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PROMOTE TECHNOLOGY WITHIN FEDERAL LABORATORIES

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OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

Tuesday, March 19, 1985

● Mr. LUNDINE. Mr. Speaker, today I am introducing with a number of my colleagues the Federal Science and Technology Transfer Act of 1985, legislation which amends the Stevenson-Wydler Technology Innovation Act of 1980. It is designed to promote economic growth, industrial productivity, and international trade competitiveness by encouraging utilization of technology developed within Federal laboratories.

Technological innovation is a wellspring for economic growth. It yields new or improved commercial products and processes, creating jobs and income as new industries are born and as existing industries expand. As an illustration, the commercialization or biotechnology has spawned a new, rapidly growing industry with worldwide sales that are projected to reach $100 billion by the end of the century.

We must use technological innovation to help revive our basic industries. In the automobile industry, for example, utilization of new technologies during the next 15 years is expected to improve both the product and the production process. The use of advanced ceramic materials for critical engine components could reduce engine weight and cooling and lubrication requirements. New light-weight but high-strength metals, polymers, and fiber composites could reduce overall vehicle weight and improve fuel economy. Both of these advancements could also enhance competitiveness by reducing the price of the product. The competitive benefits of computer-aided design [CAD] and computer-aided automated manufacturing [CAM] technologies in the automotive industry are also widely recognized. The automobile industry is only one example. If we maintain a technological edge over our competitors and utilize the new technologies, we can provide a competitive advantage for many of our basic industries.

We must also reverse the recent erosion of our competitive edge in high-technology industries. The Nation's electronics sector amassed a $6.8 billion trade deficit in 1984 according to Business Week. This is the first time that this traditionally healthy industry has ever ended a year in the red, and projections for 1985 are worse. The electronics sector is not alone; the President's Commission on Industrial Competitiveness noted in its recent report that the United States has lost world market share in 7 out of 10 high-technology sectors.

Although foreign trade barriers and the strength of the dollar are contributing factors to this decline, Business Week stated that the basic problem is the failure of American high-technology companies to consistently translate new technology into competitive products. The Commission on Industrial Competitiveness agreed and identified the creation and application of new technology as one of the four major ways in which the United States can become more competitive.

Much of the new technology that is available for utilization is produced in Federal laboratories. The Federal Government funds aproximately half of this country's total research and development and much of this work is performed in Government-owned laboratories. Therefore, the Commission on Industrial Competitiveness recommended that the Federal Government manage its research and development with more concern for commercial application and competitiveness.

The Federal Science and Technology Transfer Act promotes more effective utilization of the technology produced by Federal laboratories. The scientific and engineering expertise, the technology base, and the facilities and equipment within these laboratories are valuable national resources. This legislation allows these resources to be more readily shared with private companies wishing to develop new products and with local governments in need of technical solutions to their problems.

To encourage technological innovation, this legislation enables Government-operated Federal laboratories to enter into cooperative research and development agreements with non-Federal parties. Federal scientists and engineers would be able to work side by side with their university or industrial counterparts on projects that were cofunded by their institutions. A basic premise of this arrangement is that research in the Federal laboratories can be better attuned to industrial needs without compromising the laboratories' missions and that the benefits that accrue to industry from the Federal share of the funding are in the national interest. This is consistent with the recommendations of the 1983 Federal Laboratory Review Panel of the White House Science Council.

The extensive interpersonal interaction allowed by these cooperative arrangements is generally believed to be an extremely effective method of technology transfer. In a recent study of NSF's Industry/University Cooperative Research Program, both industry and university participants lauded the benefits of working closely together and being able to view the work from each other's perspective. Many experienced profound and beneficial changes in their attitudes toward science in general and in the way they approached their research in particular. I believe that scientists and engineers in the Federal laboratories would benefit similarly from the cooperative arrangements proposed in this legislation.

Under this act, cooperative R&D agreements would be subject to conditions that are designed to make the treatment of Government-owned, Government-operated [GOGO] laboratories consistent with the treatment of Government-owned, contractor-operated [GOCO] laboratories under last year's patent law amendments (Public Law 98-620). Nondomestic technology transfer is discouraged by requirements for participation only by U.S. entities and for U.S. manufacture of resulting products. Preference is also provided for small businesses. To prevent participating companies from obtaining an unfair competitive edge at Federal expense over others within their industry, agencies are instructed to develop plans for entering the agreements that provide reasonable opportunity for interested parties to participate.

To further promote technology transfer from the Federal laboratories, this bill institutionalizes the Federal Laboratory Consortium for Technology Transfer [FLC] within the National Science Foundation. The FLC is currently an ad-hoc organization of representatives from over 300 Federal laboratories representing 11 Federal agencies. It has been the principal body during the last decade for facilitating technology transfer from the Federal sector. The effectiveness of the Federal Laboratory Consortium has been limited only by the resources available to it as an ad-hoc organization; a modest level of direct funding would greatly increase the level of technology transfer activities. To provide these funds, the bill provides a small set-aside from the R&D budgets of the Federal agencies.

Finally, the Federal Science and Technology Transfer Act encourages utilization of Federal technology through the distribution of patent royalties received by Federal agencies. Federally employed inventors are rewarded for their creativity with a small portion of the royalties from their inventions. A larger portion is used to enhance the budgets of the Government-operated laboratories responsible for the innovations. This provision is consistent with the treatment of contractor operated Federal laboratories under last year's patent law amendments and it provides incentives for the Government-operated laboratories to seek commercialization of their new technologies.

Mr. Speaker, I cordially invite all of my colleagues from both sides of the aisle to work together with those of us introducing the legislation today. America is the greatest Nation on Earth and I believe that she would be made even greater by the increased economic growth, industrial productivity, and international trade competitiveness that enactment of this legislation would stimulate.●