

GAO

Fact Sheet for the Subcommittee on  
Oversight of Government Management  
and the District of Columbia, Committee  
on Governmental Affairs, U.S. Senate

---

December 1995

# FEDERAL RESEARCH

## Information on Fees for Selected Federally Funded Research and Development Centers







United States  
General Accounting Office  
Washington, D.C. 20548

---

**Resources, Community, and  
Economic Development Division**

B-270271

December 8, 1995

The Honorable William S. Cohen  
Chairman  
The Honorable Carl Levin  
Ranking Minority Member  
Subcommittee on Oversight  
of Government Management and the  
District of Columbia  
Committee on Governmental Affairs  
United States Senate

In July 1992, your Subcommittee reported that there were variations in (1) the fees paid by sponsoring federal agencies for the management of the Federally Funded Research and Development Centers, (2) the formulas used to calculate the fees, and (3) the justifications for paying the fees provided by the sponsoring federal agencies. Your Subcommittee also reported that there were no governmentwide guidelines for setting the fees, making it difficult to evaluate their reasonableness.

This report responds to your June 1995 request for current information on federal policies and practices concerning the fees paid by the Department of Energy, the Department of Defense, and the National Aeronautics and Space Administration (NASA) for managing the Centers. We identified (1) the extent to which the three agencies have regulations governing these fees; (2) the annual amounts and purposes of the fees provided by Energy, Defense, and NASA during fiscal year 1994; (3) the uses made by Energy's contractors of their total funds during fiscal year 1994; and (4) the effect of Energy's February 1994 contract reforms on the fees for the Department's Centers.

The Centers first came into existence during World War II to meet special research needs that federal and private-sector facilities were unable to provide. They are sponsored under a broad charter by a government agency or agencies and receive 70 percent or more of their financial support from the government. Currently, 39 Centers are sponsored by eight federal agencies—Energy sponsors 18, Defense sponsors 11, and NASA sponsors 1. The Centers are operated by educational institutions, nonprofit organizations, and industrial firms. Within Energy, these organizations may operate and manage a larger facility that includes a Center.

---

In summary:

- Of the three agencies—Energy, Defense, and NASA—only Defense has specific regulations for its Centers’ fees. Energy uses its regulations covering the development of fees for the contractors that manage and operate its facilities. These regulations differ from Defense’s. NASA uses the general federal and NASA regulations that apply to its other contracts.
- Fees totaling \$185.2 million were paid in fiscal year 1994 to Centers funded by Energy, Defense, and NASA. Energy paid about \$122.8 million; Defense, about \$45.9 million; and NASA, about \$16.5 million. The purposes of the fees varied by agency and by contract. Energy provided fees to compensate contractors for a variety of overhead costs, fund contract performance awards, and provide incentives. The fees for Defense’s Centers were used for corporate research, capital equipment and facilities, working capital requirements, contingencies, and unreimbursed costs. The fee for NASA’s single Center was for a contract performance award.
- All of Energy’s Centers are operated under management and operating contracts. In all but three cases, the contractors’ work covered more than research and development. For example, during fiscal year 1994, nearly 100 percent of the funds for the Fermi National Accelerator Laboratory were used for research and development activities, while only about 3 percent of the funds used to operate the Savannah River Laboratory and Plant—which includes the Savannah River Technical Center—were used for research and development.
- Under Energy’s 1994 contract reforms, revised contracts include objective measures of performance. However, not all of the revised contracts link earning the fee to the contractor’s performance. For example, the contract for the Continuous Electron Beam Accelerator Facility contains pages of performance criteria and measures but does not make Energy’s payment of the fee dependent on the contractor’s meeting the criteria and measures.

Section 1 describes the regulations covering the development of fees for Energy’s, Defense’s, and NASA’s Centers. Section 2 identifies the amounts and purposes of the fees paid by the three agencies during fiscal year 1994. Section 3 identifies the uses made by Energy’s management and operating contractors of their funds during fiscal year 1994. Section 4 compares the fee structure for the contracts revised under Energy’s contract reforms to the fee structure for the Department’s preceding contracts.

---

## Agency Comments and Our Evaluation

We transmitted a draft of this report to the Secretaries of Defense and Energy and the Administrator of NASA for review and comment. The Defense liaison told us that the Department did not find it necessary to provide written comments or to hold a meeting to discuss the report. The liaison did offer some technical comments that have been incorporated into the report. Energy's and NASA's comments and our responses to them appear in appendixes I and II. Energy clarified its position and provided technical corrections. NASA indicated that the report accurately portrayed the amount and purpose of the fee it had paid for its Center. In addition, NASA clarified that it had formally approved a deviation of policy to authorize the payment of this fee.

---

## Scope and Methodology

To develop information on the regulations governing the Centers' fees, we reviewed federal, Energy, Defense, and NASA regulations; identified any specifically applicable to the Centers' fees; and analyzed their requirements.

To determine the amounts and intended purposes of the fees for Energy's and NASA's Centers, we obtained and reviewed contracts, records of contract negotiations, award-fee plans, or award-fee evaluation reports for all of the fiscal year 1994 fees identified by the agencies. To determine the amounts and actual uses of the fees for Defense's Centers, we obtained information for fiscal year 1994 compiled by Defense staff for the Department's 1995 report entitled Comprehensive Review of the Department of Defense's Fee Granting Process for Federally Funded Research & Development Centers.

To determine how Energy's contractors used their total funds during fiscal year 1994, we obtained information from Energy's financial information system. To determine the amount spent on research and development, we first identified Energy's broad budget categories for research and development and then identified the funds used for other efforts that appeared to be related to research and development, such as technology transfer activities.

To determine the effect of Energy's 1994 contract reforms on the fees for the Department's Centers, we reviewed all contracts for Centers that had been revised under the reforms at the time of our review and compared them to the contracts they had replaced.

---

We conducted our review from July 1995 through October 1995 in accordance with generally accepted government auditing standards.

As arranged with your offices, unless you announce its contents earlier, we plan no further distribution of this report until 30 days after the date of this letter. At that time, we will send copies to the Secretaries of Energy and Defense and the Administrator of NASA. We will make copies available to others upon request.

Please contact me on (202) 512-6543 if you or your staff have any questions. Major contributors to this report are listed in appendix III.

A handwritten signature in black ink, reading "Bernice Steinhardt". The signature is written in a cursive, flowing style.

Bernice Steinhardt  
Associate Director, Energy and  
Science Issues

---

---

---

# Contents

Letter	1
Section I	8
Comparison of	8
FFRDC Fee	8
Regulations	9
	10
Section 2	12
Amounts and	
Purposes of Fees Paid	
to FFRDCs	
Section 3	17
Use of Funds During	
Fiscal Year 1994 by	
DOE's FFRDC	
Contractors	
Section 4	19
Effect of DOE's	
Contract Reform on	
Fees	
Appendix I	22
Comments From the	
Department of Energy	



Appendix II Comments From the National Aeronautics and Space Administration	26
---	----

Appendix III Major Contributors to This Report	28
--	----

Tables	
Table 2.1: DOE's FFRDCs—Purposes of Fees, Annual Costs, and Amounts of Fees, Fiscal Year 1994	13
Table 2.2: DOD's FFRDCs—Purposes of Fees, Annual Costs, and Amounts of Fees, Fiscal Year 1994	15
Table 2.3: NASA's FFRDC—Purpose of Fee, Annual Costs, and Amount of Fee, Fiscal Year 1994	16
Table 3.1: Proportion of Management and Operating Contractors' Total Costs Spent for Research and Development, Fiscal Year 1994	18
Table 4.1: Improvements Anticipated Under Performance-Based Management Contracts	19
Table 4.2: Purposes of Fees or Management Allowances Under Revised and Previous Contracts	20

---

**Abbreviations**

DOD	Department of Defense
DOE	Department of Energy
GAO	General Accounting Office
NASA	National Aeronautics and Space Administration
FFRDC	Federally Funded Research and Development Center

# Comparison of FFRDC Fee Regulations

There are no governmentwide regulations to guide contracting officers in developing fees specifically for Federally Funded Research and Development Centers (FFRDC). Of the Department of Energy (DOE), the Department of Defense (DOD), and the National Aeronautics and Space Administration (NASA), only DOD has specific agency regulations for developing FFRDC fees. DOE uses its management and operating contract regulations for developing fees because all of its FFRDCs are operated by management and operating contractors. NASA, with one FFRDC, uses the general federal and NASA procurement regulations to develop its single FFRDC fee.

## Federal FFRDC Fee Regulations

Governmentwide policy for establishing, using, periodically reviewing, and terminating sponsorship of FFRDCs is included in the Federal Acquisition Regulation, which is the governmentwide procurement regulation, and a 1984 Office of Federal Procurement Policy letter. Although the regulation and the letter explain that the relationship between an FFRDC and its sponsoring agency or agencies may be outlined in a sponsoring agreement, contract, or other legal instrument, neither the regulation nor the letter states how the FFRDC fee is to be developed by the sponsoring agency. Furthermore, according to a Deputy Associate Administrator in the Office of Federal Procurement Policy who deals with FFRDC issues, the Office is waiting to review changes in procurement regulations proposed by DOE and DOD before deciding on any further governmentwide guidance on FFRDC fees.

## DOE's Regulation Used for FFRDC Fees

Although DOE does not have specific regulations for developing FFRDC fees, it uses its regulation for developing management and operating contract fees because all of its FFRDCs are operated by management and operating contractors. DOE's regulation recognizes that the fees compensate management and operating contractors for organizing and managing resources, using their own resources, and assuming the risk that all incurred costs may not be reimbursable. Under DOE's management and operating contract fee regulation, educational institutions are treated differently from other organizations.

According to DOE's regulation, the Department's policy is generally not to pay a fee to an educational institution for managing and operating a facility. However, under special circumstances, a management allowance

---

may be paid.<sup>1</sup> The regulation does not explain how a management allowance should be developed.

DOE's regulation provides direction for developing fees for noneducational organizations. Fees are developed through a structured approach that includes evaluating and weighting significant factors, calculating a contractor's costs (referred to as a "fee base"), and using tables (called fee schedules) showing the maximum allowable fees for production and/or research and development. In developing a fee to use during negotiations with a contractor, a contracting officer

- may consider 11 different factors listed in the regulation (such as the management risk, the financial risk, the difficulty of the work, the use of the contractor's resources, and the project's duration);
- develops the fee base (an estimate of the allowable costs needed to do the contract work, excluding any costs whose magnitude or nature would distort the technical and management effort actually required of the contractor); and
- identifies the maximum allowable fee for the fee base from the regulation's schedules for production and/or research and development.

DOE also uses an award fee to encourage superior performance from its contractors. To calculate an award fee, which includes a base fee and an award, the contracting officer uses the previously calculated maximum allowable fee as the base fee and multiplies it by 100 to 200 percent, depending on the type of work and the risks of operating the facility, to obtain the award fee. The maximum allowable fee and the award fee are then used by the contracting officer as a negotiating position.

As a general policy, DOE pays fees to the nonprofit organizations that manage its facilities. DOE's regulation states that the maximum allowable fee from the fee schedules should be reduced by at least 25 percent to take into account the tax benefits of nonprofit organizations. However, the regulation notes that, depending upon the circumstance and with appropriate justification, the amount of the fee may vary from the reduced amount to the maximum amount allowed under the fee schedule.

---

## DOD's FFRDC Fee Regulation

All of DOD's FFRDCs are operated by nonprofit organizations, and DOD's procurement regulation provides specific direction for developing FFRDC

---

<sup>1</sup>Although not defined in DOE's procurement regulation, management allowances are, in practice, paid for certain costs expected to be incurred by the contractor or its parent organization.

fees for nonprofit organizations, including educational institutions. DOD defines a nonprofit organization as a business entity (1) that operates exclusively for charitable, scientific, or educational purposes; (2) whose earnings do not benefit any private shareholder or individual; (3) whose activities do not involve influencing legislation or political campaigning; and (4) that is exempt from federal income taxation.

DOD's procurement regulation specifies that, in developing a fee for a nonprofit organization operating an FFRDC for DOD, the contracting officer should consider first whether any fee is appropriate. In making this determination, the contracting officer is to consider the proportion of the FFRDC's retained earnings relating to DOD's contracted effort; the facility's capital acquisition plans; the working capital funding as assessed on the cash needs for the operating cycle; contingency funding; and unreimbursed costs deemed ordinary and necessary to the FFRDC. The contracting officer is then to use a structured approach, called the modified weighted guidelines procedure, to develop DOD's fee for negotiations.

Under DOD's modified weighted guidelines, a contracting officer develops a fee by focusing on three factors—performance risk, risk due to type of contract (i.e., fixed price or cost), and the facility's capital (land, buildings, and equipment) to be employed. DOD has found that, in actual practice, when its use of the modified weighted guidelines produces a higher fee than the fee requested by an FFRDC, the fee requested by the FFRDC generally becomes DOD's fee for use during contract negotiations.

In May 1995, a DOD task force studied DOD's process for developing FFRDC fees and recommended changes to DOD's regulation. Among other things, the task force recommended (1) requiring contracting officers to base FFRDC fees on their assessment of whether an FFRDC should receive a fee and (2) changing the weighted guidelines procedure. However, DOD officials responsible for FFRDC oversight told us that actions to respond to the task force's recommendations have not been completed.

---

## NASA's Fee Regulation

NASA has no FFRDC fee policy that covers its one FFRDC. However, NASA uses the Federal Acquisition Regulation and its own procurement regulation to develop the fee for its contract. Both the federal regulation and the agency's regulation authorize deviations from established policy to meet specific needs and requirements. Although NASA's regulation states that the agency's policy is not to pay a profit or a fee to an educational institution,

---

**Section I**  
**Comparison of FFRDC Fee Regulations**

---

the contracting officer for NASA's FFRDC contract requested and was granted a deviation from NASA's regulation to provide a fee to the educational institution managing its FFRDC.

---

# Amounts and Purposes of Fees Paid to FFRDCs

---

FFRDC contractors funded by DOE, DOD, and NASA were paid about \$185.2 million in fees and management allowances in fiscal year 1994. DOE paid about \$122.8 million; DOD, about \$45.9 million; and NASA, about \$16.5 million in fiscal year 1994, the latest year for which data were available. Fees and allowances were paid to the different categories of FFRDC operators—educational institutions, nonprofit organizations, and industrial organizations. Although DOE’s policy is generally not to pay fees to educational institutions, 9 out of 11 such institutions received a fee or management allowance. NASA, with a similar policy, authorized a deviation from its procurement regulation to pay a fee to the educational institution managing its sole FFRDC. Conversely, DOD paid no fees to two educational institutions operating two of its FFRDCs. All of the industrial contractors and all but one nonprofit contractor received fees.

As noted in section 1, the regulations DOE and DOD use in developing the fees for their FFRDCs consider the use an FFRDC contractor makes of its own resources. In general, DOE’s FFRDCs use the government’s facilities, while DOD’s FFRDCs use their own facilities to perform their contract work. These practices may affect the amounts of the fees and their uses. Although NASA also considers the use a contractor makes of its own resources, this approach is not required in developing the award fee for NASA’s FFRDC.

DOE, DOD, and NASA paid fees to FFRDCs for different purposes. DOE’s fees covered a variety of overhead costs, contract performance awards, and incentives, as well as recognized financial risks assumed by the contractors. All of DOD’s fees were for corporate-sponsored research, capital acquisition, working capital, contingencies, interest, or other unreimbursed costs. NASA’s one FFRDC fee was for a performance award for achieving mission objectives and other accomplishments.

For each of DOE’s FFRDCs, table 2.1 lists the contractor, by type; indicates whether a fee or management allowance was paid and for what purpose; and identifies the contractor’s annual costs and the amount of the fee for fiscal year 1994. Table 2.2 lists the same information for each of DOD’s FFRDCs, and table 2.3 lists this information for NASA’s FFRDC. It should be noted that, for each contractor, (1) the tables for DOE and NASA show the intended purpose of the fee set by the contracting officer and the contractor and (2) the table for DOD shows the actual use of the fee made by the FFRDC. For DOE and NASA, we obtained the intended purpose of each fee from the contracting officer’s records of negotiation, the award fee plan or evaluation, and/or the actual contract. For DOD, we obtained the

**Section 2**  
**Amounts and Purposes of Fees Paid to**  
**FFRDCs**

purpose of each fee from the documents supporting a DOD study on the FFRDCs' actual uses of the fees.

**Table 2.1: DOE's FFRDCs—Purposes of Fees, Annual Costs, and Amounts of Fees, Fiscal Year 1994**

Dollars in millions				
FFRDC and type of operator	Type and purpose of fee or allowance	Annual costs	Fee amount	
Ames Laboratory (educational)	No fee or allowance	\$35.9	\$0	
Argonne National Laboratory (educational)	Management allowance in lieu of payment for university overhead	\$609.1	\$3.1	
Brookhaven National Laboratory (educational)	Management allowance for reasonable operational needs that should not be funded as contract costs	\$408.7	\$2.0	
Continuous Electron Beam Accelerator Facility (educational)	Management fee in recognition of corporate oversight responsibility, financial risk, and home office expenses	\$75.4	\$1.3	
Fermi National Accelerator Laboratory (educational)	Management allowance in lieu of general corporate expenses and management services	\$238.6	\$1.4	
Lawrence Berkeley National Laboratory (educational)	Fixed fee, paid to one contractor for managing the three laboratories, in recognition of new financial risks assumed by the university, including the risk that all incurred costs may not be reimbursable	\$258.4	\$14.0	
Lawrence Livermore National Laboratory (educational)		\$921.0		
Los Alamos National Laboratory (educational)		\$1,099.5		
Oak Ridge Institute for Science and Engineering (educational)	Fixed fee in recognition of contractor's management and technical skills needed for operations	\$55.4	\$1.5	
Princeton Plasma Physics Laboratory (educational)	Management allowance in lieu of indirect cost pool allocations for the university's office support and service activities	\$108.1	\$3.0	

(continued)

**Section 2**  
**Amounts and Purposes of Fees Paid to**  
**FFRDCs**

Dollars in millions

<b>FFRDC and type of operator</b>	<b>Type and purpose of fee or allowance</b>	<b>Annual costs</b>	<b>Fee amount</b>
Stanford Linear Accelerator Center (educational)	No fee or allowance	\$163.7	\$0
Inhalation Toxicology Research Institute (nonprofit)	No fee or allowance	\$14.6	\$0
National Renewable Energy Laboratory (nonprofit)	Award fee for performance incentives in the areas of institutional leadership; environment, safety, and health; institutional management; administrative and technical services; and programmatic management	\$206.6	\$6.1
Pacific Northwest Laboratory (nonprofit)	Fixed fee in recognition of work's complexity and responsibilities, financial risk, and home office contributions	\$378.3	\$9.4
Energy Technology Engineering Center <sup>a</sup> (industrial)	Fixed fee for organizing and managing resources, using contractor's resources, and assuming the risk that all incurred costs may not be reimbursable	\$35.8	\$1.5
Idaho National Engineering Laboratory (industrial)	Award fee for performance in areas such as operations; programs; research and development; environment, safety, and health; quality assurance; management and administration; financial management; and consolidation transition	\$799.9	\$25.8
Oak Ridge Facilities <sup>b</sup> (industrial)	Award fee for performance incentives for operating and managing the Oak Ridge National Laboratory, Oak Ridge and Paducah Gaseous Diffusion Plants, and the Y-12 Plant	\$1,948.5	\$38.0
Sandia National Laboratory (industrial)	Fixed fee in recognition of research and development, production, construction, construction management, and special equipment	\$1,376.4	\$10.6

(continued)



**Section 2**  
**Amounts and Purposes of Fees Paid to**  
**FFRDCs**

Dollars in millions

<b>FFRDC and type of operator</b>	<b>Type and purpose of fee or allowance</b>	<b>Annual costs</b>	<b>Fee amount</b>
Savannah River Laboratory and Plant (industrial)	Award fee for performance incentives for efforts in administration; engineering; the Savannah River Technology Center; nuclear waste management; materials production; environment, safety, and health; and quality assurance	\$1,591.8	\$32.8

<sup>a</sup>This Center ceased to be an FFRDC on September 30, 1995.

<sup>b</sup>Annual costs are for all of the facilities under the contract and not the national laboratory alone because DOE does not routinely separate the costs in its accounting system.

Source: GAO's analysis of DOE's data.

**Table 2.2: DOD's FFRDCs—Purposes of Fees, Annual Costs, and Amounts of Fees, Fiscal Year 1994**

<b>FFRDC and type of operator</b>	<b>Type and purpose of fee or allowance</b>	<b>Annual costs</b>	<b>Fee amount</b>
Lincoln Laboratory (educational)	No fee or allowance	\$273.1	\$0
Software Engineering Institute (educational)	No fee or allowance	\$20.0	\$0
Aerospace Corporation (nonprofit)	Fixed fee, of which 57 percent was for corporate-sponsored research, 36 percent for capital acquisition, and 7 percent for unreimbursed costs	\$370.2	\$15.5
Arroyo Center (nonprofit)	Fixed fee paid to one contractor for operating the three FFRDCs; of this fee, 62 percent was for capital acquisition, 34 percent for corporate-sponsored research, 3 percent for interest, and 1 percent for unreimbursed costs	\$65.4	\$3.9
National Defense Research Institute (nonprofit)			
Project Air Force (nonprofit)			

(continued)

**Section 2**  
**Amounts and Purposes of Fees Paid to**  
**FFRDCs**

<b>FFRDC and type of operator</b>	<b>Type and purpose of fee or allowance</b>	<b>Annual costs</b>	<b>Fee amount</b>
Center for Naval Analyses (nonprofit)	Fixed fee, of which 46 percent was for capital acquisition, 37 percent for working capital, 10 percent for contingencies, and 7 percent for unreimbursed costs	\$49.6	\$2.5
Mitre C <sup>3</sup> I Division (nonprofit)	Fixed fee, of which 44 percent was for capital acquisition, 35 percent for corporate-sponsored research, 11 percent for unreimbursed costs, and 10 percent for working capital	\$379.9	\$17.9
IDA Studies and Analyses/ Operational Test and Evaluation Center (nonprofit)	Fixed fee paid to one contractor for managing both FFRDCs; of this fee, 41 percent was for contingencies, 24 percent for capital acquisition, 23 percent for corporate-sponsored research, and 12 percent for unreimbursed costs	\$107.2	\$4.6
IDA C <sup>3</sup> I (nonprofit)			
Logistics Management Institute (nonprofit)	Fixed fee, of which 64 percent was for working capital, 24 percent for unreimbursed costs, and 12 percent for capital acquisition	\$33.9	\$1.5

Source: DOD.

**Table 2.3: NASA's FFRDC—Purpose of Fee, Annual Costs, and Amount of Fee, Fiscal Year 1994**

<b>Dollars in millions</b>			
<b>FFRDC and type of operator</b>	<b>Type and purpose of fee or allowance</b>	<b>Annual costs</b>	<b>Fee amount</b>
Jet Propulsion Laboratory (educational)	Award fee for performance incentives in programmatic scientific, engineering, management, and other performance areas.	\$1,000.0	\$16.5

Source: GAO's analysis of NASA's data.

---

# Use of Funds During Fiscal Year 1994 by DOE's FFRDC Contractors

---

Spending over \$10 billion in total funds for fiscal year 1994, the management and operating contractors operating DOE's FFRDCs varied widely in their use of these funds. According to DOE's financial data, DOE's 19 contractors used from about 3 percent to nearly 100 percent of their funds for activities related to research and development during fiscal year 1994. For example, at the Fermi National Accelerator Laboratory, nearly 100 percent of the funds were used for research and development. In contrast, at the Savannah River Laboratory and Plant, which includes the Savannah River Technical Center, only about 3 percent of the funds were used for research and development. At 11 facilities, over 75 percent of the funds were used for research and development, while at three facilities less than 50 percent were used. As a whole, DOE's management and operating contractors used about 50 percent of their funds for activities related to research and development.

The contractors used funds for various other purposes. Grouped into DOE's budget categories, the other purposes were (1) the environmental restoration of facilities contaminated with hazardous and nuclear waste; (2) weapons activities, such as the maintenance of nuclear weapons, that did not involve research and development; (3) the production of nuclear materials; and (4) various other activities, including some related to sustaining nuclear weapons' capabilities, as well as others unrelated to this effort, such as the Strategic Petroleum Reserve.

Table 3.1 compares the total costs incurred by the management and operating contractors operating FFRDCs with the costs incurred for research and development. The information in table 3.1 is based on the contract costs incurred during fiscal year 1994 by the contractors. We obtained these costs from DOE's financial information system and grouped them into budget categories that were and were not related to research and development. Under research and development, we included research-, development-, and technology-related budget items from various program areas. These include items such as fossil energy research and development, energy supply research and development, energy conservation research and development, general science and research, Energy Research Development Administration technology transfer, clean coal technology, alternative fuels, geothermal development, weapons research and development and testing, environmental restoration and waste management research and development and technology development, materials production research and development and testing, and research trust funds.

**Section 3**  
**Use of Funds During Fiscal Year 1994 by**  
**DOE's FFRDC Contractors**

**Table 3.1: Proportion of Management and Operating Contractors' Total Costs Spent for Research and Development, Fiscal Year 1994**

Dollars in millions			
Management and operating contractor	Total costs	Research and development costs <sup>a</sup>	Research and development as a percent of total costs <sup>b</sup>
Ames Laboratory	\$35.9	\$34.7	97
Argonne National Laboratory	\$609.1	\$530.5	87
Brookhaven National Laboratory	\$408.7	\$384.9	94
Continuous Electron Beam Accelerator Facility	\$75.4	\$75.2	100
Energy Technology Engineering Center	\$35.8	\$30.8	86
Fermi National Accelerator Laboratory	\$238.6	\$238.4	100
Idaho National Engineering Laboratory	\$799.9	\$163.9	20
Inhalation Toxicology Research Institute	\$14.6	\$11.3	77
Lawrence Berkeley Laboratory	\$258.4	\$238.3	92
Los Alamos National Laboratory	\$1,099.5	\$564.8	51
Lawrence Livermore National Laboratory	\$921.0	\$569.8	62
National Renewable Engineering Laboratory	\$206.6	\$200.4	97
Oak Ridge Institute for Science and Engineering	\$55.4	\$36.7	66
Oak Ridge Facilities <sup>c</sup>	\$1,948.5	\$632.1	32
Pacific Northwest Laboratory	\$378.3	\$219.8	58
Princeton Plasma Physics Laboratory	\$108.1	\$107.7	100
Sandia National Laboratory	\$1,376.4	\$731.7	53
Savannah River Laboratory and Plant	\$1,591.8	\$41.6	3
Stanford Linear Accelerator Center	\$163.7	\$159.4	97
<b>Total</b>	<b>\$10,325.6</b>	<b>\$4,972.0</b>	<b>48</b>

<sup>a</sup>Rounded to the nearest hundred thousand.

<sup>b</sup>Rounded to the nearest whole percentage point.

<sup>c</sup>Contract includes the management and operation of the Oak Ridge National Laboratory, the Oak Ridge and Paducah Gaseous Diffusion Plants, and the Y-12 Plant.

Source: GAO's analysis of DOE's data.

# Effect of DOE’s Contract Reform on Fees

DOE’s February 1994 contract reforms were intended to fundamentally change management and operating contracts by converting them to what DOE calls performance-based management contracts. Because all of DOE’s FFRDCs are operated under management and operating contracts, these reforms directly affect them. A key goal of the reforms is to enhance contractors’ performance through changes in the fee and incentive structure provided in contracts. At the time of our review, FFRDC contracts had been revised for the Argonne National Laboratory, Brookhaven National Laboratory, Continuous Electron Beam Accelerator Facility, and Idaho National Engineering Laboratory.

In its February 1994 report, DOE’s Contract Reform Team identified the weaknesses in the fee structure of the management and operating contracts and the anticipated improvements in the intended fee structure of the new performance-based management contracts. Table 4.1 provides key elements of the team’s comparison.

**Table 4.1: Improvements Anticipated Under Performance-Based Management Contracts**

Management and operating contract	Performance-based management contract
Broad subjective statement of work	Well-defined, objective performance criteria and measures for program activities; environmental, health, and safety requirements; and financial and management objectives
No meaningful incentives to reduce costs	Incentives to reduce costs through such measures as sharing costs and cost savings and strictly enforcing performance criteria and measures
Compensation based on criteria applied in postperformance review process	Compensation based on measurable, objective criteria established in the contract

Source: DOE.

Table 4.2 contrasts the purposes of the fees and incentives under the revised contracts to those under the previous contracts for fiscal year 1994.

**Section 4**  
**Effect of DOE's Contract Reform on Fees**

**Table 4.2: Purposes of Fees or Management Allowances Under Revised and Previous Contracts**

Dollars in millions

Facility	Previous contract		Revised contract	
	Amount of fee or allowance	Purpose of fee or allowance	Amount of fee or allowance	Purpose of fee or allowance
Argonne National Laboratory	\$3,100,000	Management allowance in lieu of reimbursement of university's overhead	From \$2,000,000 to \$6,700,000 <sup>a</sup>	Management allowance of \$2.0 million for the university's indirect expenses and management costs; performance fee of up to \$4.7 million for performance of science and technology and operation of facility; in addition to the negotiated fees, up to 50 percent of any savings resulting from cost-reduction proposals accepted by DOE
Brookhaven National Laboratory	\$2,020,000	Management allowance for operational needs considered essential but not to be funded as contract costs	\$2,400,000	Fixed fee for contract work; in addition to the contract fee, up to 50 percent of any savings resulting from cost-reduction proposals accepted by DOE
Continuous Electron Beam Accelerator Facility	\$1,292,073	Management fee in recognition of corporate oversight responsibility, financial risk, and home office expenses	\$2,264,110	Management fee for general and administrative expenses, additional corporate resources for oversight of performance, self-assessment, liability, and a "reserve" of "risk funds" to cover potential unallowable costs, to be returned to DOE at the end of the contract if not used; in addition to the negotiated fee, up to 50 percent of any savings resulting from cost-reduction proposals accepted by DOE
Idaho National Engineering Laboratory	From \$14,718,000 to \$43,673,000	Award fee for performance in areas such as operations; programs; research and development; environment, safety, and health; quality assurance; management and administration; financial management; and consolidation transition	From \$2,810,201 to \$42,153,012	Award and incentive fees for performance awards for overall operations and incentives for cost reduction, operational performance, and facility management; additional potential incentive fees from a share of any royalties, licensing fees, or equity shares in a licensee derived from commercializing contractor-developed technologies

<sup>a</sup>The contract provides for performance fees to cover 12-month periods from August 1 to July 31 and management allowances to cover 12-month periods from October 1 to September 30.

Source: GAO's analysis of DOE data.

All four contracts revised in response to the 1994 contract reforms incorporate some objective performance measures—one of the expected benefits of the reforms. One such objective performance measure appears in the Argonne National Laboratory's contract in the area of cash and debt

---

management. Here, payment of invoices on time is used as an indicator of success. Measurable goals include 100-percent on-time payment of salaries and 95-percent on-time payment of vendors' invoices. However, the Brookhaven National Laboratory and Continuous Electron Beam Accelerator Facility contracts do not link earning the fee to the actual performance. Additionally, the original Idaho National Engineering Laboratory contract did not contain the specific cost or performance targets that the contractor needed to achieve in order to be awarded incentive fees.

# Comments From the Department of Energy


Note: GAO comments supplementing those in the report text appear at the end of this appendix.



**Department of Energy**  
Washington, DC 20585

NOV 9 1995

MEMORANDUM FOR: JEFFREY HEIL, GENERAL ACCOUNTING OFFICE

FROM:  G. L. ALLEN, ASSOCIATE DEPUTY  
ASSISTANT SECRETARY  
OFFICE OF PROCUREMENT AND ASSISTANCE  
MANAGEMENT

SUBJECT: DEPARTMENTAL COMMENTS REGARDING DRAFT  
REPORT "FEDERAL RESEARCH: INFORMATION ON  
FEES FOR SELECTED FEDERALLY FUNDED RESEARCH  
AND DEVELOPMENT CENTERS"

As a result of its review of the General Accounting Office draft report the Department of Energy has the following comments.

1. Section 2 of the draft report contained a Table which indicated the funding and fee amounts paid to the Federally Funded Research and Development Centers (FFRDC). In some cases the funding and fee amounts reflected the amounts provided to the entire Operation Site and not just the FFRDC. Information is provided where the amount of funding and fee contained in the Table reflected more than that paid to the FFRDC.

FFRDC and type of Operator	Funding Amount (Budget)	Fee Amount (Paid)
Oak Ridge National Laboratory	\$477,190,000	\$10,389,510
Savannah River Technology Center	\$153,210,000	\$1,993,250
Idaho National Engineering Laboratory	\$1,255,800,000*	\$23,199,138*
* This includes more than the FFRDC, however, the specific amounts by which these figures should be reduced has not been determined. The ratio of fee to funds for the reduced amounts should be approximately what it is here.		



2. Section 3 of the draft report which indicated Research and Development as a percent of the total funding, needs to be changed to reflect the information changed in the Table in Section 2. The following changes need to be made to the Table:

Facility	Total Costs (Budget)	R & D costs	R & D costs % of total
Oak Ridge National Laboratory	\$477.19 M	\$310.446 M	65%
Savannah River Technology Center	\$153.21 M	\$41.6 M	27.2 %
Idaho National Laboratory	\$1,255.8*	\$163.9	13.1 %*
* This includes more than the FFRDC, however, the specific amounts by which these figures should be reduced/adjusted has not been determined. The ratio of R&D funds to total funds will increase.			

3. The Raw Data does not provide a ready comparison of the ratio of fees to funding. It is believed that an additional column showing this ratio would provide a constant standard from which to evaluate the relationship of fees to funds.
4. The Department's Fee policy has allowed the provision of Management Allowances in those instances where Educational Institutions have not been allowed to bill their management support costs directly under the contract. The use of a Management Allowance compensated them, in part, for these costs. Under the draft Rule the Department is preparing to issue, Management Allowance will end, with management support costs being allowed as a direct cost to the contract. Further, a Fee will be negotiated reflecting increased liability being placed on the Educational Institutions as a result of a change in the Department's policy regarding liability assumption (also contained in the draft Rule). In most cases, it is anticipated that this will be a fixed fee and not tied to performance. The Department has long believed that Educational Institutions are not motivated in their performance of Research and Development effort by incentive fees. However, in implementing some of the Department's new fee initiatives, one Educational Institution agreed to tie this fee to performance on a trial basis. This is to determine if a fee tied to performance, especially in administrative areas, may result in improved performance. Otherwise, the achievement of performance objectives is tied only to the determination of Executive bonuses.

---

The following are GAO's comments on the Department of Energy's letter dated November 9, 1995.

---

## GAO Comments

1. DOE notes that in some cases the funding and fee amounts paid reflect the amounts provided to the entire facility and not just to the FFRDC. However, as discussed in section 2 of the report, DOE's financial information system does not separate the funds expended at three FFRDCs—Oak Ridge, Savannah River, and Idaho—from the funds for managing and operating the larger facilities that contain the FFRDCs. The dollar amounts provided in DOE's comments represent DOE's estimate of the funding (budget amounts) and fees for the FFRDCs within these facilities—not the actual contract costs incurred, which are shown in our report. To prevent readers from confusing the funding from appropriations with the actual costs incurred for fiscal year 1994, we changed the title of table 2.1 to indicate that the dollar amounts represent incurred costs and not funding, and we clarified that the Oak Ridge contract includes annual costs for the various individual facilities.
2. DOE notes that the funding amounts and percentages in section 3 of the report should be changed in accordance with DOE's first comment. As we explained in our discussion of DOE's first comment, DOE's figures represent DOE's estimate of the funding (budget amounts) for the FFRDCs and not the actual costs incurred. Because DOE's financial information system does not distinguish the costs for the FFRDCs from any other management and operating contract costs at these three facilities, we used the contract costs.
3. DOE notes that our table does not provide a ready comparison of the ratio of fees to funding. As section 1 explains, DOE, DOD, and NASA use different regulations to determine the amounts of the fees for the contractors operating their FFRDCs. We believe a simple comparison of fees as a percent of costs incurred would not reflect the differences in the fee regulations or the work performed by the contractors operating the FFRDCs.
4. DOE notes that it has long believed the educational institutions are not motivated by incentive fees in their performance of research and development. However, as noted in section 4 of this report, the February 1994 contract reforms direct a fundamental change in DOE's contracting practices by converting management and operating contracts to performance-based management contracts. A key element of these new

contracts is compensation based on performance. In its comments on this report, DOE states that, in most cases, future fees paid to educational institutions “will be a fixed fee and not tied to performance.” Such an approach, however, would run counter to the 1994 contract reforms. In section 4, we show that the revised contracts for the Continuous Electron Beam Accelerator Facility and the Brookhaven National Laboratory are performance-based management contracts but do not link earning the fees to performance. As a result, these contracts are not consistent with the intent of the 1994 contract reforms. Finally, as we point out in section 3 of this report, DOE’s management and operating contractors conducting research and development spend large portions of their funds on activities that are not related to research and development. Such work may include efforts such as environmental restoration for which DOE has provided incentives in other revised contracts.

# Comments From the National Aeronautics and Space Administration

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

National Aeronautics and  
Space Administration  
**Office of the Administrator**  
Washington, DC 20546-0001



NOV 14 1995

**Ms. Bernice Steinhardt**  
**Associate Director, Energy**  
**and Science Issues**  
**General Accounting Office**  
**Washington, DC 20548**

Dear Ms. Steinhardt:

Thank you for offering NASA the opportunity to provide comments on your draft report entitled Federal Research: Information on Fees for Selected Federally Funded Research and Development Centers (GAO/RCED-96-31FS).

We believe that your analysis accurately portrays the purposes and amounts of fees paid by NASA during fiscal year 1994 to the Jet Propulsion Laboratory (JPL). However, we request that clarifications be made to the paragraph entitled NASA's FEE REGULATION on page 13 and to the fifth sentence of the first paragraph on page 14. While the statement that it is NASA policy not to pay a profit or fee on contracts with educational institutions is correct, we believe these paragraphs should be modified to reflect the fact that the NASA Associate Administrator for Procurement formally approved a deviation from this policy authorizing payment of fee under the JPL prime contract with the California Institute of Technology.

If you have any questions or require additional information, please contact Mr. Herb Baker on (202) 358-0439.

Sincerely,

  
J. R. Dailey  
Acting Deputy Administrator

---

**Appendix II**  
**Comments From the National Aeronautics**  
**and Space Administration**

---

The following are GAO's comments on the National Aeronautics and Space Administration's letter dated November 14, 1995.

---

**GAO Comments**

1. We agree with NASA's comment and have clarified our report as requested.

# Major Contributors to This Report

Resources,  
Community, and  
Economic  
Development  
Division, Washington,  
D.C.

Jeffrey E. Heil, Assistant Director  
Robert M. Antonio  
David L. Brack  
Casandra D. Joseph

National Security and  
International Affairs  
Division, Washington,  
D.C.

Erin S. Noel  
Maria B. Boyreau

---

### **Ordering Information**

The first copy of each GAO report and testimony is free. Additional copies are \$2 each. Orders should be sent to the following address, accompanied by a check or money order made out to the Superintendent of Documents, when necessary. Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.

#### **Orders by mail:**

U.S. General Accounting Office  
P.O. Box 6015  
Gaithersburg, MD 20884-6015

#### **or visit:**

Room 1100  
700 4th St. NW (corner of 4th and G Sts. NW)  
U.S. General Accounting Office  
Washington, DC

Orders may also be placed by calling (202) 512-6000  
or by using fax number (301) 258-4066, or TDD (301) 413-0006.

Each day, GAO issues a list of newly available reports and testimony. To receive facsimile copies of the daily list or any list from the past 30 days, please call (202) 512-6000 using a touchtone phone. A recorded menu will provide information on how to obtain these lists.

For information on how to access GAO reports on the INTERNET, send an e-mail message with "info" in the body to:

[info@www.gao.gov](mailto:info@www.gao.gov)

**United States  
General Accounting Office  
Washington, D.C. 20548-0001**

**Bulk Rate  
Postage & Fees Paid  
GAO  
Permit No. G100**

**Official Business  
Penalty for Private Use \$300**

**Address Correction Requested**

