

Tech Funding: If U.S. Bows Out, States May Come Up Short

BOSTON—When Solectria Corp. of Wilmington, Massachusetts, won a 3-year, \$3.25 million grant from the U.S. Department of Commerce's Advanced Technology Program (ATP) this September, prospects for Project Sunrise—the company's 6-year effort to perfect advanced batteries and body materials for a mass-production electric sedan—suddenly brightened. Says company vice president Mark Dockser, "The government was saying, 'We're going to back you.' That made the project a lot more palatable for all our joint-venture partners," which included seven New England firms, a university, and the state energy agency.

This federal backing, however, looks like it's melting away. Congressional Republicans opposed to what they call "corporate welfare" programs have drafted budget provisions slashing ATP's annual budget from \$341 million to zero in 1996. As a result, ATP officials say they won't know until a final budget agreement is reached whether 1995 awardees will receive a promised second and third year of funding, leaving many in Massachusetts wondering when Project Sunrise will see the light of day.

Solectria, with 45 employees, is only one of hundreds of small companies counting on the federal government's investment to help turn high-risk ideas into high-tech products. ATP spent \$68 million in 1993 and \$200 million in 1994, much of it on grants to small scientific and engineering firms that get matching grants from state agencies and local industries. The money is currently helping to support 276 research and development projects, often collaborations with university researchers. All 50 states together, on the other hand, spent just \$384 million investing in such projects in 1994, according to a report* from the Battelle Memorial Institute in Columbus, Ohio.

If the federal program ends, many companies are expected to look to the states to pick up the slack—and observers have doubts about states' abilities or commitments. "The disappearance of these federal programs will move a much bigger part of the burden to the states, but only a few states actually have significant technology investment programs," says Lewis Branscomb, director of the Science, Technology, and Public Policy Program at Harvard's Kennedy School of Government. Some state agency heads think larger companies may also up their investments in smaller ventures, but skeptics suggest this is overly optimistic.

According to the Battelle report, just 18 states now provide systematic administrative or financial support to recipients of federal technology grants. Solectria is located in one. Massachusetts spent \$5 million on technology development initiatives last year and boasts a network of quasi-public agencies, led by the Massachusetts Technology Collaborative (MTC), which now helps in-state ATP awardees to form financial partnerships. Yet even in the states that spend the most on technology development, such as North Carolina, Pennsylvania, and Texas (see table), officials say legislatures are unlikely to provide additional funds to bail out specific federal grantees. "If the federal funding goes away, it will be very difficult, if not impossible, to make up the difference," says Terri Kaufman, director of the

Office of Technology Development at the Pennsylvania Department of Commerce.

In that situation, the state agencies would emerge as major players in technology development, but the rules they play by are slightly different from those of the federal game. ATP grantees would be free to compete for state funds already earmarked for technology projects—such as the \$3 million Texas allocates each year for "advanced technology development and transfer grants"—but they would have to demonstrate their projects' relevance to regional economic goals. "We're interested in supporting good projects that are important for Texas," says Roger Elliott, assistant commissioner for research planning at the Texas Higher Education Coordinating Board, which administers the state's technology grants. One recent \$300,000 grant, matched by \$600,000 from Frito-Lay, went to some faculty members at Texas A & M University who want to commercialize a new food-extrusion technique. The project, Elliott explains, could provide "added value for agriculture in Texas."

Most of these funds, like ATP grants, are awarded through a peer review process—the reviewers are often local engineers and business leaders—but state executives and legislators decide how much these programs will receive and which economic sectors should be singled out. The New York Science and Technology Foundation, for instance, reports to the governor and recommends how much of its \$23 million budget should go to each of New York's technology programs, including 13 university-indus-

try consortia specializing in materials science, robotics, biotechnology, and other fields. Those recommendations are then reviewed by another body that answers to the state legislature, the Commission on Science and Technology.

But in states such as West Virginia or Nevada, which have only recently begun looking to high-technology industries, there's little money for grants in any particular area. "The state-federal partnerships are disappearing too rapidly for everyone to have taken advantage of them, to have built up to the point that state government and private groups can take up the slack," says Diana Weigman, science adviser to the governor of Nevada—a state with no existing state-funded technology efforts.

In states with more mature partnerships, larger corporations that participate in many ATP joint ventures may be more willing to make up for any federal absence,

notes MTC Executive Director Joseph Alviani. "If a project has sufficient value, the partners may be willing to increase their contribution and self-finance it," he says. But ATP Associate Director Mark Stanley makes just the opposite prediction: "If a program like ours were to disappear, you would see even less involvement of the private sector." In the coming years, hundreds of small firms may learn which view is more accurate.

—Wade Roush

STATE COOPERATIVE TECHNOLOGY PROGRAMS BY SPENDING

Budget in \$Millions (Fiscal Year 1994)	
Top 5	
North Carolina	37.45
Pennsylvania	34.07
Texas	30.26
Georgia	29.88
Connecticut	27.50
Bottom 5	
Tennessee	00.15
Mississippi	00.08
Rhode Island	00.00
Nevada	00.00
West Virginia	00.00

SOURCE: BATTELLE MEMORIAL INSTITUTE.

* "Partnerships: A Compendium of State and Federal Cooperative Technology Programs," Christopher Coburn, Ed., Battelle Memorial Institute, 1995.