Ongressional_____Budget Request

Energy Supply Research and Development

Volume 3

FY 1987



U.S. Department of Energy

Assistant Secretary,
Management and Admiristration
Office of the Controller
Washington, D.C. 20585

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FISCAL YEAR 1987 CONGRESSIONAL BUDGET REQUEST

ENERGY SUPPLY RESEARCH AND DEVELOPMENT

VOLUME 3

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FISCAL YEAR 1987 COMGRESSIONAL BUNGET REQUEST

SUMMARY OF ESTIMATES BY APPROPRIATIONS

(in thousands of dollars)

	FY 1985 Actual	FY 1986 Estimate	FY 1987 Request
Appropriations Before The Energy and Water Development Subcommittees:	BA	BA	BA
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
Benneville Power Administration	284,771	330,000	276,100
Southeastern Power Administration .	35,744		19,647
Southwestern Power Administration .	31,208	29,191	25,337
Nestern Area Power Administration .	218,230	195,910	240,309
Nestern Area Power Emergency Fund .			
Federal Energy Regulatory	54,543	41,989	20,325
Nuclear Waste Fund	327,669	499.037	769,349
Geothermal Resources Development Fund	121	69	72
Subtotal, Appropriations Before the Energy and Water Development Subcommittees	\$11,336,748	\$11,024,162	\$11,762,664

FISCAL YEAR 1987 CONGRESSIONAL BUDGET REQUEST

SUMMARY OF ESTIMATES BY APPROPRIATIONS

(in thousands of dollars)

	FY 1985 Actual BA	FY 1986 Estimate BA	FY 1987 Request BA
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	60,919	57,724	59,651
Subtotal, Interior and Related Agencies Subcommittees	4,216,906	946,898	336,853
Subtotal, Energy and Water Development Subcommittees	11,336,748	11,024,162	11,762,664
Subtotal, Department of Energy	15,553,654	11,971,060	12,099,517
Permanent - Indefinite Appropriations:			
Payments to States	1,052	570	570
Total, Department of Energy	\$15,554,706	\$11,971,630	\$12,100,087

DEPARTMENT OF ENERGY FY 1987 CONGRESSIONAL STAFFING REQUEST TOTAL WORK FORCE

	FY1985 FTE	FY1986 CONGR	FY1987 -FY86	FY1997 CONGR
	USAGE	REQ		REG
ENERGY & WATER SUBCOMMITTEE				
HEADQUARTERS	4.865	4,965	-18	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	1.139
FIELD	907	894	-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 CDNGR REQ
10: ENERGY SUPPLY RESEARCH AND DEV	937 811	936	-34 -28	90 to 7 92
FIELD	126	114	-6	108
15:URANIUM ENRICHMENT MEADQUARTERS FIELD	69 58 11	55 11	1	67 96 11
20 GENERAL SCIENCE AND RESEARCH	37	39	Ō	39
HEADQUARTERS 25:ATOMIC ENERGY DEFENSE ACTIVITI HEADQUARTERS	2,618 496	2,702	131	2.833 527
FIELD 30:DEPARTMENTAL ADMINISTRATION	2,122	2.184	122	2,306
HEADQUARTERS	1.721	1.726	0	1.726
FIELD 34:ALASKA POWER ADMINISTRATION	1.586	1.604	-5	1,601
FIELD 36:BONNEVILLE POWER ADMIN	3,510	3.480	0	3,480
FIELD 38:SOUTHEASTERN POWER ADMIN	3.510	3,488	0	3,480
FIELD 42:SOUTHWESTERN POWER ADMIN	38 186	186		186
FIELD 46:MESTERN AREA POWER ADMIN	1.181	1,168		
FIELD	1,181	1,160	Ō	1.160
50:WAPA - COLDRADD RIVER BASIM FIELD	219	219	0	219
52: FEDERAL ENERGY REGULATORY COMM HEADQUARTERS	1.617	1.659	0	1,659
54:NUCLEAR NASTE FUND HEADQUARTERS	238 123	292 147	0	292 147
FIELD 54:GEOTHERMAL RESOURCES DEV FUND	115	145	Q Q	145
HEADQUARTERS	2	1	0	1
"65:FOSSIL ENERGY RESEARCH AND DEV HEADQUARTERS FIELD	714 151 563	700 135 565	-161 -26 -135	109 630
70 HAVAL PETROL & DIL SHALE RES	104	104	-9	95
HEADQUARTERS FIELD	23 81	23	-9	23 72
75:ENERGY CONSERVATION HEADQUARTERS	23 81 333 208 125 74 377 377	352 227	-134 -79	218
FIELD 89:EMERGENCY PREPAREDNESS	125	153	-55	70 71
HEADQUARTERS	74	71		71
81:ECONOMIC REGULATION HEADQUARTERS	377 377	340	-50 -50	290
AS: STRATEGIC PETROLEUM RESERVE HEADQUARTERS	178	152	-32	120
FIELD 91:ENERGY INFORMATION ACTIVITIES	138	125	-27	98 475
HEADQUARTERS 94:ADVANCES FOR CO-OP WORK	480	481	-6	475
FIELD	2	2	0	2
CRAND TOTAL	16.255	16,350	-299	16.051
ADJUSTMENT		-132	-198	-330
ADJUSTED TOTAL	16.258	16,218	-497	15.721

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.)

FISCAL YEAR 1987 CONGRESSIONAL BUDGET REQUEST

SUMMARY OF ESTIMATES BY APPROPRIATION BY MAJOR ACTIVITY

ENEAGY SUPPLY RESEARCH AND DEVELOPMENT

(Budget Authority in Thousands of Dollars)

		Y 1985 Ictual		FT 1986 Estimate		FY 1987 Request
Solar Energy	\$	171,587	\$	144,624	\$	72,292
Geothernal		29,698		26,681		17,930
Hydropower		447		481		man
Electric Energy Systems		19,717		11,548		7,619
Energy Storage Systems		18,642		17,292		8,000
Muclear Evergy RAD		412,612		375,684		330,900
Remedial Action & Waste Technology .		170,365		230,047		294,100
Civilian Maste RAD		25,885		15,064		6,500
Environmental, Safety and Health		10,053		46,921		76,098
Biological and Environmental Research		187,766		179,950		196,565
Liquiffed Gaseeus Spill Test Facility		4,299		1,732		1,200
Magnistic Fusion		429, 553		365,469		333,000
Basic Energy Sciences		410,801		433,770		441,376
Energy Research Amalysis		2,970		2,596		3,550
University Research Instrumentation.		4,950		6,254		5,000
University Research Support		10,099		10,296		10,975
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 Pregram		24,724				
In-House Energy Management		14,821		11,709		16,500
Technical Information and Management		13,442		22,413		10,775
Policy and Management	_	3,380	_	3,497	_	3,887
Subtotal, Energy Supply R&B	Z.	029,890	1	,939,528	1	,899,951
Less Use of Prior Year Balances and Other Adjustmet		-62,400		-243,230		-545,789
total, Energy Sapply RM	51.	967,490	51	,696,298	\$1	,254,162

SUPPORTING SERVICES

DEPARTMENT OF ENERGY FY 1987 CONGRESSIONAL BUDGET REQUEST

LEAD TABLE
POLICY AND MANAGEMENT - ENERGY RESEARCH
ENERGY SUPPLY RESEARCH AND DEVELOPMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

	FY 1985 Appropriation	FY 1986 Appropriation	FY 1987 Base	FY 1987 Request	Request vs Base
Policy and Management - Energy Research Operating Expenses Total	\$ 530a/	\$ 84 \$ 84a/b/	\$ 84 \$ 84	\$ 550 \$ 550a/	\$+ 466 \$+ 466
Staffing Total FTE's	8	8	8	8	
a/ Totals reflect a reduction in FY 1987 for management b/ Total reduced by \$3,000 in Emergency Deficit Control reduction of \$412,934 to	n accordance wi Act of 1985 (6	fings. th P.L. 99-177 Gramm/Rudman/Hol	, the Bala	nced Budget Also, gener	and

Authorization: Section 209, P.L. 95-91.

DEPARTMENT OF ENERGY 1987 CONGRESSIONAL BUDGET REQUEST SUMMARY OF CHANGES POLICY AND MANAGEMENT - ENERGY RESEARCH (In thousands of dollars)

1986 Appropriation enacted	-	87 3 84
Program increases and decreases:		
o Funding required to maintain FTE level	+	466
1987 budget request	\$	550

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PROFES to F. 1866 Appropriations

	FY 190 Confe (1)		Red	eral uction 2)	Management Initiatives (3)	Pay Cost Restoration (4)	FIE General Reduction (5)	Gram- Ruthen- Hollings (6)	ESSH Transfer/ Reprograming (7)	Subtotal (8)	Comparability Adjustments (9)	
Policy and Management - IDU												
theretal Edeses	\$ 50	¢	\$	-413				-3		84		84
Subtotal, Palify & Honogamet.	-	D	_	-03				- 3		- 84		- 84
General Reduction	-41	3		4 3								
Angust Initiatives												
Pay Restoration												
Vac of Prifor Year Ballumas (MOLIA)												
Use of Prior Year Balances (Other Energy Supply)												
Total , Politics & Monagament (ER)	87							-3		- 84	200	84

Policy and Management - Energy Research

The FY 1987 request for Policy and Management - Energy Research is \$550,000. These funds are required to provide for personnel and other costs associated with continuation of eight full-time equivalents in the Office of the Director of Energy Research.

This staff directs the Office of Energy Research responsibilities carried out under the following specific programs: Migh Energy Physics; Muclear Physics; Biological and Environmental Research; Magnetic Fusion Energy; Basic Energy Sciences; Energy Oversight, Research Analysis and University Support; Multiprogram Energy Laboratories-Facilities Support; and University Research Instrumentation.

In addition to directing the Office's research programs, the Director, Energy Research, also serves as the Department's principal science advisor in formulating basic research policy. In this capacity, the Director provides independent reviews, analyses and recommendations concerning a wide range of activities which require scientific counsel. These activities include, for example, national research and development strategies, plans and policies, including the establishment of budgetary priorities for energy research and development programs. They also include advising on policy issues regarding the best utilization of the nonweapons multipurpose laboratories assigned to Energy Research for oversight and management. These responsibilities are carried out through meetings with top management and program officials as necessary throughout the year; interactions with laboratories; presentations to the Energy Research Advisory Board; participation in Congressional hearings; and interactions with the scientific community. This staff is also responsible for implementing uniform systems and procedures for overall coordination and management of ER's continually increasing international activities which represent a significant workload and a very substantial investment of ER resources.

FY 1987 CONGRESSIONAL BUDGET REQUEST

NUCLEAR

ENERGY SUPPLY RESEARCH AND DEVELOPMENT

(Tabular dollars in thousands. Narrative material in whole dollars.)

	FY 1985	FY 1986	FY 1987	FY 1987	Request
	Appropriation	Appropriation	Base	Request	vs Base
Policy and Management (ME) Operating expenses Total	\$ 1,323 ¹ /	\$ 1,732 ² /	\$ 1,732	\$ 1,810	\$ +78
	\$ 1,323	\$ 1,732	\$ 1,732	\$ 1,810	\$ +78
Staffing	313/	24	24	15	-9

2/ Adjustments to the FY 1986 appropriation are shown on the table on the following page.

3/ Reflects actual Full Time Equivalent (FTE) usage versus allocation of 24 FTE.

SUMMARY OF CHANGES POLICY AND MANAGEMENT (NE) (In thousands of dollars)

FY 1986 Budget Appropriation	\$ 1,732
- Decrease of mine support personnel	-315 +285 +188
FY 1987 Budget Request	\$ 1,810

^{1/} Reflects a reduction of \$150,000 for management initiatives and \$50,000 for Advanced Data Processing reductions.

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F7 1987 Congressional Badget Request

Adjustments to SY 1986 Appropriations

	Confer.	Fraction - Rudman - Hollings	Total
Policy and Management - (NE)			
dperating Expenses	\$1,800	\$-68	11,12
Schtatal, Paticy & Management [NE]	\$1.800	\$-6B	\$1.732
<pre>dperating,</pre>	\$7,800	2-60	\$1,732

Department of Energy FY 1987 CONGRESSIONAL BUDGET REQUEST (tabular dollars in thousands) Policy and Management

Narrative Justification

The major change from FY 1986 to FY 1987 is the reduction of nine Full Time Equivalent's (FTE's). This action requires a reduction of support personnel with the corresponding savings in salaries and benefits. This reduction, however, is offset in part by required severance pay for these employees. A minimal increase in computer support is also required.

The objective of the Policy and Management activity is to provide adequate staffing and financial resources for the Assistant Secretary, Nuclear Energy (NE), and the supporting functions of policy development, plans formulation, resource management, and program assessment.

Staffing provides the technical and management expertise needed to direct and administer varied R&B and operational programs encompassing both civilian and defense activities. These efforts require the combined skills of technical managers, administrators, and clerical staff. The R&D activities encompass different technologies, at various stages of development, and are performed at different contractor locations to include national laboratories, universities, industrial concerns, and foreign governments. The operational activities involving uranium enrichment are also performed at decentralized locations. Defense activities include the Naval Reactors development program at Pittsburgh, Pennsylvania; Schenectady, New York; and Idaho Falls, Idaho.

The funding provides financial resources (i.e., salary, benefits, travel, etc.) to enable the Assistant Secretary and the office staff to perform the requisite functions of the organization. The required funds will permit performance of program and policy reviews at contractor or field office locations, interaction with the Congressional. OMB, and other Departmental elements, involvement with nuclear energy source selection boards, attendance at public meetings either sponsored by the Department or others, furtherance of employee development, and participation in the employment cycle. This latter effort includes invitational travel and change of station orders. With respect to change of station, the requested funds cover employee and family transportation costs, per diem costs, and temporary quarters costs. Computer acquisition and operations support are also covered.

FY 1986 Appropriation

Departmental Request

\$ 1.732

\$ 1.810

General Management: (7 FTE) This level supports positions required for the Assistant Secretary (AS), the principal Deputy Assistant Secretary (DAS) and their immediate staff.

Program Support: (8 FTE) Provides for staffing in the following principle areas.

Plans and Evaluation: (4 FTE) Provides professional and clerical staff needed for the development of plans and strategy in the nuclear sector, the preparation of testimony and special correspondence, the analysis of legislation, and the coordination of the program planning efforts. The Office also supports computer acquisition and operation support. Although computer acquisition is nearing completion, the need to maintain this equipment and to produce software packages to optimize their application to a wide range of Nuclear Energy requirements results in increased near term funding.

Resource Management: (4 FTE) Supports such overall management activities as personnel, budget formulation, budget execution, administrative management of funds, procurement, and contract administration, business management, and program/project management, including major systems acquisition, cost estimating, and project reviews. Overall ASNE training is also supported.

The funding of \$1,810,000 is comprised of \$950,000 for personnel compensation, \$100,000 for benefits, \$285,000 for benefits for former personnel, \$75,000 for travel, and \$400,000 for contractual services for computer acquisition and support.

DEPARTMENT OF ENERGY
FY 1987 CONGRESSIONAL REQUEST
LEAD TABLE
POLICY AND MANAGEMENT
Energy Supply Research and Development - Operating Expenses
(Tabular dollars in thousands. Narrative material in whole dollars.)

	FY 1985 Approp.	FY 1986 Adj. Approp.	FY 1987 Base	FY 1987 Request	Request vs. Base
Energy Supply R&D					
Operating Expenses	\$ 1,527	\$ 1,681	\$ 1,681	\$ 1,527	-154
Total	\$ 1,527	\$ 1,681	\$ 1,681	\$ 1,527	-154
Staffing Total FTEs	19	14	14	14	0

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

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FY 1987 Congressional Budges Request

Addustments to FY 1986 Appropriations

	FY 1986 General Pay Cost Conterence Reduction Restorati			General Redection		Rubbass Hollings Reduction		Subtotal	Comparability		Adj. Appropa Tota l		
Policy and Management - (CE) [ESR8D]													
Operating Expenses	\$1,800	\$	-41	\$	-51	\$	-10	\$	-68	\$1,630	\$	51	\$1, 31
General Reduction ,	-41		+41						***	***		***	
FTE magniction	-10		***				10			***			
Pay Restoration	-51		***		51				***	***		***	
Use of Prior Year Balances (PSM.CE)	51	-2	***	100	***					51		-51	
Total. Pulscy & Management (0E)	\$1,749	\$		\$	***	5	***	\$	-68	\$),601	5		\$1,601

FY 1987 CONGRESSIONAL BUDGET REQUEST SUMMARY OF CHANGES POLICY AND MANAGEMENT (In Thousands of Dollars)

FY I986 Adjusted Appropriation\$1,681
Reduced level of support
FY 1987 Congressional Request\$1,527
Policy and Management\$1,527,000

The Policy and Management FY 1987 Congressional Request is \$1,527,000 and 14 full time equivalent staff years of effort which provides for overall management guidance to Conservation and Renewable Energy (CE) programs. Staffing levels provide the executive and overall program direction for all CE programs to ensure effective management. These activities include executive management, policy formulation, program review and approval, and liaison with senior officials in DOE, White House, Congressional, OMB, other Departmental Agencies, private industry, and State and local governments. In addition, the staff will carry out analyses of the CE programs needed to assess performance and effectiveness.

The FY 1987 request also provides for the support for functions such as planning, policy development and analysis, program planning and evaluation, budget preparation and execution, program and personnel management and administrative support performed by the Offices of the Assistant Secretary and Policy and Management. Activities performed include development of planning guidance, analysis of program options for achieving planned objectives, evaluation of performance against program objectives, handling and/or coordination of program/budget submissions and execution of approved budgets and ongoing support functions in the areas of: administrative services, procurement, personnel, space management and related support services. In addition, funds are included for the continuation of a procurement tracking system and an automated support system which provides text processing, electronic mail, data base management.