

**DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
OFFICE OF ENERGY RESEARCH
SCIENCE**

(Tabular dollars in thousands, Narrative in whole dollars)

MULTIPROGRAM ENERGY LABORATORIES - FACILITIES SUPPORT

PROGRAM MISSION

The Multiprogram Energy Laboratories - Facilities Support (MEL-FS) program provides line item construction funding to support the general purpose infrastructure of the Energy Research's five multiprogram national laboratories. These are: Argonne National Laboratory - East (ANL-E), Brookhaven National Laboratory (BNL), Lawrence Berkeley National Laboratory (LBNL), Oak Ridge National Laboratory (ORNL), and Pacific Northwest National Laboratory (PNNL). These laboratories have over 1,100 buildings with 14.3 million gross square feet of space and an estimated replacement value of over \$9,000,000,000. All facilities at these laboratories are government-owned, contractor-operated (GOCO). Total operating funding for these laboratories is over \$3,000,000,000 a year. The Office of Energy Research manages this program to provide a comprehensive, prioritized and equitable approach to its stewardship responsibility for the general purpose support infrastructure of these laboratories. The program also provides funding for Payments in Lieu of Taxes (PILT) as authorized by the Atomic Energy Act of 1954, as amended. These discretionary payments are made to state or local governments where the Department or its predecessor agencies has acquired property previously subject to state or local taxation.

The GOAL of the MEL-FS program is:

To ensure that the support facilities at the multiprogram laboratories can meet the Department's research needs in a safe, environmentally sound, and cost-effective manner primarily by refurbishing or replacing deteriorated, outmoded, unsafe, and inefficient general purpose infrastructure.

The OBJECTIVES related to these goals are:

1. To correct Environment, Safety and Health (ES&H) inadequacies.
2. To reduce risk of operational interruptions due to failed support systems.
3. To provide cost effective operations and reduce maintenance costs.
4. To provide quality space for multiprogram research and support activities.

PROGRAM MISSION - MULTIPROGRAM ENERGY LABORATORIES - FACILITIES SUPPORT (Cont'd)

5. To preserve the government investment in the physical plant of the laboratories.
6. To promote performance-based infrastructure management.

PERFORMANCE MEASURES:

Performance measures related to the MEL-FS program are continuously being refined to ensure that they: 1) incorporate external/internal customers' inputs; 2) drive performance; 3) address the strategic plan; and 4) focus on the effectiveness of the laboratory system. Current performance measures include:

1. Support of line item construction funding to reduce risk, ensure continuity of operations, avoid or reduce costs and increase productivity.

Expectation: Fund highest priority needs based on scoring from Life Cycle Asset Management (LCAM) Cost-Risk-Impact Matrix.

2. Overall condition of laboratory buildings

Expectation: Increase the percentage of facilities rated adequate.

3. Excellence in project management

Expectation: Increase the percentage of projects completed within baseline cost and schedule.

SIGNIFICANT ACCOMPLISHMENTS AND PROGRAM SHIFTS:

- o Progress in Line Item Projects - Six projects are scheduled for physical completion in FY 1998. The three projects scheduled for physical completion in FY 1999 are the Building Services Upgrade, the Central Heating Plant Rehabilitation, Phase I, both at ANL-E, and the Upgrade Steam Plant at ORNL.
- o Beginning with FY 1999 this program will fund the Payments In Lieu of Taxes (PILT) for ANL-E and BNL.
- o Beginning with FY 1997 this program ceased funding ES&H inadequacies with operating funds consistent with FY 1997 Congressional direction.

MULTIPROGRAM ENERGY LABORATORIES - FACILITIES SUPPORT

PROGRAM FUNDING PROFILE

(Dollars in thousands)

	FY 1997 Current <u>Appropriation</u>	FY 1998 Original <u>Appropriation</u>	FY 1998 <u>Adjustments</u>	FY 1998 Current <u>Appropriation</u>
<u>Subprogram</u>				
Multiprogram Energy Laboratories-Facilities Support.....	\$ 20,628	\$ 21,260	-\$13 a/	\$ 21,247
Subtotal Multiprogram Energy Laboratories - Facilities Support.....	\$ 20,628	\$ 21,260	\$ (13) a/	\$ 21,247
Adjustment.....	-1,399 b/	-66 c/	0	-66 c/
Adjustment.....	0	-13 a/	13 a/	0
TOTAL, MEL-FS.....	<u>\$19,229</u>	<u>\$21,181</u>	<u>\$0 a/</u>	<u>\$21,181</u>

a/ Share of Science general reduction for contractor training.

b/ Share of Energy Supply, Research and Development general reduction assigned to this program (\$1,398,000), and FY 1997 emergency supplemental rescission (\$1,000). The total general reduction is applied at the appropriation level.

c/ Share of Science general reduction for use of prior year balances assigned to this program. The total general reduction is applied at the appropriation level.

Public Law Authorizations:

Public Law 95-91, "Department of Energy Organization Act"

FY 1999
Request

\$ 21,260

\$ 21,260
0
0

\$21,260

y flood

MULTIPROGRAM ENERGY LABORATORIES - FACILITIES SUPPORT
(Dollars in thousands)

PROGRAM FUNDING BY SITE

Field Offices/Sites	FY 1997 Current Appropriation	FY 1998 Original Appropriation	FY 1998 Adjustments	FY 1998 Current Appropriation	FY 1999 Request
Chicago Operations Office					
Argonne National Lab (East)	\$4,868	\$10,892	\$0	\$10,892	\$7,359
Brookhaven National Laboratory	11,132	568	0	568	2,239
Oakland Operations Office					
Lawrence Berkeley National Laboratory	0	2,400	0	2,400	4,854
Oak Ridge Operations Office					
Oak Ridge National Laboratory	168	7,400	-13 a/	7,387	6,808
Richland Operations Office					
Pacific Northwest National Laboratory	4,460	0	0	0	0
All Other Sites b/	0	0	0	0	0
Subtotal	<u>20,628</u>	<u>21,260</u>	<u>-13 a/</u>	<u>21,247</u>	<u>21,260</u>
Adjustment	-1,399 c/	-66 d/	0	-66 d/	0
Adjustment	0	-13 a/	13 a/	0	0
TOTAL	<u><u>\$19,229</u></u>	<u><u>\$21,181</u></u>	<u><u>\$0 a/</u></u>	<u><u>\$21,181</u></u>	<u><u>\$21,260</u></u>

a/ Share of Science general reduction for contractor training.

b/ Funding provided to industry, other Federal agencies and contractors.

c/ Share of Energy Supply, Research and Development general reduction assigned to this program (\$1,398,000), and FY 1997 emergency floor supplemental rescission (\$1,000). The total general reduction is applied at the appropriation level.

d/ Share of Science general reduction for use of prior year balances assigned to this program (\$66,000). The total general reduction is applied at the appropriation level.

MULTIPROGRAM ENERGY LABORATORIES - FACILITIES SUPPORT

(Tabular dollars in thousands, narrative in whole dollars)

- I. **Mission Supporting Goals and Objectives:** This subprogram supports the program's goal to ensure that the multiprogram laboratories' support facilities can meet the Department's research needs primarily by refurbishing or replacing deteriorated, outmoded, unsafe, and inefficient general purpose infrastructure. Facility deficiencies are due to age, obsolescence, extensive use and changing requirements, including Environment, Safety and Health (ES&H) requirements. This subprogram achieves this by funding line item construction projects (i.e., projects with a total estimated cost of \$5,000,000 or above) for general purpose facilities. General purpose facilities are general use, service and support facilities such as administrative space, cafeterias, general office/laboratory space, utility systems, sanitary sewers, roads, etc. There are over 1,100 buildings at the five multiprogram laboratories covered by this program. These buildings have over 14.3 million gross square feet of space. Approximately half of the space is considered fully adequate, while the remainder needs rehabilitation or replacement/demolition. The large percentage of inadequate space reflects the age of the facilities (average age of 33 years), changing research needs that require more office space and light laboratory space, environmental, safety and health requirements and obsolete systems.

Capital investment requirements are identified in laboratory Institutional Plans which address needs through the year 2002 based on expected programmatic support. The projected needs through the period total over \$425,000,000. Forty one percent of this amount is to rehabilitate or replace buildings; 35% is for utility projects; and 24% for environment, safety and health projects. All projects are first ranked using a prioritization model that takes into account risk, impacts, and mission need. The projects that have environment, safety and health as the principal driver are further prioritized using the Risk Prioritization Model from the DOE ES&H Management Plan process.

In FY 1999, the MELFS program will begin meeting payments in lieu of taxes assistance requirements for communities surrounding Brookhaven and Argonne National Laboratories.

MULTIPROGRAM ENERGY LABORATORIES - FACILITIES SUPPORT

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
General Purpose Facilities . . .	\$ 7,128	\$10,829	\$10,271	\$- 558	-5.2%
ES&H	13,500	10,418	9,829	- 589	-5.7%
Infrastructure Support	<u>0</u>	<u>0</u>	<u>1,160</u>	<u>+ 1,160</u>	<u>--%</u>
Total Multiprogram Energy Laboratories-Facilities Support	\$20,628	\$21,247	\$21,260	\$+ 13	+ .1%

III. Performance Summary - Accomplishments:

FY 1997 FY 1998 FY 1999

Construction

- Supports the initiation of three new General Purpose Facility subprojects in FY 1999, as well as the continuation of one FY 1998 subproject under the combined Multiprogram Energy Laboratories Infrastructure Project (MEL-001). The FY 1999 new starts include Electrical Systems Modifications at BNL (\$849,000); Rehabilitation of Building 77 at LBNL (\$754,000); and the Central Supply Facility at ANL-E (\$1,860,000). The FY 1998 subproject is the Upgrade Steam Plant at ORNL (\$1,900,000). Also supports the ongoing Roofing Improvements project at ORNL (\$4,908,000), Project No. 94-E-363.

	\$ 7,128	\$10,829	\$10,271
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- Supports the initiation of one new ES&H subproject in FY 1999, the completion of one FY 1998 subproject and the continuation of one FY 1998 subproject under the combined Multiprogram Energy Laboratories Infrastructure Project (MEL-001). The

	13,500	10,418	9,829
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FY 1999 new start is the Sanitary Systems Modifications,
Phase

MULTIPROGRAM ENERGY LABORATORIES - FACILITIES SUPPORT

III. Performance Summary - Accomplishments:

FY 1997 FY 1998 FY 1999

III at BNL (\$500,000). The FY 1998 subprojects include the Electrical Systems Rehabilitation, Phase IV at LBNL (\$4,100,000) and the Electrical Systems Upgrade, Phase III at ANL (\$4,961,000). Also supports the ongoing Building Electrical Service Upgrade, Phase I at ANL (\$268,000), Project No. 96-E-333.

Subtotal Construction

\$20,628 \$21,247 \$20,100

Infrastructure Support

- Begin meeting payments in lieu of taxes assistance requirements for communities surrounding Brookhaven National Laboratory and Argonne National Laboratory.

\$0 \$0 \$1,160

Total

\$20,628 \$21,247 \$21,260

EXPLANATION OF FUNDING CHANGES FROM FY 1998 to FY 1999:

Decrease in funding reflects shift of funds to initiate support of Payments in Lieu of Taxes in FY 1999.

\$-1,147,000

Begin funding payments in lieu of taxes in FY 1999.
\$+1,160,000

Total Funding Change, Construction

\$+13

MULTIPROGRAM ENERGY LABORATORIES - FACILITIES SUPPORT
 CAPITAL OPERATING EXPENSES & CONSTRUCTION SUMMARY
 (Dollars in thousands)

	FY 1997	FY 1998	FY 1999	\$ Change	% Change
Capital Operating Expenses	\$0	\$0	\$0	----	----

Construction Project Summary (Construction Funded)

Project No.	Project Title	TEC	Previous Appropriated	FY 1997 Appropriated	FY 1998 Appropriated	FY 1999 Request	Unapprop. Balance
MEL-001	Multiprogram Energy Laboratories Infrastructure Project	N/A	N/A	N/A	\$ 7,259	\$14,924	\$23,837
96-E-333	Multiprogram Energy Laboratories Upgrades, Various Locations	16,865	4,400	6,924	5,273	268	0
95-E-308	Sanitary System Mods, II, BNL	4,250	2,650	1,032	568	0	0
95-E-307	Fire Safety Improvements, III, ANL-I	3,003	1,285	1,000	718	0	0
95-E-301	Central Heat Plant Rehab, I, ANL-E	9,880	3,938	2,500	3,442	0	0
94-E-363	Roofing Improvements, ORNL	16,000	5,422	0	3,987	4,908	1,683
Total Multiprogram Energy Laboratories - Facilities Support		XXXXXX	XXXXXX	XXXXXX	\$21,247	\$20,100	\$25,520

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
SCIENCE - PLANT AND CAPITAL EQUIPMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

Multiprogram Energy Laboratories - Facilities Support

1. Title and Location of Project:	Multiprogram Energy Laboratories Infrastructure Project Various Locations	2a. Project No. MEL-001 2b. Construction Funded
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SIGNIFICANT CHANGES

- Four new starts in FY 1999 include: Electrical Systems Modifications, Brookhaven National Laboratory; Rehabilitation of Berkeley Lab Engineering Center - Bldg. 77, Lawrence Berkeley National Laboratory; Central Supply Facility, Argonne National Laboratory; and Sanitary Systems Modifications, Phase III, Brookhaven National Laboratory.

DEPARTMENT OF ENERGY
 FY 1999 CONGRESSIONAL BUDGET REQUEST
 SCIENCE - PLANT AND CAPITAL EQUIPMENT
 (Tabular dollars in thousands. Narrative material in whole dollars.)

Multiprogram Energy Laboratories - Facilities Support

1. Title and Location of Project:	Multiprogram Energy Laboratories Infrastructure Project Various Locations	2a. Project No. MEL-001	2b. Construction Funded
	Preliminary Estimate	Title I Baseline	Current Baseline
Estimate			
3a. Date A-E Work Initiated (Title I Design Start Scheduled)	N/A	N/A	Varies by subproject
3b. A-E Work (Title I & II) Duration:	N/A	N/A	6-12 Months
4a. Date physical Construction Starts:	N/A	N/A	See subproject details
4b. Date Construction Ends:	N/A	N/A	See subproject details
	Preliminary Estimate	Title I Baseline	Current Baseline
Estimate			
5. Total Estimated Cost (TEC) --	N/A	N/A	N/A
6. Total Project Cost (TPC) --	N/A	N/A	N/A

1.	Title and Location of Project:	Multiprogram Energy Laboratories Infrastructure Project Various Locations	2a.	Project No. MEL-001
			2b.	Construction Funded

7. Financial Schedule: (Federal Funds)

<u>Fiscal Year</u>	<u>Appropriation</u>	<u>Obligations</u>	<u>Cost</u>
FY 1998	\$ 7,259	\$ 7,259	\$ 800
FY 1999	14,924	14,924	8,665
FY 2000	17,594	17,594	21,325
FY 2001	6,243	6,243	13,590
FY 2002	0	0	1,640

8. Project Description, Justification and Scope

This project funds two types of subprojects:

- Projects to correct ES&H deficiencies including fire safety improvements, sanitary system upgrades and electrical system replacements; and
- Projects that renovate or replace inefficient and unreliable general purpose facilities (GPF) including general use, service and support facilities such as administrative space, cafeterias, utility systems, and roads.

General Purpose Facility Projects:

a. Subproject 01 - Upgrade Steam Plant, ORNL

<u>TEC</u>	<u>Prev.</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>Outyear</u>	<u>Construction Start - Completion Dates</u>
5,300	----	0	3,400	1,900	0	1st Qtr FY 1998 - 4th Qtr. FY 1999

1.	Title and Location of Project:	Multiprogram Energy Laboratories Infrastructure Project Various Locations	2a.	Project No. MEL-001
			2b.	Construction Funded

8. Project Description, Justification and Scope (Continued)

This project will upgrade the ORNL steam plant by adding a new steam boiler of approximately 100,000 pounds per hour capacity and capable of burning both natural gas and fuel oil. The boiler will be procured with all necessary ancillary equipment, such as blowers, feedwater pumps, and controls. Suitable weather protection will be provided.

This project is needed because of the age of the five existing boilers. Three are 46 years old, one is 44 years old, and the fifth is 32 years old. The new boiler capacity will allow decreased firing time on the oldest boilers and will extend their useful life. In addition, the new boiler will improve the efficiency of the steam plant.

b. Subproject 04 - Electrical Systems Modifications, (BNL)

<u>TEC</u>	<u>Prev.</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>Outyear</u>	<u>Construction Start - Completion Dates</u>
5,730	---	0	0	849	4,881	2nd Qtr FY 1999 - 4th Qtr FY 2000

This project is the first phase of a planned modernization and refurbishment of the Laboratory's electrical infrastructure. The project provides for the replacement of 30 to 50 year old deteriorating underground electrical cables, the addition of underground ductbanks to replace damaged portions and support new cabling, the installation of a new 13.8 kV - 2.4 kV substation to address capacity and operational problems, and the retrofitting/reconditioning of switchgear power circuit breakers.

c. Subproject 05 - Rehabilitation of Berkeley Lab Engineering Center - Bldg. 77, (LBNL)

<u>TEC</u>	<u>Prev.</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>Outyear</u>	<u>Construction Start - Completion Dates</u>
8,000	---	0	0	754	7,246	2nd Qtr FY 1999 - 2nd Qtr FY 2001

8. Project Description, Justification and Scope (Continued)

1.	Title and Location of Project:	Multiprogram Energy Laboratories Infrastructure Project Various Locations	2a.	Project No. MEL-001
			2b.	Construction Funded

This project will rehabilitate Building 77's structural system to restore lateral force resistance and arrest differential foundation settlement, and will modernize architectural, mechanical, and electrical systems. These upgrades will restore this 33 year-old, 68,000 sq.ft. building to acceptable seismic performance; provide environmental controls appropriate to precision fabrication processes; increase the reliability and maintainability of building systems; provide flexibility to meet future challenges; and extend building life by 40 years and building systems by 20 to 25 years.

d. Subproject 06 - Central Supply Facility (ANL-E)

<u>TEC</u>	<u>Prev.</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>Outyear</u>	<u>Construction Start - Completion Dates</u>
6,370	---	0	0	1,860	4,510	2nd Qtr FY 1999 - 3rd Qtr FY 2001

This proposed 39,100 sq.ft. Central Supply Facility will provide a highly efficient and cost-effective consolidated (expected reduction of \$800,000/year in operating costs) operation to meet the missions of the Materials Group and the Property Group of ANL-East and will eliminate the need for 67,630 square feet of substandard (50 year-old) space. The Materials Group receives, sorts, stores, retrieves, and distributes the majority of all materials and supplies for the Laboratory. The Property Group tags, controls, stores, and distributes excess property and precious metals for the Laboratory. This facility will contain truck docks; receiving and distribution areas; inventory control; general material storage; support and office areas; central mail receiving, sorting, and distribution; DOE records storage; property storage; and exterior hazardous storage.

ES&H PROJECTS:

a. Subproject 02 - Electrical Systems Rehab. Phase IV, (LBNL)

<u>TEC</u>	<u>Prev.</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>Outyear</u>	<u>Construction Start - Completion Dates</u>
6,500	---	0	2,400	4,100	0	2nd Qtr FY 1998 - 4th Qtr FY 2000

8. Project Description, Justification and Scope (Continued)

1.	Title and Location of Project:	Multiprogram Energy Laboratories Infrastructure Project Various Locations	2a.	Project No. MEL-001 2b. Construction Funded
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The Blackberry Switching Station Replacement Project is the last major planned rehabilitation to the LBNL electrical power system, in order to maintain its reliability and improve its safety. The project will upgrade the existing 12 kV power system and utilize circuit breakers installed in the FY 1987 MEL-FS project improvement to the main Grizzly Substation.

The project will correct existing deficiencies in the power distribution system that serves the Blackberry Canyon Service Area. The improvements will replace the existing electrical system, which consists of aged and underrated electrical equipment, 20 to 30 years old in many instances, that is difficult to maintain and unsafe to operate. It will provide the Laboratory with increased operational flexibility as well as improvements in reliability, maintainability and safety.

b. Subproject 03-Electrical System Upgrade, Phase III, (ANL)

<u>TEC</u>	<u>Prev.</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>Outyear</u>	<u>Construction Start - Completion Dates</u>
7,620	---	0	1,459	4,961	1,200	2nd Qtr FY 1998 - 1st Qtr FY 2001

The project provides for the upgrade of the main electrical substation at Facility 543 and Facility 549A.

The work consists of the following items: install a new 138 kV overhead steel pole transmission line and upgrade the existing transmission line, relocate an existing transformer, upgrade existing transformers, replace existing 13.2 kV outdoor switchgear, and replace existing oil circuit breaker.

The intended project will accomplish several objectives related to system reliability, personnel safety, environmental hazards, risk reduction and system expansion.

1.	Title and Location of Project:	Multiprogram Energy Laboratories Infrastructure Project Various Locations	2a.	Project No. MEL-001
			2b.	Construction Funded

8. Project Description, Justification and Scope (Continued)

c. Subproject 07 - Sanitary System Modifications, Phase III, (BNL)

<u>TEC</u>	<u>Prev.</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>Outyear</u>	<u>Construction Start - Completion Dates</u>
6,500	---	0	0	500	6,000	2nd Qtr FY 1999 - 3rd Qtr FY 2001

The BNL Sanitary System consists of over 20 miles of collection piping which collects sanitary waste from nearly all the BNL facilities. The collection piping transports the waste via gravity piping and lift stations to a sewage treatment plant (STP). This project is the third phase of the upgrade of the Laboratory sanitary waste system. In the first two phases, major operations of the STP were upgraded and approximately 14,000 feet of trunk sewer lines were replaced, repaired, or lined. Phase III will continue this upgrade and will replace or rehabilitate approximately 9,900 feet of existing deteriorated (8 to 20 inch) sewer piping, connect five facilities to the sanitary system by installing 7,500 feet of new sewer pipe, and two new lift stations. This will eliminate non-compliant leaching fields and cess pools, reduce non-contact cooling water flow into the sewage system by 72 million gallons per year by: diverting flow to the storm system; converting water heat exchangers to air cooled condensers; and replacing water cooled equipment in 15 buildings. The STP anaerobic sludge digester will be replaced with an aerobic sludge digester to eliminate high maintenance activity and improve performance, and install liners and modify the under drain piping in the STP sand filter beds.

9. Details of Cost Estimate

Based on preliminary or conceptual design.

10. Method of Performance

Design will be negotiated by architect-engineer contracts or laboratory personnel. To the extent feasible, construction and procurement will be accomplished by fixed-price contracts awarded on the basis of competitive bids.

1.	Title and Location of Project:	Multiprogram Energy Laboratories Infrastructure Project Various Locations	2a.	Project No. MEL-001
			2b.	Construction Funded

11. Schedule of Project Funding and Other Related Funding Requirements

N/A

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements

N/A

13. Design and Construction of Federal Facilities

The total estimated cost of this project includes, where appropriate, the cost of measures necessary to assure compliance with OMB Circular No. A-106, and Executive Order No. 12088, "Federal Compliance with Pollution Control Standards"; Section 19 of the Occupational Safety and Health Act of 1970, the provisions of Executive Order 12196, and the related Safety and Health provisions for Federal Employees (CFR Title 29, Chapter XVII, Part 1960); and the Architectural Barriers Act of 1968." The project will be located in an area not subject to flooding determined in accordance with Executive Order 11988.

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SCIENCE - PLANT AND CAPITAL EQUIPMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

Multiprogram Energy Laboratories - Facilities Support

1. Title and Location of Project:	Multiprogram Energy Laboratories Upgrades	2a.	Project No. 96-E-333
	Various Locations	2b.	Construction Funded

SIGNIFICANT CHANGES

- TEC for Subproject 02 - Hot Lab Renovation, Bldg. 801 (BNL) was reduced from \$7,080,000 to \$6,580,000 by a reprogramming action to support Tritium Remediation at Brookhaven National Laboratory in FY 1997.

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SCIENCE - PLANT AND CAPITAL EQUIPMENT
 (Tabular dollars in thousands. Narrative material in whole dollars.)

Multiprogram Energy Laboratories - Facilities Support

1. Title and Location of Project:	Multiprogram Energy Laboratories Upgrades Various Locations	2a. Project No. 96-E-333 2b. Construction Funded
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	Preliminary Estimate	Title I Baseline	Current Baseline
Estimate			
3a. Date A-E Work Initiated (Title I Design Start Scheduled)	N/A	N/A	Varies by subproject
3b. A-E Work (Title I & II) Duration:	N/A	N/A	6-12 months
4a. Date physical Construction Starts:	N/A	N/A	See subproject details
4b. Date Construction Ends:	N/A	N/A	See subproject details

	Preliminary Estimate	Title I Baseline	Current Baseline Estimate
5. Total Estimated Cost (TEC) --	N/A	N/A	\$16,865
6. Total Project Cost (TPC) --	N/A	N/A	\$17,010

1. Title and Location of Project:	Multiprogram Energy Laboratories Upgrades Various Locations	2a. Project No. 96-E-333 2b. Construction Funded
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7. Financial Schedule: (Federal Funds)

<u>Fiscal Year</u>	<u>Appropriation</u>	<u>Adjustments</u>	<u>Obligations</u>	<u>Cost</u>
FY 1996	4,400		4,400	675
FY 1997	6,924		6,924	4,435
FY 1998	5,273		5,273	5,965
FY 1999	268		268	4,782
FY 2000	0		0	1,008

8. Project Description, Justification and Scope

This project funds subprojects to correct ES&H deficiencies.

a. Subproject 01 - Building Electrical Service Upgrade, I (ANL)

<u>TEC</u>	<u>Prev.</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>Outyear</u>	<u>Construction Start - Completion Dates</u>
7,885	7,885	1,144	5,273	268	0	2nd Qtr FY 1997 - 4th Qtr FY 1999

This project will provide the most urgently needed replacement of emergency generators and the upgrade of building's main electrical services (circuit breaker retrofits, bus duct replacement and emergency generator replacements) that are no longer adequate, reliable, efficient, or in accordance with existing electrical codes/standards and environment, safety and health standards.

Failure to fund this project would increase frequency and duration of general maintenance resulting in increased parts and labor costs, negative impact on scientific programs and non-compliance with safety regulations.

1. Title and Location of Project:	Multiprogram Energy Laboratories Upgrades Various Locations	2a. Project No. 96-E-333 2b. Construction Funded
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8. Project Description, Justification and Scope (Continued)

b. Subproject 02 - Hot Lab Renovation, Bldg 801 (BNL)

<u>TEC</u>	<u>Prev.</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>Outyear</u>	<u>Construction Start - Completion Dates</u>
6,580	7,080	5,780	0	0	0	2nd Qtr FY 1997 - 4th Qtr FY 1998

This project, in the west side of Building 801 (the Hot Lab), is part of a comprehensive effort to: upgrade the production of radionuclides and radiopharmaceuticals for supply to the pharmaceutical/medical community outside the laboratory; upgrade major research program leading to new and more effective diagnostic and therapeutic agents; comply with DOE Order 5820.2A, which requires that the generation of low-level radioactive waste be reduced; and bring Brookhaven National Laboratory (BNL) into conformance with Federal, state, and local environmental laws and regulatory requirements. The unique location of BNL over an EPA designated "sole-source" aquifer has heightened regulatory concern over potential ground water contamination from BNL facilities.

Failure to fund this project would increase the potential for ground water contamination and non-compliance with safety regulations.

c. Subproject 03 - Sanitary Sewer Restoration Phase I (LBNL)

<u>TEC</u>	<u>Prev.</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>Outyear</u>	<u>Construction Start - Completion Dates</u>
2,400	2,400	0	0	0	0	3rd Qtr FY 1997 - 4th Qtr FY 1998

Portions of the underground sanitary sewer system will be replaced based upon video camera surveys of site sanitary sewer lines, including approximately 3,480 feet of sanitary sewer lines ranging in diameter from three (3) inches to eight (8) inches. Soil samples will be tested during construction for possible contamination. All excavated material that is contaminated will be either remediated or removed to an authorized hazardous waste site.

1. Title and Location of Project:	Multiprogram Energy Laboratories Upgrades Various Locations	2a. Project No. 96-E-333 2b. Construction Funded
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Failure to fund this project would increase the potential for ground water contamination, excessive maintenance costs, and non-compliance with safety regulations.

9. Details of Cost Estimate

Based on preliminary or conceptual design.

10. Method of Performance

Design will be by negotiated architect-engineer contracts or laboratory personnel. To the extent feasible, construction and procurement will be accomplished by fixed-price contracts awarded on the basis of competitive bids.

11. Schedule of Project Funding and Other Related Funding Requirements

N/A

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements

N/A

13. Design and Construction of Federal Facilities

The total estimated cost of this project includes, where appropriate, the cost of measures necessary to assure compliance with OMB Circular No. A-106, and Executive Order No. 12088, "Federal Compliance with Pollution Control Standards"; Section 19 of the Occupational Safety and Health Act of 1970, the provisions of Executive Order 12196, and the related Safety and Health provisions for Federal Employees (CFR Title 29, Chapter XVII, Part 1960); and the Architectural Barriers Act of 1968." The project will be located in an area not subject to flooding determined in accordance with Executive Order 11988.