

## Union Calendar No.

110TH CONGRESS  
1ST SESSION

# H. R. 1868

[Report No. 110-]

To authorize appropriations for the National Institute of Standards and Technology for fiscal years 2008, 2009, and 2010, and for other purposes.

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### IN THE HOUSE OF REPRESENTATIVES

APRIL 17, 2007

Mr. WU (for himself, Mr. GINGREY, Mr. GORDON of Tennessee, Mr. HALL of Texas, Mr. MITCHELL, and Mr. EHLERS) introduced the following bill; which was referred to the Committee on Science and Technology

APRIL --, 2007

Reported with an amendment, committed to the Committee of the Whole House on the State of the Union, and ordered to be printed

[Strike out all after the enacting clause and insert the part printed in *italie*]

[For text of introduced bill, see copy of bill as introduced on April 17, 2007]

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## A BILL

To authorize appropriations for the National Institute of Standards and Technology for fiscal years 2008, 2009, and 2010, 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,*

1 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

2 (a) *SHORT TITLE.*—*This Act may be cited as the*  
 3 *“Technology Innovation and Manufacturing Stimulation*  
 4 *Act of 2007”.*

5 (b) *TABLE OF CONTENTS.*—*The table of contents for*  
 6 *this Act is as follows:*

*Sec. 1. Short title; table of contents.*

**TITLE I—AUTHORIZATION OF APPROPRIATIONS**

*Sec. 101. Scientific and technical research and services.*

*Sec. 102. Industrial technology services.*

**TITLE II—INNOVATION AND TECHNOLOGY POLICY REFORMS**

*Sec. 201. Institute-wide planning report.*

*Sec. 202. Report by Visiting Committee.*

*Sec. 203. Manufacturing extension partnership.*

*Sec. 204. Technology Innovation Program.*

*Sec. 205. Research fellowships.*

*Sec. 206. Collaborative manufacturing research pilot grants.*

*Sec. 207. Manufacturing fellowship program.*

*Sec. 208. Meetings of Visiting Committee on Advanced Technology.*

**TITLE III—MISCELLANEOUS**

*Sec. 301. Post-doctoral fellows.*

*Sec. 302. Financial agreements clarification.*

*Sec. 303. Working capital fund transfers.*

*Sec. 304. Retention of depreciation surcharge.*

*Sec. 305. Non-Energy Inventions Program.*

*Sec. 306. Redefinition of the metric system.*

*Sec. 307. Repeal of redundant and obsolete authority.*

*Sec. 308. Clarification of standard time and time zones.*

*Sec. 309. Procurement of temporary and intermittent services.*

*Sec. 310. Malcolm Baldrige awards.*

7 **TITLE I—AUTHORIZATION OF**  
 8 **APPROPRIATIONS**

9 **SEC. 101. SCIENTIFIC AND TECHNICAL RESEARCH AND**  
 10 **SERVICES.**

11 (a) *LABORATORY ACTIVITIES.*—*There are authorized*  
 12 *to be appropriated to the Secretary of Commerce for the*

1 *scientific and technical research and services laboratory ac-*  
2 *tivities of the National Institute of Standards and Tech-*  
3 *nology—*

4 (1) \$470,879,000 for fiscal year 2008;

5 (2) \$497,750,000 for fiscal year 2009; and

6 (3) \$537,569,000 for fiscal year 2010.

7 (b) *MALCOLM BALDRIGE NATIONAL QUALITY AWARD*  
8 *PROGRAM.—There are authorized to be appropriated to the*  
9 *Secretary of Commerce for the Malcolm Baldrige National*  
10 *Quality Award program under section 17 of the Stevenson-*  
11 *Wylder Technology Innovation Act of 1980 (15 U.S.C.*  
12 *3711a)—*

13 (1) \$7,860,000 for fiscal year 2008;

14 (2) \$8,096,000 for fiscal year 2009; and

15 (3) \$8,339,000 for fiscal year 2010.

16 (c) *CONSTRUCTION AND MAINTENANCE.—There are*  
17 *authorized to be appropriated to the Secretary of Commerce*  
18 *for construction and maintenance of facilities of the Na-*  
19 *tional Institute of Standards and Technology—*

20 (1) \$93,865,000 for fiscal year 2008;

21 (2) \$86,371,000 for fiscal year 2009; and

22 (3) \$49,719,000 for fiscal year 2010.

23 **SEC. 102. INDUSTRIAL TECHNOLOGY SERVICES.**

24 *There are authorized to be appropriated to the Sec-*  
25 *retary of Commerce for Industrial Technology Services ac-*

1 *tivities of the National Institute of Standards and Tech-*  
2 *nology—*

3 (1) \$222,968,000 for fiscal year 2008, of which—

4 (A) \$110,000,000 shall be for the *Technology*  
5 *Innovation Program* under section 28 of the *Na-*  
6 *tional Institute of Standards and Technology Act*  
7 *(15 U.S.C. 278n)*, of which at least \$45,000,000  
8 shall be for new awards; and

9 (B) \$112,968,000 shall be for the *Manufac-*  
10 *turing Extension Partnership* program under  
11 *sections 25 and 26 of the National Institute of*  
12 *Standards and Technology Act (15 U.S.C. 278k*  
13 *and 278l)*, of which not more than \$1,000,000  
14 shall be for the competitive grant program under  
15 *section 25(f) of such Act;*

16 (2) \$263,505,000 for fiscal year 2009, of which—

17 (A) \$141,500,000 shall be for the *Technology*  
18 *Innovation Program* under section 28 of the *Na-*  
19 *tional Institute of Standards and Technology Act*  
20 *(15 U.S.C. 278n)*, of which at least \$45,000,000  
21 shall be for new awards; and

22 (B) \$122,005,000 shall be for the *Manufac-*  
23 *turing Extension Partnership Program* under  
24 *sections 25 and 26 of the National Institute of*  
25 *Standards and Technology Act (15 U.S.C. 278k*

1           *and 278l), of which not more than \$4,000,000*  
2           *shall be for the competitive grant program under*  
3           *section 25(f) of such Act; and*

4           (3) \$282,266,000 for fiscal year 2010, of which—

5                 (A) \$150,500,000 shall be for the *Technology*  
6                 *Innovation Program under section 28 of the Na-*  
7                 *tional Institute of Standards and Technology Act*  
8                 *(15 U.S.C. 278n), of which at least \$45,000,000*  
9                 *shall be for new awards; and*

10                (B) \$131,766,000 shall be for the *Manufac-*  
11                *turing Extension Partnership Program under*  
12                *sections 25 and 26 of the National Institute of*  
13                *Standards and Technology Act (15 U.S.C. 278k*  
14                *and 278l), of which not more than \$4,000,000*  
15                *shall be for the competitive grant program under*  
16                *section 25(f) of such Act.*

17           **TITLE II—INNOVATION AND**  
18           **TECHNOLOGY POLICY REFORMS**

19           **SEC. 201. INSTITUTE-WIDE PLANNING REPORT.**

20           *Section 23 of the National Institute of Standards and*  
21           *Technology Act (15 U.S.C. 278i) is amended by adding at*  
22           *the end the following new subsections:*

23                 “(c) *Concurrent with the submission to Congress of the*  
24                 *President’s annual budget request in the first year after the*  
25                 *date of enactment of the Technology Innovation and Manu-*

1 *facturing Stimulation Act of 2007, the Director shall trans-*  
2 *mit to the Congress a 3-year programmatic planning docu-*  
3 *ment for the Institute, including programs under the Sci-*  
4 *entific and Technical Research and Services, Industrial*  
5 *Technology Services, and Construction of Research Facili-*  
6 *ties functions.*

7       “(d) Concurrent with the submission to the Congress  
8 of the President’s annual budget request in each year after  
9 the date of enactment of the Technology Innovation and  
10 Manufacturing Stimulation Act of 2007, the Director shall  
11 transmit to the Congress an update to the 3-year pro-  
12 grammatic planning document transmitted under sub-  
13 section (c), revised to cover the first 3 fiscal years after the  
14 date of that update.”.

15 **SEC. 202. REPORT BY VISITING COMMITTEE.**

16       Section 10(h)(1) of the National Institute of Standards  
17 and Technology Act (15 U.S.C. 278(h)(1)) is amended—

18           (1) by striking “on or before January 31 in each  
19 year” and inserting “within 30 days after the sub-  
20 mission to Congress of the President’s annual budget  
21 request in each year”; and

22           (2) by adding to the end the following: “Such re-  
23 port also shall comment on the programmatic plan-  
24 ning document and updates thereto transmitted to the

1 Congress by the Director under section 23(c) and  
2 (d).”.

3 **SEC. 203. MANUFACTURING EXTENSION PARTNERSHIP.**

4 (a) *MEP ADVISORY BOARD*.—Section 25 of the Na-  
5 tional Institute of Standards and Technology Act (15  
6 U.S.C. 278k) is amended by adding at the end the following  
7 new subsection:

8 “(e) *MEP ADVISORY BOARD*.—(1) There is established  
9 within the Institute a Manufacturing Extension Partner-  
10 ship Advisory Board (in this Act referred to as the ‘*MEP*  
11 *Advisory Board*’). The *MEP Advisory Board* shall consist  
12 of 10 members broadly representative of stakeholders, to be  
13 appointed by the Director. At least 2 members shall be em-  
14 ployed by or on an advisory board for the Centers, and at  
15 least 5 other members shall be from United States small  
16 businesses in the manufacturing sector. No member shall  
17 be an employee of the Federal Government.

18 “(2)(A) Except as provided in subparagraph (B) or  
19 (C), the term of office of each member of the *MEP Advisory*  
20 *Board* shall be 3 years.

21 “(B) The original members of the *MEP Advisory*  
22 *Board* shall be appointed to 3 classes. One class of 3 mem-  
23 bers shall have an initial term of 1 year, one class of 3  
24 members shall have an initial term of 2 years, and one class  
25 of 4 members shall have an initial term of 3 years.

1       “(C) Any member appointed to fill a vacancy occur-  
2 ring prior to the expiration of the term for which his prede-  
3 cessor was appointed shall be appointed for the remainder  
4 of such term.

5       “(D) Any person who has completed two consecutive  
6 full terms of service on the MEP Advisory Board shall there-  
7 after be ineligible for appointment during the one-year pe-  
8 riod following the expiration of the second such term.

9       “(3) The MEP Advisory Board shall meet no less than  
10 2 times annually, and provide to the Director—

11               “(A) advice on Manufacturing Extension Part-  
12 nership programs, plans, and policies;

13               “(B) assessments of the soundness of Manufac-  
14 turing Extension Partnership plans and strategies;  
15 and

16               “(C) assessments of current performance against  
17 Manufacturing Extension Partnership program  
18 plans.

19       “(4) In discharging its duties under this subsection,  
20 the MEP Advisory Board shall function solely in an advi-  
21 sory capacity, in accordance with the Federal Advisory  
22 Committee Act.

23       “(5) The MEP Advisory Board shall transmit an an-  
24 nual report to the Secretary for transmittal to the Congress  
25 within 30 days after the submission to the Congress of the



1 *President’s annual budget request in each year. Such report*  
2 *shall address the status of the Manufacturing Extension*  
3 *Partnership program and comment on the relevant sections*  
4 *of the programmatic planning document and updates there-*  
5 *to transmitted to the Congress by the Director under section*  
6 *23(c) and (d).”.*

7 *(b) ACCEPTANCE OF FUNDS.—Section 25(d) of the Na-*  
8 *tional Institute of Standards and Technology Act (15*  
9 *U.S.C. 278k(d)) is amended to read as follows:*

10 *“(d) ACCEPTANCE OF FUNDS.—In addition to such*  
11 *sums as may be appropriated to the Secretary and Director*  
12 *to operate the Centers program, the Secretary and Director*  
13 *also may accept funds from other Federal departments and*  
14 *agencies and under section 2(c)(7) from the private sector*  
15 *for the purpose of strengthening United States manufac-*  
16 *turing. Such funds, if allocated to a Center or Centers, shall*  
17 *not be considered in the calculation of the Federal share*  
18 *of capital and annual operating and maintenance costs*  
19 *under subsection (c).”.*

20 *(c) MANUFACTURING EXTENSION CENTER COMPETI-*  
21 *TIVE GRANT PROGRAM.—Section 25 of the National Insti-*  
22 *tute of Standards and Technology Act (15 U.S.C. 278k),*  
23 *as amended by subsection (a) of this section, is further*  
24 *amended by adding at the end the following new subsection:*

25 *“(f) COMPETITIVE GRANT PROGRAM.—*

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

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

10           “(3) *PURPOSE.*—*The purpose of the program*  
11           *under this subsection is to develop projects to solve*  
12           *new or emerging manufacturing problems as deter-*  
13           *mined by the Director, in consultation with the Di-*  
14           *rector of the Manufacturing Extension Partnership*  
15           *program, the Manufacturing Extension Partnership*  
16           *Advisory Board, and small and medium-sized manu-*  
17           *facturers. One or more themes for the competition*  
18           *may be identified, which may vary from year to year,*  
19           *depending on the needs of manufacturers and the suc-*  
20           *cess of previous competitions. These themes shall be*  
21           *related to projects associated with manufacturing ex-*  
22           *tension activities, including supply chain integration*  
23           *and quality management, and including the transfer*  
24           *of technology based on the technological needs of man-*  
25           *ufacturers and available technologies from institu-*

1        *tions of higher education, laboratories, and other tech-*  
2        *nology producing entities, or extend beyond these tra-*  
3        *ditional areas.*

4                *“(4) APPLICATIONS.—Applications for awards*  
5        *under this subsection shall be submitted in such man-*  
6        *ner, at such time, and containing such information*  
7        *as the Director shall require, in consultation with the*  
8        *Manufacturing Extension Partnership Advisory*  
9        *Board.*

10               *“(5) SELECTION.—Awards under this subsection*  
11        *shall be peer reviewed and competitively awarded.*  
12        *The Director shall select proposals to receive*  
13        *awards—*

14                        *“(A) that utilize innovative or collaborative*  
15        *approaches to solving the problem described in*  
16        *the competition;*

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

20                        *“(C) that will contribute to the long-term*  
21        *economic stability of that region.*

22                *“(6) PROGRAM CONTRIBUTION.—Recipients of*  
23        *awards under this subsection shall not be required to*  
24        *provide a matching contribution.”.*

1 **SEC. 204. TECHNOLOGY INNOVATION PROGRAM.**

2 *Section 28 of the National Institute of Standards and*  
3 *Technology Act (15 U.S.C. 278n) is amended to read as*  
4 *follows:*

5 *“TECHNOLOGY INNOVATION PROGRAM*

6 *“SEC. 28. (a) ESTABLISHMENT.—There is established*  
7 *in the Institute a Technology Innovation Program for the*  
8 *purpose of assisting United States businesses and institu-*  
9 *tions of higher education or other organizations, such as*  
10 *national laboratories and nonprofit research institutes, to*  
11 *accelerate the development and application of challenging,*  
12 *high-risk technologies that promise widespread economic*  
13 *benefits for the Nation.*

14 *“(b) GRANTS.—*

15 *“(1) IN GENERAL.—The Director shall make*  
16 *grants under this section to eligible companies for re-*  
17 *search and development on high-risk, high-payoff*  
18 *emerging and enabling technologies that offer signifi-*  
19 *cant potential benefits to the United States economy*  
20 *and a wide breadth of potential application, and*  
21 *form an important technical basis for future innova-*  
22 *tions. Such grants shall be made to eligible companies*  
23 *that are—*

24 *“(A) small or medium-sized businesses that*  
25 *are substantially involved in the research and*  
26 *development, including having a leadership role*

1           *in programmatically steering the project and de-*  
2           *fining the research agenda; or*

3           *“(B) joint ventures.*

4           *“(2) SINGLE COMPANY GRANTS.—No grant made*  
5           *under paragraph (1)(A) shall exceed \$3,000,000 over*  
6           *3 years. The Federal share of a project funded by such*  
7           *a grant shall not be more than 50 percent of total*  
8           *project costs. An award under paragraph (1)(A) may*  
9           *be extended beyond 3 years only if the Director trans-*  
10          *mits to the Committee on Science and Technology of*  
11          *the House of Representatives and the Committee on*  
12          *Commerce, Science, and Transportation of the Senate*  
13          *a full and complete explanation of such award, in-*  
14          *cluding reasons for exceeding 3 years. Federal funds*  
15          *granted under paragraph (1)(A) may be used only for*  
16          *direct costs and not for indirect costs, profits, or man-*  
17          *agement fees of a contractor.*

18          *“(3) JOINT VENTURE GRANTS.—No grant made*  
19          *under paragraph (1)(B) shall exceed \$9,000,000 over*  
20          *5 years. The Federal share of a project funded by such*  
21          *a grant shall not be more than 50 percent of total*  
22          *project costs.*

23          *“(c) AWARD CRITERIA.—The Director shall award*  
24          *grants under this section only to an eligible company—*

1           “(1) whose proposal has scientific and techno-  
2           logical merit;

3           “(2) whose application establishes that the pro-  
4           posed technology has strong potential to generate sub-  
5           stantial benefits to the Nation that extend signifi-  
6           cantly beyond the direct return to the applicant;

7           “(3) whose application establishes that the re-  
8           search has strong potential for advancing the state-of-  
9           the-art and contributing significantly to the United  
10          States scientific and technical knowledge base;

11          “(4) whose application establishes that the re-  
12          search is aimed at overcoming a scientific or techno-  
13          logical barrier;

14          “(5) who has provided a technical plan that  
15          clearly identifies the core innovation, the technical  
16          approach, major technical hurdles, and the attendant  
17          risks, and that clearly establishes the feasibility of the  
18          technology through adequately detailed plans linked to  
19          major technical barriers;

20          “(6) whose application establishes that the team  
21          proposed to carry out the work has a high level of sci-  
22          entific and technical expertise to conduct research and  
23          development, has a high level of commitment to the  
24          project, and has access to appropriate research facili-  
25          ties;

1           “(7) *whose proposal explains why Technology In-*  
2           *novation Program support is necessary;*

3           “(8) *whose application includes a plan for ad-*  
4           *vancing the technology into commercial use; and*

5           “(9) *whose application assesses the project’s or-*  
6           *ganizational structure and management plan.*

7           “(d) *EXTERNAL REVIEW OF PROPOSALS.—In order to*  
8           *analyze the need for or the value of any proposal made by*  
9           *a joint venture or company requesting the Director’s assist-*  
10           *ance under this section, or to monitor the progress of any*  
11           *project which receives funds under this section, the Director*  
12           *shall consult with industry or other expert sources that do*  
13           *not have a proprietary or financial interest in the proposal*  
14           *or project.*

15           “(e) *INTELLECTUAL PROPERTY RIGHTS OWNER-*  
16           *SHIP.—*

17           “(1) *IN GENERAL.—Title to any intellectual*  
18           *property developed by a joint venture from assistance*  
19           *provided under this section may vest in any partici-*  
20           *part in the joint venture, as agreed by the members*  
21           *of the joint venture, notwithstanding section 202(a)*  
22           *and (b) of title 35, United States Code. The United*  
23           *States may reserve a nonexclusive, nontransferable,*  
24           *irrevocable paid-up license, to have practiced for or*  
25           *on behalf of the United States in connection with any*

1        *such intellectual property, but shall not in the exercise*  
2        *of such license publicly disclose proprietary informa-*  
3        *tion related to the license. Title to any such intellec-*  
4        *tual property shall not be transferred or passed, ex-*  
5        *cept to a participant in the joint venture, until the*  
6        *expiration of the first patent obtained in connection*  
7        *with such intellectual property.*

8            *“(2) LICENSING.—Nothing in this subsection*  
9        *shall be construed to prohibit the licensing to any*  
10       *company of intellectual property rights arising from*  
11       *assistance provided under this section.*

12           *“(3) DEFINITION.—For purposes of this sub-*  
13       *section, the term ‘intellectual property’ means an in-*  
14       *vention patentable under title 35, United States Code,*  
15       *or any patent on such an invention, or any work for*  
16       *which copyright protection is available under title 17,*  
17       *United States Code.*

18           *“(f) PROGRAM OPERATION.—Not later than 9 months*  
19       *after the date of enactment of the Technology Innovation*  
20       *and Manufacturing Stimulation Act of 2007, the Director*  
21       *shall issue regulations—*

22           *“(1) establishing criteria for the selection of re-*  
23       *cipients of assistance under this section;*

24           *“(2) establishing procedures regarding financial*  
25       *reporting and auditing to ensure that contracts and*



1        *awards are used for the purposes specified in this sec-*  
2        *tion, are in accordance with sound accounting prac-*  
3        *tices, and are not funding existing or planned re-*  
4        *search programs that would be conducted in the same*  
5        *time period in the absence of financial assistance*  
6        *under this section; and*

7                *“(3) providing for appropriate dissemination of*  
8        *Technology Innovation Program research results.*

9        *“(g) CONTINUATION OF ATP GRANTS.—The Director*  
10        *shall, through the Technology Innovation Program, con-*  
11        *tinue to provide support originally awarded under the Ad-*  
12        *vanced Technology Program, in accordance with the terms*  
13        *of the original award.*

14        *“(h) COORDINATION WITH OTHER FEDERAL TECH-*  
15        *NOLOGY PROGRAMS.—In carrying out this section, the Di-*  
16        *rector shall, as appropriate, coordinate with other senior*  
17        *Federal officials to ensure cooperation and coordination in*  
18        *Federal technology programs and to avoid unnecessary du-*  
19        *plication of efforts.*

20        *“(i) ACCEPTANCE OF FUNDS FROM OTHER FEDERAL*  
21        *AGENCIES.—In addition to amounts appropriated to carry*  
22        *out this section, the Secretary and the Director may accept*  
23        *funds from other Federal agencies to support awards under*  
24        *the Technology Innovation Program. Any award under this*  
25        *section which is supported with funds from other Federal*

1 *agencies shall be selected and carried out according to the*  
2 *provisions of this section.*

3 “(j) *TIP ADVISORY BOARD.*—

4 “(1) *ESTABLISHMENT.*—*There is established*  
5 *within the Institute a Technology Innovation Pro-*  
6 *gram Advisory Board. The TIP Advisory Board shall*  
7 *consist of 10 members appointed by the Director, at*  
8 *least 7 of which shall be from United States industry,*  
9 *chosen to reflect the wide diversity of technical dis-*  
10 *ciplines and industrial sectors represented in Tech-*  
11 *nology Innovation Program projects. No member shall*  
12 *be an employee of the Federal Government.*

13 “(2) *TERMS OF OFFICE.*—(A) *Except as provided*  
14 *in subparagraph (B) or (C), the term of office of each*  
15 *member of the TIP Advisory Board shall be 3 years.*

16 “(B) *The original members of the TIP Advisory*  
17 *Board shall be appointed to 3 classes. One class of 3*  
18 *members shall have an initial term of 1 year, one*  
19 *class of 3 members shall have an initial term of 2*  
20 *years, and one class of 4 members shall have an ini-*  
21 *tial term of 3 years.*

22 “(C) *Any member appointed to fill a vacancy oc-*  
23 *curring prior to the expiration of the term for which*  
24 *his predecessor was appointed shall be appointed for*  
25 *the remainder of such term.*

1           “(D) *Any person who has completed two consecu-*  
2           *tive full terms of service on the TIP Advisory Board*  
3           *shall thereafter be ineligible for appointment during*  
4           *the one-year period following the expiration of the sec-*  
5           *ond such term.*

6           “(3) *PURPOSE.—The TIP Advisory Board shall*  
7           *meet no less than 2 times annually, and provide to*  
8           *the Director—*

9                   “(A) *advice on programs, plans, and poli-*  
10                  *cies of the Technology Innovation Program;*

11                  “(B) *reviews of the Technology Innovation*  
12                  *Program’s efforts to assess its economic impact;*

13                  “(C) *reports on the general health of the*  
14                  *program and its effectiveness in achieving its*  
15                  *legislatively mandated mission;*

16                  “(D) *guidance on areas of technology that*  
17                  *are appropriate for Technology Innovation Pro-*  
18                  *gram funding; and*

19                  “(E) *recommendations as to whether, in*  
20                  *order to better assess whether specific innovations*  
21                  *to be pursued are being adequately supported by*  
22                  *the private sector, the Director could benefit from*  
23                  *advice and information from additional industry*  
24                  *and other expert sources without a proprietary*

1           *or financial interest in proposals being evalu-*  
2           *ated.*

3           “(4) *ADVISORY CAPACITY.*—*In discharging its*  
4           *duties under this subsection, the TIP Advisory Board*  
5           *shall function solely in an advisory capacity, in ac-*  
6           *cordance with the Federal Advisory Committee Act.*

7           “(5) *ANNUAL REPORT.*—*The TIP Advisory*  
8           *Board shall transmit an annual report to the Sec-*  
9           *retary for transmittal to the Congress within 30 days*  
10          *after the submission to Congress of the President’s an-*  
11          *nuual budget request in each year. Such report shall*  
12          *address the status of the Technology Innovation Pro-*  
13          *gram and comment on the relevant sections of the*  
14          *programmatic planning document and updates there-*  
15          *to transmitted to the Congress by the Director under*  
16          *section 23(c) and (d).*

17          “(k) *DEFINITIONS.*—*For purposes of this section—*

18                 “(1) *the term ‘eligible company’ means a com-*  
19                 *pany that is incorporated in the United States and*  
20                 *does a majority of its business in the United States,*  
21                 *and that either—*

22                         “(A) *is majority owned by citizens of the*  
23                         *United States; or*

1           “(B) is owned by a parent company incor-  
2           porated in another country and the Director  
3           finds that—

4                   “(i) the company’s participation in the  
5           Technology Innovation Program would be  
6           in the economic interest of the United  
7           States, as evidenced by—

8                           “(I) investments in the United  
9           States in research and manufacturing  
10          (including the manufacture of major  
11          components or subassemblies in the  
12          United States);

13                          “(II) significant contributions to  
14          employment in the United States; and

15                           “(III) agreement with respect to  
16          any technology arising from assistance  
17          provided under this section to promote  
18          the manufacture within the United  
19          States of products resulting from that  
20          technology (taking into account the  
21          goals of promoting the competitiveness  
22          of United States industry); and

23                           “(ii) the company is incorporated in a  
24          country which—

1                   “(I) affords to United States-  
2                   owned companies opportunities, com-  
3                   parable to those afforded to any other  
4                   company, to participate in any joint  
5                   venture similar to those receiving fund-  
6                   ing under this section;

7                   “(II) affords to United States-  
8                   owned companies local investment op-  
9                   portunities comparable to those af-  
10                  forded any other company; and

11                  “(III) affords adequate and effec-  
12                  tive protection for the intellectual  
13                  property rights of United States-owned  
14                  companies;

15                  “(2) the term ‘institution of higher education’  
16                  has the meaning given that term in section 101 of the  
17                  Higher Education Act of 1965 (20 U.S.C. 1001);

18                  “(3) the term ‘joint venture’ means a joint ven-  
19                  ture that—

20                  “(A) includes either—

21                  “(i) at least 2 separately owned for-  
22                  profit companies that are both substantially  
23                  involved in the project and both of which  
24                  are contributing to the cost-sharing required  
25                  under this section, with the lead entity of

1           *the joint venture being one of those compa-*  
2           *nies that is a small or medium-sized busi-*  
3           *ness; or*

4                   “(i) *at least one small or medium-*  
5                   *sized business and one institution of higher*  
6                   *education or other organization, such as a*  
7                   *national laboratory or nonprofit research*  
8                   *institute, that are both substantially in-*  
9                   *involved in the project and both of which are*  
10                   *contributing to the cost-sharing required*  
11                   *under this section, with the lead entity of*  
12                   *the joint venture being either that small or*  
13                   *medium-sized business or that institution of*  
14                   *higher education; and*

15                   “(B) *may include additional for-profit com-*  
16                   *panies, institutions of higher education, and*  
17                   *other organizations, such as national labora-*  
18                   *tories and nonprofit research institutes, that*  
19                   *may or may not contribute non-Federal funds to*  
20                   *the project; and*

21                   “(4) *the term ‘TIP Advisory Board’ means the*  
22                   *advisory board established under subsection (j).”.*

23   **SEC. 205. RESEARCH FELLOWSHIPS.**

24           *Section 18 of the National Institute of Standards and*  
25   *Technology Act (15 U.S.C. 278g–l) is amended by striking*

1 “up to 1 per centum of the” and inserting “up to 1.5 per-  
2 cent of the”.

3 **SEC. 206. COLLABORATIVE MANUFACTURING RESEARCH**

4 **PILOT GRANTS.**

5 *The National Institute of Standards and Technology*  
6 *Act is amended—*

7 (1) *by redesignating the first section 32 (15*  
8 *U.S.C. 271 note) as section 34 and moving it to the*  
9 *end of the Act; and*

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

12 **“SEC. 33. COLLABORATIVE MANUFACTURING RESEARCH**

13 **PILOT GRANTS.**

14 **“(a) AUTHORITY.—**

15 **“(1) ESTABLISHMENT.—***The Director shall estab-*  
16 *lish a pilot program of awards to partnerships among*  
17 *participants described in paragraph (2) for the pur-*  
18 *poses described in paragraph (3). Awards shall be*  
19 *made on a peer-reviewed, competitive basis.*

20 **“(2) PARTICIPANTS.—***Such partnerships shall*  
21 *include at least—*

22 **“(A) 1 manufacturing industry partner;**

23 **and**

24 **“(B) 1 nonindustry partner.**



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

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

18           “(c) *APPLICATIONS.*—*Applications for awards under*  
19           *this section shall be submitted in such manner, at such*  
20           *time, and containing such information as the Director shall*  
21           *require. Such applications shall describe at a minimum—*

22                   “(1) *how each partner will participate in devel-*  
23                   *oping and carrying out the research agenda of the*  
24                   *partnership;*

25                   “(2) *the research that the grant would fund; and*

1           “(3) *how the research to be funded with the*  
2           *award would contribute to improved performance,*  
3           *productivity, and competitiveness of the United States*  
4           *manufacturing industry.*

5           “(d) *SELECTION CRITERIA.—In selecting applications*  
6           *for awards under this section, the Director shall consider*  
7           *at a minimum—*

8           “(1) *the degree to which projects will have a*  
9           *broad impact on manufacturing;*

10           “(2) *the novelty and scientific and technical*  
11           *merit of the proposed projects; and*

12           “(3) *the demonstrated capabilities of the appli-*  
13           *cants to successfully carry out the proposed research.*

14           “(e) *DISTRIBUTION.—In selecting applications under*  
15           *this section the Director shall ensure, to the extent prac-*  
16           *ticable, a distribution of overall awards among a variety*  
17           *of manufacturing industry sectors and a range of firm sizes.*

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

21           **SEC. 207. MANUFACTURING FELLOWSHIP PROGRAM.**

22           *Section 18 of the National Institute of Standards and*  
23           *Technology Act (15 U.S.C. 278g-1) is amended—*

24           (1) *by inserting “(a) IN GENERAL.—” before*

25           *“The Director is authorized”; and*

1           (2) *by adding at the end the following new sub-*  
2           *section:*

3           “(b) *MANUFACTURING FELLOWSHIP PROGRAM.—*

4           *“(1) ESTABLISHMENT.—To promote the develop-*  
5           *ment of a robust research community working at the*  
6           *leading edge of manufacturing sciences, the Director*  
7           *shall establish a program to award—*

8           *“(A) postdoctoral research fellowships at the*  
9           *Institute for research activities related to manu-*  
10          *facturing sciences; and*

11          *“(B) senior research fellowships to estab-*  
12          *lished researchers in industry or at institutions*  
13          *of higher education who wish to pursue studies*  
14          *related to the manufacturing sciences at the In-*  
15          *stitute.*

16          *“(2) APPLICATIONS.—To be eligible for an award*  
17          *under this subsection, an individual shall submit an*  
18          *application to the Director at such time, in such*  
19          *manner, and containing such information as the Di-*  
20          *rector may require.*

21          *“(3) STIPEND LEVELS.—Under this subsection,*  
22          *the Director shall provide stipends for postdoctoral re-*  
23          *search fellowships at a level consistent with the Na-*  
24          *tional Institute of Standards and Technology*  
25          *Postdoctoral Research Fellowship Program, and sen-*

1 *ior research fellowships at levels consistent with sup-*  
2 *port for a faculty member in a sabbatical position.”.*

3 **SEC. 208. MEETINGS OF VISITING COMMITTEE ON AD-**  
4 **VANCED TECHNOLOGY.**

5 *Section 10(d) of the National Institute of Standards*  
6 *and Technology Act (15 U.S.C. 278(d)) is amended by strik-*  
7 *ing “quarterly” and inserting “twice each year”.*

8 **TITLE III—MISCELLANEOUS**

9 **SEC. 301. POST-DOCTORAL FELLOWS.**

10 *Section 19 of the National Institute of Standards and*  
11 *Technology Act (15 U.S.C. 278g–2) is amended by striking*  
12 *“nor more than 60 new fellows” and inserting “nor more*  
13 *than 120 new fellows”.*

14 **SEC. 302. FINANCIAL AGREEMENTS CLARIFICATION.**

15 *Section 2(b)(4) of the National Institute of Standards*  
16 *and Technology Act (15 U.S.C. 272(b)(4)) is amended by*  
17 *inserting “and grants and cooperative agreements,” after*  
18 *“arrangements,”.*

19 **SEC. 303. WORKING CAPITAL FUND TRANSFERS.**

20 *Section 12 of the National Institute of Standards and*  
21 *Technology Act (15 U.S.C. 278b) is amended by adding at*  
22 *the end the following:*

23 *“(g) AMOUNT AND SOURCE OF TRANSFERS.—Not more*  
24 *than one-quarter of one percent of the amounts appro-*  
25 *priated to the Institute for any fiscal year may be trans-*

1 *ferred to the fund, in addition to any other transfer author-*  
2 *ity. In addition, funds provided to the Institute from other*  
3 *Federal agencies for the purpose of production of Standard*  
4 *Reference Materials may be transferred to the fund.”.*

5 **SEC. 304. RETENTION OF DEPRECIATION SURCHARGE.**

6 *Section 14 of the National Institute of Standards and*  
7 *Technology Act (15 U.S.C. 278d) is amended—*

8 *(1) by inserting “(a) IN GENERAL.—” before*  
9 *“Within”; and*

10 *(2) by adding at the end the following:*

11 *“(b) RETENTION OF FEES.—The Director is author-*  
12 *ized to retain all building use and depreciation surcharge*  
13 *fees collected pursuant to OMB Circular A–25. Such fees*  
14 *shall be collected and credited to the Construction of Re-*  
15 *search Facilities Appropriation Account for use in mainte-*  
16 *nance and repair of the Institute’s existing facilities.”.*

17 **SEC. 305. NON-ENERGY INVENTIONS PROGRAM.**

18 *Section 27 of the National Institute of Standards and*  
19 *Technology Act (15 U.S.C. 278m) is repealed.*

20 **SEC. 306. REDEFINITION OF THE METRIC SYSTEM.**

21 *Section 3570 of the Revised Statues of the United*  
22 *States (derived from section 2 of the Act of July 28, 1866,*  
23 *entitled “An Act to authorize the Use of the Metric System*  
24 *of Weights and Measures” (15 U.S.C. 205; 14 Stat. 339))*  
25 *is amended to read as follows:*

1 **“SEC. 3570. METRIC SYSTEM DEFINED.**

2 *“The metric system of measurement shall be defined*  
3 *as the International System of Units as established in 1960,*  
4 *and subsequently maintained, by the General Conference of*  
5 *Weights and Measures, and as interpreted or modified for*  
6 *the United States by the Secretary of Commerce.”.*

7 **SEC. 307. REPEAL OF REDUNDANT AND OBSOLETE AUTHOR-**  
8 **ITY.**

9 *The Act of July 21, 1950, entitled “An Act To redefine*  
10 *the units and establish the standards of electrical and photo-*  
11 *metric measurements” (15 U.S.C. 223 and 224) is repealed.*

12 **SEC. 308. CLARIFICATION OF STANDARD TIME AND TIME**  
13 **ZONES.**

14 *(a) Section 1 of the Act of March 19, 1918, (commonly*  
15 *known as the “Calder Act”) (15 U.S.C. 261) is amended—*

16 *(1) by striking the second sentence and the extra*  
17 *period after it and inserting “Except as provided in*  
18 *section 3(a) of the Uniform Time Act of 1966 (15*  
19 *U.S.C. 260a), the standard time of the first zone shall*  
20 *be Coordinated Universal Time retarded by 4 hours;*  
21 *that of the second zone retarded by 5 hours; that of*  
22 *the third zone retarded by 6 hours; that of the four*  
23 *zone retarded by 7 hours; that of the fifth zone re-*  
24 *tarded by 8 hours; that of the sixth zone retarded by*  
25 *9 hours; that of the seventh zone retarded by 10 hours;*  
26 *that of the eighth zone retarded by 11 hours; and that*

1       *of the ninth zone shall be Coordinated Universal Time*  
2       *advanced by 10 hours.”; and*

3               (2) *by adding at the end the following: “In this*  
4       *section, the term ‘Coordinated Universal Time’ means*  
5       *the time scale maintained through the General Con-*  
6       *ference of Weights and Measures and interpreted or*  
7       *modified for the United States by the Secretary of*  
8       *Commerce in coordination with the Secretary of the*  
9       *Navy.”*

10       (b) *Section 3 of the Act of March 19, 1918, (commonly*  
11       *known as the “Calder Act”) (15 U.S.C. 264) is amended*  
12       *by striking “third zone” and inserting “fourth zone”.*

13       **SEC. 309. PROCUREMENT OF TEMPORARY AND INTERMIT-**  
14               **TENT SERVICES.**

15       (a) *IN GENERAL.—The Director of the National Insti-*  
16       *tute of Standards and Technology may procure the tem-*  
17       *porary or intermittent services of experts or consultants (or*  
18       *organizations thereof) in accordance with section 3109(b)*  
19       *of title 5, United States Code to assist on urgent or short-*  
20       *term research projects.*

21       (b) *EXTENT OF AUTHORITY.—A procurement under*  
22       *this section may not exceed 1 year in duration, and the*  
23       *Director shall procure no more than 200 experts and con-*  
24       *sultants per year.*

1       (c) *SUNSET.*—*This section shall cease to be effective*  
2 *after September 30, 2010.*

3       (d) *REPORT TO CONGRESS.*—*Not later than 2 years*  
4 *after the date of enactment of this Act, the Comptroller Gen-*  
5 *eral shall report to the Committee on Science and Tech-*  
6 *nology of the House of Representatives and the Committee*  
7 *on Commerce, Science, and Transportation of the Senate*  
8 *on whether additional safeguards would be needed with re-*  
9 *spect to the use of authorities granted under this section*  
10 *if such authorities were to be made permanent.*

11 **SEC. 310. MALCOLM BALDRIGE AWARDS.**

12       Section 17(c)(3) of the *Stevenson-Wydler Technology*  
13 *Innovation Act of 1980 (15 U.S.C. 3711a(c)(3)) is amended*  
14 *to read as follows:*

15       “(3) *In any year, not more than 18 awards may be*  
16 *made under this section to recipients who have not pre-*  
17 *viously received an award under this section, and no award*  
18 *shall be made within any category described in paragraph*  
19 *(1) if there are no qualifying enterprises in that category.”.*