I

108TH CONGRESS
1ST SESSION

H. R. 2908

To establish the position of Under Secretary of Commerce for Manufacturing and Technology, require the establishment of a research and implementation program on manufacturing, and promote manufacturing education.

IN THE HOUSE OF REPRESENTATIVES

JULY 25, 2003

Mr. UDALL of Colorado (for himself, Mr. HONDA, Mr. CARDOZA, and Mr. EHLERS) introduced the following bill; which was referred to the Committee on Science

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A BILL

To establish the position of Under Secretary of Commerce for Manufacturing and Technology, require the establishment of a research and implementation program on manufacturing, and promote manufacturing education.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''American Manufacturing Works Act of 2003''.

SEC. 2. MANUFACTURING AND TECHNOLOGY ADMINISTRATION.

Section 5 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3704) is amended to read as follows:

"SEC. 5. MANUFACTURING AND TECHNOLOGY.

''(a) ESTABLISHMENT.—There is established in the Department of Commerce a Manufacturing and Technology Administration, which shall operate in accordance with the provisions, findings, and purposes of this Act. The Manufacturing and Technology Administration shall include—

''(1) the National Institute of Standards and Technology;

''(2) the National Technical Information Service; and

''(3) a policy analysis office, which shall be known as the Office of Manufacturing and Technology Policy.

''(b) UNDER SECRETARY AND ASSISTANT SECRETARIES.—The President shall appoint, by and with the advice and consent of the Senate, to the extent provided for in appropriations Acts—

''(1) an Under Secretary of Commerce for Manufacturing and Technology, who shall be compensated at the rate provided for level III of the Ex-

ecutive Schedule in section 5314 of title 5, United States Code;

''(2) an Assistant Secretary of Manufacturing who shall serve as a policy analyst for the Under Secretary; and

''(3) an Assistant Secretary of Technology who shall serve as a policy analyst for the Under Secretary.

''(c) DUTIES.—The Secretary, through the Under Secretary, as appropriate, shall—

''(1) manage the Manufacturing and Technology Administration and supervise its agencies, programs, and activities;

''(2) conduct manufacturing and technology policy analyses to improve United States industrial productivity, manufacturing capabilities, and innovation, and cooperate with United States industry to improve its productivity, manufacturing capabilities, and ability to compete successfully in an international marketplace;

''(3) identify manufacturing and technological needs, problems, and opportunities within and across industrial sectors, that, if addressed, could make significant contributions to the economy of the United States;

''(4) assess whether the capital, technical, and other resources being allocated to domestic industrial sectors which are likely to generate new technologies are adequate to meet private and social demands for goods and services and to promote productivity and economic growth;

''(5) propose and support studies and policy experiments, in cooperation with other Federal agencies, to determine the effectiveness of measures for improving United States manufacturing capabilities and productivity;

''(6) provide that cooperative efforts to stimulate industrial competitiveness and innovation be undertaken between the Under Secretary and other officials in the Department of Commerce responsible for such areas as trade and economic assistance;

''(7) encourage and assist the creation of centers and other joint initiatives by State or local governments, regional organizations, private businesses, institutions of higher education, nonprofit organizations, or Federal laboratories to encourage technology transfer, to encourage innovation, and to promote an appropriate climate for investment in technology-related industries;

''(8) propose and encourage cooperative research involving appropriate Federal entities, State or local governments, regional organizations, colleges or universities, nonprofit organizations, or private industry to promote the common use of resources, to improve training programs and curricula, to stimulate interest in manufacturing and technology careers, and to encourage the effective dissemination of manufacturing and technology skills within the wider community;

''(9) serve as a focal point for discussions among United States companies on topics of interest to industry and labor, including discussions regarding manufacturing, competitiveness, and emerging technologies;

''(10) consider government measures with the potential of advancing United States technological innovation and exploiting innovations of foreign origin and publish the results of studies and policy experiments; and

''(11) assist in the implementation of the Metric Conversion Act of 1975 (15 U.S.C. 205a et seq.).

''(d) MANUFACTURING ADVISORY BOARD.—

''(1) ESTABLISHMENT AND COMPOSITION.—There is established a Manufacturing Advisory

Board within the Manufacturing and Technology Administration. The Under Secretary or the Assistant Secretary of Manufacturing shall chair the Advisory Board. The Advisory Board shall be composed of 14 additional members appointed by the Under Secretary as follows:

''(A) 1 representative each from the National Association of Manufacturers, the National Coalition for Advanced Manufacturing, and the Modernization Forum.

''(B) 4 members from outside the Federal Government who are eminent in the manufacturing industry, at least 2 of whom are representatives of small and medium-sized companies in such industries.

''(C) 4 members from Federal agencies who have manufacturing science and technology expertise, at least 1 of whom shall be from the National Institute of Standards and Technology.

''(D) 3 members from labor unions, a majority of whose members have manufacturing jobs.

''(2) DUTIES.—The duties of the Advisory Board shall be—

"(A) to identify manufacturing issues relative to manufacturing technology and competitiveness;

"(B) to advise the Under Secretary on manufacturing issues, including manufacturing activities at the National Institute of Standards and Technology, and make recommendations for actions by the Federal Government; and

"(C) to report its finding and recommendations to the Under Secretary and the Director of the Office of Management and Budget.

"(3) TERM OF OFFICE.—The term of office of each member of the Advisory Board shall be 4 years, except that—

"(A) of the initial members, 3 shall be appointed for terms of 1 year, 3 shall be appointed for terms of 2 years, 4 shall be appointed for terms of 3 years, and 4 shall be appointed for terms of 4 years; and

"(B) any member appointed to fill a vacancy in the Advisory Board shall serve for the remainder of the term for which his predecessor was appointed.

''(4) QUORUM.—The Advisory Board shall not act in the absence of a quorum, which shall consist of 8 members.

''(5) ALLOWANCE FOR TRAVEL EXPENSES.—Members of the Advisory Board, other than full-time employees of the Federal Government, while attending meetings of the Board or while otherwise performing duties at the request of the Chairman while away from their home or a regular place of business, may be allowed travel expenses in accordance with subchapter I of chapter 57 of title 5, United States Code.

''(6) STAFF SERVICES AND UTILIZATION OF FEDERAL PERSONNEL.—To provide the staff services necessary to assist the Advisory Board in carrying out its functions, the Advisory Board may utilize personnel from the National Institute of Standards and Technology or any other agency of the Federal Government with the consent of the head of the agency.

''(e) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary for the activities of the Under Secretary—

''(1) $2,000,000 for fiscal year 2004;

''(2) $2,070,000 for fiscal year 2005;

''(3) $2,140,000 for fiscal year 2006; and

''(4) $2,220,000 for fiscal year 2007.''.

SEC. 3. STUDIES BY NATIONAL ACADEMY OF SCIENCES.

Section 24 of the National Institute of Standards and Technology Act (15 U.S.C. 278j) is amended—

(1) by striking ''The Director may'' through ''assist the'' and inserting ''The Under Secretary of Commerce for Manufacturing and Technology and the Director may periodically enter into an arrangement with the National Academy of Sciences for advice and studies to assist the Manufacturing and Technology Administration and the''; and

(2) in paragraph (2) by inserting ''the Manufacturing and Technology Administration and'' after ''potential activities of''.

SEC. 4. MANUFACTURING RESEARCH AND IMPLEMENTATION; DEVELOPMENT OF NEW MANUFACTURING TECHNOLOGIES.

(a) NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY LABORATORY ACTIVITIES.—There are authorized to be appropriated to the Secretary of Commerce for Manufacturing Engineering activities at the Scientific and Technical Research and Services Laboratory of the National Institute of Standards and Technology—

(1) $60,000,000 for fiscal year 2004, of which $30,000,000 shall be for the research and development program on manufacturing under section 33 of the National Institute of Standards and Technology Act;

(2) $62,100,000 for fiscal year 2005, of which $31,050,000 shall be for the research and development program on manufacturing under section 33 of the National Institute of Standards and Technology Act;

(3) $64,270,000 for fiscal year 2006, of which $32,140,000 shall be for the research and development program on manufacturing under section 33 of the National Institute of Standards and Technology Act; and

(4) $68,850,000 for fiscal year 2007, of which $33,260,000 shall be for the research and development program on manufacturing under section 33 of the National Institute of Standards and Technology Act.

(b) NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY RESEARCH AND DEVELOPMENT PROGRAM.—The National Institute of Standards and Technology Act is amended—

(1) by redesignating the first section 32 as section 34 and moving it to the end of the Act; and

(2) by inserting before the section moved by paragraph (1) the following new section:

"SEC. 33. RESEARCH AND DEVELOPMENT PROGRAM ON MANUFACTURING.

''(a) ESTABLISHMENT.—The Director shall establish a program of assistance to institutions of higher education or nonprofit research institutions that enter into partnerships with for-profit entities to support, promote, and enhance manufacturing research and development. The program shall—

''(1) include multidisciplinary research; and

''(2) include research directed toward addressing the needs identified through the Under Secretary of Commerce for Manufacturing and Technology, the Office of Manufacturing and Technology Policy, and the Manufacturing Advisory Board.

''(b) FELLOWSHIPS.—In order to promote the development of a robust research community working at the leading edge of manufacturing sciences, the Director shall establish a program to award—

''(1) postdoctoral research fellowships to individuals who are seeking research positions at institu-

tions, including the Institute, engaged in research activities related to manufacturing sciences; and

''(2) senior research fellowships to individuals seeking research positions at institutions, including the Institute, engaged in research activities related to manufacturing sciences.

To be eligible for an award under this subsection, an individual shall submit an application to the Director at such time, in such manner, and containing such information as the Director may require. Under this subsection, the Director shall provide stipends for postdoctoral research fellowships at a level consistent with the Institute's Post Doctoral Research Fellowship Program, and senior research fellowships at levels consistent with support for a faculty member in a sabbatical position.

''(c) AWARDS; APPLICATIONS.—The Director is authorized to award grants or cooperative agreements to institutions of higher education to carry out the program established under subsection (a). To be eligible for an award under such subsection, an institution shall submit an application to the Director at such time, in such manner, and containing such information as the Director may require. The application shall include, at minimum, a description of how the for-profit entities and any other part-

ners will participate in developing and carrying out the research agenda of the partnership.

''(d) PROGRAM OPERATION.—(1) The program established under subsection (a) shall be managed by individuals who have expertise in research related to manufacturing technology. The Director shall designate such individuals program managers.

''(2) Program managers designated under paragraph (1) may be new or existing employees of the Institute or individuals on assignment at the Institute under the Intergovernmental Personnel Act of 1970.

''(3) Program managers designated under paragraph (1) shall be responsible for—

''(A) establishing and publicizing the broad research and development goals for the program;

''(B) soliciting applications for specific research projects to address the goals developed under subparagraph (A); and

''(C) selecting research projects for support under the program from among applications submitted to the Institute, following consideration of—

''(i) the novelty and scientific and technical merit of the proposed projects;

''(ii) the demonstrated capabilities of the individual or individuals submitting the applica-

tions to successfully carry out the proposed research;

"(iii) the impact the proposed projects will have on increasing the number of individuals with research expertise in manufacturing sciences; and

"(iv) the nature of the participation by for-profit entities and the extent to which the proposed projects address the concerns of industry.

"(e) REVIEW OF PROGRAM.—The Director shall enter into an arrangement with the National Academy of Sciences for a comprehensive review of the program established under subsection (a) during the third year of the program. Such review shall include an assessment of the quality and utility of the research conducted and the relevance of the research results obtained to the goals of the program. The Director shall submit a report to Congress on the results of the review under this subsection not later than 4 years after the initiation of the program.

"(f) DEFINITIONS.—For the purposes of this section the term 'institution of higher education' has the meaning given that term in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001).".

SEC. 5. ADVANCED TECHNOLOGY PROGRAM.

(a) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary of Commerce for the Advanced Technology Program under section 28 of the National Institute of Standards and Technology Act (15 U.S.C. 278n)—

(1) $219,400,000 for fiscal year 2004, including $80,700,000 for new awards, of which $20,000,000 shall be for a focused competition in manufacturing sciences;

(2) $262,900,000 for fiscal year 2005, including $80,700,000 for new awards, of which $20,000,000 shall be for a focused competition in manufacturing sciences;

(3) $280,900,000 for fiscal year 2006, including $80,700,000 for new awards, of which $20,000,000 shall be for a focused competition in manufacturing sciences; and

(4) $290,400,000 for fiscal year 2007, including $80,700,000 for new awards, of which $20,000,000 shall be for a focused competition in manufacturing sciences.

(b) UNIVERSITY LEADERSHIP OF JOINT VENTURES.—

(1) JOINT VENTURE AID.—Section 28(b)(1) of the National Institute of Standards and Technology

Act (15 U.S.C. 278n(b)(1)) is amended by striking ''industry-led United States'' and all that follows through ''organizations)'' and inserting ''joint ventures''.

(2) DEFINITION.—Section 28(j)(1) of the National Institute of Standards and Technology Act (15 U.S.C. 278n(j)(1)) is amended by striking ''two or more persons'' and inserting ''a combination of two or more persons (which shall include at least two companies, each of which participates substantially in the joint venture, and may include one or more institutions of higher education or nonprofit organizations)''.

(c) INTELLECTUAL PROPERTY RIGHTS OWNERSHIP.—Section 28(d)(11) of the National Institute of Standards and Technology Act (15 U.S.C. 278n(d)(11)) is amended by striking ''(11)(A)'' and all that follows through ''with such intellectual property.'' and inserting the following:

''(11)(A) Title to any intellectual property developed by a joint venture from assistance provided under this section may vest in any participant in the joint venture, as agreed by the members of the joint venture, notwithstanding section 202(a) and (b) of title 35, United States Code. The United States may

reserve a nonexclusive, nontransferable, irrevocable, paid-up license, to have practiced for or on behalf of the United States in connection with any such intellectual property, but shall not, in the exercise of such license, publicly disclose proprietary information related to the license. Title to any such intellectual property shall not be transferred or passed, except to a participant in the joint venture, until the expiration of the first patent obtained in connection with such intellectual property.''.

(d) BARRIERS TO PRODUCT DEVELOPMENT.—Section 28(d) of the National Institute of Standards and Technology Act (15 U.S.C. 278n(d)) is amended by adding at the end the following new paragraph:

''(12) No contract or award may be made under this section for any project unless the project may remove a scientific or technological barrier to product development.''.

(e) PROJECT REVIEW AND EVALUATION.—Section 28(g) of the National Institute of Standards and Technology Act (15 U.S.C. 278n(g)) is amended to read as follows:

''(g) INDUSTRY AND PEER REVIEW OF PROPOSALS.—(1) In order to analyze the need for or the value of any proposal made by a joint venture or company re-

questing the Secretary's assistance under this section, or to monitor the progress of any project which receives funds under this section, the Secretary, the Under Secretary of Commerce for Manufacturing and Technology, and the Director may, notwithstanding any other provision of law, meet with such industry and other expert sources, without a proprietary or financial interest in proposals being evaluated, as they consider useful and appropriate.

''(2) In order to better assess whether specific innovations to be pursued are being adequately supported by the private sector, the Director shall conduct a study of, and thereafter monitor, whether the Secretary, the Undersecretary of Commerce for Manufacturing and Technology, and the Director could benefit from advice and information from additional industry and other expert sources, without a proprietary or financial interest in proposals being evaluated. Not later than one year after the date of the enactment of this Act, and biennially thereafter, the Director shall transmit to the Congress a report containing the results of the study and monitoring under this paragraph.''.

SEC. 6. SMALL BUSINESS INNOVATION RESEARCH/SMALL BUSINESS TECHNOLOGY TRANSFER PROGRAMS.

Not later than 6 months after the date of enactment of this Act, the Under Secretary of Commerce for Manufacturing and Technology shall develop and transmit to the Congress a plan to maximize the utilization of Federal programs such as the Small Business Innovation Research Program and the Small Business Technology Transfer Program to support manufacturing sciences. Not later than 18 months after the date of enactment of this Act, the Under Secretary of Commerce for Manufacturing and Technology shall transmit to the Congress a report assessing how Federal agencies are implementing the plan and including a description of the amount of Small Business Innovative Research and Small Business Technology Transfer funds supporting the plan.

SEC. 7. MANUFACTURING TECHNICAL ASSISTANCE.

(a) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary of Commerce for the Manufacturing Extension Partnership program under sections 25 and 26 of the National Institute of Standards and Technology Act (15 U.S.C. 278k and 278*l*)—

(1) $110,000,000 for fiscal year 2004;

(2) $113,840,000 for fiscal year 2005;

(3) $117,830,000 for fiscal year 2006; and

(4) $121,960,000 for fiscal year 2007.

(b) AMENDMENT.—Section 25 of the National Institute of Standards and Technology Act (15 U.S.C. 278k) is amended by adding at the end the following new subsection:

''(e) Not later than January 20 of each year, the Director shall transmit to the Congress a 3-year programmatic planning document for the Manufacturing Extension Partnerships program. This document shall be developed in consultation with the Modernization Forum.''.

SEC. 8. TECHNICAL WORKFORCE EDUCATION AND DEVELOPMENT.

(a) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Director of the National Science Foundation for the Advanced Technological Education Program established under section 3 of the Scientific and Advanced-Technology Act of 1992 (42 U.S.C. 1862i) and for the Manufacturing Skill Standards Council formed as the voluntary partnership for the manufacturing occupational cluster under section 504(b) of the National Skill Standards Act of 1994 (20 U.S.C. 5934(b))—

(1) $70,000,000 for fiscal year 2004, of which at least $20,000,000 shall be devoted to the edu-

cation of technicians for manufacturing fields, $5,000,000 of which shall be used to support the work of the Manufacturing Skill Standards Council in educating and preparing manufacturing technicians for certification;

(2) $80,000,000 for fiscal year 2005, of which at least $30,000,000 shall be devoted to the education of technicians for manufacturing fields, $5,000,000 of which shall be used to support the work of the Manufacturing Skill Standards Council in educating and preparing manufacturing technicians for certification;

(3) $90,000,000 for fiscal year 2006, of which at least $40,000,000 shall be devoted to the education of technicians for manufacturing fields, $5,000,000 of which shall be used to support the work of the Manufacturing Skill Standards Council in educating and preparing manufacturing technicians for certification; and

(4) $100,000,000 for fiscal year 2007, of which at least $50,000,000 shall be devoted to the education of technicians for manufacturing fields, $5,000,000 of which shall be used to support the work of the Manufacturing Skill Standards Council

in educating and preparing manufacturing technicians for certification.

(b) AMENDMENT.—Section 3 of the Scientific and Advanced-Technology Act of 1992 (42 U.S.C. 1862i) is amended by striking ''advanced-technology fields'' each place it appears and inserting ''manufacturing and advanced-technology fields''.

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