

103^D CONGRESS
1ST SESSION

H. R. 820

To amend the Stevenson-Wydler Technology Innovation Act of 1980 to enhance manufacturing technology development and transfer, to authorize appropriations for the Technology Administration of the Department of Commerce, including the National Institute of Standards and Technology, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

FEBRUARY 4, 1993

Mr. VALENTINE (for himself, Mr. BROWN, Mr. MINETA, Mrs. LLOYD, Mr. GLICKMAN, Mr. VOLKMER, Mr. BOEHLERT, Mr. HALL of Texas, Mr. MCCURDY, Mr. HENRY, Mr. TORRICELLI, Mr. BOUCHER, Mr. TRAFICANT, Mr. HAYES, Mr. BACCHUS of Florida, Mr. ROEMER, Mr. CRAMER, Mr. SWETT, Mr. BARCIA, Mr. KLEIN, Mr. FINGERHUT, Mr. MCHALE, Mr. BECERRA, Ms. HARMAN, Mr. JOHNSON of Georgia, Mr. COPPERSMITH, Ms. ESHOO, Mr. INSLEE, Ms. E.B. JOHNSON of Texas, Mr. MINGE, Mr. SCOTT, Ms. WOOLSEY, Mr. MOORHEAD, Mr. REGULA, Mr. RIDGE, Mr. THORNTON, Mr. ENGEL, and Mr. OLVER) introduced the following bill; which was referred to the Committee on Science, Space, and Technology

A BILL

To amend the Stevenson-Wydler Technology Innovation Act of 1980 to enhance manufacturing technology development and transfer, to authorize appropriations for the Technology Administration of the Department of Commerce, including the National Institute of Standards and Technology, 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 **TITLE I—GENERAL PROVISIONS**

4 **SEC. 101. SHORT TITLE; TABLE OF CONTENTS.**

5 (a) SHORT TITLE.—This Act may be cited as the
 6 “National Competitiveness Act of 1993”.

7 (b) TABLE OF CONTENTS.—

TITLE I—GENERAL PROVISIONS

- Sec. 101. Short title; table of contents.
- Sec. 102. Findings.
- Sec. 103. Purposes.
- Sec. 104. Definitions.

TITLE II—MANUFACTURING

Subtitle A—Manufacturing Technology and Extension

- Sec. 201. Short title.
- Sec. 202. Findings, purpose, and statement of policy.
- Sec. 203. Role of the Department of Commerce.
- Sec. 204. National Technology Outreach Program.
- Sec. 205. Advanced Manufacturing Technology Development Program.
- Sec. 206. Miscellaneous and conforming amendments.
- Sec. 207. Manufacturing Technology Centers.
- Sec. 208. State Technology Extension Program.

Subtitle B—National Science Foundation Manufacturing Programs

- Sec. 211. Role of the National Science Foundation in manufacturing.
- Sec. 212. Engineering and Cooperative Research Centers.
- Sec. 213. Manufacturing traineeships and fellowships.
- Sec. 214. Total quality management.

TITLE III—CRITICAL TECHNOLOGIES

Subtitle A—Benchmarking Science and Technology

- Sec. 301. Benchmarking United States science and technology against foreign capabilities.

Subtitle B—Advanced Technology Program

- Sec. 321. Development of program plan.
- Sec. 322. Large scale research and development consortia.
- Sec. 323. Technical amendments.

Subtitle C—Civilian Technology Loan Program

- Sec. 331. Loan and loan guarantee authority.
- Sec. 332. Terms and conditions.
- Sec. 333. Technical assistance for lenders and borrowers.
- Sec. 334. Definitions.

Subtitle D—Civilian Technology Development Program

- Sec. 341. Short title.
- Sec. 342. Definitions.
- Sec. 343. Establishment and purpose.
- Sec. 344. Advisory Committee.
- Sec. 345. Organization and licensing.
- Sec. 346. Capital and management requirements.
- Sec. 347. Financing for licensees.
- Sec. 348. Issuance and guarantee of trust certificates.
- Sec. 349. Capital for qualified business concerns.
- Sec. 350. Operation.
- Sec. 351. Regulations; liability.
- Sec. 352. Technical assistance for licensees and qualified business concerns.
- Sec. 353. Annual audit and report.
- Sec. 354. Reports, investigations, and examinations.
- Sec. 355. Revocation and suspension of licenses; cease and desist orders.
- Sec. 356. Injunctions and other orders.
- Sec. 357. Conflicts of interest.
- Sec. 358. Removal or suspension of directors and officers.
- Sec. 359. Violations.
- Sec. 360. Civil penalties.
- Sec. 361. Antitrust savings clause.

TITLE IV—MISCELLANEOUS

- Sec. 401. Department of Commerce Technology Advisory Board.
- Sec. 402. International standardization.
- Sec. 403. Malcolm Baldrige Award amendments.
- Sec. 404. Cooperative research and development agreements.
- Sec. 405. Clearinghouse on State and Local Initiatives.
- Sec. 406. Competitiveness assessments and evaluations.
- Sec. 407. Study of semiconductor lithography technologies.
- Sec. 408. American workforce quality partnerships.
- Sec. 409. Severability.

TITLE V—AUTHORIZATIONS OF APPROPRIATIONS

- Sec. 501. Technology Administration.
- Sec. 502. National Institute of Standards and Technology.
- Sec. 503. Additional activities of the Technology Administration.
- Sec. 504. National Science Foundation.
- Sec. 505. Availability of appropriations.

1 **SEC. 102. FINDINGS.**

2 The Congress finds that—

1 (1) the creation, development, and adoption of
2 advanced technologies are significant determinants
3 of economic growth, productivity improvement, and
4 competitive standing;

5 (2) over the last decade, the rate of advanced
6 technology adoption in the United States has been
7 about half that of some prominent foreign nations
8 and has contributed to a relative decline in United
9 States industrial competitiveness;

10 (3) maintaining a highly competitive manufac-
11 turing base in the United States is essential for eco-
12 nomic prosperity and national welfare and requires
13 continuous development and adoption of advanced
14 manufacturing technologies that will enable United
15 States manufacturers to develop innovative products
16 rapidly and manufacture goods of the highest quality
17 at competitive prices;

18 (4) there is general agreement on which fields
19 of technology are critical for economic competitive-
20 ness through the first decade of the next century,
21 but the United States Government lacks a com-
22 prehensive strategy for ensuring that the appro-
23 priate research, development, and applications activi-
24 ties and other reforms occur so these technologies
25 are readily available to United States manufacturers

1 for incorporation into products made in the United
2 States;

3 (5) technology-based products of the twenty-
4 first century must be developed incorporating the
5 values of sustainable development, including low en-
6 ergy and material use, safety, recyclability, and
7 minimal pollution;

8 (6) the cost of and difficulty in obtaining in-
9 vestment capital for small high technology compa-
10 nies are significant deterrents to their formation, de-
11 velopment, and growth;

12 (7) standardization of weights and measures,
13 including development and promotion of product and
14 quality standards, has a significant role to play in
15 competitiveness; and

16 (8) strategic technology planning for sustain-
17 able economic growth, the support of critical civilian
18 technology research, development, and application,
19 and advancement of manufacturing technology re-
20 search, development, and adoption are appropriate
21 Government roles.

22 **SEC. 103. PURPOSES.**

23 The purposes of this Act are to—

24 (1) promote and facilitate the creation, develop-
25 ment, and adoption of technologies that will contrib-

1 ute significantly to United States competitiveness,
2 employment, and sustainable economic growth;

3 (2) improve the competitiveness of United
4 States manufacturers, particularly small- and me-
5 dium-sized firms, by developing a nationwide tech-
6 nology outreach program to improve access to infor-
7 mation, expertise, and technology required to com-
8 pete throughout the world;

9 (3) promote the development and rapid applica-
10 tion of advanced manufacturing technologies and
11 processes, with emphasis on environmentally sound
12 practices and sustainable economic growth;

13 (4) stimulate long-term investment in United
14 States companies engaged in development or utiliza-
15 tion of critical or other advanced technologies;

16 (5) establish mechanisms to ensure synergistic
17 linkages between Federal, State, and local initiatives
18 aimed at enhancing the technological competitiveness
19 of United States products;

20 (6) enhance and expand the core programs of
21 the National Institute of Standards and Technology,
22 including the Advanced Technology Program; and

23 (7) monitor and assess foreign technology capa-
24 bilities relative to those of the United States in order
25 to assist United States industry and policymakers in

1 identifying and responding to competitive opportuni-
2 ties and challenges.

3 **SEC. 104. DEFINITIONS.**

4 For purposes of this Act—

5 (1) the term “advanced manufacturing tech-
6 nology” has the meaning given such term in section
7 4 of the Stevenson-Wydler Technology Innovation
8 Act of 1980, as amended by section 206(a) of this
9 Act;

10 (2) the term “Director” means the Director of
11 the Institute;

12 (3) the term “Institute” means the National In-
13 stitute of Standards and Technology;

14 (4) the term “modern technology” has the
15 meaning given such term in section 4 of the Steven-
16 son-Wydler Technology Innovation Act of 1980, as
17 amended by section 206(a) of this Act;

18 (5) the term “Secretary” means the Secretary
19 of Commerce;

20 (6) the term “sustainable economic growth” has
21 the meaning given such term in section 4 of the Ste-
22 venson-Wydler Technology Innovation Act of 1980,
23 as amended by section 206(a) of this Act;

24 (7) the term “United States manufacturer” has
25 the meaning given such term in section 4 of the Ste-

1 venson-Wydler Technology Innovation Act of 1980,
2 as amended by section 206(a) of this Act; and

3 (8) the term “Under Secretary” means the
4 Under Secretary of Commerce for Technology.

5 **TITLE II—MANUFACTURING**

6 **Subtitle A—Manufacturing**

7 **Technology and Extension**

8 **SEC. 201. SHORT TITLE.**

9 This subtitle may be cited as the “Manufacturing
10 Technology and Extension Act of 1993”.

11 **SEC. 202. FINDINGS, PURPOSE, AND STATEMENT OF POL-**

12 **ICY.**

13 The Stevenson-Wydler Technology Innovation Act of
14 1980 (15 U.S.C. 3701 et seq.) is amended by adding at
15 the end the following new title:

16 **“TITLE III—MANUFACTURING**

17 **TECHNOLOGY**

18 **“SEC. 301. FINDINGS, PURPOSE, AND STATEMENT OF POL-**

19 **ICY.**

20 “(a) FINDINGS.—Congress finds and declares the fol-
21 lowing:

22 “(1) United States manufacturers, especially
23 small businesses, require the adoption and imple-
24 mentation of both modern and advanced manufac-

1 turing and process technologies to meet the chal-
2 lenge of foreign competition.

3 “(2) The development and application of mod-
4 ern and advanced manufacturing technologies are
5 vital to the sustainable economic growth, standard of
6 living, competitiveness in world markets, and na-
7 tional security and welfare of the United States.

8 “(3) New developments in flexible, computer-in-
9 tegrated manufacturing, electronic manufacturing
10 communications networks, and other new tech-
11 nologies make possible dramatic improvements
12 across all industrial sectors in productivity, quality,
13 and the speed with which manufacturers can re-
14 spond to changing market opportunities.

15 “(4) The application of advances in computer
16 science and technology to manufacturing is also vital
17 to the Nation’s prosperity, national and economic se-
18 curity, industrial production, engineering, and sci-
19 entific advancement.

20 “(5) The Department of Commerce’s Tech-
21 nology Administration can continue to play an im-
22 portant role in assisting United States industry to
23 develop, test, and adopt modern and advanced man-
24 ufacturing technologies and in establishing high-per-
25 formance computing technology testbeds to develop,

1 refine, test, and transfer advanced manufacturing
2 and networking technologies and associated applica-
3 tions.

4 “(b) PURPOSE.—It is the purpose of this title to help
5 ensure the continued leadership of the United States in
6 manufacturing by enhancing the Department of Com-
7 merce’s technology programs to—

8 “(1) provide United States manufacturers, es-
9 pecially small- and medium-sized companies, with
10 ready access to high quality advice and assistance in
11 the development, adoption, and improvement of
12 modern manufacturing technology, and in solving
13 their specific technology-based problems; and

14 “(2) encourage, facilitate, and support the de-
15 velopment and adoption of advanced manufacturing
16 technologies by United States manufacturers.

17 “(c) STATEMENT OF POLICY.—Congress declares
18 that it is the policy of the United States that—

19 “(1) Federal agencies, particularly the Depart-
20 ment of Commerce, shall work with industry, labor,
21 and the States to ensure that within 10 years of the
22 date of enactment of this title the United States is
23 second to no other nation in the development, adop-
24 tion, and use of modern and advanced manufactur-
25 ing technology;

1 “(2) the Department of Commerce shall work
2 with all the major Federal research and development
3 agencies to encourage the development and adoption
4 of advanced manufacturing technologies, and shall
5 work closely with United States industry and labor,
6 and with the Nation’s universities, to develop and
7 test those technologies; and

8 “(3) the Department of Commerce shall place a
9 high priority on the establishment and growth of a
10 National Technology Outreach Program to promote
11 and facilitate the development and use by United
12 States manufacturers of modern and advanced man-
13 ufacturing systems and applications for manufactur-
14 ing.

15 “(d) CONSTRUCTION.—Nothing in this title shall be
16 construed as modifying the duties and responsibilities of
17 the Department of Energy with regard to its technology
18 resources and expertise in matters under its jurisdiction.”.

19 **SEC. 203. ROLE OF THE DEPARTMENT OF COMMERCE.**

20 Title III of the Stevenson-Wydler Technology Innova-
21 tion Act of 1980, as added by section 202 of this Act,
22 is further amended by adding at the end the following new
23 section:

1 **“SEC. 302. ROLE OF THE DEPARTMENT OF COMMERCE.**

2 “(a) DEPARTMENT OF COMMERCE.—The Depart-
3 ment of Commerce shall, consistent with the purposes and
4 policies of section 301, work with United States industry
5 and labor and the States to develop advanced manufactur-
6 ing technologies and to promote and assist the adoption
7 and use of modern and advanced manufacturing tech-
8 nologies and practices throughout the United States. In
9 carrying out this title, the Secretary, acting, as appro-
10 priate, through the Under Secretary and the Director,
11 shall—

12 “(1) consult with other Federal agencies, in-
13 cluding the Department of Defense, the Department
14 of Energy, and the National Aeronautics and Space
15 Administration to ensure consistent and, where pos-
16 sible, coordinated efforts to promote the development
17 and adoption of modern and advanced manufactur-
18 ing technologies;

19 “(2) assist the Office of Science and Tech-
20 nology Policy in its efforts to coordinate the manu-
21 facturing technology activities of the various Federal
22 agencies; and

23 “(3) work with representatives of Federal,
24 State, and local agencies, manufacturing extension
25 programs, private industry, worker organizations,
26 and academia to encourage and facilitate the use of

1 both advanced manufacturing technologies, including
2 those developed by the Advanced Manufacturing
3 Technology Development Program established under
4 section 304 of this Act, and modern manufacturing
5 technologies and practices to large, medium-sized,
6 and small manufacturing firms throughout the Unit-
7 ed States.

8 The Secretary shall annually report to Congress on actions
9 taken under this subsection.

10 “(b) OTHER FEDERAL AGENCIES.—To the extent
11 permitted by other law, other Federal agencies shall assist
12 the Secretary in carrying out this title.”.

13 **SEC. 204. NATIONAL TECHNOLOGY OUTREACH PROGRAM.**

14 Title III of the Stevenson-Wydler Technology Innova-
15 tion Act of 1980, as added by sections 202 and 203 of
16 this Act, is further amended by adding at the end the fol-
17 lowing new section:

18 **“SEC. 303. NATIONAL TECHNOLOGY OUTREACH PROGRAM.**

19 “(a) ESTABLISHMENT AND PURPOSE.—There is
20 hereby established a National Technology Outreach Pro-
21 gram (in this section referred to as the ‘Outreach Pro-
22 gram’), the purpose of which shall be to—

23 “(1) interconnect, programatically and elec-
24 tronically, the Nation’s technology and manufactur-
25 ing extension centers, programs, and activities; and

1 “(2) assist United States manufacturers, espe-
2 cially small- and medium-sized firms, to expand and
3 accelerate the use of modern manufacturing tech-
4 nologies and practices and to develop and adopt ad-
5 vanced manufacturing technologies. The Secretary,
6 acting through the Under Secretary and the Direc-
7 tor, shall implement and coordinate the Outreach
8 Program in accordance with an initial plan and a 5-
9 year plan for the Outreach Program, to be submit-
10 ted to the Congress under subsection (g).

11 “(b) PROGRAM COMPONENTS.—The Outreach Pro-
12 gram shall constitute a partnership between the Depart-
13 ment of Commerce, the States, the private sector, and,
14 as appropriate, other Federal agencies to provide a na-
15 tional system of manufacturing and technology extension
16 centers and technical services to United States manufac-
17 turers, particularly small- and medium-sized manufactur-
18 ers. The Outreach Program shall include—

19 “(1) Manufacturing Outreach Centers estab-
20 lished under subsection (c);

21 “(2) Regional Centers for the Transfer of Man-
22 ufacturing Technology established under section 25
23 of the National Institute of Standards and Tech-
24 nology Act (15 U.S.C. 278k);

1 “(3) the State Technology Extension Program
2 established under section 26 of the National Insti-
3 tute of Standards and Technology Act (15 U.S.C.
4 278l);

5 “(4) the Outreach Program Information Net-
6 work and the Clearinghouse established under sub-
7 sections (d) and (e) of this section, respectively; and

8 “(5) other technology and manufacturing exten-
9 sion centers that the Secretary considers appropriate
10 for inclusion in the Outreach Program.

11 “(c) MANUFACTURING OUTREACH CENTERS.—(1)
12 Eligible government and private sector organizations that
13 are actively engaged in technology or manufacturing ex-
14 tension activities may apply to the Secretary for designa-
15 tion as Manufacturing Outreach Centers, in such form
16 and manner as the Secretary may prescribe. Eligible orga-
17 nizations include Federal, State, and local government
18 agencies, their extension programs, and their laboratories;
19 small business development centers; and appropriate pro-
20 grams run by professional societies, worker organizations,
21 industrial organizations, for-profit or nonprofit organiza-
22 tions, universities, community colleges, and technical
23 schools and colleges.

24 “(2) The Secretary shall establish standards, consist-
25 ent with the requirements of subsection (f), for designa-

1 tion of an existing technology or manufacturing extension
2 program as a Manufacturing Outreach Center.

3 “(3) The Secretary may, through a competitive proc-
4 ess, make grants, subject to the availability of appropria-
5 tions, to Manufacturing Outreach Centers designated in
6 accordance with the standards established under para-
7 graph (2), to enable them to better fulfill the purposes
8 and perform the activities of the Outreach Program. The
9 purpose of such grants is to upgrade the overall quality
10 of the Outreach Program and to contribute to the goal
11 of ready availability of the services and information pro-
12 vided through the Outreach Program, including informa-
13 tion on modern and advanced manufacturing technology,
14 to all interested United States manufacturers. Such
15 grants shall be awarded to increase the capabilities and
16 capacity of Manufacturing Outreach Centers and may not
17 be used to cover costs of current activities. Manufacturing
18 Outreach Centers may not concurrently receive financial
19 assistance under section 25 of the National Institute of
20 Standards and Technology Act and grants under this
21 paragraph. Grants may be awarded under this paragraph
22 for an initial period not to exceed 3 years and may be
23 renewed for one additional period, not to exceed 2 years.
24 Such grants may not at any time exceed 33 percent of
25 the operating costs of the grant recipient.

1 “(4) In selecting applicants to participate in the Out-
2 reach Program and in making grants under paragraph
3 (3), the Secretary shall solicit and consider evaluations of
4 the applicant’s performance record and current capabili-
5 ties, and the potential usefulness of the applicant’s pro-
6 posal, from United States manufacturers that the Sec-
7 retary considers qualified to make such evaluations.

8 “(d) OUTREACH PROGRAM INFORMATION NET-
9 WORK.—(1) The Department of Commerce shall establish,
10 operate, and maintain, through acquisition or other
11 means, an instantaneous, interactive electronic commu-
12 nications network (in this section referred to as the ‘out-
13 reach network’) to serve the Outreach Program, to facili-
14 tate effective and efficient interaction within it, and to
15 permit the collection and dissemination in electronic form,
16 in a timely and accurate manner, of information described
17 in subsection (e). The outreach network shall, wherever
18 practicable, make use of existing computer networks, data
19 bases, and electronic bulletin boards. The design, configu-
20 ration, acquisition plan, and operating policies, including
21 user fees and appropriate electronic access for public and
22 private information suppliers and users, of the outreach
23 network shall be included in the 5-year plan prepared
24 under subsection (g)(2) and shall address—

1 “(A) effective mechanisms for providing operat-
2 ing funds for the maintenance and use of the out-
3 reach network established under this paragraph, in-
4 cluding user fees, industry support, and continued
5 Federal investment;

6 “(B) the future operation and evolution of the
7 outreach network, including its relationship with
8 other public or private information services;

9 “(C) how to protect the copyrights of material
10 distributed over the outreach network; and

11 “(D) appropriate policies—

12 “(i) to ensure the security of proprietary
13 information that might be available on the out-
14 reach network and to protect the privacy of
15 users of the outreach network; and

16 “(ii) to facilitate and limit access to the
17 outreach network and its information to mem-
18 ber organizations of the Outreach Program and
19 to United States manufacturers.

20 “(2) Except as provided in this section, the outreach
21 network established under paragraph (1) shall be designed
22 and configured in a manner that will enable migration to
23 and interoperability with networks and technologies devel-
24 oped under the National High-Performance Computing

1 Program described in section 101 of the High-Perform-
2 ance Computing Act of 1991 (15 U.S.C. 5511).

3 “(e) CLEARINGHOUSE.—(1) The Secretary shall de-
4 velop a clearinghouse system, using existing public and
5 private sector information providers and carriers where
6 appropriate, to—

7 “(A) identify expertise and acquire information,
8 appropriate to the purpose of the Outreach Program
9 stated in subsection (a), from all appropriate Fed-
10 eral sources, and where appropriate from other
11 sources, providing assistance where necessary in
12 making such information electronically available
13 through and compatible with the outreach network;

14 “(B) ensure ready access, through the outreach
15 network, by United States manufacturers and other
16 interested United States private sector parties to the
17 most recent relevant available information and ex-
18 pertise;

19 “(C) ensure that common standards of inter-
20 connection are utilized by the outreach network and
21 the clearinghouse to allow maximum interoperability
22 and usership; and

23 “(D) to the extent practicable, inform such
24 manufacturers of the availability of such informa-
25 tion.

1 “(2) The clearinghouse shall include information
2 available electronically on—

3 “(A) activities of Manufacturing Outreach Cen-
4 ters, Regional Centers for the Transfer of Manufac-
5 turing Technology, the State Technology Extension
6 Program, and the users of the outreach network;

7 “(B) domestic and international standards and
8 other export promotion information, including con-
9 formity assessment requirements and procedures;

10 “(C) the Malcolm Baldrige Quality program,
11 and quality principles and standards;

12 “(D) manufacturing processes minimizing waste
13 and negative environmental impact;

14 “(E) federally funded technology development
15 and transfer programs;

16 “(F) responsibilities assigned to the Clearing-
17 house for State and Local Initiatives on Productiv-
18 ity, Technology, and Innovation under section 102 of
19 this Act; and

20 “(G) how to access data bases and services.

21 “(f) ADDITIONAL REQUIREMENTS.—In carrying out
22 this section, the Secretary shall satisfy the following re-
23 quirements:

24 “(1) The Outreach Program and the outreach
25 network shall be established and operated through

1 cooperation and co-funding among Federal, State,
2 and local governments, other public and private con-
3 tributors, and end users.

4 “(2) The Outreach Program and the outreach
5 network shall utilize and leverage, to the extent
6 practicable, existing organizations, data bases, elec-
7 tronic networks, facilities, capabilities, and existing
8 standards for interconnection, and shall be designed
9 to complement rather than supplant State and local
10 programs.

11 “(3) The Outreach Program and the outreach
12 network shall be subject to all applicable provisions
13 of law for the protection of trade secrets and busi-
14 ness confidential information.

15 “(4) Access to the services available through
16 the Outreach Program and information available
17 through the outreach network servicing the Outreach
18 Program shall be limited, as appropriate, to United
19 States manufacturers.

20 “(5) Local or regional needs should determine
21 the management structure and staffing of the Manu-
22 facturing Outreach Centers. The Outreach Program
23 shall strive for geographical balance with the ulti-
24 mate goal of access for all United States manufac-
25 turers.

1 “(6) Manufacturing Outreach Centers should
2 have the capability to deliver outreach services di-
3 rectly to United States manufacturers, actively work
4 with, rather than supplant, the private sector, and to
5 the extent practicable, maximize the exposure of
6 manufacturers to demonstrations of modern tech-
7 nologies in use, including flexible manufacturing
8 practices.

9 “(7) The Department of Commerce shall de-
10 velop mechanisms for—

11 “(A) soliciting the perspectives of manufac-
12 turers using the services of the Manufacturing
13 Outreach Centers and Regional Centers for the
14 Transfer of Manufacturing Technology; and

15 “(B) evaluating the effectiveness of the
16 Manufacturing Outreach Centers and Regional
17 Centers for the Transfer of Manufacturing
18 Technology.

19 “(g) PLAN AND REPORTS.—(1) Within 6 months
20 after the date of enactment of this title, the Secretary,
21 after consultation with the Under Secretary, the Director,
22 the Department of Commerce Technology Advisory Board,
23 and a cross-section of potential participants in the Out-
24 reach Program, shall submit an initial plan for the imple-
25 mentation of this title to Congress—

1 “(A) describing how the Secretary will carry out
2 the responsibility to create, operate, and support the
3 Outreach Program and the outreach network, in-
4 cluding the interactive electronic linkage of Manu-
5 facturing Outreach Centers to the programs of the
6 Technology Administration and other appropriate
7 Federal, State, and local agencies;

8 “(B) establishing criteria and procedures, con-
9 sistent with the requirements of this title, for—

10 “(i) the selection of organizations to re-
11 ceive Department of Commerce services or fi-
12 nancial assistance as part of the Outreach Pro-
13 gram, including qualifications and training of
14 technology extension agents; and

15 “(ii) access to services provided by partici-
16 pants in the Outreach Program and to informa-
17 tion available through the outreach network
18 servicing the Outreach Program; and

19 “(C) evaluating the need for and the benefits of
20 a National Conference of States on Technology Ex-
21 tension, similar in structure to the National Con-
22 ference on Weights and Measures, and, if the Sec-
23 retary determines that such a Conference is advis-
24 able, developing, in consultation with the States and
25 other interested parties, a plan for the establish-

1 ment, operation, funding, and evaluation of such a
2 Conference.

3 “(2) Within 1 year after the date of enactment of
4 this title, the Secretary, in consultation with the Under
5 Secretary, the Director, and the Department of Commerce
6 Technology Advisory Board, shall prepare and submit to
7 the Congress a 5-year plan for implementing the Outreach
8 Program and the outreach network and clearinghouse es-
9 tablished under subsections (d) and (e), respectively. Such
10 5-year plan shall identify appropriate methods for expand-
11 ing the Outreach Program in a geographically balanced
12 manner. Such 5-year plan shall include a detailed imple-
13 mentation plan and cost estimates and shall take into con-
14 sideration and build on the report submitted under para-
15 graph (1).

16 “(3) Beginning with first year after submission of the
17 5-year plan under paragraph (2), the Secretary shall an-
18 nually report to the Congress, at the time of the Presi-
19 dent’s annual budget request to Congress, on—

20 “(A) progress made in carrying out this section
21 during the preceding fiscal year;

22 “(B) changes proposed to the 5-year plan;

23 “(C) performance in adhering to schedules; and

1 “(D) any recommendations for legislative
2 changes necessary to enhance the Outreach Pro-
3 gram.

4 The report under this paragraph submitted at the end of
5 the fourth year of operation of the Outreach Program
6 shall include recommendations on whether to terminate
7 the Outreach Program or extend it for an additional pe-
8 riod not to exceed 5 years.”.

9 **SEC. 205. ADVANCED MANUFACTURING TECHNOLOGY DE-**
10 **VELOPMENT PROGRAM.**

11 Title III of the Stevenson-Wydler Technology Innova-
12 tion Act of 1980, as added by sections 202, 203, and 204
13 of this Act, is further amended by adding at the end the
14 following new section:

15 **“SEC. 304. ADVANCED MANUFACTURING TECHNOLOGY DE-**
16 **VELOPMENT PROGRAM.**

17 “(a) ESTABLISHMENT.—The Secretary, through the
18 Under Secretary and the Director, shall establish an Ad-
19 vanced Manufacturing Technology Development Program
20 which shall include projects to develop advanced manufac-
21 turing systems, networks, and electronic data exchange.

22 “(b) PURPOSE.—The purpose of the Advanced Manu-
23 facturing Technology Development Program is to create
24 collaborative multiyear technology development programs
25 involving United States industry and, as appropriate,

1 other Federal agencies and laboratories, the States, work-
2 er organizations, universities and colleges, and other inter-
3 ested persons, in order to develop, refine, test, and trans-
4 fer design and manufacturing technologies and associated
5 applications, including advanced computer integration and
6 electronic networks for manufacturing information ex-
7 change.

8 “(c) PROGRAM COMPONENTS.—The Advanced Manu-
9 facturing Technology Development Program shall in-
10 clude—

11 “(1) the advanced manufacturing research and
12 development activities at the Institute; and

13 “(2) one or more technology development
14 testbeds within the United States, selected in ac-
15 cordance with procedures, including cost sharing, es-
16 tablished for the Advanced Technology Program es-
17 tablished under section 28 of the National Institute
18 of Standards and Technology Act (15 U.S.C. 278n),
19 whose purpose shall be to develop, refine, test, and
20 transfer advanced manufacturing, data exchange,
21 and networking technologies and associated applica-
22 tions.

23 “(d) FUNCTIONS AND ACTIVITIES.—The Advanced
24 Manufacturing Technology Development Program, under

1 the coordination of the Secretary, through the Director,
2 shall—

3 “(1) test and, as appropriate, facilitate and
4 support the development of, the equipment, com-
5 puter software, and systems integration necessary
6 for the successful operation within the United States
7 of advanced design and manufacturing systems and
8 associated electronic networks;

9 “(2) establish at the Institute and the tech-
10 nology development testbed or testbeds—

11 “(A) prototype advanced computer-inte-
12 grated manufacturing systems; and

13 “(B) prototype electronic networks linking
14 manufacturing systems;

15 “(3) assist industry to develop voluntary con-
16 sensus standards relevant to advanced computer-in-
17 tegrated manufacturing operations, including stand-
18 ards for networks, electronic data interchange, and
19 digital product data specifications;

20 “(4) help to make high-performance computing
21 and networking technologies an integral part of de-
22 sign and production processes where appropriate;

23 “(5) conduct research to identify and overcome
24 technical barriers to the successful and cost-effective
25 operation of advanced manufacturing systems and

1 networks and to promote and facilitate electronic
2 data exchange;

3 “(6) facilitate industry efforts to develop and
4 test new applications for manufacturing systems,
5 networks, and information exchange;

6 “(7) involve in the Advanced Manufacturing
7 Technology Development Program, to the maximum
8 extent practicable, both those United States manu-
9 facturers which make manufacturing technology and
10 related computer equipment and software, and com-
11 panies which buy such technology, equipment and
12 software;

13 “(8) identify training needs, as appropriate, for
14 company managers, engineers, and employees in the
15 operation and applications of advanced manufactur-
16 ing technologies and networks, with particular em-
17 phasis on training for production workers in the ef-
18 fective use of advanced manufacturing technology;

19 “(9) work with private industry, universities,
20 and other interested parties to develop standards,
21 tools, and techniques for the use of advanced com-
22 puter-based training systems, including multi-media
23 and interactive learning technologies;

24 “(10) involve small and medium-sized manufac-
25 turers in its activities;

1 “(11) exchange information and personnel, as
2 appropriate, between the technology development
3 testbeds and the outreach network created under
4 section 303(d); and

5 “(12) coordinate its activities with the National
6 High-Performance Computing Program described in
7 section 101 of the High-Performance Computing Act
8 of 1991 (15 U.S.C. 5511) to ensure that both pro-
9 grams are complementary and compatible.

10 “(e) TESTBED AWARDS.—(1) In selecting applicants
11 to receive awards under subsection (c)(2) of this section,
12 the Secretary shall give preferential consideration to appli-
13 cants that have existing computer expertise in manufac-
14 turing applications and the ability to diffuse such expertise
15 into industry, and that, in the case of joint research and
16 development ventures, include both suppliers and users of
17 advanced manufacturing technology.

18 “(2) An industry-led joint research and development
19 venture applying for an award under subsection (c)(2) of
20 this section may include one or more State research orga-
21 nizations, universities, independent research organiza-
22 tions, or Regional Centers for the Transfer of Manufactur-
23 ing Technology (as created under section 25 of the Na-
24 tional Institute of Standards and Technology Act) and

1 other organizations as the Secretary considers appro-
2 priate.

3 “(f) ADVICE AND ASSISTANCE.—(1) Within 6 months
4 after the date of enactment of this title, and before any
5 request for proposals is issued, the Secretary shall hold
6 one or more workshops to solicit advice from United
7 States industry and from other Federal agencies, particu-
8 larly the Department of Defense, regarding the specific
9 missions and activities of the testbeds.

10 “(2) The Secretary shall, to the greatest extent pos-
11 sible, coordinate activities under this section with activities
12 of other Federal agencies and initiatives relating to Com-
13 puter-Aided Acquisition and Logistics Support, electronic
14 data interchange, flexible computer-integrated manufac-
15 turing, and enterprise integration.

16 “(3) The Secretary may request and accept funds,
17 facilities, equipment, or personnel from other Federal
18 agencies in order to carry out responsibilities under this
19 section.

20 “(g) APPLICATION OF ANTITRUST LAWS.—Nothing
21 in this section shall be construed to create any immunity
22 to any civil or criminal action under any Federal or State
23 antitrust law, or to alter or restrict in any manner the
24 applicability of any Federal or State antitrust law.”.

1 **SEC. 206. MISCELLANEOUS AND CONFORMING AMEND-**
2 **MENTS.**

3 (a) DEFINITIONS.—Section 4 of the Stevenson-
4 Wydler Technology Innovation Act of 1980 (15 U.S.C.
5 3703) is amended by adding at the end the following new
6 paragraphs:

7 “(14) ‘Director’ means the Director of the Na-
8 tional Institute of Standards and Technology.

9 “(15) ‘Institute’ means the National Institute
10 of Standards and Technology.

11 “(16) ‘Assistant Secretary’ means the Assistant
12 Secretary of Commerce for Technology Policy.

13 “(17) ‘Advanced manufacturing technology’
14 means—

15 “(A) numerically-controlled machine tools,
16 robots, automated process control equipment,
17 computerized flexible manufacturing systems,
18 associated computer software, and other tech-
19 nology for improving manufacturing and indus-
20 trial production of goods, including bio-
21 technology products, which advance the state-
22 of-the-art; or

23 “(B) novel techniques and processes not
24 previously generally available that—

25 “(i) improve manufacturing quality,
26 productivity, and practices, including engi-

1 neering design, quality assurance, concur-
2 rent engineering, continuous process pro-
3 duction technology, inventory management,
4 upgraded worker skills, and communica-
5 tions with customers and suppliers; or

6 “(ii) promote sustainable economic
7 growth.

8 “(18) ‘Modern technology’ means the best avail-
9 able proven technology, techniques, and processes
10 appropriate to enhancing the productivity of manu-
11 facturers or to promoting sustainable economic
12 growth.

13 “(19) ‘Sustainable economic growth’ means eco-
14 nomic growth that enhances the national quality of
15 life and preserves environmental integrity.

16 “(20) ‘United States manufacturer’ means a
17 company described in section 28(d)(9)(B) of the Na-
18 tional Institute of Standards and Technology Act
19 (15 U.S.C. 278n(d)(9)(B)) that is engaged in manu-
20 facturing activities.

21 “(21) ‘Benchmarking’ means the assessment of
22 foreign science and technology capabilities relative to
23 comparable United States capabilities.”.

1 (b) REDESIGNATIONS.—The Stevenson-Wydler Tech-
2 nology Innovation Act of 1980 (15 U.S.C. 3701 et seq.)
3 is amended—

4 (1) by inserting immediately after section 4 the
5 following new title heading:

6 **“TITLE I—DEPARTMENT OF COMMERCE**
7 **AND RELATED PROGRAMS”;**

8 (2) by redesignating sections 5 through 10 as
9 sections 101 through 106, respectively;

10 (3) by striking section 21;

11 (4) by redesignating sections 16 through 20,
12 and 22, as sections 107 through 112, respectively;

13 (5) by inserting immediately after section 112
14 (as redesignated by paragraph (4) of this sub-
15 section) the following new title heading:

16 **“TITLE II—FEDERAL TECHNOLOGY**
17 **TRANSFER”;**

18 (6) by redesignating sections 11 through 15 as
19 sections 201 through 205, respectively;

20 (7) by redesignating section 23 as section 206;

21 (8) in section 4—

22 (A) by striking “section 5” each place it
23 appears and inserting in lieu thereof “section
24 101”;

1 (B) in paragraphs (4) and (6), by striking
2 “section 6” and “section 8” each place they ap-
3 pear and inserting in lieu thereof “section 102”
4 and “section 104”, respectively; and

5 (C) in paragraph (13), by striking “section
6 6” and inserting in lieu thereof “section 102”;

7 (9) in section 105 (as redesignated by para-
8 graph (2) of this subsection) by striking “section 6”
9 each place it appears and inserting in lieu thereof
10 “section 102”;

11 (10) in section 106(d) (as redesignated by para-
12 graph (2) of this subsection) by striking “7, 9, 11,
13 15, 17, or 20” and inserting in lieu thereof “103,
14 105, 108, 111, 201, or 205”;

15 (11) in section 202(b) (as redesignated by para-
16 graph (6) of this subsection) by striking “section
17 14” and inserting in lieu thereof “section 204”;

18 (12) in section 204(a)(1) (as redesignated by
19 paragraph (6) of this subsection) by striking “sec-
20 tion 12” and inserting in lieu thereof “section 202”;

21 (13) in section 112 (as redesignated by para-
22 graph (4) of this subsection) by striking “sections
23 11, 12, and 13” and inserting in lieu thereof “sec-
24 tions 201, 202, and 203”;

1 (14) in section 206 (as redesignated by para-
2 graph (7) of this subsection)—

3 (A) by striking “section 11(b)” in sub-
4 section (a)(2) and inserting in lieu thereof “sec-
5 tion 201(b)”;

6 (B) by striking “section 6(d)” in sub-
7 section (b) and inserting in lieu thereof “section
8 102(d)”;

9 (15) by adding at the end of section 201 (as re-
10 designated by paragraph (6) of this subsection) the
11 following new subsection:

12 “(j) **ADDITIONAL TECHNOLOGY TRANSFER MECHA-**
13 **NISMS.**—In addition to the technology transfer mecha-
14 nisms set forth in this section and section 202 of this Act,
15 the heads of Federal departments and agencies also may
16 transfer technologies through the technology transfer and
17 extension programs of the Department of Commerce and
18 the Department of Defense.”.

19 **SEC. 207. MANUFACTURING TECHNOLOGY CENTERS.**

20 Section 25 of the National Institute of Standards and
21 Technology Act (15 U.S.C. 278k), is amended—

22 (1) by amending the section heading to read as
23 follows: “**MANUFACTURING TECHNOLOGY**
24 **CENTERS**”;

1 (2) in subsection (c)(5), by striking “which are
2 designed” and all that follows through “operation of
3 a Center” and inserting in lieu thereof “to a maxi-
4 mum of one-third Federal funding. Each center
5 which receives financial assistance under this section
6 shall be evaluated during its sixth year of operation,
7 and at such subsequent times as the Secretary con-
8 siders appropriate, by an evaluation panel appointed
9 by the Secretary in the same manner as was the
10 evaluation panel previously appointed. The Secretary
11 shall not provide funding for additional years of the
12 Center’s operation unless the evaluation is positive
13 and the Secretary finds that continuation of funding
14 furtheres the goals of the Department. Such addi-
15 tional Federal funding shall not exceed one-third of
16 the cost of the Center’s operations”;

17 (3) by striking subsection (d); and

18 (4) by adding at the end the following new sub-
19 sections:

20 “(d) If a Center receives a positive evaluation during
21 its third year of operation, the Director may, any time
22 after that evaluation, contract with the Center to provide
23 additional technology extension or transfer services above
24 and beyond the baseline activities of the Center. Such ad-

1 ditional services may include, but are not necessarily lim-
2 ited to, the development and operation of the following:

3 “(1) Programs to assist small and medium-
4 sized manufacturers and their employees in the Cen-
5 ter’s region to learn and apply the technologies,
6 techniques, and processes associated with systems
7 management technology, electronic data exchange, or
8 improving manufacturing productivity.

9 “(2) Services focused on the testing, develop-
10 ment, and application of manufacturing and process
11 technologies within specific technical fields such as
12 advanced materials or electronics fabrication for the
13 purpose of assisting United States companies, both
14 large and small and both within the Center’s original
15 service region and in other regions, to improve man-
16 ufacturing, product design, workforce training, and
17 production in those specific technical fields.

18 “(3) Industry-led demonstration programs that
19 explore the value of innovative nonprofit manufac-
20 turing technology consortia to provide ongoing re-
21 search, technology transfer, and worker training as-
22 sistance for industrial members. An award under
23 this paragraph shall be for no more than \$500,000
24 per year, and shall be subject to renewal after a 1-
25 year demonstration period.

1 “(e) In addition to any assistance provided or con-
2 tracts entered into with a Center under this section, the
3 Director is authorized to make separate and smaller
4 awards, through a competitive process, to nonprofit orga-
5 nizations which wish to work with a Center. Such awards
6 shall be for the purpose of enabling those organizations
7 to provide supplemental outreach services, in collaboration
8 with the Center, to small and medium-sized manufacturers
9 located in parts of the region served by the Center which
10 are not easily accessible to the Center and which are not
11 served by any other manufacturing outreach center. Orga-
12 nizations which receive such awards shall be known as
13 Local Manufacturing Offices. In reviewing applications,
14 the Director shall consider the needs of rural as well as
15 urban manufacturers. No single award for a Local Manu-
16 facturing Office shall be for more than three years, awards
17 shall be renewable through the competitive awards proc-
18 ess, and no award shall be made unless the applicant pro-
19 vides matching funds at least equal to the amount received
20 under this section.

21 “(f) In carrying out this section, the Director shall
22 coordinate his efforts with the plans for the National
23 Technology Outreach Program established under section
24 303 of the Stevenson-Wydler Technology Innovation Act
25 of 1980.”.

1 **SEC. 208. STATE TECHNOLOGY EXTENSION PROGRAM.**

2 (a) ESTABLISHMENT.—Section 26(a) of the National
3 Institute of Standards and Technology Act (15 U.S.C.
4 2781(a)), is amended—

5 (1) by inserting immediately after “(a)” the fol-
6 lowing new sentence: “There is established within
7 the Institute a State Technology Extension Pro-
8 gram.”; and

9 (2) by inserting “through that Program” imme-
10 diately after “technical assistance”.

11 (b) ADDITIONAL AUTHORITIES.—Section 26 of the
12 National Institute of Standards and Technology Act (15
13 U.S.C. 2781) is amended by adding at the end the follow-
14 ing new subsection:

15 “(c) In addition to the general authorities listed in
16 subsection (b) of this section, the State Technology Exten-
17 sion Program also may, through merit-based competitive
18 review processes—

19 “(1) make awards to States and conduct work-
20 shops, pursuant to section 5121(b) of the Omnibus
21 Trade and Competitiveness Act of 1988, in order to
22 help States improve their planning and coordination
23 of technology extension activities;

24 “(2) support technology demonstration projects
25 to help States provide technical assistance and serv-

1 ices to small- and medium-sized manufacturers that
2 will improve their productivity and competitiveness;

3 “(3) support State efforts to develop and test
4 innovative ways to help small and medium-sized
5 manufacturers improve their technical capabilities;

6 “(4) support State efforts designed to help
7 small and medium-sized manufacturers in rural as
8 well as urban areas adopt modern manufacturing
9 technologies;

10 “(5) support State efforts to assist interested
11 defense manufacturing firms to adapt to modern or
12 advanced manufacturing technologies as they con-
13 vert to nondefense or dual-use purposes;

14 “(6) support worker technology education pro-
15 grams in the States at institutions such as research
16 universities, community colleges, labor education
17 centers, labor-management committees, and worker
18 organizations in production technologies critical to
19 the Nation’s future, with an emphasis on high-per-
20 formance work systems, the skills necessary to use
21 modern or advanced manufacturing systems well;
22 and

23 “(7) help States develop programs to train per-
24 sonnel who in turn can provide technical skills to

1 managers and workers of United States manufactur-
2 ers.”.

3 **Subtitle B—National Science Foun-**
4 **ation Manufacturing Programs**

5 **SEC. 211. ROLE OF THE NATIONAL SCIENCE FOUNDATION**
6 **IN MANUFACTURING.**

7 The Director of the National Science Foundation,
8 after appropriate consultation with the Secretary, the
9 Under Secretary, and the Director, shall—

10 (1) work with United States industry to identify
11 areas of research in advanced manufacturing tech-
12 nologies and practices that offer the potential to im-
13 prove United States productivity, competitiveness,
14 employment, and sustainable economic growth;

15 (2) support research at United States univer-
16 sities to improve advanced manufacturing tech-
17 nologies and practices; and

18 (3) work with the Technology Administration
19 and the Institute and, as appropriate, other Federal
20 agencies to accelerate the transfer to United States
21 industry of manufacturing research and innovations
22 developed at universities.

1 **SEC. 212. ENGINEERING AND COOPERATIVE RESEARCH**
2 **CENTERS.**

3 The Director of the National Science Foundation
4 shall strengthen and expand the number of Engineering
5 Research Centers and strengthen and expand the Indus-
6 try/University Cooperative Research Centers Program
7 with the goal of increasing the engineering talent base
8 versed in technologies critical to the Nation's future, with
9 emphasis on advanced manufacturing technology and
10 practices, and of advancing fundamental engineering
11 knowledge in these technologies, including biotechnology.
12 At least one Engineering Research Center shall have a re-
13 search and education focus on the concerns of United
14 States manufacturers, including small- and medium-sized
15 firms that are trying to modernize their operations.
16 Awards under this section shall be made on a competitive,
17 merit review basis and on terms and conditions the Direc-
18 tor may prescribe to ensure that the purposes for which
19 the award is made are satisfied. Such awards may include
20 support for acquisition of instrumentation, equipment,
21 and facilities related to the research and education activi-
22 ties of the Centers and support for undergraduate stu-
23 dents to participate in the activities of the Centers.

1 **SEC. 213. MANUFACTURING TRAINEESHIPS AND FELLOW-**
2 **SHIPS.**

3 (a) GRADUATE TRAINEESHIPS.—The Director of the
4 National Science Foundation, in consultation with the
5 Secretary, may establish a program to provide traineeships
6 to graduate students at institutions of higher education
7 within the United States who choose to pursue masters
8 or doctoral degrees in manufacturing engineering.

9 (b) MANUFACTURING MANAGERS IN THE CLASS-
10 ROOM PROGRAM.—The Director of the National Science
11 Foundation, in consultation with the Secretary, may es-
12 tablish a program to provide fellowships, on a cost-shared
13 basis, to individuals from industry with experience in man-
14 ufacturing to serve for 1 or 2 years as instructors in man-
15 ufacturing at 2-year community and technical colleges in
16 the United States. In selecting fellows, the Director of the
17 National Science Foundation shall place special emphasis
18 on supporting individuals who not only have expertise and
19 practicable experience in manufacturing but who also will
20 work to foster cooperation between 2-year colleges and
21 nearby manufacturing firms.

22 **SEC. 214. TOTAL QUALITY MANAGEMENT.**

23 The Director of the National Science Foundation, in
24 consultation with the Secretary, the Under Secretary, and
25 the Director, may establish a program to develop innova-
26 tive curricula, courses, and materials for use by institu-

1 tions of higher education for instruction in total quality
2 management and related management practices, in order
3 to help improve the productivity of United States industry.

4 **TITLE III—CRITICAL**
5 **TECHNOLOGIES**
6 **Subtitle A—Benchmarking Science**
7 **and Technology**

8 **SEC. 301. BENCHMARKING UNITED STATES SCIENCE AND**
9 **TECHNOLOGY AGAINST FOREIGN CAPABILI-**
10 **TIES.**

11 The Stevenson-Wydler Technology Innovation Act of
12 1980, as amended by this Act, is further amended by add-
13 ing at the end the following new title:

14 **“TITLE IV—BENCHMARKING**
15 **SCIENCE AND TECHNOLOGY**

16 **“SEC. 401. FINDINGS AND PURPOSES.**

17 “(a) FINDINGS.—As other countries have gained
18 strength in new technologies and as centers of technical
19 excellence have developed around the world, it has become
20 increasingly important to assess United States scientific
21 and technological capabilities relative to those of other
22 global competitors and to make this information available
23 to United States researchers and policymakers in govern-
24 ment and industry.

1 “(b) PURPOSES.—The purposes of this title are to
2 conduct and coordinate the collection, evaluation, and dis-
3 semination of information on foreign science and tech-
4 nology, specifically information assessing foreign capabili-
5 ties relative to comparable United States capabilities.

6 **“SEC. 402. PROGRAM RESPONSIBILITIES.**

7 “(a) DEPARTMENT OF COMMERCE.—The Depart-
8 ment of Commerce shall be the lead agency of the Federal
9 Government in making available information for assessing
10 the comparative strength of United States scientific and
11 technological capabilities. The Secretary, acting through
12 the Under Secretary, shall—

13 “(1) act as a focal point within the Federal
14 Government for collection and dissemination to
15 United States industry of foreign process and prod-
16 uct research and technologies of importance to Unit-
17 ed States Government and industry, and of related
18 technology assessment activities already underway in
19 the Federal Government;

20 “(2) provide leadership in making sure the in-
21 formation and analyses are easily accessible in elec-
22 tronic form, and ensure, consistent with confidential-
23 ity and security considerations, that they will be
24 readily available through the clearinghouse to the

1 outreach network created under section 303 of this
2 Act;

3 “(3) work, in coordination with the Federal Co-
4 ordinating Council for Science Engineering and
5 Technology, as appropriate, to streamline Federal
6 Government procedures for collecting, evaluating,
7 and disseminating information benchmarking foreign
8 scientific and technological information and to iden-
9 tify roadblocks to collection, evaluation, or dissemi-
10 nation of foreign science and technology information;
11 and

12 “(4) Conduct appropriate planning regarding
13 long-term collection, evaluation, dissemination, and
14 application of foreign science and technology infor-
15 mation.

16 “(b) OTHER AGENCIES.—All executive departments
17 and agencies shall assist the Secretary in carrying out this
18 title.

19 “(c) ESTABLISHMENT OF THE OFFICE OF TECH-
20 NOLOGY MONITORING AND ASSESSMENT.—The Secretary,
21 acting through the Under Secretary, shall establish an of-
22 fice within the Technology Administration to carry out
23 this title. Such office shall be known as the Office of Tech-
24 nology Monitoring and Assessment, and is authorized to—

1 “(1) arrange for access to benchmarking infor-
2 mation, in electronic form or otherwise, by interested
3 parties;

4 “(2) direct and fund the collection of additional
5 information needed for benchmarking;

6 “(3) direct and fund analysis of foreign re-
7 search and development activities and technological
8 capabilities, particularly in those areas where the
9 United States is considered to be at par or lagging
10 foreign capabilities or where foreign capabilities are
11 projected to overtake those of the United States;

12 “(4) enter into joint ventures authorized under
13 section 212(a)(1)(A) of Public Law 100–519 (15
14 U.S.C. 3704b(a)(1)(a)) in carrying out this title;

15 “(5) establish collaborative programs to actively
16 disseminate benchmarking information to policy, in-
17 dustrial, labor, educational, research, and other or-
18 ganizations, and provide a minority share of funding
19 necessary for such programs;

20 “(6) consult with private sector groups, as ap-
21 propriate, on the usefulness of available foreign sci-
22 entific and technological information and on the
23 need for additional information and assessment ac-
24 tivities and consult with other affected agencies to
25 promote consistent and useful collection, assessment,

1 and analysis of foreign technological information;
2 and

3 “(7) establish and administer the fellowship
4 program described in subsection (d).

5 “(d) FELLOWSHIP PROGRAM.—(1) The Office of
6 Technology Monitoring and Assessment shall establish
7 and administer a fellowship program to support Tech-
8 nology Fellows to assist the Under Secretary in carrying
9 out activities under this title relating to those countries
10 that are major competitors of the United States in critical
11 technologies, and to identify opportunities for technology
12 transfer to the United States or technological collabora-
13 tion for United States industries.

14 “(2) Technology Fellows shall—

15 “(A) regularly report to the Office of Tech-
16 nology Monitoring and Assessment on work planned,
17 in progress, and accomplished; and

18 “(B) provide support to the Office of Tech-
19 nology Monitoring and Assessment as requested by
20 that Office.

21 “(3) Fellowships awarded under the program estab-
22 lished under this subsection shall—

23 “(A) be awarded for a period of 2 years;

24 “(B) include a stipend equivalent to comparable
25 wages in the engineering industry; and

1 “(C) include provisions for living and office ar-
2 rangements in the host country.

3 “(4) Only individuals who—

4 “(A) have at least a bachelors degree in engi-
5 neering or science; and

6 “(B) have at least 5 years of work experience
7 in manufacturing or technology development,
8 shall be eligible for a fellowship under this program.”.

9 **Subtitle B—Advanced Technology**
10 **Program**

11 **SEC. 321. DEVELOPMENT OF PROGRAM PLAN.**

12 The Secretary, acting through the Under Secretary
13 and the Director, shall, within 6 months after the date
14 of enactment of this Act, submit to the Congress a plan
15 for the expansion of the Advanced Technology Program
16 established under section 28 of the National Institute of
17 Standards and Technology Act (15 U.S.C. 278n), with
18 specific consideration given to—

19 (1) closer coordination and cooperation with the
20 Defense Advanced Research Projects Agency and
21 other Federal research and development agencies as
22 appropriate;

23 (2) establishment of staff positions that can be
24 filled by private sector industrial or technical experts
25 for a period of one to two years;

1 (3) broadening of the scope of the program to
2 include and focus on as many critical technologies
3 identified pursuant to section 603(d) of the National
4 Science and Technology Policy, Organization, and
5 Priorities Act of 1976 (42 U.S.C. 6683(d)) as is ap-
6 propriate; and

7 (4) changes that may be needed when annual
8 funds available for grants under the Program reach
9 levels of \$200,000,000 and \$500,000,000.

10 **SEC. 322. LARGE SCALE RESEARCH AND DEVELOPMENT**
11 **CONSORTIA.**

12 (a) ESTABLISHMENT OF PROGRAM.—The Secretary,
13 acting through the Director, shall establish a program for
14 the support of large-scale research and development con-
15 sortia.

16 (b) SELECTION PROCEDURES AND REQUIRE-
17 MENTS.—

18 (1) GENERAL RULE.—Except as provided in
19 paragraph (2), the selection and making of awards
20 to large-scale research and development consortia
21 under this section shall be carried out in accordance
22 with procedures and requirements applicable to joint
23 ventures described in section 28(b)(1) of the Na-
24 tional Institute of Standards and Technology Act
25 (15 U.S.C. 278n(b)(1)).

1 (2) EXCEPTION.—Notwithstanding section
2 28(b)(1)(B)(ii) of the National Institute of Stand-
3 ards and Technology Act (15 U.S.C.
4 278n(b)(1)(B)(ii)), for purposes of awards made
5 under this section, a minority share of the cost of
6 large-scale research and development consortia may
7 be provided by the Federal Government for up to 7
8 years.

9 (c) PROJECT SELECTION.—Preference shall be given
10 for selection under this section to large-scale research and
11 development consortia that would not be undertaken by
12 the private sector without a Federal investment of
13 \$50,000,000 or more per year.

14 (d) SELECTION CRITERIA.—In selecting large-scale
15 research and development consortia under this section, the
16 Secretary, acting through the Director, shall give priority
17 to consortia that best achieve the following goals:

18 (1) Significant contribution to broad economic
19 growth.

20 (2) Significant contribution to the national
21 quality of life.

22 (3) Significant contribution to environmental
23 sustainability.

24 (4) Promotion of private sector partnership
25 with Federal research and development activities.

1 (5) Substantial improvement of the inter-
2 national competitiveness of United States industry.

3 (6) Involvement of several competitor firms in
4 the development of the key consortia technologies.

5 (7) Strengthening of the linkages between do-
6 mestic suppliers, systems developers, and end-users.

7 (8) Participation by domestic end-users from
8 several industrial sectors.

9 (9) Promotion of the diffusion of
10 nonproprietary information to United States indus-
11 try through strong links with organizations such as
12 trade and professional groups.

13 (e) INDEPENDENT TECHNICAL REVIEW.—The Sec-
14 retary, through the Director, shall provide for periodic
15 technical review of large-scale research and development
16 consortia receiving support under this section, by the Na-
17 tional Institute of Standards and Technology, other na-
18 tional laboratories, the Department of Commerce Tech-
19 nology Advisory Board established under section 401 of
20 this Act, or independent research organizations that are
21 not a participant in the large-scale research and develop-
22 ment consortium being reviewed. Such review shall be for
23 the purpose of determining progress toward the objectives
24 for which such large-scale research and development con-
25 sortium was formed. The Secretary, through the Director,

1 shall transmit to the Committee on Science, Space, and
2 Technology of the House of Representatives and the Com-
3 mittee on Commerce, Science, and Transportation of the
4 Senate an annual status report summarizing significant
5 accomplishments in achieving those objectives.

6 (f) DEFINITION.—For purposes of this section, the
7 term “large-scale research and development consortia”
8 means a joint venture described in section 28(b)(1) of the
9 National Institute of Standards and Technology Act (15
10 U.S.C. 278n(b)(1)).

11 (g) ANTITRUST.—The National Cooperative Research
12 Act of 1984 (15 U.S.C. 4301 et seq.) shall apply to large-
13 scale research and development consortia selected under
14 this section.

15 **SEC. 323. TECHNICAL AMENDMENTS.**

16 Section 28 of the National Institute of Standards and
17 Technology Act (15 U.S.C. 278n) is amended—

18 (1) in subsection (b)(1)(B)(ii), by striking “pro-
19 vision of a minority share of the cost of such joint
20 ventures for up to 5 years” and inserting in lieu
21 thereof “the option of provision of either—

22 “(I) a minority share of the cost of
23 such joint ventures for up to 5 years; or

1 “(II) only direct costs, and not indi-
2 rect costs, profits, or management fees, for
3 up to 5 years”; and

4 (2) by adding at the end the following new sub-
5 section:

6 “(k) Notwithstanding subsections (b)(1)(B)(ii) and
7 (d)(3), the Director may grant an extension of not to ex-
8 ceed 6 months beyond the deadlines established under
9 those subsections for joint venture and single applicant
10 awardees to expend Federal funds to complete their
11 projects, if such extension may be granted with no addi-
12 tional cost to the Federal Government.”.

13 **Subtitle C—Civilian Technology**
14 **Loan Program**

15 **SEC. 331. LOAN AND LOAN GUARANTEE AUTHORITY.**

16 To the extent provided in appropriation Acts, the
17 Secretary, acting through the Under Secretary, may make,
18 or enter into agreements to make, loans and loan guaran-
19 tees, either directly or in cooperation with other lenders,
20 to small- and medium-sized qualified business concerns in
21 accordance with this subtitle.

22 **SEC. 332. TERMS AND CONDITIONS.**

23 Loans and loan guarantees made under section 331
24 shall be in such form and manner and under such terms
25 and conditions as the Under Secretary may prescribe by

1 regulation, and shall be subject to the following terms and
2 conditions:

3 (1) Loans awarded or guaranteed shall be for
4 sound financing of research, development, dem-
5 onstration, or utilization of critical technologies or
6 advanced technologies.

7 (2) Loans shall only be awarded or guaranteed
8 if the Under Secretary finds that—

9 (A) sufficient collateral is pledged; or

10 (B) the borrower is sufficiently financially
11 sound,

12 to reasonably ensure repayment.

13 (3) Loans awarded or guaranteed may not ex-
14 ceed 50 percent of total eligible project costs. For
15 purposes of this section, the term “eligible project
16 costs” shall be defined by the Under Secretary by
17 regulation.

18 (4) The total principal amount of outstanding
19 loans awarded or guaranteed to a single borrower
20 may not exceed \$2,000,000 at any time.

21 (5) Loans awarded or guaranteed shall be sen-
22 ior to any other debt obligations of the borrower, ex-
23 cept to the extent that the Under Secretary consid-
24 ers necessary to accommodate the borrower’s ability
25 to raise sufficient debt or equity capital from non-

1 Federal sources to pay the balance of eligible project
2 costs that are not covered by such loans.

3 (6) Interest on a loan, or portion of a loan,
4 awarded or guaranteed by the Federal Government
5 under this subtitle shall be at a rate determined by
6 the Secretary of the Treasury, at the time such loan
7 is made, to equal the then current average market
8 yield on outstanding debt obligations of the United
9 States with remaining periods to maturity com-
10 parable to the maturity of such loan, plus an addi-
11 tional charge of up to 1 percent applied by the
12 Under Secretary to cover expected defaults and rea-
13 sonable administrative costs of carrying out this sub-
14 title. For purposes of this section, the term “de-
15 fault” shall be defined by the Under Secretary by
16 regulation.

17 (7) Except as provided in paragraph (8), the
18 maturity of loans awarded or guaranteed under this
19 subtitle may not be less than 2 years or greater
20 than—

21 (A) 10 years; or

22 (B) the useful life of property, plant,
23 equipment, or other assets, as determined by
24 the Secretary of the Treasury, which have been
25 pledged as collateral for such loan,

1 whichever is greater.

2 (8) The Under Secretary may extend the matu-
3 rity of or renew a loan or extend the guarantee of
4 a loan for additional periods, not to exceed 5 years,
5 only if such extension or renewal will aid in the or-
6 derly liquidation of such loan.

7 (9) Payment of interest on direct loans made by
8 the Federal Government under this subtitle may be
9 deferred by the borrower, upon approval by the
10 Under Secretary, only to the extent that the bor-
11 rower has established to the satisfaction of the
12 Under Secretary that the borrower has not realized
13 sufficient earnings and returns of capital to make
14 such payment without incurring undue financial
15 hardship, and that there is a reasonable prospect
16 that such loan and interest thereon will be repaid.

17 (10) The Under Secretary may guarantee pay-
18 ment of 100 percent of principal and interest on a
19 loan made under section 331.

20 (11) The Under Secretary may establish,
21 charge, and regulate fees to cover loan origination
22 and servicing costs that are reasonable and nec-
23 essary.

1 **SEC. 333. TECHNICAL ASSISTANCE FOR LENDERS AND BOR-**
2 **ROWERS.**

3 The Secretary, acting through the Under Secretary,
4 shall, upon request, provide technical assistance and serv-
5 ices, as appropriate and needed, to lenders and borrowers
6 under this subtitle, and shall ensure that such lenders and
7 borrowers have ready access to appropriate assistance
8 available under title III of the Stevenson-Wydler Tech-
9 nology Innovation Act of 1980, or under any other Act,
10 in order to aid such lenders and borrowers in achieving
11 the purposes described in section 332(1). The Secretary
12 may charge fees for technical assistance and services pro-
13 vided under this section in amounts sufficient to cover the
14 reasonable cost of such assistance and services. The Sec-
15 retary may waive such fees on a case-by-case basis. Fees
16 paid to the United States under this section shall be de-
17 posited in an account established by the Under Secretary
18 and shall be available solely for carrying out this subtitle,
19 to the extent provided in advance in appropriations Acts.

20 **SEC. 334. DEFINITIONS.**

21 For purposes of this subtitle, the terms “advanced
22 technologies”, “critical technologies”, and “qualified busi-
23 ness concern” have the meaning given such terms in sec-
24 tion 342 of this Act.

1 **Subtitle D—Civilian Technology**
2 **Development Program**

3 **SEC. 341. SHORT TITLE.**

4 This subtitle may be cited as the “Civilian Tech-
5 nology Development Act of 1993”.

6 **SEC. 342. DEFINITIONS.**

7 For purposes of this subtitle—

8 (1) the term “advanced technologies” means
9 technologies eligible for assistance under the Ad-
10 vanced Technology Program established under sec-
11 tion 28 of the National Institute of Standards and
12 Technology Act (15 U.S.C. 278n);

13 (2) the term “articles” means articles of incor-
14 poration for an incorporated body, and the func-
15 tional equivalent, or other similar documents speci-
16 fied by the Under Secretary, for other business enti-
17 ties;

18 (3) the term “critical technologies” means tech-
19 nologies identified as critical technologies pursuant
20 to section 603(d) of the National Science and Tech-
21 nology Policy, Organization, and Priorities Act of
22 1976 (42 U.S.C. 6683(d));

23 (4) the term “Department” means the Depart-
24 ment of Commerce;

1 (5) the term “executive agency” has the mean-
2 ing given such term in section 105 of title 5, United
3 States Code;

4 (6) the term “license” means a license issued
5 by the Under Secretary under section 345;

6 (7) the term “licensee” means a company li-
7 censed under section 345;

8 (8) the term “preferred securities” means pre-
9 ferred stock or a preferred limited partnership inter-
10 est or other similar security, as defined by the
11 Under Secretary by regulation;

12 (9) the term “private equity capital” means the
13 paid-in capital and paid-in surplus, on hand or le-
14 gally committed to be provided, of a licensee orga-
15 nized as a corporation, or the partnership capital, on
16 hand or legally committed to be provided, of a li-
17 censee organized as an unincorporated partnership,
18 but does not include any funds—

19 (A) borrowed by the licensee from any
20 source;

21 (B) obtained from the sale of preferred se-
22 curities; or

23 (C) derived directly or indirectly from any
24 Federal source;

1 (10) the term “qualified business concern”
2 means a United States company described in section
3 28(d)(9)(B) of the National Institute Standards and
4 Technology Act (15 U.S.C. 278n(d)(9)(B)), if—

5 (A) the business of such company includes
6 the pursuit, under the Small Business Innova-
7 tion Research (SBIR) program, of applications
8 described in section 9(e)(4)(C) of the Small
9 Business Act (15 U.S.C. 638(e)(4)(C));

10 (B) the principal business of such company
11 is the development or application of a critical
12 technology;

13 (C) such company is eligible for assistance
14 under the Advanced Technology Program
15 (ATP) established under section 28 of the Na-
16 tional Institute of Standards and Technology
17 Act (15 U.S.C. 278n); or

18 (D) such company is principally engaged in
19 the development or exploitation of inventions,
20 technological improvements, new processes, or
21 products not previously generally available
22 (within the meaning of section 851(e)(1) of the
23 Internal Revenue Code of 1986);

24 (11) the term “State” means several States, the
25 District of Columbia, the Commonwealth of Puerto

1 Rico, the Virgin Islands, Guam, American Samoa,
2 and the Commonwealth of the Northern Mariana Is-
3 lands, and any other territory or possession of the
4 United States;

5 (12) the term “State sponsored licensee” means
6 a company licensed under section 345 in which a
7 State or instrumentality of a State has at least a 25
8 percent investment interest in the private equity cap-
9 ital of such licensee;

10 (13) the term “university sponsored licensee”
11 means a company licensed under section 345 in
12 which a single university or consortium of univer-
13 sities has at least a 25 percent investment interest
14 in the private equity capital of such licensee; and

15 (14) the term “venture capital” means consid-
16 eration for such—

17 (A) common stock;

18 (B) preferred stock;

19 (C) subordinated debt with equity features
20 which may include equity warrants or rights to
21 convert into common stock and which provides
22 for interest payments contingent upon and lim-
23 ited to the extent of earnings; or

24 (D) other financing with subordination or
25 nonamortization characteristics,

1 as the Under Secretary determines to be substan-
2 tially similar to equity financing, issued by a quali-
3 fied business concern.

4 **SEC. 343. ESTABLISHMENT AND PURPOSE.**

5 (a) ESTABLISHMENT.—There is established within
6 the Technology Administration of the Department of Com-
7 merce a national program to stimulate and supplement the
8 availability of long-term investment capital for the forma-
9 tion, development, and growth of United States business
10 concerns that are engaged primarily in the development
11 or application of critical or other advanced technologies.
12 The Secretary, through the Under Secretary, shall,
13 through such program, provide for the selection, licensing,
14 monitoring, and financial and technical support of profes-
15 sionally managed technology investment companies which
16 in turn shall provide financial, management, and technical
17 assistance to qualified business concerns, with preference
18 given to satisfying the seed and early-stage financing
19 needs of such concerns that are not being met by other
20 sources on reasonable terms.

21 (b) PURPOSES.—The purposes of this subtitle are—

22 (1) to contribute to United States economic
23 competitiveness, employment, and prosperity;

1 (2) to promote the advancement, maturation,
2 and application of critical and other advanced tech-
3 nologies;

4 (3) to supplement and stimulate long-term in-
5 vestment in qualified business concerns; and

6 (4) to encourage and facilitate the formation
7 and growth of professionally managed technology in-
8 vestment companies that will give preference to sat-
9 isfying the capital needs of qualified business con-
10 cerns in the early stages of their development.

11 (c) RESPONSIBILITIES.—(1) In carrying out this sub-
12 title, the Secretary, acting through the Under Secretary,
13 and subject to the availability of appropriations, shall—

14 (A) consult with and, to the extent permitted by
15 law, utilize the capabilities of other executive agen-
16 cies, as appropriate, to ensure the efficient and ef-
17 fective implementation of this subtitle;

18 (B) explore, with other executive agencies, ways
19 to avoid duplication of effort by consolidating the
20 administration of the program established by this
21 subtitle with any other similar Federal program, and
22 as part of such consolidation may delegate adminis-
23 trative functions, as necessary and appropriate, to
24 another executive agency; and

1 (C) consult with the Secretary of Energy on all
2 policy matters related to the Civilian Technology De-
3 velopment Program that deal with development or
4 utilization of energy technologies.

5 (2) To the extent permitted by law, other executive
6 agencies shall assist the Under Secretary in carrying out
7 this subtitle.

8 (d) OFFICE OF TECHNOLOGY FINANCING.—There is
9 established an Office of Technology Financing in the
10 Technology Administration of the Department of Com-
11 merce to administer the program established under this
12 subtitle and the Civilian Technology Loan Program estab-
13 lished under subtitle C of this title and to conduct related
14 activities the Secretary may assign to such office.

15 **SEC. 344. ADVISORY COMMITTEE.**

16 (a) ESTABLISHMENT.—There is established a Civil-
17 ian Technology Development Advisory Committee (in this
18 section referred to as the “CTD Advisory Committee”).

19 (b) COMPOSITION.—The CTD Advisory Committee
20 shall be composed of 7 members, appointed by the Under
21 Secretary from among private individuals who, because of
22 their experience and accomplishments in technology devel-
23 opment, maturation, and adoption, business development,
24 venture capital, finance, or other relevant areas, are excep-
25 tionally qualified to perform the duties of the CTD Advi-

1 sory Committee. The Under Secretary shall designate 1
2 member to serve as chairman.

3 (c) DUTIES.—The duties of the CTD Advisory Com-
4 mittee shall include advising the Under Secretary on all
5 matters related to policy, planning, execution, and evalua-
6 tion of the program established under this subtitle.

7 (d) TERMINATION.—Section 14 of the Federal Advi-
8 sory Committee Act shall not apply to the CTD Advisory
9 Committee.

10 **SEC. 345. ORGANIZATION AND LICENSING.**

11 (a) IN GENERAL.—Any incorporated body, limited
12 partnership, or State instrumentality organized and char-
13 tered or otherwise existing under State law for the purpose
14 of performing the functions and conducting the activities
15 contemplated under this subtitle, that possesses the pow-
16 ers, capabilities, and expertise reasonably necessary to
17 perform such functions and conduct such activities, may
18 apply for a license under this subtitle in such form and
19 manner as the Under Secretary may prescribe.

20 (b) ARTICLES.—The articles of any applicant shall
21 specify in general terms the objects for which the applicant
22 is formed, the name assumed by such applicant, the area
23 or areas in which its operations are to be carried on, the
24 place where its principal office is to be located, and the
25 amount and classes of its shares of capital stock. Such

1 articles may contain any other provisions not inconsistent
2 with this subtitle that the applicant may see fit to adopt
3 for the regulation of its business and the conduct of its
4 affairs. Such articles and any amendments thereto adopt-
5 ed from time to time shall be subject to the approval of
6 the Under Secretary.

7 (c) BUSINESS PLAN.—The business plan of any ap-
8 plicant shall specify in general terms—

9 (1) how the applicant proposes to achieve the
10 objects for which it is formed, to operate and govern
11 its business, and to fulfill the purposes and satisfy
12 the requirements of this subtitle;

13 (2) the board members or general partners and
14 the management and professional staff of the appli-
15 cant, and the professional training, experience, rep-
16 utation, and investment performance record, if any,
17 of each such individual, along with a description of
18 the applicant's current and proposed management
19 structure;

20 (3) all current or committed private investors in
21 the applicant, together with the amount and convey-
22 ances associated with such investment, and appro-
23 priate background information on each private inves-
24 tor; and

1 (4) such other information as the Under Sec-
2 retary may require.

3 Such business plan and any material amendments thereto
4 adopted from time to time shall be subject to the approval
5 of the Under Secretary.

6 (d) APPROVAL OF ARTICLES AND BUSINESS PLAN;
7 LICENSING.—The articles and business plan of an appli-
8 cant for a license shall be forwarded to the Under Sec-
9 retary for consideration and approval or disapproval. In
10 determining whether to approve a prospective licensee’s
11 articles and business plan and permit it to operate under
12 the provisions of this subtitle, the Under Secretary shall
13 give due regard, among other things, to the general busi-
14 ness reputation, character, suitability, and demonstrated
15 ability, experience, and performance in the development,
16 growth, and financing of qualified business concerns, of
17 the proposed owners and management of the prospective
18 licensee, and the likelihood of successful operations of the
19 prospective licensee including adequate profitability and fi-
20 nancial soundness. After consideration of all relevant fac-
21 tors, if the Under Secretary approves the company’s arti-
22 cles and business plan and determines that the applicant
23 satisfies or will satisfy the requirements of this subtitle,
24 the Under Secretary may approve the company to operate

1 under the provisions of this subtitle and issue the company
2 a license for such operation.

3 **SEC. 346. CAPITAL AND MANAGEMENT REQUIREMENTS.**

4 (a) CAPITAL.—(1) The private equity capital of a li-
5 censee shall be adequate to ensure a reasonable prospect
6 that the licensee will be operated soundly and profitably,
7 and managed actively and prudently in accordance with
8 its articles and business plan. Such private equity capital
9 shall not be less than \$5,000,000, except that, in the case
10 of a State sponsored licensee or a university sponsored li-
11 censee, such private equity capital shall not be less than
12 \$2,500,000. At the time of issuance of a license, not less
13 than 75 percent of the private equity capital of the licensee
14 shall be available or committed to be available for new in-
15 vestment in accordance with this subtitle.

16 (2) Private and public pension funds may contribute
17 to the private equity capital of a licensee without restric-
18 tion as to the amount of such contribution.

19 (3) State and local government entities may contrib-
20 ute not more than 40 percent of the total private equity
21 capital of a licensee.

22 (4) The aggregate amount of shares in any such li-
23 censee or licensees which may be owned or controlled by
24 any stockholder, or by any group or class of stockholders,
25 may be limited by the Under Secretary.

1 (b) MANAGEMENT.—The management and oper-
2 ational control of a licensee shall be carried out by suitable
3 private individuals who possess the professional training,
4 experience, and capabilities reasonably necessary to
5 achieve the purposes of this subtitle.

6 **SEC. 347. FINANCING FOR LICENSEES.**

7 (a) AUTHORITY TO PURCHASE AND GUARANTEE
8 PREFERRED SECURITIES.—To encourage and facilitate
9 the formation and growth of licensees and qualified busi-
10 ness concerns, the Under Secretary may purchase or com-
11 mit to purchase nonvoting, nonparticipating preferred se-
12 curities with mandatory redemption issued by a licensee,
13 or guarantee, or commit to guarantee, the payment of 100
14 percent of the redemption price of and dividends on such
15 preferred securities, to the extent provided in appropria-
16 tions Acts, if the licensee has demonstrated to the satisfac-
17 tion of the Under Secretary that it is financially sound
18 and that it has complied with or will comply with the re-
19 quirements of this subtitle, the terms of its license, and
20 any rule, regulation, or order issued under this subtitle.
21 Such purchases and guarantees shall constitute direct
22 loans and loan guarantees within the meaning of para-
23 graphs (1) and (3) of section 502 of the Federal Credit
24 Reform Act of 1990, respectively. A trust or pool acting

1 on behalf of the Under Secretary may purchase preferred
2 securities that are guaranteed under this subsection.

3 (b) TERMS AND CONDITIONS OF PREFERRED SECURITIES.—(1) Guarantees and purchases of preferred securities, or commitments to make such guarantees and purchases, under this section may be made on such terms and conditions as the Under Secretary shall establish by regulation or set forth in contract to ensure compliance with this subtitle and to protect the interests of taxpayers and the United States in the event of default or otherwise. For purposes of this paragraph, the Under Secretary shall by regulation define the term “default”.

13 (2)(A) Except as provided in subparagraph (B), preferred securities issued under this section shall be senior in priority for all purposes to all non-Federal equity interests in a licensee unless the Under Secretary, in the exercise of reasonable investment prudence and in considering the financial soundness of the licensee, determines otherwise.

20 (B) The equity interests of a university or consortium of universities, or of a State or instrumentality of a State, in a licensee shall be equal in priority to Federal equity interests in such licensee for all purposes unless the Under Secretary, in the exercise of reasonable investment prudence,

1 dence and in considering the financial soundness of the
2 licensee, determines otherwise.

3 (3) Preferred securities issued under this section
4 shall be redeemed by the issuer not later than 10 years
5 after their date of issuance for an amount equal to 100
6 percent of the original issue price plus any accrued and
7 unpaid dividends. In order to facilitate the orderly liquida-
8 tion of a licensee's investments, redemption of such pre-
9 ferred securities may be extended by mutual consent for
10 no more than 5 years beyond such expiration date.

11 (4) Preferred securities issued under this section
12 shall pay dividends at a rate determined by the Secretary
13 of the Treasury at the time of issuance to equal the then
14 current average market yield on outstanding marketable
15 debt obligations of the United States with remaining peri-
16 ods to maturity comparable to the time to required re-
17 demption of such preferred securities, plus such additional
18 charge, if any, toward covering expected defaults and rea-
19 sonable administrative costs of carrying out this subtitle
20 as the Under Secretary may determine to be reasonable
21 and appropriate. Such additional charge shall not exceed
22 2 percent.

23 (5) Dividends on preferred securities issued under
24 this section shall be cumulative and preferred and paid
25 out of net realized earnings and returns of capital avail-

1 able for distribution, as defined by the Under Secretary
2 by regulation.

3 (6) The payment of dividends on preferred securities
4 issued under this section may be deferred by the issuer
5 until such time as, and to the extent that, the issuer real-
6 izes earnings and returns of capital available for distribu-
7 tion. Accumulated and unpaid dividends on such preferred
8 securities shall be paid by the issuer before or at the time
9 of redemption of the preferred securities and before any
10 distribution of net realized earnings and returns of capital
11 of the issuer to its non-Federal equity investors, except
12 as provided in subsection (e)(2) (B) and (C). With respect
13 to preferred securities issued under this section to a party
14 other than the Under Secretary, during the time of any
15 deferral under this paragraph, the Under Secretary shall
16 make, on behalf of the issuer, required dividend payments
17 to the holder of the preferred securities, its agents or as-
18 signs, or the appropriate central registration agent, if any.
19 The authority to make dividend payments provided in this
20 paragraph shall be limited to the extent of amounts pro-
21 vided in advance in appropriations Acts for such purposes.

22 (7) For purposes of this subsection, the term “divi-
23 dends” means dividends on preferred stock and returns
24 on preferred limited partnership interests or other similar

1 securities, as defined by the Under Secretary by regula-
2 tion.

3 (c) LIMITATIONS AND RESTRICTIONS.—(1) The total
4 principal amount of debt, as evidenced by notes, bonds,
5 debentures, or certificates of indebtedness, plus the total
6 face amount of preferred securities purchased or guaran-
7 teed by the Under Secretary under subsection (a), issued
8 and outstanding from a licensee shall not exceed 200 per-
9 cent of the private equity capital of the licensee.

10 (2) The total face amount of preferred securities pur-
11 chased or guaranteed by the Under Secretary under sub-
12 section (a) and outstanding from a licensee or a combina-
13 tion of licensees which are commonly controlled, as defined
14 and determined by the Under Secretary, shall not exceed
15 \$50,000,000.

16 (3)(A) If preferred securities issued under this sec-
17 tion are outstanding, then the issuing licensee shall be
18 subject to the following restrictions:

19 (i) The total principal amount of debt, as evi-
20 denced by notes, bonds, debentures, or certificates of
21 indebtedness, of a licensee issued and outstanding
22 may not exceed 50 percent of the private equity cap-
23 ital of the licensee.

24 (ii) The annual management expenses of a li-
25 censee shall not exceed an amount which the Under

1 Secretary determines to be reasonable and cus-
2 tomary.

3 (iii) The aggregate amount of obligations and
4 securities acquired and for which commitments may
5 be issued by a licensee for any single qualified busi-
6 ness concern shall not exceed \$2,000,000 or 20 per-
7 cent of the private equity capital of such licensee,
8 whichever is greater, unless the Under Secretary ap-
9 proves a greater amount.

10 (B) For purposes of this paragraph, the term “man-
11 agement expenses” includes expenses incurred in the nor-
12 mal course of operations, but shall not include the cost
13 of legal, accounting, and consulting services provided by
14 outside parties and by affiliates of the licensee which are
15 not normal practice in making and monitoring investments
16 consistent with the purposes of this subtitle.

17 (d) USE OF CAPITAL BY LICENSEES.—(1) A licensee
18 issuing preferred securities under this section shall invest
19 or commit to invest—

20 (A) an amount equal to the face value of such
21 preferred securities that are outstanding; plus

22 (B) an amount of its private equity capital
23 equal to 50 percent of the amount described in sub-
24 paragraph (A),

1 in the venture capital of qualified business concerns in ac-
2 cordance with section 349.

3 (2) At least 50 percent of the amount of investments
4 required under paragraph (1) shall be for seed and early
5 stage financing, as defined by the Under Secretary by reg-
6 ulation. The Under Secretary may alter the percentage re-
7 quirement under this paragraph to the extent necessary,
8 in the determination of the Under Secretary, to achieve
9 the purposes of this subtitle and maintain prudent invest-
10 ment diversification.

11 (3) Proceeds to a licensee derived from preferred se-
12 curities issued under this section may be used by the is-
13 suer to redeem any preferred securities issued under this
14 section that have been outstanding at least 5 years, as
15 provided in subsection (b)(3).

16 (4) Proceeds to a licensee derived from preferred se-
17 curities issued under this section that have not been in-
18 vested pursuant to paragraphs (1) and (2) or used for re-
19 demptions pursuant to paragraph (3) and are not reason-
20 ably needed for the operations of the licensee shall be in-
21 vested in direct obligations of, or obligations guaranteed
22 as to principal and interest by, the United States, or in
23 certificates of deposit maturing within one year or less,
24 issued by any institution the accounts of which are insured
25 by the Federal Deposit Insurance Corporation.

1 (e) PROFIT DISTRIBUTION BY LICENSEES.—(1) Any
2 distribution of net realized earnings and returns of capital
3 made by a licensee that exceeds amounts required for the
4 purposes stated in paragraph (2) shall be distributed pro
5 rata to all investors entitled to such distributions. The
6 United States shall receive no funds under this paragraph.

7 (2)(A) Except as provided in subparagraphs (B) and
8 (C), any distribution of net realized earnings and returns
9 of capital made by a licensee shall first be used to pay
10 accumulated and unpaid dividends owed on outstanding
11 preferred securities issued under this section and to satisfy
12 the redemption requirements of subsection (b)(3).

13 (B) For purposes of subparagraph (A), the redemp-
14 tion requirements of subsection (b)(3) shall be considered
15 to be satisfied if necessary and appropriate actions, as de-
16 termined by the Under Secretary, have been undertaken
17 by the licensee to ensure that such requirements will be
18 satisfied.

19 (C) If a licensee is operating as a limited partnership
20 or as a corporation described in subchapter S of chapter
21 1 of subtitle A of the Internal Revenue Code of 1986 or
22 an equivalent pass-through entity for tax purposes, it may
23 distribute to the partners or shareholders an amount equal
24 to the estimated amount of Federal, State, and local in-
25 come taxes due from such partners and shareholders on

1 their share of undistributed taxable income for the current
2 taxable year before payments described in subparagraph
3 (A) are made.

4 (f) USE OF PAYMENTS TO THE UNITED STATES.—
5 Amounts received by the United States from the payment
6 of dividends and the redemption of preferred securities
7 pursuant to this section, and fees paid to the United
8 States by a licensee pursuant to this subtitle, shall be de-
9 posited in an account established by the Under Secretary
10 and shall be available solely for carrying out this subtitle,
11 to the extent provided in advance in appropriations Acts.

12 **SEC. 348. ISSUANCE AND GUARANTEE OF TRUST CERTIFI-**
13 **CATES.**

14 (a) AUTHORITY TO ISSUE TRUST CERTIFICATES.—
15 The Under Secretary is authorized to issue trust certifi-
16 cates representing ownership of all or a fractional part of
17 preferred securities issued by licensees and guaranteed by
18 the Under Secretary under this subtitle. Such trust certifi-
19 cates shall be based on and backed by a trust or pool ap-
20 proved by the Under Secretary and composed of preferred
21 securities and such other contractual obligations as the
22 Under Secretary may undertake to facilitate the sale of
23 such trust certificates.

24 (b) GUARANTEE OF TRUST CERTIFICATES.—The
25 Under Secretary is authorized, upon such terms and con-

1 ditions as are deemed appropriate, to guarantee the timely
2 payment of the principal of and interest on trust certifi-
3 cates issued by the Under Secretary or his agent for pur-
4 poses of this section. Such guarantee shall be limited to
5 the extent of the redemption price of and dividends on the
6 preferred securities, plus any related contractual obliga-
7 tions, which compose the trust or pool.

8 (c) PREPAYMENTS AND REDEMPTIONS.—In the event
9 that preferred securities or contractual obligations in such
10 trust or pool are redeemed or extinguished, either volun-
11 tarily or involuntarily, the guarantee of timely payment
12 of principal and interest on the trust certificates shall be
13 reduced in proportion to the amount of redemption price
14 and dividends such redeemed preferred security or extin-
15 guished contractual obligation represents in the trust or
16 pool. Dividends or partnership profit distributions on such
17 preferred securities and related contractual obligations,
18 shall accrue and be guaranteed by the Under Secretary
19 only through the date of payment on the guarantee. Dur-
20 ing the term of the trust certificate, it may be called for
21 redemption, whether voluntary or involuntary, of all pre-
22 ferred securities residing in the pool.

23 (d) FEES.—The Under Secretary may collect fees for
24 a guarantee under this section that are reasonable and
25 customary.

1 (e) PAYMENT OF CLAIMS.—(1) In the event the
2 Under Secretary pays a claim under a guarantee issued
3 under this section, it shall be subrogated fully to the rights
4 satisfied by such payment.

5 (2) No State or local law, and no Federal law, shall
6 preclude or limit the exercise by the Under Secretary of
7 ownership rights in the preferred securities residing in a
8 trust or pool against which trust certificates are issued.

9 (f) REGISTRATION AND INTERMEDIARY OPER-
10 ATIONS.—(1) The Under Secretary shall provide for a
11 central registration of all trust certificates sold pursuant
12 to this section. Such central registration shall include with
13 respect to each sale, identification of each licensee, the in-
14 terest rate or dividend rate paid by the licensee, commis-
15 sions, fees, or discounts paid to brokers and dealers in
16 trust certificates, identification of each purchaser of the
17 trust certificate, the price paid by the purchaser for the
18 trust certificate, the interest rate paid on the trust certifi-
19 cate, the fees of any agent for carrying out the functions
20 described in paragraph (2), and such other information
21 as the Under Secretary deems appropriate.

22 (2) The Under Secretary shall contract with an agent
23 or agents to carry out on behalf of the Under Secretary
24 the pooling and the central registration functions of this
25 section including, notwithstanding any other provision of

1 law, maintenance on behalf of and under the direction of
2 the Under Secretary, such commercial bank accounts as
3 may be necessary to facilitate trusts or pools backed by
4 securities guaranteed or purchased under this subtitle,
5 and the issuance of trust certificates to facilitate such
6 poolings. Such agent or agents shall provide a fidelity
7 bond or insurance in such amounts as the Under Secretary
8 determines to be necessary to fully protect the interests
9 of the Federal Government.

10 (3) Prior to any sale, the Under Secretary shall re-
11 quire the seller to disclose to a purchaser of a trust certifi-
12 cate issued pursuant to this section, information on the
13 terms, conditions, and yield of such instrument.

14 **SEC. 349. CAPITAL FOR QUALIFIED BUSINESS CONCERNS.**

15 (a) VENTURE CAPITAL.—Each licensee may provide
16 venture capital to qualified business concerns, in such
17 manner and under such terms as the licensee may fix in
18 accordance with the regulations of the Under Secretary.
19 Venture capital provided to incorporated qualified busi-
20 ness concerns under this section may be provided directly
21 or in cooperation with other investors, incorporated or un-
22 incorporated, through agreements to participate on an im-
23 mediate basis.

24 (b) LIMITATION ON LOAN AUTHORITY.—A licensee
25 may not make a direct loan to a qualified business concern

1 under this section which provides for repayment of such
2 loan more than 1 year after the loan is made, unless the
3 Under Secretary determines that to do so is necessary to
4 facilitate the orderly liquidation of the licensee's invest-
5 ment.

6 **SEC. 350. OPERATION.**

7 (a) COOPERATION.—Wherever practicable the oper-
8 ations of a licensee, including the generation of business,
9 may be undertaken in cooperation with banks or other li-
10 censees, investors, or lenders, incorporated or unincor-
11 porated, and any servicing or initial investigation required
12 for loans or acquisitions of securities by the licensee under
13 the provisions of this subtitle may be handled through
14 such banks or other licensees, investors, or lenders on a
15 fee basis. Any licensee may receive fees for services ren-
16 dered to such banks and other licensees, investors, and
17 lenders.

18 (b) ADVISORY SERVICES.—Each licensee may make
19 use, wherever practicable, of the advisory services of the
20 Federal Reserve System and of the Department of Com-
21 merce which are available for and useful to industrial and
22 commercial businesses, and may provide consulting and
23 advisory services on a fee basis and have on its staff per-
24 sons competent to provide such services. A licensee may

1 not charge fees for such services that are provided to a
2 qualified business concern in which it has an investment.

3 **SEC. 351. REGULATIONS; LIABILITY.**

4 (a) REGULATIONS.—The Under Secretary is author-
5 ized to prescribe regulations governing the operations of
6 licensees, and to carry out the provisions of this subtitle,
7 in accordance with the purposes of this subtitle. Regula-
8 tions to implement this subtitle shall be issued not later
9 than 180 days after the date of enactment of this Act.

10 (b) LIABILITY OF THE UNITED STATES.—Nothing in
11 this subtitle or in any other provision of law imposes any
12 liability on the United States with respect to any obliga-
13 tions entered into, or stocks issued, or commitments made,
14 by any licensee operating under the provisions of this sub-
15 title.

16 **SEC. 352. TECHNICAL ASSISTANCE FOR LICENSEES AND**
17 **QUALIFIED BUSINESS CONCERNS.**

18 (a) TECHNICAL ASSISTANCE.—The Secretary shall,
19 upon request, provide technical assistance and services, as
20 appropriate and needed, to licensees and to qualified busi-
21 ness concerns receiving financial assistance under this
22 subtitle, and shall ensure that such qualified business con-
23 cerns have ready access to appropriate assistance available
24 under title III of the Stevenson-Wydler Technology Inno-
25 vation Act of 1980, or under any other Act, in order to

1 aid such qualified business concerns in their development
2 or utilization of critical or other advanced technologies.
3 Technical assistance and services under this subsection
4 shall include providing licensees and qualified business
5 concerns with—

6 (1) an assessment of the technological and sci-
7 entific feasibility of a project, or an analysis of a
8 specific field of technical or scientific endeavor;

9 (2) improved access to technology developed by
10 the Institute and assistance in obtaining access to
11 technology developed by other Federal agencies and
12 laboratories;

13 (3) expert analysis of the economics of tech-
14 nology development undertaken by a qualified busi-
15 ness concern; and

16 (4) any other assistance or service that the
17 Under Secretary determines, after consultation with
18 licensees and qualified business concerns, is nec-
19 essary and appropriate to enhance prospects for suc-
20 cess and to reduce technical risk for licensees and
21 qualified business concerns.

22 (b) FEES.—The Secretary may charge fees for serv-
23 ices and technical assistance provided under subsection (a)
24 in amounts sufficient to cover the reasonable cost of such

1 services and assistance. The Secretary may waive fees es-
2 tablished under this subsection.

3 **SEC. 353. ANNUAL AUDIT AND REPORT.**

4 (a) REQUIREMENT.—The Under Secretary shall pre-
5 pare, in consultation with the advisory committee estab-
6 lished under section 344, and submit annually a report
7 to the Congress containing a full and detailed account of
8 operations under this subtitle. Such report shall include
9 an audit setting forth the amount, type, recipient, and
10 source of disbursements, receipts, and losses sustained by
11 the Federal Government as a result of such operations
12 during the preceding fiscal year and since inception of the
13 program, together with an assessment of progress made
14 in achieving the purposes of this subtitle, including signifi-
15 cant accomplishments.

16 (b) CONTENTS.—In the annual report submitted
17 under subsection (a), the Under Secretary shall also in-
18 clude full and detailed accounts relative to the following
19 matters:

20 (1) The Under Secretary's plans to ensure the
21 provision of licensee financing to all areas of the
22 country and to all qualified business concerns, in-
23 cluding steps taken to accomplish that goal.

24 (2) Steps taken by the Under Secretary to
25 maximize recoupment of Federal Government funds

1 incident to the inauguration and administration of
2 the licensee program, and to ensure compliance with
3 statutory and regulatory standards relating thereto.

4 (3) An accounting by the Treasury Department
5 with respect to tax revenues accruing to the Federal
6 Government from licensees, private investors in li-
7 censees, and business concerns receiving assistance
8 under this subtitle.

9 (4) Recommendations with respect to program
10 changes, statutory changes, and other matters, in-
11 cluding tax incentives to improve and facilitate the
12 operations of licensees and to encourage the use of
13 their financing facilities by qualified business con-
14 cerns.

15 **SEC. 354. REPORTS, INVESTIGATIONS, AND EXAMINATIONS.**

16 (a) **REPORTING REQUIREMENTS.**—Each license is-
17 sued under this subtitle shall require a licensee with out-
18 standing preferred securities to provide the Under Sec-
19 retary such information, including companies financed,
20 disbursements made along with associated terms and con-
21 ditions, receipts, portfolio valuation at cost and at esti-
22 mated fair market value, and other financial statements,
23 that the Under Secretary may require to determine, in a
24 timely manner, compliance with this subtitle and regula-

1 tions promulgated under this subtitle. Such reporting shall
2 be—

3 (1) except as otherwise provided in this sub-
4 section, consistent with the reporting practices and
5 standards of the venture capital industry;

6 (2) uniform for all licensees; and

7 (3) independently audited, at the expense of a
8 licensee, in accordance with generally accepted audit-
9 ing standards and submitted to the Under Secretary
10 no later than 60 days after the end of a licensee's
11 fiscal year, with interim unaudited financial state-
12 ments provided to the Under Secretary no later than
13 45 days after the end of each 3-month period during
14 a licensee's fiscal year.

15 The Under Secretary may exempt from making such re-
16 ports any licensee which is registered under the Invest-
17 ment Company Act of 1940 only to the extent necessary
18 to avoid duplication in reporting requirements.

19 (b) VALUATIONS.—The Under Secretary shall, by
20 regulation, establish guidelines for estimating the fair
21 market value of investments held by a licensee as required
22 under subsection (a). The board of directors of a corporate
23 licensee and the general partners of a partnership licensee
24 shall have the sole responsibility for making a good faith
25 determination of the fair market value of investments held

1 by such licensee, based on guidelines established under
2 this subsection.

3 (c) INVESTIGATIONS.—The Secretary may undertake
4 investigations to determine whether a licensee or any other
5 person has engaged or is about to engage in any acts or
6 practices which constitute or will constitute a violation of
7 any provision of this subtitle, or of any rule, regulation,
8 or order issued under this subtitle. The Secretary shall
9 permit any person to file a statement in writing, under
10 oath or otherwise as the Secretary shall determine, as to
11 all the facts and circumstances concerning the matter to
12 be investigated. For the purpose of any investigation, the
13 Secretary is empowered to administer oaths and affirma-
14 tions, subpoena witnesses, compel their attendance, take
15 evidence, and require the production of any books, papers,
16 and documents which are relevant to the inquiry.

17 (d) EXAMINATIONS.—(1) Each licensee shall be sub-
18 ject to examinations made at the direction of the Under
19 Secretary by examiners selected or approved by, and under
20 the supervision of, the Under Secretary. The Under Sec-
21 retary may enter into contracts with private parties to per-
22 form such examinations. The cost of such examinations,
23 including the compensation of the examiners, may in the
24 discretion of the Under Secretary be assessed against the

1 licensee examined and when so assessed shall be paid by
2 such licensee.

3 (2) Each licensee shall be examined at least every 2
4 years in such detail so as to determine whether or not it
5 has engaged in any violations of this subtitle.

6 (3) The Under Secretary may waive the examina-
7 tion—

8 (A) for up to one additional year if such a delay
9 would be appropriate, based upon the amount of de-
10 bentures and preferred securities being issued by the
11 licensee and its repayment record, the prior operat-
12 ing experience of the licensee, the contents and re-
13 sults of the last examination and the management
14 expertise of the licensee; or

15 (B) if it is a licensee whose operations have
16 been suspended while the licensee is involved in liti-
17 gation or is in receivership.

18 **SEC. 355. REVOCATION AND SUSPENSION OF LICENSES;**

19 **CEASE AND DESIST ORDERS.**

20 (a) **GROUND FOR REVOCATION OR SUSPENSION.**—

21 A license may be revoked or suspended by the Secretary—

22 (1) for willful or repeated violation of any provi-
23 sion of this subtitle or any rule, regulation, or order
24 issued thereunder; or

1 (2) if the licensee no longer serves the purposes
2 for which it was granted a license.

3 (b) CEASE AND DESIST ORDERS.—Where a licensee
4 or any other person has not complied with any provision
5 of this subtitle, or of any rule, regulation, or order issued
6 thereunder, or is engaging or is about to engage in any
7 acts or practices which constitute or will constitute a viola-
8 tion of such provision, rule, regulation, or order, the Sec-
9 retary may order such licensee or other person to cease
10 and desist from such action or failure to act. The Sec-
11 retary may further order such licensee or other person to
12 take such action or to refrain from such action as the Sec-
13 retary considers necessary to ensure compliance with such
14 provisions, rules, regulations, or orders. The Secretary
15 may also suspend the license of a licensee, against whom
16 an order has been issued, until such licensee complies with
17 such order.

18 (c) PROCEDURES.—Before revoking or suspending a
19 license pursuant to subsection (a) or issuing a cease and
20 desist order pursuant to subsection (b), the Secretary shall
21 serve upon the licensee and any other person involved an
22 order to show cause why an order revoking or suspending
23 the license or a cease and desist order should not be is-
24 sued. If the Secretary, after an opportunity for agency
25 hearing, determines on the record that an order revoking

1 or suspending the license or a cease and desist order
2 should issue, the Secretary shall promptly issue such
3 order.

4 (d) SUBPOENAS.—The Secretary may require by sub-
5 poenas the attendance and testimony of witnesses and the
6 production of all books, papers, and documents relating
7 to the hearing from any place in the United States.

8 (e) ENFORCEMENT.—If any licensee or other person
9 against which or against whom an order is issued under
10 this section fails to obey the order, the Secretary may
11 apply to the United States court of appeals, within the
12 circuit where the licensee has its principal place of busi-
13 ness, for the enforcement of the order.

14 **SEC. 356. INJUNCTIONS AND OTHER ORDERS.**

15 (a) IN GENERAL.—Whenever, in the judgment of the
16 Secretary, a licensee or any other person has engaged or
17 is about to engage in any acts or practices which con-
18 stitute or will constitute a violation of any provision of
19 this subtitle, or of any rule, regulation, or order issued
20 under this subtitle, the Secretary may make application
21 to the proper district court of the United States or a
22 United States court of any place subject to the jurisdiction
23 of the United States for an order enjoining such acts or
24 practices, or for an order enforcing compliance with such
25 provision, rule, regulation, or order, and such courts shall

1 have jurisdiction of such actions and, upon a showing by
2 the Secretary that such licensee or other person has en-
3 gaged or is about to engage in any such acts or practices,
4 a permanent or temporary injunction shall be granted
5 without bond.

6 (b) TRUSTEESHIP OR RECEIVERSHIP.—Whenever it
7 is necessary in order to achieve the purposes of an injunc-
8 tion or other order under subsection (a), the court may
9 seize the assets of a licensee and appoint a trustee or re-
10 ceiver to hold or administer under the direction of the
11 court such assets. The Under Secretary shall have author-
12 ity to act as trustee or receiver of the licensee. Upon re-
13 quest by the Secretary, the court may appoint the Under
14 Secretary to act in such capacity unless the court deems
15 such appointment inequitable or otherwise inappropriate
16 by reason of the special circumstances involved.

17 **SEC. 357. CONFLICTS OF INTEREST.**

18 For the purpose of controlling conflicts of interest
19 which may be detrimental to qualified business concerns,
20 to licensees, to the shareholders or partners of either, or
21 to the purposes of this subtitle, the Under Secretary shall
22 adopt regulations to govern transactions with any officer,
23 director, shareholder, or partner of any licensee, or with
24 any person or concern, in which any interest, direct or in-
25 direct, financial or otherwise, is held by any officer, direc-

1 tor, shareholder, or partner of (1) any licensee, or (2) any
2 person or concern with an interest, direct or indirect, fi-
3 nancial or otherwise, in any licensee. Such regulations
4 shall include appropriate requirements for public disclo-
5 sure (including disclosure in the locality most directly af-
6 fected by the transaction) necessary to the purposes of this
7 section.

8 **SEC. 358. REMOVAL OR SUSPENSION OF DIRECTORS AND**
9 **OFFICERS.**

10 (a) GROUND.—The Secretary, after an opportunity
11 for agency hearing, may serve upon any director or officer
12 of a licensee a written notice of its intention to remove
13 such director or officer from office, temporarily or perma-
14 nently, whenever in the opinion of the Secretary such di-
15 rector or officer—

16 (1) has willfully and knowingly—

17 (A) committed any substantial violation of
18 this subtitle or any rule, regulation, or order is-
19 sued under this subtitle; or

20 (B) committed or engaged in any act,
21 omission, or practice which constitutes a sub-
22 stantial breach of his fiduciary duty as such di-
23 rector or officer,

1 and that such violation or such breach of fiduciary
2 duty is one involving personal dishonesty on the part
3 of such director or officer; or

4 (2) has been charged in any information, indict-
5 ment, or complaint, authorized by a United States
6 attorney but not yet having reached final disposition,
7 with the commission of or participation in a felony
8 involving dishonesty or breach of trust.

9 (b) HEARING.—A hearing under this section shall be
10 on the record and shall be held in the Federal judicial dis-
11 trict or in the territory in which the principal office of
12 the licensee is located unless the party afforded the hear-
13 ing consents to another place. A hearing under this section
14 shall be fixed for a date not earlier than 30 days nor later
15 than 60 days after the date of service of such notice, un-
16 less an earlier or a later date is set by the Secretary at
17 the request of (1) such director or officer and for good
18 cause shown, or (2) the Attorney General of the United
19 States. Unless such director or officer shall appear at the
20 hearing in person or by a duly authorized representative,
21 he shall be deemed to have consented to the issuance of
22 an order of such removal.

23 **SEC. 359. VIOLATIONS.**

24 (a) PARTICIPATION.—Whenever a licensee commits a
25 violation of this subtitle, or any rule, regulation, or order

1 issued under this subtitle, such violation shall be deemed
2 to be also a violation on the part of any person who, di-
3 rectly or indirectly, authorizes, orders, participates in, or
4 causes, brings about, counsels, aids, or abets in the com-
5 mission of such violation.

6 (b) BREACH OF FIDUCIARY DUTY.—It shall be a vio-
7 lation of this subtitle for any officer, director, employee,
8 agent, or other participant in the management or conduct
9 of the affairs of a licensee to engage in any act or practice,
10 or to omit any act, in breach of his fiduciary duty as such
11 officer, director, employee, agent, or participant, if, as a
12 result thereof, the licensee has suffered or is in imminent
13 danger of suffering financial loss or other damage.

14 (c) DISQUALIFICATION.—Except with the written
15 consent of the Secretary, it shall be a violation of this sub-
16 title for any person to take office, or to continue to serve,
17 as an officer, director, or employee of a licensee, or to be-
18 come or continue to serve as an agent or participant in
19 the conduct of the affairs or management of a licensee,
20 if such person—

21 (1) has been convicted of a felony, or any other
22 criminal offense involving dishonesty or breach of
23 trust; or

24 (2) has been found civilly liable in damages, or
25 has been permanently or temporarily enjoined by an

1 order, judgment, or decree of a court of competent
2 jurisdiction, by reason of any act or practice involv-
3 ing fraud or breach of trust.

4 **SEC. 360. CIVIL PENALTIES.**

5 Any person who is found by the Secretary, after no-
6 tice and opportunity to be heard on the record in accord-
7 ance with section 554 of title 5, United States Code, to
8 have committed a violation of this subtitle or any rule,
9 regulation, or order issued under this subtitle shall be lia-
10 ble to the United States for a civil penalty of not more
11 than \$1,000 for each violation. Each day of a continuing
12 violation shall constitute a separate violation. The amount
13 of such civil penalty shall be assessed by the Secretary
14 by written notice. The Secretary may compromise, modify,
15 or remit, with or without conditions, any civil penalty
16 which is subject to imposition or which has been imposed
17 under this section.

18 **SEC. 361. ANTITRUST SAVINGS CLAUSE.**

19 This subtitle shall not be construed to modify, impair,
20 or supersede the operation of the antitrust laws. For pur-
21 poses of this section, the term “antitrust laws” has the
22 meaning given it in subsection (a) of the first section of
23 the Clayton Act (15 U.S.C. 12(a)), except that such term
24 includes the Act of June 19, 1936 (49 Stat. 1526; 15
25 U.S.C. 13 et seq.), commonly known as the Robinson Pat-

1 man Act, and section 5 of the Federal Trade Commission
2 Act (15 U.S.C. 45) to the extent that such section 5 ap-
3 plies to unfair methods of competition.

4 **TITLE IV—MISCELLANEOUS**

5 **SEC. 401. DEPARTMENT OF COMMERCE TECHNOLOGY AD-** 6 **VISORY BOARD.**

7 (a) ESTABLISHMENT.—There is established a De-
8 partment of Commerce Technology Advisory Board (in
9 this section referred to as the “Advisory Board”) to assist
10 the Technology Administration in the performance of its
11 functions.

12 (b) COMPOSITION.—The Advisory Board shall be
13 composed of at least 17 members, appointed by the Under
14 Secretary from among individuals who, because of their
15 experience and accomplishments are exceptionally quali-
16 fied to provide advice to the Under Secretary on the plans,
17 programs, and policy of the Technology Administration.
18 The Under Secretary shall designate 1 member to chair
19 the Advisory Board. Membership of the Advisory Board
20 shall include representatives of—

- 21 (1) United States small businesses;
- 22 (2) other United States manufacturers;
- 23 (3) research universities and independent re-
24 search institutes;

1 (4) State and local government agencies in-
2 volved in technology extension;

3 (5) national laboratories;

4 (6) industrial, worker, and professional organi-
5 zations;

6 (7) financial organizations; and

7 (8) computing and communications equipment
8 and services providers.

9 (c) DUTIES.—The duties of the Advisory Board shall
10 include advising the Secretary, the Under Secretary, and
11 the Director regarding—

12 (1) the development of policies and options for
13 implementation that the Advisory Board considers
14 essential to technology creation, development, and
15 adoption, including policies that would benefit small
16 businesses;

17 (2) the development and rapid application of
18 critical and other advanced technologies, including
19 advanced manufacturing technologies;

20 (3) the development of computer and commu-
21 nications support services for advanced manufactur-
22 ing; and

23 (4) the planning, execution, and evaluation of
24 programs under the authority of the Technology Ad-
25 ministration.

1 (d) MEETINGS.—(1) The chairman shall call the first
2 meeting of the Advisory Board not later than 90 days
3 after the date of enactment of this Act.

4 (2) The Advisory Board shall meet at least once every
5 6 months, and at the call of the Under Secretary.

6 (e) TRAVEL EXPENSES.—Members of the Advisory
7 Board, other than full-time employees of the United
8 States, shall be allowed travel expenses in accordance with
9 subchapter I of chapter 57 of title 5, United States Code,
10 while engaged in the business of the Advisory Board.

11 (f) CONSULTATION.—In carrying out this section, the
12 Under Secretary shall consult with other agencies, as ap-
13 propriate.

14 (g) TERMINATION.—Section 14 of the Federal Advi-
15 sory Committee Act shall not apply to the Advisory Board.

16 **SEC. 402. INTERNATIONAL STANDARDIZATION.**

17 (a) FINDINGS.—The Congress finds that—

18 (1) private sector consensus standards are es-
19 sential to the timely development of competitive
20 products;

21 (2) Federal Government contribution of re-
22 sources, more active participation in the voluntary
23 standards process in the United States, and assist-
24 ance, where appropriate, through government to gov-
25 ernment negotiations, can increase the quality of

1 United States standards, increase their compatibility
2 with the standards of other countries, and ease ac-
3 cess of United States-made products to foreign mar-
4 kets; and

5 (3) the Federal Government, working in co-
6 operation with private sector organizations including
7 trade associations, engineering societies, and tech-
8 nical bodies, can effectively promote United States
9 Government use of United States consensus stand-
10 ards and, where appropriate, the adoption and
11 United States Government use of international
12 standards.

13 (b) STANDARD PILOT PROGRAM.—Section 104(e) of
14 the American Technology Preeminence Act of 1991 is
15 amended—

16 (1) by inserting “(1)” before “Pursuant to
17 the”; and

18 (2) by adding at the end the following new
19 paragraph:

20 “(2) As necessary and appropriate, the Institute shall
21 expand the program established under section 112 of the
22 National Institute of Standards and Technology Author-
23 ization Act for Fiscal Year 1989 (15 U.S.C. 272 note)
24 by extending the existing program and by entering into
25 additional contracts with non-Federal organizations rep-

1 resenting United States companies, as such term is de-
2 fined in section 28(d)(9)(B) of the National Institute of
3 Standards and Technology Act (15 U.S.C.
4 278n(d)(9)(B)). Such contracts shall require cost sharing
5 between Federal and non-Federal sources for such pur-
6 poses. In awarding such contracts, the Institute shall seek
7 to promote and support the dissemination of United
8 States technical standards to additional foreign countries,
9 in cooperation with governmental bodies, private organiza-
10 tions including standards setting organizations and indus-
11 try, and multinational institutions that promote economic
12 development. The organizations receiving such contracts
13 may establish training programs to bring to the United
14 States foreign standards experts for the purpose of receiv-
15 ing in-depth training in the United States standards sys-
16 tem.”.

17 (c) REPORT ON GLOBAL STANDARDS.—The Sec-
18 retary, in consultation with the Institute and the Depart-
19 ment of Commerce Technology Advisory Board established
20 under section 401 of this Act, shall submit to the Congress
21 a report describing the appropriate roles of the Depart-
22 ment of Commerce in aid to United States companies in
23 achieving conformity assessment and accreditation and
24 otherwise qualifying their products in foreign markets,
25 and in the development and promulgation of domestic and

1 global product and quality standards, including a discus-
2 sion of the extent to which each of the policy options pro-
3 vided in such Office of Technology Assessment report con-
4 tributes to meeting the goals of—

5 (1) increasing the international adoption of
6 standards beneficial to United States industries; and

7 (2) improving the coordination of United States
8 representation to international standards setting
9 bodies.

10 (d) FEDERAL GOVERNMENT ROLE.—Section 508(a)
11 of the American Technology Preeminence Act of 1991 is
12 amended by adding at the end the following new para-
13 graph:

14 “(6) The appropriate role of the Federal Gov-
15 ernment in aid to United States companies in
16 achieving conformity assessment and accreditation
17 and otherwise qualifying their products in foreign
18 markets, and in the development and promulgation
19 of domestic and global product and quality stand-
20 ards, including a discussion of the extent to which
21 each of the policy options provided in the Office of
22 Technology Assessment report on global standards
23 contributes to meeting the goal of improving the co-
24 ordination of United States representation to inter-
25 national standards-setting bodies.

1 **SEC. 403. MALCOLM BALDRIGE AWARD AMENDMENTS.**

2 (a) Section 108(c)(3) of the Stevenson-Wydler Tech-
3 nology Innovation Act of 1980, as so redesignated by sec-
4 tion 206(b)(4) of this Act, is amended to read as follows:

5 “(3) No award shall be made within any category or
6 subcategory if there are no qualifying enterprises in that
7 category or subcategory.”.

8 (b)(1) Section 108(c)(1) of the Stevenson-Wydler
9 Technology Innovation Act of 1980, as so redesignated by
10 section 206(b)(4) of this Act, is amended by adding at
11 the end the following new subparagraph:

12 “(D) Educational institutions.”.

13 (2)(A) Within 1 year after the date of enactment of
14 this Act, the Secretary shall submit to the Congress a re-
15 port containing—

16 (i) criteria for qualification for a Malcolm
17 Baldrige National Quality Award by various classes
18 of educational institutions;

19 (ii) criteria for the evaluation of applications for
20 such awards under section 108(d)(1) of the Steven-
21 son-Wydler Technology Innovation Act of 1980, as
22 so redesignated by section 206(b)(4) of this Act; and

23 (iii) a plan for funding awards described in
24 clause (i).

25 (B) In preparing the report required under subpara-
26 graph (A), the Secretary shall consult with the National

1 Science Foundation and other public and private entities
2 with appropriate expertise, and shall provide for public no-
3 tice and comment.

4 (C) The Secretary shall not accept applications for
5 awards described in subparagraph (A)(i) until after the
6 report required under subparagraph (A) is submitted to
7 the Congress.

8 **SEC. 404. COOPERATIVE RESEARCH AND DEVELOPMENT**
9 **AGREEMENTS.**

10 Section 202(d)(1) of the Stevenson-Wydler Tech-
11 nology Innovation Act of 1980 (15 U.S.C. 3710a(d)(1)),
12 as redesignated by section 206(b)(6) of this Act, is amend-
13 ed by inserting “(including both real and personal prop-
14 erty)” after “or other resources” both places it appears.

15 **SEC. 405. CLEARINGHOUSE ON STATE AND LOCAL INITIA-**
16 **TIVES.**

17 Section 102(a) of the Stevenson-Wydler Technology
18 Innovation Act of 1980, as so redesignated by section
19 206(b)(2) of this Act, is amended by striking “Office of
20 Productivity, Technology, and Innovation” and inserting
21 in lieu thereof “Institute”.

1 **SEC. 406. COMPETITIVENESS ASSESSMENTS AND EVALUA-**
2 **TIONS.**

3 Section 101(e) of the Stevenson-Wydler Technology
4 Innovation Act of 1980, as so redesignated by section
5 206(b)(2) of this Act, is amended to read as follows:

6 “(e) COMPETITIVENESS ASSESSMENTS AND EVALUA-
7 TIONS.—(1) The Secretary, through the Under Secretary,
8 shall—

9 “(A) provide for the conduct of research and
10 analyses to advance knowledge of the ways in which
11 the economic competitiveness of United States in-
12 dustry can be enhanced through Federal programs
13 established under the National Competitiveness Act
14 of 1993 or the amendments made by that Act; and

15 “(B) as appropriate, provide for evaluations of
16 Federal technology programs established or ex-
17 panded under the National Competitiveness Act of
18 1993 or the amendments made by that Act in order
19 to judge their effectiveness and make recommenda-
20 tions to improve their contribution to United States
21 competitiveness.

22 “(2) All executive departments and agencies shall as-
23 sist the Secretary in carrying out this section as appro-
24 priate.

25 “(3) Nothing in this section shall authorize the re-
26 lease of information to, or the use of information by, the

1 Secretary or Under Secretary in a manner inconsistent
2 with law or any procedure established pursuant thereto.

3 “(4) The head of any Federal agency may detail such
4 personnel and may provide such services, with or without
5 reimbursement, as the Secretary may request to assist in
6 carrying out the activities required under this section.”.

7 **SEC. 407. STUDY OF SEMICONDUCTOR LITHOGRAPHY**
8 **TECHNOLOGIES.**

9 Within 9 months after the date of enactment of this
10 Act, the Critical Technologies Institute (in this section re-
11 ferred to as the “Institute”) established under section 822
12 of the National Defense Authorization Act for Fiscal Year
13 1991 shall, after consultation with the private sector and
14 appropriate officials from other Federal agencies, submit
15 to Congress a report on advanced lithography technologies
16 for the production of semiconductor devices. The report
17 shall include the Institute’s evaluation of the likely tech-
18 nical and economic advantages and disadvantages of each
19 such technology, an analysis of current private and Gov-
20 ernment research to develop each such technology, and
21 any recommendations the Institute may have regarding
22 future Federal support for research and development in
23 advanced lithography.

1 **SEC. 408. AMERICAN WORKFORCE QUALITY PARTNER-**
2 **SHIPS.**

3 Title III of the Stevenson-Wydler Technology Innova-
4 tion Act of 1980, as added by title II of this Act, is further
5 amended by adding at the end the following new section:

6 **“SEC. 305. AMERICAN WORKFORCE QUALITY PARTNER-**
7 **SHIPS.**

8 “(a) PROGRAM AUTHORIZED.—The Secretary may
9 make grants to eligible applicants having applications ap-
10 proved under this section to establish and operate Amer-
11 ican workforce quality partnership programs in accord-
12 ance with the provisions of this section. The Secretary
13 shall award grants on a competitive basis to pay the Fed-
14 eral share for American workforce quality partnership pro-
15 grams to establish workforce training consortia between
16 industry and institutions of higher education.

17 “(b) GRANT PERIOD.—Grants awarded under this
18 section may be for a period of 5 years.

19 “(c) GENERAL AUTHORITY.—Each grant recipient
20 shall use amounts provided under the grant to develop and
21 operate an American workforce quality partnership pro-
22 gram.

23 “(d) CONTENTS OF PROGRAM.—An American
24 workforce quality partnership program shall establish
25 partnerships between—

1 “(1) one or more technology-based or manufac-
2 turing sector firms, in conjunction with a labor orga-
3 nization where available or worker representative
4 group or employee representatives; and

5 “(2) a local community or technical college or
6 other appropriate institutions of higher education, or
7 a vocational training institution or consortium of
8 such education institutions,

9 to train the employees of the industrial partners through
10 both workplace-based and classroom-based programs of
11 training.

12 “(e) FEDERAL SHARE.—The Federal share of the
13 cost of an American workforce quality partnership pro-
14 gram may not exceed 50 percent of the total cost of the
15 program. The non-Federal share of such costs may be pro-
16 vided in-cash or in-kind, fairly valued. The total contribu-
17 tion of the proposed partnership should reflect a substan-
18 tial contribution on the part of the industrial partners and
19 appropriate contributions of the education partners, local
20 or State governments, and other appropriate entities.

21 “(f) APPLICATIONS.—

22 “(1) IN GENERAL.—Each eligible applicant that
23 desires to receive a grant under this section shall
24 submit an application to the Secretary at such time
25 and in such manner as the Secretary shall prescribe.

1 “(2) PLAN.—Each application submitted under
2 this subsection shall contain a plan for the develop-
3 ment and implementation of an American workforce
4 quality partnership program under this section.
5 Such plan shall—

6 “(A) show a demonstrated commitment, on
7 the part of the industrial partners, to adopt
8 total quality management strategies or other
9 plausible strategies to renew its competitive
10 edge;

11 “(B) demonstrate the need for Federal re-
12 sources because of the long-term nature and
13 risk of such an investment, the inability to fi-
14 nance such ventures because of the high cost of
15 capitalization, intense competition from foreign
16 industries, or such other appropriate reasons as
17 may limit the industrial partners’ ability to
18 launch programs where worker training and de-
19 velopment is a substantial component;

20 “(C) demonstrate long-term benefit for all
21 partners and the local economy, through an en-
22 hanced competitive position of the industrial
23 partners, substantial benefits for regional em-
24 ployment, and the ability of the education part-
25 ners to further their capabilities to educate and

1 train other nonpartnership-affiliated individuals
2 wishing to obtain or upgrade technical, techno-
3 logical, industrial management and leadership,
4 or other industrial skills;

5 “(D) make full, appropriate, and innova-
6 tive use of industrial and higher education re-
7 sources and other local resources such as facili-
8 ties, equipment, personnel exchanges, experts,
9 or consultants;

10 “(E) provide for the establishment of an
11 advisory board in accordance with subsection
12 (h);

13 “(F) include an explanation of the indus-
14 trial partners’ plans to adopt new competitive
15 strategies and how the training partnership aids
16 that effort; and

17 “(G) include assurances that the eligible
18 entity will maintain its aggregate expenditures
19 from all other sources for employee training at
20 or above the average level of such expenditures
21 in the 2 fiscal years preceding the date of en-
22 actment of this section.

23 “(3) APPROVAL.—

24 “(A) IN GENERAL.—The Secretary shall
25 approve applications based on their potential to

1 create an effective American workforce quality
2 partnership program in accordance with this
3 section.

4 “(B) CRITERIA.—In reviewing grant appli-
5 cations, the Secretary shall give significant con-
6 sideration to the following criteria:

7 “(i) Saliency of argument for requir-
8 ing a Federal investment.

9 “(ii) Commitment of partnership to
10 continue operation after the termination of
11 Federal funding.

12 “(iii) The likelihood that the training
13 will lead to long-term competitiveness of
14 the industrial partners and contribute sig-
15 nificantly to economic growth.

16 “(iv) The likelihood that the partner-
17 ship will benefit the education mission of
18 the education partners in ways outside of
19 the scope of the partnership, such as devel-
20 oping the capability to train other
21 nonpartnership-affiliated individuals in
22 similar skills.

23 “(C) PRIORITY CONSIDERATION.—The
24 Secretary shall give priority consideration to in-
25 dustries which are threatened by intense foreign

1 competition important to the long-term national
2 economic or military security of the United
3 States and industries which are critical in ena-
4 bling other United States industries to maintain
5 a healthy competitive position. In addition, the
6 Secretary shall give priority to applicants in
7 areas of high poverty and unemployment.

8 “(g) USE OF FUNDS.—

9 “(1) APPROVED USES.—Federal funds may be
10 used for—

11 “(A) the direct costs of workplace-based
12 and classroom-based training in advanced tech-
13 nical, technological, and industrial management,
14 skills, and training for the implementation of
15 total quality management strategies, or other
16 competitiveness strategies, contained in the ap-
17 plicant’s plan submitted under subsection
18 (f)(2)(F);

19 “(B) the purchase or lease of equipment or
20 other materials for the purpose of instruction to
21 aid in training;

22 “(C) the development of in-house curricula
23 or coursework or other training-related pro-
24 grams, including the training of teachers and

1 other eligible participants to utilize such curric-
2 ula or coursework; and

3 “(D) reasonable administrative expenses
4 and other indirect costs of operating the part-
5 nership which may not exceed 10 percent of the
6 total cost of the program.

7 “(2) LIMITATIONS.—Federal funds may not be
8 used for nontraining related costs of adopting new
9 competitive strategies including the replacement of
10 manufacturing equipment, product redesign and
11 manufacturing facility construction costs, or salary
12 compensation of the partners’ employees. Grants
13 shall not be made under this section for programs
14 that will impair any existing program, contract, or
15 agreement without the written concurrence of the
16 parties to such program, contract, or agreement.

17 “(h) ADVISORY BOARD.—

18 “(1) Each partnership shall establish an advi-
19 sory board which shall include equal representation
20 from each of the following categories:

21 “(A) Multiple organizational levels of the
22 industrial partners.

23 “(B) The education partners.

1 “(C) Labor organization representatives
2 where available, worker representative groups,
3 or employee representatives.

4 “(2) The advisory board shall—

5 “(A) advise the partnership on the general
6 direction and policy of the partnership including
7 training, instruction, and other related issues;

8 “(B) report to the Secretary after the sec-
9 ond and fourth year of the program, on the
10 progress and status of the partnership, includ-
11 ing its strengths, weaknesses, and new direc-
12 tions, the number of individuals served, types of
13 services provided, and an outline of how the
14 program can be integrated into the existing
15 training infrastructure in place in other Federal
16 agencies and departments; and

17 “(C) assist in the revision of the plans
18 (submitted with the application under sub-
19 section (f)(2)(F)) and include revised plans as
20 necessary in the reports required under sub-
21 paragraph (B).”.

22 **SEC. 409. SEVERABILITY.**

23 If any provision of this Act or the amendments made
24 by this Act, or the application thereof to any person or
25 circumstance, is held invalid, the remainder of this Act

1 and the amendments made by this Act, and the applica-
2 tion thereof to other persons or circumstances, shall not
3 be affected thereby.

4 **TITLE V—AUTHORIZATIONS OF**
5 **APPROPRIATIONS**

6 **SEC. 501. TECHNOLOGY ADMINISTRATION.**

7 There are authorized to be appropriated to the Sec-
8 retary, to carry out the activities of the Under Secretary
9 and the Assistant Secretary of Commerce for Technology
10 Policy, in addition to any other amounts authorized for
11 such purposes—

12 (1) for the Office of the Under Secretary,
13 \$5,000,000 for fiscal year 1994 and \$8,000,000 for
14 fiscal year 1995;

15 (2) for Technology Policy, \$5,000,000 for fiscal
16 year 1994 and \$6,000,000 for fiscal year 1995;

17 (3) for Japanese Technical Literature,
18 \$2,000,000 for fiscal year 1994 and \$3,000,000 for
19 fiscal year 1995; and

20 (4) for competitiveness assessments and evalua-
21 tions under section 101(e) of the Stevenson-Wydler
22 Technology Innovation Act of 1980, as so redesignig-
23 nated by section 206(b)(2) of this Act, \$1,000,000
24 for fiscal year 1994 and \$2,000,000 for fiscal year
25 1995.

1 **SEC. 502. NATIONAL INSTITUTE OF STANDARDS AND TECH-**
2 **NOLOGY.**

3 (a) INTRAMURAL SCIENTIFIC AND TECHNICAL RE-
4 SEARCH AND SERVICES.—(1) There are authorized to be
5 appropriated to the Secretary, to carry out the intramural
6 scientific and technical research and services activities of
7 the Institute, \$250,000,000 for fiscal year 1994 and
8 \$300,000,000 for fiscal year 1995.

9 (2) Of the amounts authorized under paragraph
10 (1)—

11 (A) \$1,000,000 for fiscal year 1994 and
12 \$1,000,000 for fiscal year 1995 are authorized only
13 for the evaluation of nonenergy-related inventions;

14 (B) \$9,000,000 for fiscal year 1994 and
15 \$10,000,000 for fiscal year 1995 are authorized only
16 for the technical competence fund; and

17 (C) \$5,000,000 for fiscal year 1994 and
18 \$5,000,000 for fiscal year 1995 are authorized only
19 for the standards pilot project established under sec-
20 tion 104(e) of the American Technology Pre-
21 eminence Act of 1991.

22 (b) TRANSFERS.—(1) Funds may be transferred
23 among the line items listed in subsection (a), so long as—

24 (A) the net funds transferred to or from any
25 line item do not exceed 10 percent of the amount
26 authorized for that line item in such subsection;

1 (B) the aggregate amount authorized under
2 subsection (a) is not changed; and

3 (C) the Committee on Commerce, Science, and
4 Transportation of the Senate and the Committee on
5 Science, Space, and Technology of the House of
6 Representatives are notified in advance of any such
7 transfer.

8 (2) The Secretary may propose transfers to or from
9 any line item listed in subsection (a) exceeding 10 percent
10 of the amount authorized for such line item, but such pro-
11 posed transfer may not be made unless—

12 (A) a full and complete explanation of any such
13 proposed transfer and the reason therefor are trans-
14 mitted in writing to the Speaker of the House of
15 Representatives, the President of the Senate, and
16 the appropriate authorizing Committees of the
17 House of Representatives and the Senate; and

18 (B) 30 days have passed following the trans-
19 mission of such written explanation.

20 (c) EXTRAMURAL INDUSTRIAL TECHNOLOGY SERV-
21 ICES.—In addition to the amounts authorized under sub-
22 section (a), there are authorized to be appropriated to the
23 Secretary, to carry out the extramural industrial tech-
24 nology services activities of the Institute—

1 vation Act of 1980, \$30,000,000 for fiscal year 1994
2 and \$50,000,000 for fiscal year 1995;

3 (3) for the Civilian Technology Loan Program
4 established under subtitle C of title III of this Act,
5 \$40,000,000 for the period encompassing fiscal
6 years 1994 and 1995;

7 (4) for the Civilian Technologies Development
8 Program established under subtitle D of title III of
9 this Act, \$100,000,000 for the period encompassing
10 fiscal years 1994 and 1995;

11 (5) for carrying out the Benchmarking Pro-
12 gram established under title IV of the Stevenson-
13 Wydler Technology Innovation Act of 1980,
14 \$16,000,000 for fiscal year 1994 and \$20,000,000
15 for fiscal year 1995; and

16 (6) for carrying out the American workforce
17 quality partnership program established under sec-
18 tion 305 of the Stevenson-Wydler Technology Inno-
19 vation Act of 1980, \$50,000,000 for fiscal year 1994
20 and \$50,000,000 for fiscal year 1995.

21 Amounts appropriated under paragraph (3) or (4) shall
22 remain available for expenditure through September 30,
23 1996. Of the amounts made available under paragraph (3)
24 for a fiscal year, not more than \$2,000,000 or 10 percent,
25 whichever is greater, shall be available for administrative

1 expenses. Of the amounts made available under paragraph
2 (4) for a fiscal year, not more than \$5,000,000 or 10 per-
3 cent, whichever is greater, shall be available for adminis-
4 trative expenses. The Secretary, through the Under Sec-
5 retary and the Director, may accept the transfer of fund-
6 ing appropriated to any other agency for purposes similar
7 or related to those of the programs established and carried
8 out under title III of the Stevenson-Wydler Technology In-
9 novation Act of 1980, or the programs established and
10 carried out under sections 25 and 26 of the National Insti-
11 tute of Standards and Technology Act, and to use those
12 funds to implement such programs as provided in those
13 statutory provisions.

14 **SEC. 504. NATIONAL SCIENCE FOUNDATION.**

15 In addition to such other sums as may be authorized
16 by other Acts to be appropriated to the Director of the
17 National Science Foundation, there are authorized to be
18 appropriated to that Director—

19 (1) for carrying out section 212 of this Act,
20 \$20,000,000 for fiscal year 1994 and \$25,000,000
21 for fiscal year 1995; and

22 (2) for carrying out section 213 of this Act,
23 \$30,000,000 for fiscal year 1994 and \$35,000,000
24 for fiscal year 1995.

1 **SEC. 505. AVAILABILITY OF APPROPRIATIONS.**

2 Except as otherwise provided in this title, appropria-
3 tions made under the authority provided in this title shall
4 remain available for obligation, for expenditure, or for ob-
5 ligation and expenditure for periods specified in the Acts
6 making such appropriations.

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