines relating to scientific and technical information (STI).
- (2) Program evaluation responsibility to ensure that scientific and technical information policies are effectively carried out.
- (3) The management of an international program to allow the U.S. to capitalize on the availability of technical information generated through other nations' energy research and development.
- (4) Management of the Technical Information Center, DOE's centralized scientific and technical information facility. This facility is maintained on behalf of all programs to:
 - (a) provide management accountability information for DOE-funded information deliverables; and
 - (b) make accessible the result of worldwide investment in energy R&D to support research program productivity and ensure that DOE receives the maximum return on its research dollar investment.

The Department's Technical Information Management Program also ensures DOE compliance with legislation establishing the Department of Commerce (NTIS) as the primary distribution center to the U.S. public for federally-funded research and development results and the provision of DOE scientific and technical reports to the nation's depository libraries (15 U.S.C. 1151-57 and 44 U.S.C. 1901-14). Through its TIMP, DOE provides research results to the NTIS for access by U.S. business, industry and the general public, and to GPO's depository libraries. The gross costs of operating the Technical Information Management Program are partially offset by collections from users of its products and services. The program will continue to maximize every opportunity to recover costs.

The major benefits of the program can be grouped into four impact areas:

- (1) Research program productivity is increased through cost avoidance and better allocation of resources.
- (2) Control and protection of the DOE technology resource in the form of scientific and technical information (STI) is cost-effectively achieved.
- (3) DOE management accountability is provided.
- (4) DOE and other U.S. funded energy research is exchanged with selected nations on the basis of equity.

Table 1 outlines the major management and control systems which are funded to meet the program responsibilities and to obtain the program benefits.

Table 1
 THE MANAGEMENT AND CONTROL SYSTEMS FOR THE RESULTS OF DOE INVESTMENT IN R&D

Program Control System	Purpose
Technical Information Management System (TIMS)	Provide DOE management with accountability information on contract deliverables. Ensure R&D results are reported to the control system.
Research-In-Progress (RIP)	Avoid unnecessary R&D spending by relating to ensure that new procurements do not overlap other research efforts (i.e., EE requires RIP search before any new procurements are made). Provide DOE program with multi-use R&D data.
Policy Development	Reduce ineffective use of information resources (part of defective Information Resources Management as required by P. L. 96-511). Comply with laws, treaties, and Executive and Departmental orders relating to research information.
Oversight and Program Evaluation	Ensure policy implementation for effective resource management.
DOE Archives for R&D	Provide economies of scale for cost-effective resource management (uniform record of over 300,000 DOE reports; used in Defense program (DP) classification review).
Energy Data Bases	Provide unrestricted access to state of knowledge to avoid duplicative R&D activities (over 2.5 million research records in energy science and technology). Provide intelligence help for analysis of other nations' state of the art in energy technologies in the interest of U.S. security as required by Executive Order 12333.
Energy Access and Dissemination Systems	Provide economies of scale and avoid waste by centralization (through online electronic access and current awareness publications).
International Information Management	Protect technology and assure favorable exchange when it is to U.S. advantage.
Industrial and Public Access to results of DOE R&D	Facilitate goals of technology transfer to U.S. industry (25,000 reports deposited annually at NTIS). Satisfy laws requiring taxpayer access.
Management and control of DOE Technical Reports	Ensure that contractors produce reproducible and usable products. Provide cost effective centralized control of publication distribution (input requirements of DOE 1.14) for over 20,000 DOE technical reports.

Narrative (Continued)

Of the \$14,698,000 program funding available, approximately \$6 million is for personal services and personnel benefit costs for 175 full time equivalent employees and the balance is for contractual services and supplies. The increase of \$1,075,000 above the FY 1986 program level of \$13,622,000 is for the following:

- (1) Personal Services and Personnel Benefits (\$80,000) - Although staffing level remains constant at 175 for FY 1986 and FY 1987, additional costs will be increased for within grades and promotions.
- (2) Software Conversion (\$301,000) - All applications on the DECSYSTEM KL-10 computers must be converted over to the VAX cluster in anticipation of the phase-out of the KL-10s in FY 1988. This increase is for the software requirements associated with this change over.
- (3) ADP Capital Equipment Maintenance (\$75,000) - Increase reflects the need for additional maintenance contracts associated with maintaining both VAX and KL-10 equipment during transition.
- (4) Contractual Service Contracts (\$320,000) - Increase is based on cost escalation of contractual services.
- (5) Capital Equipment (\$300,000) - The increase in capital equipment from FY 1986 to FY 1987 is as follows:

	<u>FY 1986</u> <u>Request</u>	<u>FY 1987</u> <u>Request</u>
<u>Central Information Management (ADP)</u>		
VAX 8600 System	300	300
VAX Cluster Upgrade	75	150
Magnetic Disk Upgrade	0	00
Terminals and Microcomputers	30	0
IDM Upgrade	25	0
Classified System Upgrade	70	43
Communications Upgrade	0	100
Subtotal	500	673
<u>Non-ADP</u>		
Production Equipment	50	177
Total Capital Equipment	550	850

Justification for the above FY 1987 equipment items:

ADP - Central Information Management Upgrade (\$673,000)

As indicated above, all applications on the DECSYSTEM KL-10 computers must be converted over to the VAX cluster. A VAX 8600 must be acquired and the existing VAX cluster upgraded to accommodate the KL-10 workload. The storage capability on the VAX cluster will be augmented to replace the storage capabilities of the

RPO6 disk units on the XL-10 system and a second controller will be acquired to increase the fault tolerance of the cluster. Classified systems must be upgraded with additional disk and tape drive capability. The communications upgrade will allow the local area network to be expanded to accommodate a greater number of users for access to OSTI computers as well as to the DOE-wide systems for bibliographic and numeric data. As the number of databases available on the system increases and more post-processing applications are made available, the number of users are expected to increase accordingly.

Non-AOP Equipment (\$177,000)

The non-AOP funds will be used to replace old inefficient equipment. A folder (\$45,000), perfect binder (\$125,000), and plate burner (\$7,000) will be acquired in order to increase production without additional labor costs and reduce maintenance costs.

The TIMP request of \$14,698,000 will support the following activities:

- (1) INTERNATIONAL INFORMATION EXCHANGE. TIMP has the lead in special bilateral technical information exchange agreements and programs of the International Energy Agency and the International Atomic Energy Agency. Technical information received through these programs lets DOE researchers review progress on similar or related work in other countries. This often permits them to cut costs or redirect their work in more promising directions.
- (2) DEVELOPMENT OF POLICIES, PROCEDURES, AND GUIDELINES. TIMP must implement responsibilities under DOE Order 1430.1 so that the results of the Department's R&D program in the form of technical information is managed effectively.
- (3) OVERSIGHT AND APPRAISAL. In order to assure that all research sites fulfill their contractual reporting responsibilities to DOE, TIMP is responsible for a Department-wide oversight and appraisal program.
- (4) DEVELOPMENT OF THE ENERGY DATABASE (EDB). TIMP will continue to maintain a central database of energy science and research findings for DOE researchers.
- (5) MANAGEMENT OF DEFENSE AND SENSITIVE TECHNICAL INFORMATION. TIMP will continue to maintain secured facilities and systems and qualified staff to manage and control the results of DOE classified R&D.
- (6) MANAGEMENT OF DOE TECHNICAL RESEARCH RESULTS. As a result of its R&D effort, DOE disseminates research findings in over 25,000 original technical reports each year. TIMP has the responsibility to acquire these results, distribute them to the appropriate users, and then maintain effective access for future use as well as for historical program documentation. Records of this material as well as subject access are put in machine-readable files, and those of substantial technical value are added to the Energy Database. Over 32,000 DOE-funded publications including journal articles, monographs and conference proceedings are also accessible through its centralized

database system. To reduce costs, microfiches will be substituted in many cases for prime contractor R&D reports previously provided in full-size text.

- (7) ACCESS TO UNCLASSIFIED ENERGY R&D RESULTS. TIMP provides access to the technical information it manages by subsetting the Energy Database (EDB) into 300 significant areas of science and technology corresponding to DOE's R&D program disciplines and then providing detailed subject access to EDB using over 24,000 specialized technical subject terms. TIMP has provided for online electronic access to the EDB through commercial vendors and to technical information management files via TIMP computers.
- (8) DEVELOPMENT OF RESEARCH-IN-PROGRESS (RIP) DATABASES. The RIP database is DOE's central file on new and ongoing research programs and projects funded throughout the Department. Through computerized online access, this information is available in a timely manner. The availability of this information discourages unnecessary duplication in energy R&D. As a result of cooperative efforts with the Electric Power Research Institute (EPRI) as well as through interagency and bilateral international agreements, TIMP has been receiving notifications of non-DOE energy research in progress which are also being made available to DOE through online electronic access facilities. RIP databases now contain over 10,000 DOE energy project summaries and over 15,000 from other domestic organizations and foreign countries.
- (9) MANAGEMENT OF THE TECHNICAL INFORMATION MONITORING SYSTEM (TIMS). TIMP operates an R&D contract monitoring and control system to help ensure that research contract deliverables are received by the Department and made available to appropriate audiences. The system utilizes information contained in the Department's procurement system (PADS) and the reporting requirements specified in individual contracts and grants and compares these requirements against the contract deliverables actually received at OSTI.