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# Impact of Defense Conversion on the Transportation Industry

## *Redirecting the Nation's Resources*

KAREN McHENRY

The ending of the Cold War has opened up opportunities to redirect the nation's resources from defense to civilian priorities. In today's world of "geo-economics," technological leadership is still as important as it was during the Cold War years. National success or failure will be measured as much by performance in the global marketplace as it was on the missile pad. Federal programs designed to fund industry-led projects, such as the Technology Reinvestment Project (TRP) and the Advanced Technology Program (ATP), have created new approaches to facilitate defense conversion, while also boosting transportation-related research and development.

### **Transportation's Potential for the Defense Industry**

The transportation sector holds great potential for defense industries looking for new commercial products and markets. There is a long history of successful dual-use application of technologies to defense and civilian transportation, such as the jet engine; radar; advanced materials; satellite-based communications, navigation, and surveillance; synthetic vision; and advanced remote sensors. In a recent interview, U.S. Secretary of Transportation Federico Peña said, "We think transportation technologies are the most ripe for defense conversion."

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### **Technology Reinvestment Project**

Most federal programs for industry-led research require at least 50-50 cost sharing by industry. TRP, for example, has proved to be an important catalyst for applying defense technologies to transportation-related products. Jointly managed by the Advanced Research Projects Agency (ARPA) of the U.S. Departments of Defense, Energy, Commerce, and Transportation, the National Aeronautics and Space Administration, and the National Science Foundation, TRP is the largest multiagency technology program ever conducted by the federal government. During the fiscal year 1993 TRP competition, funds were available for three broad areas: technology development, technology deployment, and manufacturing education and training.

The U.S. Department of Transportation (DOT) became involved in TRP in June 1993, when Secretary Peña requested that DOT be included in the TRP effort. By providing proposal evaluators and supplying ARPA with input about transportation-related areas that could benefit from TRP support, DOT has been able to steer and guide TRP funding into areas that will benefit the nation's transportation system, such as new vehicle technology, advanced materials for infrastructure renewal, and advanced battery technology.

In February 1994, the final awards for the FY 1993 TRP competition were announced. In the Technology Development portion of the program, 69 cost-shared proposals with a total face value of \$800 million were awarded. The federal share of the \$800 million has yet to be negotiated, but may be as much as 50

percent. Twenty-seven proposals with a total face value of \$420 million were directly related to transportation. Operating administrations within DOT will be managing nine of these projects, including a \$39 million proposal for an Advanced Automatic Train Control System, a \$21 million project for Advanced Composites for Bridge Infrastructure Renewal, and a \$13.9 million Commercial Shipbuilding Focused Development Project. Other Technology Development winning proposals in areas such as the environment and telecommunications will also benefit the transportation sector.

TRP plans to continue in FY 1994 and 1995, with DOT an active participant. Some \$404 million was appropriated for the FY 1994 competition and \$150 million of U.S. Department of Defense funds have been reprogrammed for FY 1994, bring the FY 1994 total for TRP to \$554 million. It is hoped that TRP will receive approximately \$625 million for FY 1995.

In April 1994, TRP announced seven technical areas for a focused competition of about \$170 million of FY 1994 appropriation. The balance of the FY 1994 appropriation and a portion of the expected FY 1995 appropriation will be allocated on the basis of a second, broad competition planned for later in 1994.

### **Advanced Technology Program**

DOT is also working with the National Institute of Standards and Technology (NIST) of the U.S. Department of Commerce to include transportation as a focus area of the Advanced Technology

*continued on page 29*

## Choctawhatchee Bay Bridge



Choctawhatchee Bay Bridge links Destin and Bluewater Bay in Okaloosa County in northwest Florida panhandle. Completed five months ahead of schedule, bridge was constructed by Traylor Bros., Inc., under \$42.5 million contract with Mid-Bay Bridge Authority. The 3.6-mile post-tensioned box girder bridge, designed by Figg Engineering Group, was constructed with precast segments.

## Obituary

John H. Riley  
1950–1994

John H. Riley, an authority on high-speed rail transportation and former head of the Federal Railroad Administration, died in March.

He came to Washington, D.C., in 1979 to join the office of Sen. David Durenberger (R-Minn.), where he served as Chief Legislative Counsel and then Chief of Staff. He was appointed Federal Railroad Administrator in 1983, a post he held until 1989. Following the Amtrak passenger train accident near Baltimore in January 1987, Riley helped draft new safety laws, including the Rail Safety Improvement Act of 1988, and sought increased funding for rail research. In 1991 he was appointed State Transportation Commissioner for Minnesota under the administration of Governor Arne Carlson (R), and later became the Governor's Chief of Staff.

Riley was a member of the 1991 Transportation Research Board Executive Committee.

## Defense Conversion *continued from page 13*

Program. ATP, which will award about \$200 million this year, provides support on a cost-sharing basis to industrial research and development projects with a significant potential for stimulating economic growth and improving the competitiveness of U.S. industry. The projects selected by ATP for funding are characterized by a potential broad-based economic impact, but with a relatively high technical risk and a long-time horizon. ATP awards are generally in the form of cooperative agreements, under which NIST plays a substantial role by monitoring the technical work, and may provide technical assistance or other support.

Like TRP, ATP represents an important resource for transportation-related research and development. A total of

\$450 million has been requested for ATP in FY 1995 and the program is expected to grow to \$750 million by 1997. In February 1994 NIST announced a new ATP competition to support industrial research projects. An estimated \$20 million to \$25 million in first-year funding will be available under this competition, for which all areas of technology are eligible. As of this writing, ATP plans to announce several "program competitions" in 1994, including one on manufacturing composite structures. This topic will focus on transportation-related areas, such as composite materials for use in automobiles and bridges. In the future, DOT will continue to work with NIST to develop an ATP transportation program that meets the selection criteria of significant economic

impact, good technical ideas, widespread industry commitment and willingness to cost share, and ATP funds would make a significant difference.

## Promoting Future Cooperation

Federal programs like TRP and ATP are one way of promoting productive cooperation among government, private industry, the national laboratories, and universities. Reinvestment in transportation technology will play a crucial role in stimulating and sustaining an industry that is competitive, that creates high-quality jobs, and that preserves the environment.