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Report to the Ranking Minority Member, Committee on Science, Space, and Technology, House of Representatives

September 1993

FEDERAL RESEARCH

Advanced Technology Program's Indirect Cost Rates and Program Evaluation Status

GAO/RCED-93-221

GAO

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

Resources, Community, and
Economic Development Division

B-254627

September 10, 1993

The Honorable Robert S. Walker
Ranking Minority Member
Committee on Science, Space, and
Technology
House of Representatives

Dear Mr. Walker:

You requested that we assess the implementation of the Advanced Technology Program (ATP) by the National Institute of Standards and Technology (NIST) within the Department of Commerce. ATP was established by the Omnibus Trade and Competitiveness Act of 1988 (P.L. 100-418) and modified by the American Technology Preeminence Act of 1991 (P.L. 102-245). Its purpose is to assist U.S. businesses in creating and applying the generic technology and research results necessary to (1) rapidly commercialize significant new scientific discoveries and technologies and (2) refine manufacturing technologies. The acts require that ATP focus on improving the competitive position of the United States and its businesses, give preference to discoveries and technologies that have great economic potential, and avoid providing undue advantages to specific companies. Since April 1991, NIST has awarded funding to 60 projects proposed by individual companies or joint ventures. The administration has proposed that funding for ATP be increased from $68 million in fiscal year 1993 to $200 million in fiscal year 1994—that is, by 194 percent—and to $744 million in fiscal year 1997.

In June 1993, we briefed your office on the preliminary results of our review. As agreed with your office, this report contains information on (1) ATP awardees' indirect cost rates, (2) completed ATP projects, and (3) NIST's plans to evaluate ATP's effectiveness. We will continue to assess other aspects of NIST's implementation of ATP and will report our results at a later date.

Background

Under the Omnibus Trade and Competitiveness Act, NIST may reimburse ATP awardees' indirect costs only if the awardees are participating in joint ventures. To comply with the act, NIST considers a joint-venture participant's total ATP project costs—both direct and indirect costs—for matching purposes, according to NIST's ATP Director. Indirect costs include such components as (1) general and administrative expenses and

(2) expenses for operating and maintaining facilities. Because indirect costs cannot be accounted for directly, a rate is set as a percentage of the direct costs. Separate rates may be established for individual components of indirect costs. Direct costs are expenses directly associated with a project, including researchers' salaries and research equipment. In addition, given the broad nature of indirect costs and the different structures and practices of various businesses, classification of direct and indirect costs is not uniform and may vary widely among businesses.

Department of Commerce policy limits the indirect cost rates recipients of funding may use to less than 100 percent of the total direct costs. However, ATP received a waiver from this limit in February 1992; the indirect cost rates of a participant in a joint venture receiving funding from ATP may exceed 100 percent of the direct costs if NIST and Commerce's Office of Inspector General (OIG) determine that the rates are adequately documented and essential to meeting ATP's objectives. Commerce's OIG reviews a joint-venture participant's indirect cost rates if (1) one or more components exceed 100 percent of the component's direct cost base or (2) the participant has not had an indirect cost rate audited and approved by another federal agency.

Results in Brief

NIST and Commerce's OIG have approved the indirect cost rates of 20 of the 98 businesses participating in joint ventures under ATP. These rates ranged from under 5 percent to over 250 percent. Commerce's OIG has established procedures that are intended to ensure that awardees properly manage ATP funds.

ATP began making awards 2-1/2 years ago; to date, four projects have reached their originally estimated completion dates. ATP project officers considered all four projects technical successes. However, participants in two of the projects have experienced problems that could affect the potential commercial success of the ATP-funded technologies. The lead company for one project declared bankruptcy at the end of the ATP award period for reasons unrelated to the ATP project. For the other project, the ATP project manager noted that the overall economic climate of the relevant industry is not currently receptive to new technologies. ATP officials stated that the project's participants are pursuing other avenues for using the ATP-funded technologies.

NIST's ATP staff have initiated a program evaluation of ATP with a short-term focus on improving the program's efficiency and effectiveness and a

long-term focus on measuring the program's impacts. NIST has funded two preliminary studies that examined cost savings and indicators of success. However, the small number of completed projects and other factors impede a program evaluation of ATP at this time. Commerce's OIG officials also expressed interest in conducting a program evaluation of ATP at an appropriate future date.

Indirect Cost Rates of ATP Participants

Since April 1991, NIST has awarded ATP funding through cooperative agreements to 98 companies participating in 18 joint ventures and 42 companies as individual awardees.[1] (See table 1.) These awardees include 65 small businesses, 28 large businesses, and 47 Fortune 500 companies.

Table 1: Businesses Awarded ATP Funding by Type of Award and Company Size

Award	Small businesses[a]	Large businesses[b]	Fortune 500 businesses	Total
Joint venture	36	24	38	**98**
Individual	29	4	9	**42**
Total	**65**	**28**	**47**	**140**

Note: Some businesses are listed more than once because they are participating in more than one ATP project.

[a]The Small Business Administration generally defines a small business as having fewer than 500 employees.

[b]This figure includes 12 business consortia. Eighteen university-affiliated organizations and one federal laboratory are participating in some of the joint-venture projects.

Of the 98 joint ventures, 20 companies have had their indirect cost rates reviewed and approved by Commerce's OIG. NIST officials initiate the approval of indirect cost rates by requesting that the OIG review a particular company's rate. Usually, the company has already had a rate approved by the Defense Contract Audit Agency (DCAA) for Department of Defense contracts.[2] Commerce's OIG generally accepts this indirect cost rate if DCAA's audit report adequately documents the rate and ATP officials consider the rate essential to meeting the program's objectives. If the company does not already have a federally approved indirect cost rate and Commerce is the primary federal funding agency, Commerce's OIG negotiates one on the basis of documentation that the company provides.

[1]Cooperative agreements enable NIST to provide both financial and technical assistance to businesses awarded ATP funding.

[2]DCAA performs contract audit functions for Defense, including evaluation of the acceptability of costs claimed or proposed by contractors. DCAA approves indirect cost rates on the basis of on-site audits. These rates are also used by other agencies.

Most joint-venture participants have several different approved rates that are applied to different bases, or portions, of their budget. These rates ranged from under 5 percent to over 250 percent. Sixteen of the 20 companies had one or more indirect cost components for which the approved rate was over 100 percent; 4 of these 16 companies had at least one indirect cost component for which the approved rate was over 200 percent.[3] In addition, the OIG negotiated a rate of less than 100 percent for one company and reviewed two companies' indirect costs because they were expressed in dollars rather than as a percentage of direct costs. Commerce's OIG is currently reviewing indirect cost rates for eight joint-venture participants.

Before ATP provides funding, NIST requires each joint-venture participant that is receiving federal funds for the first time to submit an independent certified public accountant's (CPA) report on the adequacy of the participant's accounting and internal control systems. NIST also requires that each recipient arrange for an audit of its financial accounts at least every 2 years to ensure proper management of ATP funds. At present, Commerce's OIG is working with NIST officials and CPA firms to develop auditing procedures for all projects. The OIG reserves the right to perform direct audits to resolve any issues that might result from the CPAs' audits or that might otherwise be deemed necessary.

Four ATP Projects Have Been Completed

ATP began funding ATP projects in April 1991 by making awards to 11 projects in response to its first solicitation. ATP has selected 49 additional projects in response to its second and third solicitations. Only 4 of the first 11 ATP projects were scheduled for completion by August 20, 1993. Technical work for all four projects has been completed. However, each of the four projects was granted an extension to complete work at no additional cost to ATP. Two of the projects have submitted their final reports to NIST.

ATP project officers considered all four projects technical successes. However, participants in two of the projects have experienced problems that could affect the potential commercial success of the ATP-funded technologies. One of the two joint-venture participants for one project declared bankruptcy at the end of the project for reasons unrelated to the project. The other participant in that joint venture plans to continue to try to commercialize the technology. According to the ATP project officer for

[3]A more detailed breakdown of companies' indirect cost rates was not included in this report because of NIST's concern about the release of proprietary information.

the second project, the overall economic climate of the relevant industry is not currently receptive to new technologies. ATP officials stated that the project's participants are pursuing other avenues for using the ATP-funded technologies.

Table 2 lists ATP projects nearing completion. Completion dates of ATP projects are approximate because of the uncertainties inherent in research, which may affect projects' timetables.

Table 2: ATP Projects Nearing Completion Dates

Number of projects	Projected completion date
1	July - December 1993
11	January - June 1994
24	January - June 1995

Evaluation of the ATP Program Has Been Initiated

According to ATP officials, program evaluation is critical to the development of a results-oriented, efficiently run program. Early in the program, ATP staff developed an evaluation plan and measurable goals to track performance. The plan includes four principal elements: (1) assessing the program's effectiveness and efficiency; (2) profiling applicants, recipients, technologies, and projects; (3) tracking interim indicators of success; and (4) measuring long-term economic impacts.

ATP staff established 12 indicators of short- to medium-term ATP benefits, including an increase in leveraged investments in research and development, an increase in the number of collaborations and strategic alliances, the creation or retention of high-technology jobs, and the conversion of defense companies to civilian applications. NIST's ATP staff are currently assessing short-term objectives by, for example, funding two preliminary studies that examined cost savings and indicators of success. This evaluation includes profiling applicants and awardees and conducting and analyzing a survey to gauge the "customer satisfaction" of awardees in order to identify areas to improve the program's administrative process.

ATP staff have also established 11 criteria for measuring ATP's long-term success, including (1) value added; (2) the creation of new industry; and (3) changes in sales, manufacturing costs, product quality, the time it takes to bring a technology to market, and market share. However, ATP staff face barriers in evaluating their long-term objective of identifying ATP's impact and the factors that lead to a successful ATP project. First, ATP staff need to wait for more projects to be completed before they can evaluate the

program. Second, ATP projects are evaluated on both their technical and commercial success. Even after a project is completed, its commercial success may not be evident for several more years. Even then, commercial success may be difficult to determine because the resultant technical developments might be incorporated into a different product that eventually reaches the commercial market.

Scope and Methodology

In conducting our work at NIST in Gaithersburg, Maryland, and at the Department of Commerce in Washington, D.C., we (1) interviewed ATP and OIG officials and (2) reviewed proposal folders and award records, OIG audit reports on ATP awardees, and DCAA's reports on indirect cost rates. This report does not identify the individual cost rates of specific companies because such information is considered proprietary. We performed our review between March 1993 and August 1993 in accordance with generally accepted government auditing standards.

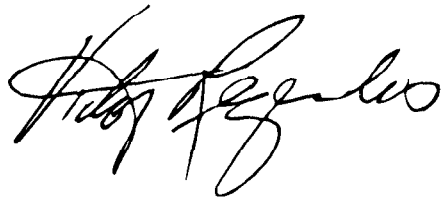
Views of Agency Officials

We discussed the facts in this report with cognizant Department of Commerce officials, including NIST's General Counsel, NIST's ATP Director, and the Deputy Assistant Inspector General for Audits. They provided additional information that clarified program evaluation work on ATP and the OIG's reviews of indirect costs. We have incorporated their comments as appropriate. However, as requested by your office, we did not obtain written agency comments on a draft of this report.

As arranged with your office, unless you announce its contents earlier, we plan no further distribution of this report until 15 days after the date of this letter. At that time we will send copies to the Secretary of Commerce; Commerce's Director of NIST, ATP Director, and Inspector General; and other interested parties. We will make copies available to others on request.

Please contact me at (202) 512-3841 if you or your staff have any questions. Major contributors to this report are listed in the appendix.

Sincerely yours,



Victor S. Rezendes
Director, Energy and Science Issues

Major Contributors to This Report

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

Jim Wells, Associate Director
Robert E. Allen, Jr., Assistant Director
Richard Cheston, Assignment Manager
Andrew J. Vogelsang, Evaluator-in-Charge
George Warholic, Evaluator

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