

108TH CONGRESS
2D SESSION

H. R. 3598

IN THE SENATE OF THE UNITED STATES

JULY 12, 2004

Received; read twice and referred to the Committee on Commerce, Science,
and Transportation

AN ACT

To establish an interagency committee to coordinate Federal manufacturing research and development efforts in manufacturing, strengthen existing programs to assist manufacturing innovation and education, and expand outreach programs for small and medium-sized manufacturers, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Manufacturing Tech-
5 nology Competitiveness Act of 2004”.

6 **SEC. 2. INTERAGENCY COMMITTEE AND ADVISORY COM-**
7 **MITTEE.**

8 (a) INTERAGENCY COMMITTEE.—

9 (1) ESTABLISHMENT.—The President shall es-
10 tablish or designate an interagency committee on
11 manufacturing research and development, which
12 shall include representatives from the Office of
13 Science and Technology Policy, the National Insti-
14 tute of Standards and Technology, the Science and
15 Technology Directorate of the Department of Home-
16 land Security, the National Science Foundation, the
17 Department of Energy, and any other agency that
18 the President may designate. The Interagency Com-
19 mittee shall be chaired by the Under Secretary of
20 Commerce for Technology.

21 (2) FUNCTIONS.—The Interagency Committee
22 shall be responsible for the planning and coordina-
23 tion of Federal efforts in manufacturing research
24 and development through—

1 (A) establishing goals and priorities for
2 manufacturing research and development, in-
3 cluding the strengthening of United States
4 manufacturing through the support and coordi-
5 nation of Federal manufacturing research, de-
6 velopment, technology transfer, standards, and
7 technical training;

8 (B) developing, within 6 months after the
9 date of enactment of this Act, and updating
10 every 3 years for delivery with the President's
11 annual budget request to Congress, a strategic
12 plan, to be transmitted to the Committee on
13 Science of the House of Representatives and
14 the Committee on Commerce, Science, and
15 Transportation of the Senate, for manufac-
16 turing research and development that includes
17 an analysis of the research, development, tech-
18 nology transfer, standards, technical training,
19 and integration needs of the manufacturing sec-
20 tor important to ensuring and maintaining
21 United States competitiveness;

22 (C) proposing an annual coordinated inter-
23 agency budget for manufacturing research and
24 development to the Office of Management and
25 Budget; and

1 (D) developing and transmitting to Con-
2 gress an annual report on the Federal programs
3 involved in manufacturing research, develop-
4 ment, technical training, standards, and inte-
5 gration, their funding levels, and their impacts
6 on United States manufacturing competitive-
7 ness, including the identification and analysis of
8 the manufacturing research and development
9 problems that require additional attention, and
10 recommendations of how Federal programs
11 should address those problems.

12 (3) RECOMMENDATIONS AND VIEWS.—In car-
13 rying out its functions under paragraph (2), the
14 Interagency Committee shall consider the rec-
15 ommendations of the Advisory Committee and the
16 views of academic, State, industry, and other entities
17 involved in manufacturing research and develop-
18 ment.

19 (b) ADVISORY COMMITTEE.—

20 (1) ESTABLISHMENT.—Not later than 6
21 months after the date of enactment of this Act, the
22 President shall establish or designate an advisory
23 committee to provide advice and information to the
24 Interagency Committee.

1 (2) RECOMMENDATIONS.—The Advisory Com-
2 mittee shall assist the Interagency Committee by
3 providing it with recommendations on—

4 (A) the goals and priorities for manufac-
5 turing research and development;

6 (B) the strategic plan, including proposals
7 on how to strengthen research and development
8 to help manufacturing; and

9 (C) other issues it considers appropriate.

10 (3) REPORT.—The Advisory Committee shall
11 provide an annual report to the Interagency Com-
12 mittee and the Congress that shall assess—

13 (A) the progress made in implementing the
14 strategic plan and challenges to this progress;

15 (B) the effectiveness of activities under the
16 strategic plan in improving United States man-
17 ufacturing competitiveness;

18 (C) the need to revise the goals and prior-
19 ities established by the Interagency Committee;
20 and

21 (D) new and emerging problems and op-
22 portunities affecting the manufacturing re-
23 search community, research infrastructure, and
24 the measurement and statistical analysis of

1 manufacturing that may need to be considered
2 by the Interagency Committee.

3 (4) FEDERAL ADVISORY COMMITTEE ACT AP-
4 PPLICATION.—Section 14 of the Federal Advisory
5 Committee Act shall not apply to the Advisory Com-
6 mittee.

7 **SEC. 3. COLLABORATIVE MANUFACTURING RESEARCH**
8 **PILOT GRANTS.**

9 The National Institute of Standards and Technology
10 Act is amended—

11 (1) by redesignating the first section 32 as sec-
12 tion 34 and moving it to the end of the Act; and

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

15 **“SEC. 33. COLLABORATIVE MANUFACTURING RESEARCH**
16 **PILOT GRANTS.**

17 **“(a) AUTHORITY.—**

18 **“(1) ESTABLISHMENT.—**The Director shall es-
19 tablish a pilot program of awards to partnerships
20 among participants described in paragraph (2) for
21 the purposes described in paragraph (3). Awards
22 shall be made on a peer-reviewed, competitive basis.

23 **“(2) PARTICIPANTS.—**Such partnerships shall
24 include at least—

1 “(A) 1 manufacturing industry partner;
2 and

3 “(B) 1 nonindustry partner.

4 “(3) PURPOSE.—The purpose of the program
5 under this section is to foster cost-shared collabora-
6 tions among firms, educational institutions, research
7 institutions, State agencies, and nonprofit organiza-
8 tions to encourage the development of innovative,
9 multidisciplinary manufacturing technologies. Part-
10 nerships receiving awards under this section shall
11 conduct applied research to develop new manufac-
12 turing processes, techniques, or materials that would
13 contribute to improved performance, productivity,
14 and competitiveness of United States manufacturing,
15 and build lasting alliances among collaborators.

16 “(b) PROGRAM CONTRIBUTION.—Awards under this
17 section shall provide for not more than one-third of the
18 costs of a partnership. Not more than an additional one-
19 third of such costs may be obtained directly or indirectly
20 from other Federal sources.

21 “(c) APPLICATIONS.—Applications for awards under
22 this section shall be submitted in such manner, at such
23 time, and containing such information as the Director
24 shall require. Such applications shall describe at a min-
25 imum—

1 “(1) how each partner will participate in devel-
2 oping and carrying out the research agenda of the
3 partnership;

4 “(2) the research that the grant would fund;
5 and

6 “(3) how the research to be funded with the
7 award would contribute to improved performance,
8 productivity, and competitiveness of the United
9 States manufacturing industry.

10 “(d) SELECTION CRITERIA.—In selecting applica-
11 tions for awards under this section, the Director shall con-
12 sider at a minimum—

13 “(1) the degree to which projects will have a
14 broad impact on manufacturing;

15 “(2) the novelty and scientific and technical
16 merit of the proposed projects; and

17 “(3) the demonstrated capabilities of the appli-
18 cants to successfully carry out the proposed re-
19 search.

20 “(e) DISTRIBUTION.—In selecting applications under
21 this section the Director shall ensure, to the extent prac-
22 ticable, a distribution of overall awards among a variety
23 of manufacturing industry sectors and a range of firm
24 sizes.

1 “(f) DURATION.—In carrying out this section, the Di-
2 rector shall run a single pilot competition to solicit and
3 make awards. Each award shall be for a 3-year period.”.

4 **SEC. 4. MANUFACTURING FELLOWSHIP PROGRAM.**

5 Section 18 of the National Institute of Standards and
6 Technology Act (15 U.S.C. 278g–1) is amended—

7 (1) by inserting “(a) IN GENERAL.—” before
8 “The Director is authorized”; and

9 (2) by adding at the end the following new sub-
10 section:

11 “(b) MANUFACTURING FELLOWSHIP PROGRAM.—

12 “(1) ESTABLISHMENT.—To promote the devel-
13 opment of a robust research community working at
14 the leading edge of manufacturing sciences, the Di-
15 rector shall establish a program to award—

16 “(A) postdoctoral research fellowships at
17 the Institute for research activities related to
18 manufacturing sciences; and

19 “(B) senior research fellowships to estab-
20 lished researchers in industry or at institutions
21 of higher education who wish to pursue studies
22 related to the manufacturing sciences at the In-
23 stitute.

24 “(2) APPLICATIONS.—To be eligible for an
25 award under this subsection, an individual shall sub-

1 mit an application to the Director at such time, in
2 such manner, and containing such information as
3 the Director may require.

4 “(3) STIPEND LEVELS.—Under this section, the
5 Director shall provide stipends for postdoctoral re-
6 search fellowships at a level consistent with the Na-
7 tional Institute of Standards and Technology
8 Postdoctoral Research Fellowship Program, and sen-
9 ior research fellowships at levels consistent with sup-
10 port for a faculty member in a sabbatical position.”.

11 **SEC. 5. MANUFACTURING EXTENSION.**

12 (a) MANUFACTURING CENTER EVALUATION.—Sec-
13 tion 25(c)(5) of the National Institute of Standards and
14 Technology Act (15 U.S.C. 278k(c)(5)) is amended by in-
15 serting “A Center that has not received a positive evalua-
16 tion by the evaluation panel shall be notified by the panel
17 of the deficiencies in its performance and may be placed
18 on probation for one year, after which time the panel may
19 reevaluate the Center. If the Center has not addressed the
20 deficiencies identified by the panel, or shown a significant
21 improvement in its performance, the Director may conduct
22 a new competition to select an operator for the Center or
23 may close the Center.” after “sixth year at declining lev-
24 els.”.

1 (b) MANUFACTURING EXTENSION CENTER COMPETITIVE GRANT PROGRAM.—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 subsections:

6 “(e) COMPETITIVE GRANT PROGRAM.—

7 “(1) ESTABLISHMENT.—The Director shall establish, within the Manufacturing Extension Partnership program under this section and section 26 of this Act, a program of competitive awards among participants described in paragraph (2) for the purposes described in paragraph (3).

13 “(2) PARTICIPANTS.—Participants receiving awards under this subsection shall be the Centers, or a consortium of such Centers.

16 “(3) PURPOSE.—The purpose of the program under this subsection is to develop projects to solve new or emerging manufacturing problems as determined by the Director, in consultation with the Director of the Manufacturing Extension Partnership program, the Manufacturing Extension Partnership National Advisory Board, and small and medium-sized manufacturers. One or more themes for the competition may be identified, which may vary from year to year, depending on the needs of manufactur-

1 ers and the success of previous competitions. These
2 themes shall be related to projects associated with
3 manufacturing extension activities, including supply
4 chain integration and quality management, or extend
5 beyond these traditional areas.

6 “(4) APPLICATIONS.—Applications for awards
7 under this subsection shall be submitted in such
8 manner, at such time, and containing such informa-
9 tion as the Director shall require, in consultation
10 with the Manufacturing Extension Partnership Na-
11 tional Advisory Board.

12 “(5) SELECTION.—Awards under this sub-
13 section shall be peer reviewed and competitively
14 awarded. The Director shall select proposals to re-
15 ceive awards—

16 “(A) that utilize innovative or collaborative
17 approaches to solving the problem described in
18 the competition;

19 “(B) that will improve the competitiveness
20 of industries in the region in which the Center
21 or Centers are located; and

22 “(C) that will contribute to the long-term
23 economic stability of that region.

1 “(6) PROGRAM CONTRIBUTION.—Recipients of
2 awards under this subsection shall not be required
3 to provide a matching contribution.

4 “(f) AUDITS.—A center that receives assistance
5 under this section shall submit annual audits to the Sec-
6 retary in accordance with Office of Management and
7 Budget Circular A-133 and shall make such audits avail-
8 able to the public on request.”.

9 **SEC. 6. SCIENTIFIC AND TECHNICAL RESEARCH AND SERV-**
10 **ICES.**

11 (a) LABORATORY ACTIVITIES.—There are authorized
12 to be appropriated to the Secretary of Commerce for the
13 scientific and technical research and services laboratory
14 activities of the National Institute of Standards and Tech-
15 nology—

16 (1) \$425,688,000 for fiscal year 2005, of
17 which—

18 (A) \$55,777,000 shall be for Electronics
19 and Electrical Engineering;

20 (B) \$29,584,000 shall be for Manufac-
21 turing Engineering;

22 (C) \$50,142,000 shall be for Chemical
23 Science and Technology;

24 (D) \$42,240,000 shall be for Physics;

1 (E) \$62,724,000 shall be for Material
2 Science and Engineering;

3 (F) \$23,594,000 shall be for Building and
4 Fire Research;

5 (G) \$60,660,000 shall be for Computer
6 Science and Applied Mathematics, of which
7 \$2,800,000 shall be for activities in support of
8 the Help America Vote Act of 2002;

9 (H) \$17,445,000 shall be for Technical As-
10 sistance; and

11 (I) \$78,102,000 shall be for Research Sup-
12 port Activities;

13 (2) \$446,951,000 for fiscal year 2006;

14 (3) \$469,299,000 for fiscal year 2007; and

15 (4) \$492,764,000 for fiscal year 2008.

16 (b) MALCOLM BALDRIGE NATIONAL QUALITY
17 AWARD PROGRAM.—There are authorized to be appro-
18 priated to the Secretary of Commerce for the Malcolm
19 Baldrige National Quality Award program under section
20 17 of the Stevenson-Wydler Technology Innovation Act of
21 1980 (15 U.S.C. 3711a)—

22 (1) \$5,400,000 for fiscal year 2005;

23 (2) \$5,535,000 for fiscal year 2006;

24 (3) \$5,674,000 for fiscal year 2007; and

25 (4) \$5,815,000 for fiscal year 2008.

1 (c) CONSTRUCTION AND MAINTENANCE.—There are
2 authorized to be appropriated to the Secretary of Com-
3 merce for construction and maintenance of facilities of the
4 National Institute of Standards and Technology such
5 sums as may be necessary for each of fiscal years 2005
6 through 2008.

7 **SEC. 7. STANDARDS EDUCATION PROGRAM.**

8 (a) PROGRAM AUTHORIZED.—(1) As part of the
9 Teacher Science and Technology Enhancement Institute
10 Program, the Director of the National Institute of Stand-
11 ards and Technology shall carry out a Standards Edu-
12 cation program to award grants to institutions of higher
13 education to support efforts by such institutions to develop
14 curricula on the role of standards in the fields of engineer-
15 ing, business, science, and economics. The curricula
16 should address topics such as—

- 17 (A) development of technical standards;
- 18 (B) demonstrating conformity to standards;
- 19 (C) intellectual property and antitrust issues;
- 20 (D) standardization as a key element of busi-
21 ness strategy;
- 22 (E) survey of organizations that develop stand-
23 ards;
- 24 (F) the standards life cycle;
- 25 (G) case studies in effective standardization;

1 (H) managing standardization activities; and

2 (I) managing organizations that develop stand-
3 ards.

4 (2) Grants shall be awarded under this section on a
5 competitive, merit-reviewed basis and shall require cost-
6 sharing from non-Federal sources.

7 (b) SELECTION PROCESS.—(1) An institution of
8 higher education seeking funding under this section shall
9 submit an application to the Director at such time, in such
10 manner, and containing such information as the Director
11 may require. The application shall include at a min-
12 imum—

13 (A) a description of the content and schedule
14 for adoption of the proposed curricula in the courses
15 of study offered by the applicant; and

16 (B) a description of the source and amount of
17 cost-sharing to be provided.

18 (2) In evaluating the applications submitted under
19 paragraph (1) the Director shall consider, at a min-
20 imum—

21 (A) the level of commitment demonstrated by
22 the applicant in carrying out and sustaining lasting
23 curricula changes in accordance with subsection
24 (a)(1); and

25 (B) the amount of cost-sharing provided.

1 (c) AUTHORIZATION OF APPROPRIATIONS.—There
 2 are authorized to be appropriated to the Secretary of Com-
 3 merce for the Teacher Science and Technology Enhance-
 4 ment Institute program of the National Institute of Stand-
 5 ards and Technology—

6 (1) \$773,000 for fiscal year 2005;

7 (2) \$796,000 for fiscal year 2006;

8 (3) \$820,000 for fiscal year 2007; and

9 (4) \$844,000 for fiscal year 2008.

10 **SEC. 8. AUTHORIZATION OF APPROPRIATIONS.**

11 (a) MANUFACTURING EXTENSION PARTNERSHIP
 12 PROGRAM.—There are authorized to be appropriated to
 13 the Secretary of Commerce, or other appropriate Federal
 14 agencies, for the Manufacturing Extension Partnership
 15 program under sections 25 and 26 of the National Insti-
 16 tute of Standards and Technology Act (15 U.S.C. 278k
 17 and 278l)—

18 (1) \$110,000,000 for fiscal year 2005, of which
 19 not more than \$4,000,000 shall be for the competi-
 20 tive grant program under section 25(e) of such Act
 21 (15 U.S.C. 278k(e));

22 (2) \$115,000,000 for fiscal year 2006, of which
 23 not more than \$4,100,000 shall be for the competi-
 24 tive grant program under section 25(e) of such Act
 25 (15 U.S.C. 278k(e));

1 (3) \$120,000,000 for fiscal year 2007, of which
 2 not more than \$4,200,000 shall be for the competi-
 3 tive grant program under section 25(e) of such Act
 4 (15 U.S.C. 278k(e)); and

5 (4) \$125,000,000 for fiscal year 2008, of which
 6 not more than \$4,300,000 shall be for the competi-
 7 tive grant program under section 25(e) of such Act
 8 (15 U.S.C. 278k(e)).

9 In any fiscal year for which appropriations are
 10 \$106,000,000 or greater, none of the funds appropriated
 11 pursuant to this subsection shall be used for a general re-
 12 competition of Centers established under section 25 of the
 13 National Institute of Standards and Technology Act (15
 14 U.S.C. 278k).

15 (b) COLLABORATIVE MANUFACTURING RESEARCH
 16 PILOT GRANTS PROGRAM.—There are authorized to be
 17 appropriated to the Secretary of Commerce for the Col-
 18 laborative Manufacturing Research Pilot Grants program
 19 under section 33 of the National Institute of Standards
 20 and Technology Act—

21 (1) \$10,000,000 for fiscal year 2005;
 22 (2) \$10,000,000 for fiscal year 2006; and
 23 (3) \$10,000,000 for fiscal year 2007.

24 (c) FELLOWSHIPS.—There are authorized to be ap-
 25 propriated to the Secretary of Commerce for Manufac-

1 turing Fellowships at the National Institute of Standards
2 and Technology under section 18(b) of the National Insti-
3 tute of Standards and Technology Act, as added by section
4 4 of this Act—

- 5 (1) \$1,500,000 for fiscal year 2005;
6 (2) \$1,750,000 for fiscal year 2006;
7 (3) \$2,000,000 for fiscal year 2007; and
8 (4) \$2,250,000 for fiscal year 2008.

Passed the House of Representatives July 9, 2004.

Attest: JEFF TRANDAHL,
Clerk.