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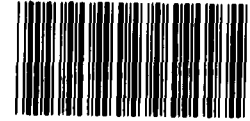
RESOURCES, COMMUNITY,  
AND ECONOMIC DEVELOPMENT  
DIVISION

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RELEASED

The Honorable Richard L. Ottinger  
Chairman, Subcommittee on Energy  
Conservation and Power  
Committee on Energy and Commerce.  
House of Representatives



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Dear Mr. Chairman:

Subject: The Funding of Generic Activities Within DOE's  
Office of Assistant Secretary for Nuclear Energy  
(GAO/RCED-84-186)

Your letter of March 15, 1984, requested we respond to a number of questions concerning the Office of the Assistant Secretary for Nuclear Energy funding certain activities not previously identified in the Department of Energy's (DOE's) budget request. These activities are of a generic nature and, according to DOE officials, are intended to enhance the overall management and/or assist in accomplishing the common objectives of various nuclear energy programs.

In subsequent meetings with your office, it was agreed this report would present the results of our examination of the practice of funding generic activities by determining (1) if it is in accordance with DOE internal regulations and congressional guidance regarding the execution of DOE's budget, (2) the impact it has on DOE's accounting records, and (3) the extent to which it should be disclosed in the budget. Additionally, as agreed with your office, we will brief your staff on the effectiveness of DOE's management controls over selected generic activities when that portion of our audit is complete.

The Office of the Assistant Secretary for Nuclear Energy carries out eight different nuclear energy programs which vary from cleaning up uranium mining sites to developing new types of nuclear reactors. In fiscal year 1984, these programs were funded in the amount of \$3.4 billion, of which about \$8.4 million is expected to be used for funding generic activities. These activities include management tasks such as maintaining a computer for budget information, obtaining assistance in formulating

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program plans and budget estimates, and answering public correspondence. Other generic activities include research and/or policy studies, such as examining barriers to the further use of nuclear power, and public information programs on nuclear energy. The funding level for these activities is determined at the beginning of the fiscal year--usually after funds for the nuclear programs have been appropriated by the Congress. The generic activities are then funded from DOE budget accounts within various nuclear programs.

The following briefly summarizes the results of our review.

--Neither DOE internal regulations nor congressional guidance on executing DOE's budget prohibits the practice of funding generic activities. DOE internal regulations and congressional guidance do require congressional notification and/or approval when expenditures depart from DOE's approved budget. DOE nuclear program officials do not believe, however, that these regulations and/or guidance apply to funding generic activities.

--The practice of funding generic activities from DOE accounts within various nuclear programs detracts from the accuracy of DOE's accounting records, and could misrepresent the actual obligations and costs DOE is incurring in specific accounts. For example, we found that over \$2 million funded in fiscal year 1984 for generic activities such as overall management support and public information were recorded in DOE's accounting records as costs at DOE facilities which enrich uranium.

--Generic activities account for less than one-half of one percent of the Office of Assistant Secretary for Nuclear Energy's total budget. However, the \$8.4 million expected to be funded in fiscal year 1984 is more than some nuclear subprograms that are described in DOE's budget. In addition, many of the same activities are funded each year. The relative magnitude of the practice and recurring nature of many of the projects suggest that they be disclosed in DOE's budget submission.

In view of the above, we are recommending that the Assistant Secretary for Nuclear Energy (1) take the necessary action to assure that obligations and costs are more accurately recorded in DOE's accounting records and (2) disclose the magnitude and scope of funding generic activities in the budget submission for nuclear energy programs.

The following sections describe (1) the practice of funding generic activities, (2) DOE regulations and congressional guidance governing such activities, (3) the impact the practice has on

DOE's accounting records, (4) the extent to which the activities should be disclosed in the budget process, and (5) our conclusions and recommendations. The objectives, scope, and methodology for our review is contained in enclosure I. A listing of the generic activities planned for fiscal year 1984 is contained in enclosure II.

THE PRACTICE OF FUNDING GENERIC ACTIVITIES  
FROM VARIOUS NUCLEAR PROGRAMS

DOE's Office of the Assistant Secretary for Nuclear Energy is responsible for planning and executing eight nuclear energy programs,<sup>1</sup> whose fiscal year 1984 budgets range in size from about \$22 million for support activities related to managing and disposing of nuclear waste to about \$2.2 billion to provide nuclear material for civilian, military, and research needs. For the most part, these programs are carried out and managed separately under the overall guidance and management of the Assistant Secretary for Nuclear Energy and his supporting staff. Generic activities, according to nuclear program officials, which are aimed at benefiting more than one nuclear program are undertaken each year to assist the Assistant Secretary and his supporting staff in guiding and managing the various nuclear programs.<sup>2</sup>

Funds for generic activities are obtained by assessing the individual nuclear program budgets. According to nuclear program officials, funding for any specific generic activity is shared by

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<sup>1</sup>These programs include (1) converter reactor--to remove barriers to the further development of nuclear power; (2) commercial waste--to support research and development activities related to managing and disposing of radioactive waste (not supported by the Nuclear Waste Fund); (3) remedial action--to treat or stabilize radioactive waste at specific sites; (4) nuclear fuel cycle--to develop selected aspects of advanced and/or conventional nuclear reactors; (5) advanced systems--to develop nuclear power sources for special systems (i.e., space); (6) breeder reactor--to develop a special type of reactor which in addition to generating electricity produces nuclear fuel; (7) uranium supply and enrichment--to provide nuclear material for civilian, military, and research needs; and (8) naval reactor development--to develop nuclear power for powering naval vessels.

<sup>2</sup>The use of generic activities is not unique to DOE's nuclear programs. The Office of Assistant Secretary for Defense Programs informed us that it funds about \$2.5 million in generic activities each year. The Office of Assistant Secretary for Fossil Energy funded about \$5.7 million in generic activities in fiscal year 1984. Our review was limited, however, to examining the funding of generic activities within DOE's nuclear programs.

various nuclear programs proportional to the benefit the program receives. At the beginning of each fiscal year, the Assistant Secretary's support staff, along with the nuclear program managers, develop a list of generic-type activities that they believe will enhance the objectives of nuclear programs for which the Congress appropriated funds. The amount of funds provided from each nuclear program is also determined at this time. Once the activities are approved by the Assistant Secretary, the various nuclear programs directly fund the projects. No separate account is set up to fund the activities.

The following table shows the amount assessed various nuclear programs for generic activities during the last three fiscal years.

Funding for Generic Activities  
From Nuclear Energy Programs

<u>Nuclear Energy programs</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84<sup>a</sup></u>
	----- (millions) -----		
Breeder Reactor and Advanced Reactor Systems	\$ 3.1	\$ 3.3	\$ 3.1
Remedial Action and Commercial Nuclear Waste Programs	2.4	2.2	1.5
Converter Reactor	2.6	2.7	.9
Nuclear Fuel Cycle	1.2	.8	.4
Uranium Enrichment Activities	.6	1.1	2.5
Naval Reactor Development <sup>b</sup>	<u>0</u>	<u>0</u>	<u>0</u>
Total	\$ <u>9.9</u>	\$ <u>10.1</u>	\$ <u>8.4</u>

<sup>a</sup>Estimated.

<sup>b</sup>According to nuclear program officials, this program is not assessed funds because it does not benefit from the activities carried out.

The types of activities funded over the last 3 fiscal years have been somewhat constant from year to year. Generally, they include: management support, research and/or policy analysis studies, public information, training, and international programs. The largest portion of funds is generally used for management support activities (about 40 percent). The types of activities funded as management support during each of the last 3 fiscal years have included: maintaining a computer for nuclear program budget information and tracking, obtaining assistance in formulating program plans and budget estimates, answering public correspondence, and preparing briefing material. In addition, regulatory studies, public information programs, an analytical

data base, and specific international projects have been funded in each of the last 3 fiscal years. (Enclosure II contains a detailed listing of the generic activities funded in fiscal year 1984.)

DOE INTERNAL REGULATIONS AND  
CONGRESSIONAL GUIDANCE GOVERNING  
THE FUNDING OF GENERIC ACTIVITIES

Neither DOE internal regulations nor congressional guidance on executing DOE's budget prohibits the practice of funding generic activities. DOE does have regulations governing the use of funds for purposes not justified in the budget process. In addition, the Congress has indicated concern about DOE's use of appropriated funds for purposes other than intended or specified by the Congress.

DOE's Office of the Controller develops internal regulations (in the form of orders and/or notices) to guide individual program managers in carrying out the programs in conformance with DOE's appropriated funds. Officials of DOE's Office of the Controller told us that there are no regulations governing the funding of generic activities. They added that such activities can be a useful and a necessary part of any DOE program. Similarly, our review disclosed no DOE internal regulations governing the funding of generic activities. We did note, however, that DOE has an order governing the use of funds for purposes not intended in DOE's approved budget. DOE's Order 5160.1 requires a reprogramming action<sup>3</sup> for projects that depart from DOE's congressional budget justification or for purposes different than outlined by the Congress. Under the order, all DOE offices are responsible for notifying DOE's Office of Controller of such projects as reprogramming actions. The Controller is then responsible for notifying the Congress.

DOE's generic activities associated with the nuclear programs are not treated as reprogramming actions, because nuclear program officials do not consider any of the generic activities as a departure from the budget justification or as projects whose purposes differ from those outlined by Congress. Therefore, the officials do not report the funding of generic activities to the Office of the Controller as reprogramming actions. Officials from the Office of the Controller told us that determining whether or

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<sup>3</sup>This order, dated October 6, 1981, defines reprogramming as including "any departure from a program as described in the Department's Congressional budget justification; or the use of funds for purposes different than that outlined by Congress in the appropriation or reports."

to what extent a project or activity departs from an approved program is a difficult and judgmental decision. They believe an individual program manager is the best judge of how a generic activity benefits and relates to his/her respective program since he/she is intimately involved with the conduct of the program.

In our view, without more specific guidance on what constitutes a departure from an approved program, it is very judgmental determining at what point a generic activity must be considered a reprogramming action. Existing DOE regulations give program managers considerable latitude when deciding if a particular expenditure departs from their approved programs. For example, the regulations could be interpreted that if any expenditure benefits the program, even indirectly, then the activity does not depart from the budget justification.

Applying congressional guidance to the practice is likewise difficult. The House and Senate Appropriation Subcommittees on Energy and Water Development have jurisdiction over all of the programs within the Office of Assistant Secretary for Nuclear Energy. In fiscal year 1984, the Office received its appropriated funds for its programs from three appropriations in the Energy and Water Development Appropriation Act of 1984 (Public Law 98-50, dated July 14, 1983). One appropriation was for Uranium Supply and Enrichment Activities. The Naval Reactor Development Program received its appropriated funds as part of another appropriation--Atomic Energy Defense Activities. The remaining nuclear programs received their appropriated funds as part of an appropriation entitled Energy Supply, Research, and Development Activities. Because the purpose and use of these appropriations are stated in terms of broad objectives, DOE, from a legal view, has considerable flexibility in spending the funds appropriated.

Although the appropriation legislation does not provide detailed congressional guidance regarding the use of funds within the aforementioned appropriations, the House report<sup>4</sup> which accompanies the 1984 appropriation legislation states that "any adjustments of significant magnitude between the budget justifications and the execution of the programs also require approved reprogramming requests." DOE officials do not believe this guidance applies to funding of generic activities. Nuclear program officials as well as officials of DOE's Office of the Controller do not believe the activities depart from the budget justification. In addition, these officials do not believe the activities funded can be termed significant since they account for less than one-half of one percent of the appropriated funds for nuclear programs.

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<sup>4</sup>H.R. Rep. No. 217, 98th Congress (May 24, 1983).

During our review, we discussed the practice with the staffs of both the Senate and House Appropriation Subcommittees on Energy and Water Development. While the staffs did not believe the practice was a major problem, they did express some reservations about it. They were concerned that under such a practice, funds could easily be used to fund project(s) that were clearly beyond the budget scope and justification. In addition, the staffs were concerned that the amounts could increase substantially from one year to the next without the Subcommittees' knowledge. In this respect, they felt that some type of oversight is necessary regarding both the type of activity and the level at which generic activities are funded.

THE IMPACT OF FUNDING GENERIC  
ACTIVITIES ON DOE'S ACCOUNTING  
RECORDS

Because generic activities are jointly funded through various nuclear programs, the obligations and costs for carrying out the activities are charged to DOE accounts within the various programs. The description of those accounts, in many cases, does not seem to include the generic activity funded. This situation affects the accuracy of DOE's accounting system and could eventually lead to misrepresenting actual obligations and costs.

DOE's funds are controlled through budget and reporting classifications or codes, which help to control budget execution and ensure the integrity of the appropriation process. The system is also designed to ensure that actual obligations and costs are represented accurately in DOE's financial records. Each code represents a separate account within DOE's accounting system and has a description to identify the specific use of funds. These DOE accounts and their descriptions expand and elaborate on DOE activities as set forth in their budget request.<sup>5</sup>

We reviewed several specific generic activities to determine how the funding of the activities is recorded in DOE's accounting system. The activities we reviewed represented approximately 40 percent of the total funds used in fiscal years 1983 and 1984 to carry out generic activities within the Office of the Assistant Secretary for Nuclear Energy. Because of the nature of many of

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<sup>5</sup>A budget and reporting code can delineate a program such as breeder reactor systems into subprograms (i.e., the liquid metal fast breeder reactor), categories within subprograms (i.e., the liquid metal fast breeder reactor base program), tasks within categories (i.e., breeder technology) and even subtasks within a task (i.e., safety). In general, DOE's programs and subprograms accounts are established in conformance with DOE's budget.

the generic activities, it was difficult to determine how the activity related to the account charged. For example, \$549,000 funded for management support activities (including answering public correspondence and preparing briefing materials) was recorded under accounts for special applications of advanced nuclear systems and cleaning up inactive uranium mill sites in the United States.

In other cases, as the following examples illustrate, there appears to be no apparent relationship between the activity carried out and the account where a portion of the funds for the activity was recorded.

- \$100,000 for a public information program on nuclear energy (including preparing pamphlets, fact sheets, and a film for public distribution) was recorded under an account for costs at the gaseous diffusion<sup>6</sup> sites for shutdown and standby, warehousing, special planning studies, etc.
- \$190,000 to study potential applications of nuclear reactors in low power ranges was recorded under an account for cost incurred in connection with examining Three Mile Island-2's reactor core and research on immobilization of abnormal reactor waste products.
- \$57,000 to establish a system for collecting and analyzing information on nuclear power programs in other countries was recorded under an account for establishing a system for treatment and disposal of low-level waste and an account for costs at gaseous diffusion sites for shutdown, standby, etc.
- \$56,000 to examine the prospects for nuclear power plant equipment sales in other countries was recorded under an account for the costs to help state governments deal with low-level nuclear waste.

Accounting for generic activities expenditures in the manner discussed above not only detracts from the accuracy of DOE's accounting records, but could eventually lead, if many generic activities are charged to a single account, to misrepresenting the actual obligations and costs of large amounts of money for that account. For example, in fiscal year 1984 over \$2 million used to carry out generic activities such as management support activities, training projects, public information, and various

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<sup>6</sup>A gaseous diffusion plant enriches natural uranium so that it can become more fissionable. Plant sites are at Oak Ridge, Tennessee; Paducah, Kentucky; and Portsmouth, Ohio.



international projects was accounted for in DOE records as part of the cost for shutdown and standby, warehousing, special planning studies, etc., at the gaseous diffusion sites. DOE's description of the scope of these activities does not show how, if at all, these activities benefit or relate to work at gaseous diffusion sites.

Nuclear program officials acknowledge that program managers are not always charging the most appropriate account when they provide funds to carry out generic activities. They told us that in many cases, it is strictly a judgmental decision as to what accounts most accurately describes the generic activity funded. They added that, in some other cases, funds may become available from a project initially budgeted under an account because the project was cancelled or finished under cost. When this happens, program managers may simply charge the generic activity to an account where funds are available.

We recognize that assigning generic activity expenditures to a specific DOE account can be, in some cases, judgmental. The narrative descriptions of DOE accounts within the nuclear program indicate that most were not set up to reflect the practice of funding generic activities. We found only two nuclear programs--commercial nuclear waste and remedial action programs--that have DOE accounts with descriptions that include many of the generic activities funded. For example, the commercial nuclear waste program has an account entitled "supporting studies and evaluations" for costs of generic studies and evaluations. The other nuclear programs, however, do not have comparable accounts for recording generic activity costs.

THE EXTENT TO WHICH GENERIC  
ACTIVITIES SHOULD BE DISCLOSED  
IN THE BUDGET PROCESS

Although program managers must adhere to regulations and guidance from the Office of Management and Budget in preparing the respective budgets, they do have a certain amount of discretion in justifying the programs in the annual budget submission to the Congress. In this regard, it appears to be within the discretion of nuclear program officials to disclose the practice of funding generic activities.

Each year, when the President announces his budget, the Congress receives a detailed budget request document, usually by federal agency. The document is prepared by the cognizant federal agency under the regulations and guidance of the Office of Management and Budget. Among other things, this document provides a detailed breakout of specific programs and projects to be carried

out during the next fiscal year along with their cost, expected benefit, and relation to other programs. The document also provides a description of how the programs and projects will be managed. The Congress, before authorizing and/or appropriating funds, will review the budget request. During this process, funding levels for various programs and/or projects are adjusted. Some programs can be deleted and others added. The budget request document provides the basic information for the Congress to analyze and review the scope and direction of the agency's programs.

Both DOE's budget requests for fiscal years 1983 and 1984 for nuclear programs did not disclose (1) the specific generic tasks planned to be carried out or (2) the total amount of funds planned for generic activities. Nuclear-program officials point out that itemizing every task or project planned would make the budget submission extremely long and complicate the budgetary process. They point out that many of the generic tasks funded are for \$100,000 or less. These officials also stated that many of the generic tasks, if not all, have a sense of immediacy that goes with day-to-day management of the program and are not amenable to long-range forecasting. Because of the uncertainty of the size and nature of the generic activities needed from year to year, the officials do not believe it is practical or necessary to highlight the activities either individually or in total in the budget request. Finally, nuclear program officials told us that they have made no effort to conceal the practice and, in addition to cooperating fully in this audit, have also provided congressional staff with information on the extent and type of work funded when requested.

While recognizing that nuclear program managers should have some flexibility in preparing their budget request submissions, certain observations are worth noting. First, funding of generic activities from various nuclear programs has been a relatively standard practice in the amount funded each year and also in the types of activities funded. This suggests that the use of the practice could be estimated in future years. Second, the generic activities taken collectively represent about \$9 million a year that is not explicitly justified in DOE's budget submissions. This appears to be a rather substantial amount when noting that other subprograms and/or activities which account for less funding are described in detail in DOE's budget submissions. For example, advanced reactor systems within the converter reactor program were funded at about \$5 million in fiscal year 1984. In addition, DOE received about \$1.9 million in fiscal year 1984 to provide adequate staffing for, among other things, policy development, plans formulation, and program assessments. These subprograms and/or activities were highlighted and explained in DOE's budget submission. The extent to which generic activities were funded, on the other hand, was not specified at all.

CONCLUSIONS AND RECOMMENDATIONS

DOE's internal regulations and congressional guidance do not specifically prohibit the funding of generic activities. Nevertheless, the practice of funding such activities from various nuclear program budgets does detract from the accuracy of DOE's accounting records and could misrepresent the actual obligations and cost DOE is incurring for a specific account. This practice can overstate the cost of carrying out individual projects within the nuclear programs, while understating the cost of managing the various nuclear programs.

In regard to the extent to which the practice should be disclosed in DOE's budget submission, we believe many factors must be considered. These include the amount to be funded on such activities, the nature of the activities, and the expected duration of the activities. We recognize these factors can change from year to year. Nevertheless, the magnitude of the practice (about \$9 million per year), as well as the consistency in the projects funded over the last 3 fiscal years, suggests that the practice should be disclosed in DOE's budget submission. Disclosing the practice in the budget would increase congressional oversight of the Office of Assistant Secretary for Nuclear Energy's programs and management practices.

In view of the above, we recommend that the Assistant Secretary for Nuclear Energy:

- Take the necessary actions to assure that obligations and costs are more accurately recorded in DOE's accounting systems. This could be accomplished by revising budget account descriptions to more accurately reflect the activities funded from that account or setting up a separate account within DOE's accounting systems specifically for generic activities.
- Disclose the magnitude and scope of funding for generic activities in the budget submission for nuclear energy programs. This could be done as part of the narrative overview of the nuclear programs or in the discussion of program management resources.

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At the request of your office, we did not obtain official agency comments on the report. However, we did discuss the factual contents of the report with DOE nuclear program officials. These officials were in general agreement with the information

presented. As arranged with your office, unless you publicly announce the contents earlier, we plan no further distribution of this letter until 30 days from the date it is issued. At that time, we will send copies to the Secretary of Energy and make copies available to others upon request.

Sincerely yours,



J. Dexter Peach  
Director

OBJECTIVES, SCOPE, AND METHODOLOGY

As agreed with your office, we focused our review on the appropriateness of the practice of funding generic activities, which were not previously identified in the Department of Energy's (DOE's) budget, by the Office of Assistant Secretary for Nuclear Energy. Specifically, we examined (1) if the practice is in accordance with DOE internal regulations and congressional guidance regarding the execution of DOE's budget, (2) the impact that funding generic activities has on DOE's accounting records, and (3) the extent to which the practice should be disclosed in the budget process.

To understand the practice of funding generic activities, we initially interviewed nuclear program officials and reviewed our past work in the area. We then obtained pertinent documents which described the various activities funded, identified their costs, and determined how the activities related to the various nuclear programs which fund them. Through discussions with DOE officials and reviewing DOE's financial plans, we were able to determine the method used to fund the projects. We did not concentrate on the appropriateness of funding individual generic projects. Our review was limited to the overall practice within the Office of the Assistant Secretary for Nuclear Energy over the last 3 fiscal years.

In examining if the practice is in accordance with DOE regulations and congressional guidance, we discussed the practice with and obtained information from officials of DOE's Office of the Controller, General Counsel, Office of Inspector General, and nuclear program managers. We examined DOE regulations on preparing and executing the budget and how they apply to the practice. We also reviewed the appropriation laws and accompanying reports that would provide congressional guidance on executing DOE's budget. Finally, we discussed the practice with officials of the Office of Management and Budget and staff of the House and Senate Appropriations Subcommittees on Energy and Water Development (these Subcommittees have jurisdiction over the nuclear energy program appropriations) to obtain their views and insights into the annual budgetary process as well as the practice itself.

We also examined the impact funding such activities has on DOE's accounting records by tracing how they are accounted for in DOE's Office of the Controller's records. We also reviewed the narrative description of DOE's accounts to determine how well they describe the generic activities funded. Finally, we obtained the views of nuclear program officials and DOE's Office of the Controller regarding how such funds should be accounted for in DOE's accounting records.

Finally, to determine the extent to which generic activities should be described in the budgetary process, we initially reviewed, in detail, DOE's budget submission for fiscal years 1983 and 1984 to gain an understanding of how nuclear programs are presented to the Congress as well as determine the extent to which generic activities are identifiable in the budget. We also obtained the views of nuclear program officials on presenting their programs in the budget and the extent to which such activities should be disclosed. We also identified the benefits and drawbacks of highlighting such activities in the budget on the basis of our own views as well as those of DOE officials, officials from the Office of Management and Budget, and congressional staff.

We conducted our review between March and June 1984. With the exception of getting agency comments, our review was conducted in accordance with generally accepted government auditing standards.

PLANNED PROJECTS AND ESTIMATED FUNDING  
FOR FISCAL YEAR 1984 GENERIC ACTIVITIES

Regulatory Reform--Legislative Viability (\$400,000). Studies, analysis, and investigations to support DOE's proposed legislation to the Congress on nuclear licensing and regulatory reform.

SSEB Regional Financial Study (\$300,000). A cooperative study with Southern States Energy Board to analyze actions which might help to improve the financial health of the nuclear electric utility industry.

Foreign Training (\$50,000). Project aimed at stimulating markets for U.S. nuclear technology abroad through training in plant safety and maintaining system reliability.

DOE Response to Nuclear Safety Research, Development, and Demonstration Act (P.L. 96-567) (\$200,000). Supports the coordinated activity of the U.S. light water reactor research and development program, through funding working groups from laboratories and industry which develop recommendations to DOE.

Research on Radioactive Releases (\$200,000). To support the Electric Power Research Institute's conduct of research examining the release of different types of radioactive materials.

"Update" Publication and Related Economic Data Collection (\$170,000). Contributes to the quarterly publication of "Update" which reflects current data on the U.S. nuclear power program. Includes information on the economical performance of nuclear units in relation to other competitive electrical energy supplies.

Computer/Office Automation (\$150,000). A project aimed at providing a budget formulation and execution system, and continuous training for the system's users and purchase of system software.

Integrated Data Base (\$100,000). The maintenance of a data base to store information on nuclear waste.

Argonne National Lab Data Acquisition/Support (\$1,650,000). The performance of technical, economic, and planning analyses; information assessment, data processing and retrieval; preparing

briefing data; preparing program information documentation for internal and external use; and technical management and coordination of special studies.

Nuclear Science, Engineering and Health Physics Fellowships (\$400,000). Supports graduate study and research at academic institutions and appropriate DOE facilities in discipline(s) supportive of DOE's nuclear energy program.

Black University Fellowships (\$300,000). Provides support for training, study, and research, and of students and faculty at designated historically black colleges and universities.

Public Information Program (\$375,000). Activities related to development of exhibits, data, and reports for informing the public and state and local officials as to the status and potential of the nuclear power option.

EEEDB VII (\$300,000). Supports development of estimates of current and future cost of nuclear power and competing technologies by maintaining a detailed data base of capital cost estimates for nuclear reactor systems.

Oak Ridge National Lab Technical and Economic Analysis Support (\$200,000). Supports evaluation of the economics of nuclear and competing technologies and assessment of their future potential in order to develop DOE's programmatic needs.

Fuel Cycle Strategies and Economical Analysis (\$200,000). The performance of work in the area of fuel cycle strategy and economic analysis, including analyzing the related costs and benefits associated with different nuclear program strategies and the potential impact of alternative DOE program strategies.

Oak Ridge Associated Universities Manpower Study (\$100,000). Assessment of regional occupational employment requirements for the nuclear industry and research for the time period 1984-2000. Includes identification of employment shifts and their implications for regional educational and training institutions.

Analysis of Future Trend in GNP/Electric Growth Relationship (\$180,000). Analyzes the infrastructure changes taking place in the United States and estimates the impact of changes on future electrical growth and the demand for nuclear power.



Special Meteorological Studies (\$50,000). Studies examining atmospheric transport and diffusion of radioactivity for both routine and accidental releases.

Support for U.S. Sales of Nuclear Equipment Overseas (\$100,000). Identification of legal problems associated with nuclear power plant equipment proposals to foreign countries. Includes establishment of an informational gathering system on factors pertinent to the sales of nuclear power plant equipment to foreign countries.

Sister Laboratory Agreements (\$250,000). Establishment of technical cooperation with Mexico in reactor physics experiments, critical experiments, electric grid systems/power source mix studies, and electric grid system/power plant size options.

Nuclear Energy Administration Support (\$80,000). Publication of the "Yellow Book," which gives the nuclear fuel cycle requirements and supply considerations for the long term (through 2025) for both domestic and foreign applicability.

International Nuclear Policy (\$20,000). The study of U.S. policies and potential modifications thereto to determine whether the U.S. can be a reliable nuclear supplier.

Translations (\$50,000). To translate foreign nuclear technical publications and meeting reports into English for dissemination.

ASNE Energy/Nuclear Planning (\$1,028,000). Estimated funding for projects to be determined in the course of the fiscal year.

Reactor Operator Training, Univ. of VA (\$67,000). Training of disadvantaged/minority students for reactor operation and maintenance of research reactor.

Energy Technology Visuals Collection (\$25,000). Nuclear energy program's share of repository cost for visuals representing Department's research and contractual activities.

Terrestrial Research Applications (\$1,000,000). An effort to evaluate potential applications of nuclear reactors in lower power ranges and to prepare a plan for the development of low power nuclear technology.

Plant Inventory Assessment/OA for Safety-Related Equipment (\$300,000). The examination of the present extent and condition of the large equipment and materials stockpile that exists for nuclear power plants that have been cancelled or indefinitely postponed. Also, the project will compare failure rates of components in nuclear and non-nuclear service to determine if there are or are not significant differences in performance.

Reevaluation Study (\$59,000). A study to analyze the technical, economic, and institutional issues associated with formulating a revised mathematical model to study radioactive releases.

Legal Aspects/Utility Financial Conditions (\$73,000). Examination of the nuclear electric utilities financial problems and determination of the procedures used by the states and federal government to deal with the problems.

Price-Anderson Research (\$31,000). Analysis of the Nuclear Regulatory Commission's report to the Congress on the Price-Anderson Act.

Printing for Program Documents (\$15,000). The publication of studies and plans.