



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

Resources, Community, and  
Economic Development Division

B-261026

April 26, 1995

The Honorable Jerry Lewis  
Chairman, Subcommittee on VA,  
HUD and Independent Agencies  
Committee on Appropriations  
House of Representatives

Dear Mr. Chairman:

You requested that we examine the National Science Foundation's (NSF) academic research infrastructure program, which provides matching funds to universities and colleges (hereafter, called academic institutions) to (1) modernize their research facilities and (2) develop and acquire scientific equipment. Specifically, you asked us to review whether NSF's program restricts an academic institution from including in its matching contribution the indirect, or overhead, costs that federal agencies pay the academic institution for federally funded research and development (R&D) projects.

In summary, NSF's academic research infrastructure program generally requires academic institutions that receive grants to provide between 30 and 50 percent of a project's costs in nonfederal matching contributions. However, NSF's program does not restrict academic institutions from including their matching contributions in their indirect costs for reimbursement by federal agencies that fund R&D. As a result, grant recipients that receive substantial federal R&D funding could recover a significant portion of their matching contributions, effectively increasing federal funding for the facilities modernization projects.

#### BACKGROUND

NSF's academic research infrastructure program is the largest of three federal programs we identified that provide matching grants to upgrade academic institutions' research facilities. The National Institutes of Health (NIH), within the Department of Health and Human Services (HHS), also awards funding to improve biomedical research facilities

GAO/RCED-95-153R NSF's Academic Facilities Program

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through (1) the National Center for Research Resources' extramural research facilities construction and renovation program, which was appropriated \$20 million in fiscal year 1995,<sup>1</sup> and (2) a National Cancer Institute construction program, which was appropriated \$8 million for fiscal year 1995. In addition, several NSF programs award matching grants for scientific equipment. Funding for NSF's academic research infrastructure program increased from \$20 million in fiscal year 1990 to \$105.4 million in fiscal year 1994 and \$250.2 million in fiscal year 1995. The administration has proposed, and the Congress has passed, legislation rescinding \$131.9 million of the fiscal year 1995 funds that had been designated for an interagency infrastructure program.

The Academic Research Facilities Modernization Act of 1988 (P.L. 100-570), which established NSF's facilities modernization program, requires that the academic institution receiving an award shall provide at least 50 percent of the cost if the academic institution is among the top 100 institutions receiving federal R&D funding. Alternatively, NSF's Director may accept matching funding of less than 50 percent--but at least 30 percent--for academic institutions that receive less federal R&D funding. NSF issues separate solicitations for the facilities modernization and the equipment development and acquisition programs. Each solicitation specifies the evaluation criteria for awarding grants, which can range from \$100,000 to \$2 million, and states that an academic institution may submit at most two proposals.

Federal agencies that fund R&D at academic institutions pay for the direct costs of a particular R&D project and the indirect, or overhead, costs for associated administrative and facilities expenses. For every dollar spent for the direct costs of academic institutions' research, subject to certain exclusions, the government pays an additional 50 cents, on average, to cover its share of academic institutions' indirect costs. HHS and the Office of Naval Research, within the Department of Defense, are primarily responsible for negotiating indirect cost rates with academic institutions.

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<sup>1</sup>The administration has proposed rescinding \$1 million of this amount.

NSF'S ACADEMIC RESEARCH INFRASTRUCTURE PROGRAM

NSF's academic research infrastructure program does not prevent grant recipients from including their matching contribution in the facilities costs that are used to determine the indirect cost rate that federal agencies pay for federally funded R&D projects. If a university recovers its costs for an academic research infrastructure project through its indirect costs, then the government's contribution to the project could be substantially greater than the initial grant. For example, HHS' indirect cost rate negotiators told us that one major research university had recovered almost all of its matching contribution for an NIH facilities improvement grant by expensing its costs in the year they were incurred and including them in its indirect costs.

NSF plans to allocate half of its fiscal year 1995 funding to facilities modernization grants and half to equipment development and acquisition grants. For facilities modernization projects, NSF requires (1) doctorate-granting institutions to contribute at least 50 percent of the funding and (2) institutions that do not grant doctorates to contribute at least 20 percent of the funding.<sup>2</sup> For equipment development and acquisition grants, NSF requires academic institutions to contribute between 30 and 50 percent of the total eligible project costs.

Table 1 shows NSF's facilities modernization awards in fiscal years 1993 and 1994 to recipients; the awards are divided into three groups on the basis of their NSF funding for R&D. NSF awarded the most facilities modernization funding to 110 institutions that received the most NSF funding for R&D. These institutions include 90 of the 122 academic institutions that received at least \$20 million in total federal funding for R&D in fiscal year 1992.

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<sup>2</sup>NSF reduced the requirement for matching funding from 30 to 20 percent to further encourage nondoctoral institutions to modernize their research facilities.

Table 1: NSF's Facilities Modernization Awards in Fiscal Years 1993 and 1994

Dollars in millions

Size of academic institution	Fiscal year 1993		Fiscal year 1994	
	Projects	Funding	Projects	Funding
Group 1 <sup>a</sup>	26	\$20.9	23	\$21.0
Group 2 <sup>b</sup>	15	7.5	19	17.1
Group 3 <sup>c</sup>	15	8.7	27	14.7
Total	56	\$37.1	69	\$52.8

<sup>a</sup>Includes 110 academic institutions that receive more than \$3 million each in NSF funding annually for R&D.

<sup>b</sup>Includes 191 academic institutions that receive between \$400,000 and \$3 million each in NSF funding annually for R&D.

<sup>c</sup>Includes academic institutions that receive less than \$400,000 each in NSF funding annually for R&D.

Table 2 shows NSF's equipment development and acquisition awards in fiscal years 1993 and 1994 to recipients; the awards are divided into three groups on the basis of their NSF funding for R&D. In fiscal year 1994, NSF awarded \$38.5 million, or 74 percent, of the funding to the 110 largest recipients of NSF funding for R&D.

Table 2: NSF's Equipment Development and Acquisition Awards in Fiscal Years 1993 and 1994

Dollars in millions

Size of academic institution	Fiscal year 1993		Fiscal year 1994	
	Projects	Funding	Projects	Funding
Group 1 <sup>a</sup>	7	\$10.0	107	\$38.5
Group 2 <sup>b</sup>	2	2.4	55	11.2
Group 3 <sup>c</sup>	0	0	20	2.4
Total	9	\$12.4	182	\$52.1

<sup>a</sup>Includes 110 academic institutions that receive more than \$3 million each in NSF funding annually for R&D.

<sup>b</sup>Includes 191 academic institutions that receive between \$400,000 and \$3 million each in NSF funding annually for R&D.

<sup>c</sup>Includes academic institutions that receive less than \$400,000 each in NSF funding annually for R&D.

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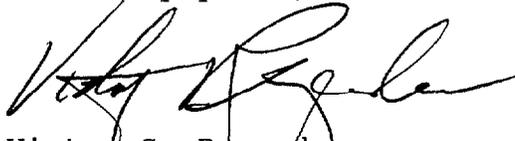
To obtain information for this report, we reviewed NSF program documents and interviewed NSF program and budget officials. We also interviewed HHS officials responsible for negotiating indirect cost rates with more than 600 academic institutions that receive federal R&D funding. We conducted our work between March and April 1995 in accordance with generally accepted government auditing standards.

We discussed the contents of this report with NSF officials, including (1) the Director, Office of Science and Technology Infrastructure, who is responsible for the academic research infrastructure program; (2) an official in the Office of Grants and Contracts who is responsible for indirect cost issues; and (3) an official in the Office of Inspector General. These NSF officials agreed with the technical accuracy of the report.

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We are sending copies of this report to the Director of NSF and the Director, Office of Management and Budget. We will also make copies available to others on request. Please contact me at (202) 512-3841 if you or your staff have any questions.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Victor S. Rezendes". The signature is fluid and cursive, with a large loop at the end.

Victor S. Rezendes  
Director, Energy and  
Science Issues

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