

Calendar No. 109

103D CONGRESS
1ST SESSION

S. 473

[Report No. 103-69]

A BILL

To promote the industrial competitiveness and economic growth of the United States by strengthening the linkages between the laboratories of the Department of Energy and the private sector and by supporting the development and application of technologies critical to the economic, scientific and technological competitiveness of the United States, and for other purposes.

JUNE 24 (legislative day, JUNE 22), 1993

Reported with an amendment

Calendar No. 109103^D CONGRESS
1ST SESSION**S. 473****[Report No. 103-69]**

To promote the industrial competitiveness and economic growth of the United States by strengthening the linkages between the laboratories of the Department of Energy and the private sector and by supporting the development and application of technologies critical to the economic, scientific and technological competitiveness of the United States, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 2 (legislative day, JANUARY 5), 1993

Mr. JOHNSTON (for himself, Mr. WALLOP, Mr. BINGAMAN, Mr. DOMENICI, Mr. FORD, Mr. MATHEWS, Mr. GORTON, Mr. KEMPTHORNE, Mr. CRAIG, Mr. HATFIELD, Mr. SASSER, Mr. LOTT, and Mr. SIMON) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

JUNE 24 (legislative day, JUNE 22), 1993

Reported by Mr. JOHNSTON, with an amendment

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

A BILL

To promote the industrial competitiveness and economic growth of the United States by strengthening the linkages between the laboratories of the Department of Energy and the private sector and by supporting the development and application of technologies critical to the

economic, scientific and technological competitiveness of the United States, and for other purposes.

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

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Department of Energy
5 National Competitiveness Technology Partnership Act of
6 1993”.

7 **SEC. 2. COMPETITIVENESS AMENDMENT TO THE DEPART-**
8 **MENT OF ENERGY ORGANIZATION ACT.**

9 The Department of Energy Organization Act is
10 amended by adding at the end the following new title (42
11 U.S.C. 7101 et seq.):

12 **“TITLE XI—TECHNOLOGY**
13 **PARTNERSHIPS**

14 **“SEC. 1101. FINDINGS, PURPOSES AND DEFINITIONS.**

15 “(a) FINDINGS.—Congress finds that—

16 “(1) the United States Department of Energy
17 has scientific and technical capabilities and re-
18 sources within the departmental laboratories in vir-
19 tually every area of importance to the economic, sci-
20 entific and technological competitiveness of United
21 States industry;

22 “(2) the extensive scientific and technical in-
23 vestments in people, facilities and equipment in the
24 Department of Energy laboratories can be applied to

1 achieve national technology goals in areas such as
2 the environment, health, space, and transportation;

3 ~~“(3) the Department of Energy has pursued ag-~~
4 ~~gressively the transfer of technology from depart-~~
5 ~~mental laboratories to the private sector, but the ca-~~
6 ~~pabilities of the laboratories could be made more~~
7 ~~fully available to United States industry;~~

8 ~~“(4) technology development has been increas-~~
9 ~~ingly driven by the commercial marketplace and pri-~~
10 ~~ivate firms have extraordinary research and develop-~~
11 ~~ment capabilities in a broad range of generic~~
12 ~~technologies;~~

13 ~~“(5) in carrying out their missions, the Depart-~~
14 ~~ment and the departmental laboratories would great-~~
15 ~~ly benefit from closer collaboration and partnership~~
16 ~~with United States industry; and~~

17 ~~“(6) partnerships between the departmental~~
18 ~~laboratories and United States industry can provide~~
19 ~~significant benefits to the Nation as a whole, includ-~~
20 ~~ing the creation of high-paying, high value-added~~
21 ~~jobs for United States workers and the improvement~~
22 ~~of the competitiveness of United States firms in key~~
23 ~~sectors such as the aerospace, automotive, chemical~~
24 ~~and electronics sectors.~~

25 ~~“(b) PURPOSES.—The purposes of this title are to—~~

1 “(1) enhance partnerships between the private
2 sector and the Department and the departmental
3 laboratories and to establish a minimum goal for the
4 percentage of the multi-program departmental lab-
5 oratory budgets devoted to partnerships;

6 “(2) ensure that the Department and the de-
7 partmental laboratories play an appropriate role,
8 consistent with their core competencies, in imple-
9 menting the President’s critical technology strate-
10 gies;

11 “(3) provide additional authority to the Sec-
12 retary to enter into partnerships with the private
13 sector in pursuit of research, development, dem-
14 onstration and commercial application activities; and

15 “(4) streamline the process by which coopera-
16 tive research and development agreements proposed
17 by the departmental laboratories receive final dis-
18 position within the Department.

19 “(c) DEFINITIONS.—For the purposes of this title—

20 “(1) ‘core competency’ means an area in which
21 the Secretary determines a departmental laboratory
22 has developed expertise and demonstrated capabili-
23 ties;

1 “(2) ‘critical technology’ means a technology
2 identified in the National Critical Technologies Re-
3 port;

4 “(3) ‘Department’ means the United States De-
5 partment of Energy;

6 “(4) ‘departmental laboratory’ means a facility
7 operated by or on behalf of the Department that
8 would be considered a laboratory as that term is de-
9 fined in section 12 of the Stevenson-Wydler Tech-
10 nology Innovation Act of 1980 (15 U.S.C.
11 3710a(d)(2));

12 “(5) ‘disadvantaged’ has the same meaning as
13 such term has in section 8(a) (5) and (6) of the
14 Small Business Act (15 U.S.C. 637(a) (5) and (6));

15 “(6) ‘dual-use technology’ means a technology
16 that has military and commercial applications;

17 “(7) ‘educational institution’ means a college,
18 university, or elementary or secondary school, in-
19 cluding any not-for-profit organization dedicated to
20 education that would be exempt under section
21 501(a) of the Internal Revenue Code of 1986;

22 “(8) ‘minority college or university’ means a
23 historically black college or university that would be
24 considered a ‘part B institution’ by section 322(2) of
25 the Higher Education Act of 1965 (20 U.S.C.

1 1061(2)) or any other institution of higher education
2 where enrollment includes a substantial percentage
3 of students who are disadvantaged;

4 “(9) ‘multi-program departmental laboratory’
5 means any of the following: Argonne National Lab-
6 oratory, Brookhaven National Laboratory, Idaho
7 National Engineering Laboratory, Lawrence Berke-
8 ley Laboratory, Lawrence Livermore National Lab-
9 oratory, Los Alamos National Laboratory, National
10 Renewable Energy Laboratory, Oak Ridge National
11 Laboratory, Pacific Northwest Laboratory, and
12 Sandia National Laboratories;

13 “(10) ‘National Critical Technologies Report’
14 means the biennial report on national critical tech-
15 nologies submitted to Congress by the President
16 pursuant to section 603(d) of the National Science
17 and Technology Policy, Organization, and Priorities
18 Act of 1976 (42 U.S.C. 6683(d));

19 “(11) ‘partnership’ means an arrangement, in-
20 cluding an arrangement under section 1109, under
21 which the Secretary or one or more departmental
22 laboratories undertakes research, development, dem-
23 onstration or commercial application activities for
24 the mutual benefit of the partners in cooperation
25 with one or more participants from among the fol-

1 lowing: an educational institution, private sector en-
2 tity, State governmental entity, or other Federal
3 agency; and

4 “(12) ‘Secretary’ means the Secretary of the
5 United States Department of Energy.

6 **“SEC. 1102. ESTABLISHMENT OF PARTNERSHIPS.**

7 “The Secretary and the director of each departmental
8 laboratory may enter into any partnership that will en-
9 hance the economic, scientific or technological competitive-
10 ness of United States industry utilizing the authority of
11 this title or the authority available to the Secretary or the
12 directors under the following—

13 “(a) the Atomic Energy Act of 1954;

14 “(b) the Federal Nonnuclear Energy Research
15 and Development Act of 1974;

16 “(c) the Energy Policy Act of 1992;

17 “(d) the Stevenson-Wydler Technology Innova-
18 tion Act of 1980;

19 “(e) the National Competitiveness Technology
20 Transfer Act of 1989;

21 “(f) the Federal Technology Transfer Act of
22 1986;

23 “(g) the “Renewable Energy and Energy Effi-
24 ciency Technology Competitiveness Act of 1989;

1 ~~“(h) the Bayh-Dole Patent and Trademark Act~~
2 ~~of 1980; or~~

3 ~~“(i) the National Cooperative Research Act of~~
4 ~~1984.~~

5 **~~“SEC. 1103. ESTABLISHMENT OF GOAL FOR PARTNERSHIPS~~**
6 **~~BETWEEN MULTI-PROGRAM DEPARTMENTAL~~**
7 **~~LABORATORIES AND UNITED STATES INDUS-~~**
8 **~~TRY.~~**

9 ~~“(a) Beginning in fiscal year 1994, the Secretary~~
10 ~~shall establish a goal to allocate not less than 10 percent~~
11 ~~of the annual budget of each multi-program departmental~~
12 ~~laboratory to cost-shared partnerships with United States~~
13 ~~industry.~~

14 ~~“(b) Funds authorized to be appropriated to the Sec-~~
15 ~~retary and made available for departmental laboratory-~~
16 ~~directed research and development shall be available for~~
17 ~~any partnership.~~

18 **~~“SEC. 1104. DEPARTMENT ROLE IN THE DEVELOPMENT OF~~**
19 **~~CRITICAL TECHNOLOGY STRATEGIES.~~**

20 ~~“(a) The Secretary shall develop a multi-year critical~~
21 ~~technology strategy for research, development, demonstra-~~
22 ~~tion and commercial application activities supported by~~
23 ~~the Department for each critical technology listed in the~~
24 ~~National Critical Technologies Report.~~

1 “(b) In developing such strategy, the Secretary
2 shall—

3 ~~“(1) develop goals and objectives for the appro-~~
4 ~~prate role of the Department in each of the critical~~
5 ~~technologies listed in the report, building on the core~~
6 ~~competencies of the departmental laboratories;~~

7 ~~“(2) consult with appropriate representatives of~~
8 ~~United States industry, including members of Unit-~~
9 ~~ed States industry associations and representatives~~
10 ~~of labor organizations in the United States; and~~

11 ~~“(3) participate in the executive branch process~~
12 ~~to develop critical technology strategies such as re-~~
13 ~~quired by section 822 of the National Defense Au-~~
14 ~~thorization Act for Fiscal Years 1992 and 1993~~
15 ~~(Public Law 102-190).~~

16 **“SEC. 1105. MISSION STATEMENT.**

17 ~~“(a) The Secretary, and the director of each depart-~~
18 ~~mental laboratory, may enter into partnerships that build~~
19 ~~on the core competencies of the departmental laboratories~~
20 ~~to conduct research, development, demonstration or com-~~
21 ~~mercial application activities in those areas listed in the~~
22 ~~biennial National Critical Technologies Report or in any~~
23 ~~of the following areas—~~

24 ~~“(1) energy efficiency, including efficiency in~~
25 ~~power generation, transmission, and utilization; en-~~

1 energy conservation technologies; process technologies;
2 and transportation;

3 ~~“(2) energy supply, including alternative fuels;~~
4 ~~advanced forms of renewable energy; advanced clean~~
5 ~~coal technologies; coal liquefaction and synthetic fos-~~
6 ~~sil fuels; advanced oil and gas recovery; advanced~~
7 ~~nuclear reactor technologies; fusion technologies;~~
8 ~~biofuel technologies; electricity transmission, dis-~~
9 ~~tribution, and storage; and energy forecasting;~~

10 ~~“(3) high-performance computing, including~~
11 ~~programs to develop and use new computer architec-~~
12 ~~tures such as large scale parallel computers, real-~~
13 ~~time visualization, powerful scientific workstations,~~
14 ~~high-speed networking, new computer software and~~
15 ~~algorithms; programs to develop advanced materials~~
16 ~~for the communication and computing industry such~~
17 ~~as new memories, optical switches or optical storage~~
18 ~~disks; programs to address complex scientific chal-~~
19 ~~lenges such as understanding global climate change,~~
20 ~~hydrologic modeling, and fundamental combustion~~
21 ~~processes; and programs with other agencies and the~~
22 ~~private sector for the development and use of high-~~
23 ~~performance computer research networks;~~

24 ~~“(4) the environment, including global climate~~
25 ~~change; protection of ecological systems; environ-~~

1 mental restoration and waste management; and de-
2 velopment of technologies for biogeochemical dynam-
3 ics, toxicology, remote sensing, biotechnology, risk
4 analysis, and environmental assessment;

5 “(5) human health, including radio-
6 pharmaceutical and laser applications; mapping of
7 the human genome; structural biology; development
8 of technologies for nuclear and diagnostic medicine
9 and radiation biology, including cancer therapies;
10 and development of sensors, electronics and informa-
11 tion systems to lower health care costs;

12 “(6) advanced manufacturing technologies, in-
13 cluding laser technologies, robotics and intelligent
14 machines; semiconductors, superconductors, micro-
15 electronics, photonics, optoelectronics, and advanced
16 displays; x-ray lithography; sensor and process con-
17 trols; and those technologies that may affect energy
18 production, energy efficiency, environmental protec-
19 tion or waste minimization;

20 “(7) advanced materials, including materials
21 that may increase efficiency in energy generation,
22 conversion, transmission and use; synthesis and
23 processing for improved and new materials; mate-
24 rials to promote waste minimization and environ-
25 mental protection; and new and improved methods,

1 techniques, and instruments to characterize and
2 analyze properties of materials;

3 “(8) transportation technologies, including
4 those that will improve the efficiency of and reduce
5 the energy consumption and environmental impact
6 associated with conventional transportation tech-
7 nologies;

8 “(9) space technologies, including space-based
9 sensors for environmental monitoring, climate mod-
10 eling, and radio-biological studies;

11 “(10) quality technologies, including reliability
12 engineering, failure analysis, statistical process con-
13 trol, nondestructive testing and inspection tech-
14 niques, concurrent engineering and design practices
15 for reliability and testability used to ensure product
16 and process quality specifications are met;

17 “(11) technologies listed in the annual defense
18 critical technologies plan submitted to Congress by
19 the Secretary of Defense pursuant to section
20 2506(e) of title 10, United States Code; and

21 “(12) any other generic, precompetitive tech-
22 nology or other critical technology identified by the
23 Secretary.

24 “(b) The Secretary, and the directors of the depart-
25 mental laboratories, shall utilize partnerships with United

1 States industry to ensure that technologies developed in
2 pursuit of the Department's missions are rapidly applied
3 and commercialized. In carrying out the Department's
4 missions, the Secretary, and the directors of the depart-
5 mental laboratories, shall, to the maximum extent prac-
6 ticable, work in partnership with United States industry
7 and educational institutions.

8 “(c) The Secretary shall work with other Federal
9 agencies to carry out research, development, demonstra-
10 tion, or commercial application activities where the core
11 competencies of the Department and the departmental
12 laboratories could contribute to the missions of such other
13 agencies.

14 **“SEC. 1106. PARTNERSHIP PREFERENCES.**

15 “(a) Any partnership that would be given preference
16 under section 12(c)(4) of the Stevenson-Wydler Tech-
17 nology Innovation Act of 1980 (15 U.S.C. 3710a(c)(4))
18 if it were a cooperative research and development agree-
19 ment shall be given similar preference under this title.

20 “(b) The Secretary shall issue guidelines to describe
21 the application of section 12(c)(4) of the Stevenson-
22 Wydler Technology Innovation Act of 1980 (15 U.S.C.
23 3710a(c)(4)) to partnerships as prescribed by section (a).

1 “(c) The Secretary shall encourage partnerships that
2 involve minority colleges or universities or private sector
3 entities owned or controlled by disadvantaged individuals.

4 **“SEC. 1107. EVALUATION OF PARTNERSHIP PROGRAMS.**

5 “(a) The Secretary shall develop mechanisms for
6 independent evaluation of the accomplishments of the on-
7 going partnership activities of the Department and the de-
8 partmental laboratories.

9 “(b)(1) The Secretary and the director of each de-
10 partmental laboratory shall develop mechanisms for as-
11 sessing the accomplishments of each partnership and for
12 measuring the progress of each such partnership.

13 “(2) The Secretary and the director of each depart-
14 mental laboratory shall utilize mechanisms developed
15 under subparagraph (1) to evaluate the success of each
16 ongoing multiyear partnership and shall condition contin-
17 ued funding of each such partnership on demonstrated
18 progress.

19 **“SEC. 1108. ANNUAL REPORT.**

20 “(a) The Secretary shall submit an annual report to
21 Congress describing the ongoing partnership activities of
22 the Secretary and each departmental laboratory and, to
23 the extent practicable, the activities planned by the Sec-
24 retary and by each departmental laboratory for the coming
25 fiscal year. In developing the report, the Secretary shall

1 seek the advice of the Laboratory Partnership Advisory
2 Board established in section 1110.

3 ~~“(b) The Secretary shall submit the report under sub-~~
4 ~~section (a) to the Committees on Appropriations and En-~~
5 ~~ergy and Natural Resources of the Senate and to the~~
6 ~~appropriate Committees of the House of Representatives.~~
7 ~~No later than March 1, 1994, and no later than the first~~
8 ~~of March of each subsequent year, the Secretary shall sub-~~
9 ~~mit the report under subsection (a) that covers the fiscal~~
10 ~~year beginning on the first of October of such year.~~

11 ~~“(c) Each director of a departmental laboratory shall~~
12 ~~provide annually to the Secretary a report on current part-~~
13 ~~nership activities and a plan and such other information~~
14 ~~as the Secretary may reasonably require describing the~~
15 ~~partnership activities the director expects will be carried~~
16 ~~out by such laboratory in the coming fiscal year. The di-~~
17 ~~rector shall provide such report and plan in a timely man-~~
18 ~~ner as prescribed by the Secretary to permit preparation~~
19 ~~of the report under subsection (a).~~

20 ~~“(d) The Secretary’s description of planned activities~~
21 ~~under subsection (a) shall include, to the extent such in-~~
22 ~~formation is available, appropriate information on—~~

23 ~~“(1) the total funds to be allocated to partner-~~
24 ~~ship activities by the Secretary and by the director~~
25 ~~of each departmental laboratory;~~

1 “(2) a breakdown of funds to be allocated by
2 the Secretary and by the director of each depart-
3 mental laboratory for partnership activities in each
4 area of technology identified in section 1105(a);

5 “(3) plans for additional funds not described in
6 subparagraph (2) to be set aside for partnerships
7 during the coming fiscal year;

8 “(4) the partnerships the Secretary and the di-
9 rector of each departmental laboratory expects to
10 undertake in the coming fiscal year;

11 “(5) the technologies that will be advanced by
12 partnerships and the anticipated benefits of such
13 technologies;

14 “(6) the types of entities that will be eligible for
15 participation in partnerships;

16 “(7) the nature of the partnership arrange-
17 ments, including the anticipated level of financial
18 and in-kind contribution from participants and any
19 repayment terms;

20 “(8) the extent of the use of competitive proce-
21 dures in selecting partnerships; and

22 “(9) such other information that the Secretary
23 finds relevant to the determination of the appro-
24 priate level of Federal support for such partnerships.

1 same purposes and the same period for which other funds
2 in such account are available.

3 ~~“(c) The authority provided under subsection (a) may~~
4 ~~be exercised without regard to section 3324 of title 31 of~~
5 ~~the United States Code.~~

6 ~~“(d) The Secretary shall ensure that—~~

7 ~~“(1) to the maximum extent practicable, a co-~~
8 ~~operative agreement or other transaction under this~~
9 ~~section does not provide for activities that duplicate~~
10 ~~activities being conducted under existing programs~~
11 ~~carried out by the Department;~~

12 ~~“(2) to the extent the Secretary determines~~
13 ~~practicable, the funds provided by the Government~~
14 ~~under the cooperative agreement or other trans-~~
15 ~~action do not exceed the total amount provided by~~
16 ~~other parties to the cooperative agreement or other~~
17 ~~transaction; and~~

18 ~~“(3) the authority under this section is used~~
19 ~~only when the use of contracts or grants is not fea-~~
20 ~~sible or appropriate.~~

21 ~~“(e) There is hereby established in the Treasury an~~
22 ~~account for support of partnerships provided for in cooper-~~
23 ~~ative agreements and other transactions entered into~~
24 ~~under subsection (a). Funds in such account shall be avail-~~
25 ~~able to the Secretary for the payment of such support.~~

1 **“SEC. 1110. LABORATORY PARTNERSHIP ADVISORY BOARD**
2 **AND INDUSTRIAL ADVISORY GROUPS AT**
3 **MULTI-PROGRAM DEPARTMENTAL LABORA-**
4 **TORIES.**

5 “(a)(1) The Secretary shall establish within the De-
6 partment an advisory board to be known as the “Labora-
7 tory Partnership Advisory Board,” to provide the Sec-
8 retary with advice on the implementation of this title.

9 “(2) The membership of the Laboratory Partnership
10 Advisory Board shall consist of prominent representatives
11 primarily from United States industry, but also from edu-
12 cational institutions, Federal laboratories of agencies
13 other than the Department, and professional and technical
14 societies in the United States who are qualified to provide
15 the Secretary with advice on the implementation of this
16 title.

17 “(3) The Laboratory Partnership Advisory Board
18 shall request comment and suggestions from departmental
19 laboratories to assist the Board in providing advice to the
20 Secretary on the implementation of this title.

21 “(b) The director of each multi-program depart-
22 mental laboratory shall establish an advisory group con-
23 sisting of individuals with experience in the industrial
24 sector to—

25 “(1) evaluate new initiatives proposed by the
26 departmental laboratory and identify opportunities

1 for partnerships with United States industry on
2 those initiatives; and

3 ~~“(2) evaluate ongoing programs at the depart-~~
4 ~~mental laboratory from the perspective of United~~
5 ~~States industry.~~

6 ~~“(c) Nothing in this section is intended to preclude~~
7 ~~the Secretary or the director of a departmental laboratory~~
8 ~~from utilizing existing advisory boards to achieve the~~
9 ~~purposes of this section.~~

10 ~~**“SEC. 1111. FELLOWSHIP PROGRAM.**~~

11 ~~“The Secretary shall establish a program to encour-~~
12 ~~age scientists and engineers from departmental labora-~~
13 ~~tories to serve as visiting scientists and engineers in the~~
14 ~~research facilities of governments, educational institutions~~
15 ~~and industrial organizations in the United States and~~
16 ~~foreign countries.~~

17 ~~**“SEC. 1112. COOPERATION WITH STATE PROGRAMS FOR**~~
18 ~~**TECHNOLOGY DEVELOPMENT AND DISSEMI-**~~
19 ~~**NATION.**~~

20 ~~“The Secretary and the director of each multi-~~
21 ~~program departmental laboratory shall seek opportunities~~
22 ~~to coordinate their activities with programs of state and~~
23 ~~local governments for technology development and dis-~~
24 ~~semination, including programs funded in part by the Sec-~~
25 ~~retary of Defense pursuant to section 2523 of title 10 of~~

1 the United States Code and section 2513 of title 10 of
2 the United States Code and programs funded in part by
3 the Secretary of Commerce pursuant to sections 25 and
4 26 of the Act of March 3, 1901 (15 U.S.C. 278k and 278l)
5 and section 5121(b) of the Omnibus Trade and Competi-
6 tiveness Act of 1988 (15 U.S.C. 278l note).

7 **“SEC. 1113. AVAILABILITY OF FUNDS FOR PARTNERSHIPS.**

8 “(a) All of the funds authorized to be appropriated
9 to the Secretary for research, development, demonstration
10 or commercial application activities, other than atomic en-
11 ergy defense activities, shall be available for partnerships
12 to the extent such partnerships are consistent with the
13 goals and objectives of such activities.

14 “(b) All of the funds authorized to be appropriated
15 to the Secretary for research, development, demonstration
16 or commercial application of dual-use technologies within
17 the Department’s atomic energy defense activities, except
18 for the naval nuclear propulsion program, shall be avail-
19 able for partnerships to the extent such partnerships are
20 consistent with the goals and objectives of such activities.

21 **“SEC. 1114. PROTECTION OF INFORMATION.**

22 “Section 12(c)(7) of the Stevenson-Wydler Tech-
23 nology Innovation Act of 1980, relating to the protection
24 of information, shall apply to the partnership activities un-

1 dertaken by the Secretary and by the directors of the
2 departmental laboratories.

3 **“SEC. 1115. EQUALITY OF ACCESS.**

4 “(a) The Secretary and the director of each depart-
5 mental laboratory shall institute such procedures as need-
6 ed to ensure that information on opportunities to partici-
7 pate in partnerships with the Secretary or the depart-
8 mental laboratories is widely disseminated.

9 “(b) In cases where the Secretary or the director of
10 a departmental laboratory believes a potential partnership
11 activity would benefit from broad participation from the
12 private sector, the Secretary or the director of such de-
13 partmental laboratory may take such steps as may be nec-
14 essary to facilitate formation of a United States industry
15 consortium to pursue the partnership activity.

16 **“SEC. 1116. PRODUCT LIABILITY.**

17 “‘The Secretary and the Attorney General shall enter
18 into a memorandum of understanding to establish a con-
19 sistent policy and standards regarding the liability of the
20 United States, the non-federal entity operating a depart-
21 mental laboratory and of any other party to a partnership
22 for claims arising from partnership activities. The Sec-
23 retary and the director of each departmental laboratory
24 shall, to the maximum extent practicable, incorporate into

1 any partnership arrangement the standards established in
2 the memorandum of understanding.

3 **“SEC. 1117. INTELLECTUAL PROPERTY.**

4 “(a) The Secretary shall develop guidelines to govern
5 the distribution of intellectual property resulting from a
6 cost-shared partnership. Such guidelines shall ensure, to
7 the maximum extent practicable, that the intellectual
8 property provisions of any partnership arrangement ad-
9 ministered by a non-federal entity operating a depart-
10 mental laboratory:

11 “(1) maximize the competitiveness of United
12 States industry; and

13 “(2) are uniform among the departmental lab-
14 oratories.

15 “(b) The Secretary shall ensure that the management
16 and operating contracts between the Secretary and the
17 non-federal entities operating the departmental labora-
18 tories are uniform with respect to provisions governing the
19 administration of intellectual property in partnership ar-
20 rangements involving departmental laboratories.”.

21 **SEC. 3. MINORITY COLLEGE AND UNIVERSITY REPORT.**

22 Within one year after the date of enactment of this
23 provision, the Secretary of Energy shall submit to the
24 Committee on Energy and Natural Resources of the Unit-
25 ed States Senate and to the United States House of Rep-

1 representatives a report addressing opportunities for minority
2 colleges and universities to participate in programs and
3 activities being carried out by the Department or the de-
4 partmental laboratories. The Secretary shall consult with
5 representatives of minority colleges and universities in pre-
6 paring the report. Such report shall—

7 (a) describe current education and training pro-
8 grams being carried out by the Department or the
9 departmental laboratories with respect to or in con-
10 junction with minority colleges and universities in
11 the areas of mathematics, science, and engineering;

12 (b) describe current research, development or
13 demonstration programs involving the Department
14 or the departmental laboratories and minority col-
15 leges and universities;

16 (c) describe funding levels for the programs re-
17 ferred to in subsection (a) and (b);

18 (d) identify ways for the Department or the de-
19 partmental laboratories to assist minority colleges
20 and universities in providing education and training
21 in the fields of mathematics, science, and engineer-
22 ing;

23 (e) identify ways for the Department or the de-
24 partmental laboratories to assist minority colleges
25 and universities in entering into partnerships;

1 (f) address the need for and potential role of
2 the Department or the departmental laboratories in
3 providing minority colleges and universities:

4 (1) increased research opportunities for
5 faculty and students;

6 (2) assistance in faculty development and
7 recruitment and curriculum enhancement and
8 development; and

9 (3) laboratory instrumentation and equip-
10 ment, including computer equipment, through
11 purchase, loan, or other transfer;

12 (g) address the need for and potential role of
13 the Department or departmental laboratories in pro-
14 viding funding and technical assistance for the devel-
15 opment of infrastructure facilities, including build-
16 ings and laboratory facilities at minority colleges
17 and universities; and

18 (h) make specific proposals and recommenda-
19 tions, together with estimates of necessary funding
20 levels, for initiatives to be carried out by the Depart-
21 ment or the departmental laboratories to assist mi-
22 nority colleges and universities in providing edu-
23 cation and training in the areas of mathematics,
24 science, and engineering, and in entering into part-

1 nerships with the Department or departmental lab-
2 oratories.

3 **SEC. 4. CAREER PATH PROGRAM.**

4 (a) The Secretary shall establish a career path pro-
5 gram to recruit employees of the national laboratories to
6 serve in positions in the Department.

7 (b) The Secretary may utilize the authorities in this
8 section to carry out the career path program. In addition
9 to these authorities, the Secretary may exercise the waiver
10 authorities of section 208(b) of title 18, United States
11 Code, and section 602(c) of the Department of Energy
12 Organization Act, (~~42 U.S.C. section 7212(c)~~).

13 (c) Section 207 of title 18, United States Code, is
14 amended by inserting after subsection (j)(6) the following:

15 “(7) NATIONAL LABORATORIES.—(A) The re-
16 strictions contained in subsections (a), (b), (c), and
17 (d) shall not apply to an appearance or communica-
18 tion made, or advice or aid rendered by an employee
19 of a contractor managing and operating a facility
20 described in subparagraph (B), if the appearance or
21 communication is made on behalf of the facility or
22 the advice or aid is provided to the contractor of the
23 facility.

24 “(B) This paragraph applies to the following:
25 Argonne National Laboratory, Brookhaven National

1 Laboratory, Idaho National Engineering Laboratory,
2 Lawrence Berkeley Laboratory, Lawrence Livermore
3 National Laboratory, Los Alamos National Labora-
4 tory, National Renewable Energy Laboratory, Oak
5 Ridge National Laboratory, Pacific Northwest Lab-
6 oratory, and Sandia National Laboratories”.

7 (d) Section 27 of the Office of Federal Procurement
8 Policy Act, 41 U.S.C. section 423, is amended by inserting
9 after subsection (p) the following:

10 “(q) NATIONAL LABORATORIES.—(1) The restric-
11 tions on obtaining a recusal contained in paragraphs
12 (e)(2) and (e)(3) shall not apply to discussions of future
13 employment or business opportunity between a procure-
14 ment official and a competing contractor managing and
15 operating a facility described in paragraph (3): *Provided,*
16 That such discussions concern the employment of the pro-
17 curement official at such facility.

18 “(2) The restrictions contained in paragraph (f)(1)
19 shall not apply to activities performed on behalf of a facil-
20 ity described in paragraph (3).

21 “(3) This subsection applies to the following: Ar-
22 gonne National Laboratory, Brookhaven National Labora-
23 tory, Idaho National Engineering Laboratory, Lawrence
24 Berkeley Laboratory, Lawrence Livermore National Lab-
25 oratory, Los Alamos National Laboratory, National Re-

1 newable Energy Laboratory, Oak Ridge National Labora-
2 tory, Pacific Northwest Laboratory, and Sandia National
3 Laboratories.”.

4 **SEC. 5. INFORMATION INFRASTRUCTURE AND TECH-**
5 **NOLOGY.**

6 (a) FINDINGS.—

7 (1) High-performance computing and high-
8 speed networking have the potential to revolutionize
9 many fields and to contribute to the enhancement of
10 the economic, scientific, and technological competi-
11 tiveness of United States industry.

12 (2) The Federal Government should ensure that
13 a coordinated interagency program in partnership
14 with the private sector is available to identify and
15 promote applications of high-performance computing
16 and high-speed networking that will significantly im-
17 prove the use of information, foster and strengthen
18 research and development capabilities, and enhance
19 the competitiveness of United States industry.

20 (b) PURPOSE.—

21 The purpose of this section is to—

22 (1) ensure the widest possible application
23 of high-performance computing and high-speed
24 networking in the United States; and

1 (2) provide for partnerships that will en-
2 hance Federal and private efforts to deploy and
3 commercialize these technologies as part of a
4 national information infrastructure.

5 (c) NATIONAL INFORMATION INFRASTRUCTURE DE-
6 VELOPMENT PROGRAM.—The High-Performance Comput-
7 ing Act of 1991 (Public Law 101-425) is amended—

8 (1) in section 101, by adding after paragraph
9 (2) a new paragraph (3) as follows and renumbering
10 subsequent paragraphs accordingly:

11 “(3) The Program shall also—

12 “(A) provide for a coordinated interagency
13 effort in partnership with the private sector to
14 develop, deploy, and commercialize high-per-
15 formance computing and high-speed networking
16 technologies through a national information in-
17 frastructure for applications in—

18 “(i) education,

19 “(ii) health care,

20 “(iii) manufacturing,

21 “(iv) digital information,

22 “(v) energy demand management,

23 “(vi) environmental monitoring and
24 remediation;

25 “(vii) financial services; and

1 ~~“(viii) such other fields as the Presi-~~
2 ~~dent deems appropriate;~~

3 ~~“(B) set forth the role of the Network in~~
4 ~~making the benefits of applications of high-per-~~
5 ~~formance computing and high-speed networking~~
6 ~~available to United States research and edu-~~
7 ~~cational institutions, government and industry~~
8 ~~in every State through a national information~~
9 ~~infrastructure; and~~

10 ~~“(C) otherwise ensure that services and~~
11 ~~applications of high-performance computing and~~
12 ~~high-speed networking technologies are avail-~~
13 ~~able as needed to United States industry, gov-~~
14 ~~ernment and academia.”.~~

15 ~~(2) In section 203 by adding at the end thereof~~
16 ~~a new subsection (f) as follows:~~

17 ~~“(f)(1) The Secretary of Energy shall, consist-~~
18 ~~ent with the Program, provide for cooperative, cost-~~
19 ~~shared projects involving the Department of Energy~~
20 ~~or one or more Department of Energy laboratories~~
21 ~~and appropriate non-Federal entities to develop, test~~
22 ~~and apply high-performance computing and high-~~
23 ~~speed networking technologies for—~~

24 ~~“(A) education and training, including~~
25 ~~science, mathematics and engineering education~~

1 and practical post-secondary training in skills
2 needed by United States industry;

3 “(B) health care, including remote diag-
4 nosis and monitoring;

5 “(C) manufacturing;

6 “(D) energy demand management and con-
7 trol, including vehicle efficiency and utilization,
8 energy efficiency in commercial and residential
9 buildings, and industrial energy use and prac-
10 tices;

11 “(E) scientific, technical and energy infor-
12 mation dissemination and analysis, including
13 exhibits and model experiments;

14 “(F) technology transfer among the De-
15 partment of Energy laboratories, United States
16 industry and educational institutions;

17 “(G) environmental monitoring, modeling
18 and remediation;

19 “(H) financial services, including security
20 and data base management of financial data;
21 and

22 “(I) such other areas as the Secretary
23 deems appropriate.

24 “(2) In carrying out projects under subpara-
25 graph (1), the Secretary shall, where appropriate,

1 seek to address the technical, architectural, eco-
2 nomic, regulatory, and market considerations critical
3 to further development of a national information in-
4 frastructure.

5 “(3) There is authorized to be appropriated to
6 the Secretary of Energy for purposes of this sub-
7 section \$50,000,000 for fiscal year 1994,
8 \$100,000,000 for fiscal year 1995 and
9 \$150,000,000 for fiscal year 1996.”.

10 **SEC. 6. AVLIS COMMERCIALIZATION.**

11 (a) **PREDEPLOYMENT CONTRACTOR.**—Not later than
12 ninety days after the date of enactment of this Act, the
13 Secretary shall solicit proposals for a commercial
14 predeployment contractor to conduct such activities as
15 may be necessary to enable the Secretary or any successor
16 to the Secretary’s uranium enrichment enterprise to de-
17 ploy a commercial uranium enrichment plant using the
18 Atomic Vapor Laser Isotope Separation (AVLIS) tech-
19 nology. Such activities shall include:

20 (1) developing a transition plan for transferring
21 the AVLIS program from research, development,
22 and demonstration activities at the Lawrence Liver-
23 more National Laboratory to deployment of a com-
24 mercial AVLIS production plant;

1 (2) confirming the technical performance of
2 AVLIS technology;

3 (3) developing the economic and industrial as-
4 sessments necessary for the Secretary or his succes-
5 sor to make a commercial decision whether to deploy
6 AVLIS;

7 (4) providing an industrial perspective for the
8 planning and execution of remaining demonstration
9 program activities; and

10 (5) completing feasibility and risk studies nec-
11 essary for a commercial decision whether to deploy
12 AVLIS, including financing options.

13 (b) ~~ADDITIONAL ACTIVITIES.~~—Based upon the re-
14 sults of subsection (a), the Secretary may solicit additional
15 proposals to complete the following activities:

16 (1) site selection, site characterization, and en-
17 vironmental documentation activities for a commer-
18 cial AVLIS plant;

19 (2) engineering design of a production plant,
20 developing a project schedule, and initiating oper-
21 ations planning;

22 (3) activities leading to obtaining necessary li-
23 censes from the Nuclear Regulatory Commission;
24 and

1 (4) ensuring the successful integration of
2 AVLIS technology into the commercial nuclear fuel
3 cycle.

4 (c) **REPORTS.**—The Secretary shall submit to the
5 Committee on Energy and Natural Resources of the Unit-
6 ed States Senate and to the Speaker of the House of Rep-
7 resentatives a written report on the progress made toward
8 the deployment of a commercial AVLIS production plant
9 ninety days after the date of enactment of this Act and
10 each ninety days thereafter.

11 **SEC. 7. DOE MANAGEMENT.**

12 (a)(1) Section 202(a) of the Department of Energy
13 Organization Act (42 U.S.C. 7132(a)) is amended by
14 striking “Under Secretary” and inserting in its place
15 “Under Secretaries”.

16 (2) Section 202(b) of the Department of Energy Or-
17 ganization Act (42 U.S.C. 7132(b)) is amended to read
18 as follows:

19 “(b) There shall be in the Department three Under
20 Secretaries and a General Counsel, who shall be appointed
21 by the President, by and with the advice and consent of
22 the Senate, and who shall perform functions and duties
23 the Secretary prescribes. The Under Secretaries shall be
24 compensated at the rate for level III of the Executive
25 Schedule under section 5314 of title 5, United States

1 Code, and the General Counsel shall be compensated at
2 the rate provided for level IV of the Executive Schedule
3 under section 5315 of title 5, United States Code.”.

4 (b) Section 203(a) of the Department of Energy Or-
5 ganization Act (42 U.S.C. 7133(a)) is amended by strik-
6 ing “eight Assistant Secretaries” and inserting in its place
7 “eleven Assistant Secretaries”.

8 **SEC. 8. AMENDMENTS TO STEVENSON-WYDLER TECH-**
9 **NOLOGY INNOVATION ACT.**

10 Section 12(c)(5) of the Stevenson-Wydler Technology
11 Innovation Act of 1980 (15 U.S.C. 3710a(c)(5)) is amend-
12 ed—

13 (a) by deleting subparagraph (C)(i) and insert-
14 ing in lieu thereof:

15 “(C)(i) Any agency which has contracted with a non-
16 Federal entity to operate a laboratory shall review and ap-
17 prove, request specific modifications to, or disapprove a
18 joint work statement and cooperative research and devel-
19 opment agreement that is submitted by the director of
20 such laboratory within thirty days after such submission.
21 In any case where an agency has requested specific modi-
22 fications to a joint work statement or cooperative research
23 and development agreement, the agency shall approve or
24 disapprove any resubmission of such joint work statement
25 or cooperative research and development agreement within

1 fifteen days after such resubmission. No agreement may
2 be entered into by a Government-owned, contractor-oper-
3 ated laboratory under this section before both approval of
4 the cooperative research and development agreement and
5 a joint work statement.”;

6 (b) by adding after “joint work statement” in
7 subparagraph (C)(ii) the words, “or cooperative re-
8 search and development agreement”.

9 (c) by deleting subparagraph (C)(iv).

10 (d) by deleting subparagraph (C)(v) and insert-
11 ing in lieu thereof:

12 “(C)(iv) If an agency fails to complete a review under
13 clause (i) within any of the specified time-periods, the
14 agency shall submit to the Congress, within ten days after
15 the failure to complete the review, a report on the reasons
16 for such failure. The agency shall, at the end of each suc-
17 cessive fifteen-day period thereafter during which such
18 failure continues, submit to Congress another report on
19 the reasons for the continuing failure.”.

20 (e) by deleting subparagraph (C)(vi).

21 **SEC. 9. GUIDELINES.**

22 The implementation of the provisions of this Act shall
23 not be delayed pending the issuance of guidelines or stand-
24 ards required by sections 1106, 1116, and 1117 of the

1 Department of Energy Organization Act (42 U.S.C. 7101
2 et seq.) as added by section 2 of this Act.

3 **SEC. 10. AUTHORIZATION.**

4 In addition to funds made available for partnerships
5 under section 1113 of the Department of Energy Organi-
6 zation Act (42 U.S.C. 7101 et seq.) as added by section
7 2 of this Act, there is authorized to be appropriated from
8 funds otherwise available to the Secretary—

9 (a) for partnership activities with industry in
10 areas other than atomic energy defense activities
11 \$100,000,000 for fiscal year 1994, \$140,000,000 for
12 fiscal year 1995, \$180,000,000 for fiscal year 1996
13 and \$220,000,000 for fiscal year 1997; and

14 (b) for partnership activities with industry in-
15 volving dual-use technologies within the Depart-
16 ment's atomic energy defense activities, except for
17 the naval nuclear propulsion program, \$240,000,000
18 for fiscal year 1994, \$290,000,000 for fiscal year
19 1995, \$350,000,000 for fiscal year 1996 and
20 \$400,000,000 for fiscal year 1997.

21 **SECTION 1. SHORT TITLE.**

22 *This Act may be cited as the "Department of Energy*
23 *National Competitiveness Technology Partnership Act of*
24 *1993".*

1 **SEC. 2. DEFINITIONS.**

2 *For purposes of this Act, the term—*

3 (1) *“Department” means the United States De-*
4 *partment of Energy; and*

5 (2) *“Secretary” means the Secretary of the*
6 *United States Department of Energy.*

7 **SEC. 3. COMPETITIVENESS AMENDMENT TO THE DEPART-**
8 **MENT OF ENERGY ORGANIZATION ACT.**

9 (a) *The Department of Energy Organization Act is*
10 *amended by adding the following new title (42 U.S.C. 7101*
11 *et seq.):*

12 **“TITLE XI—TECHNOLOGY**
13 **PARTNERSHIPS**

14 **“SEC. 1101. FINDINGS, PURPOSES AND DEFINITIONS.**

15 *“(a) FINDINGS.—For purposes of this title, Congress*
16 *finds that—*

17 *“(1) the Department has scientific and technical*
18 *resources within the departmental laboratories in*
19 *many areas of importance to the economic, scientific*
20 *and technological competitiveness of United States in-*
21 *dustry;*

22 *“(2) the extensive scientific and technical invest-*
23 *ment in people, facilities and equipment in the de-*
24 *partmental laboratories can contribute to the achieve-*
25 *ment of national technology goals in areas such as the*
26 *environment, health, space, and transportation;*

1 “(3) the Department has pursued aggressively
2 the transfer of technology from departmental labora-
3 tories to the private sector; however, the capabilities
4 of the laboratories could be made more fully accessible
5 to United States industry and to other Federal
6 agencies;

7 “(4) technology development has been increas-
8 ingly driven by the commercial marketplace, and the
9 private sector has research and development capabili-
10 ties in a broad range of generic technologies;

11 “(5) the Department and the departmental lab-
12 oratories would benefit, in carrying out their mis-
13 sions, from collaboration and partnership with
14 United States industry and other Federal agencies;
15 and

16 “(6) partnerships between the departmental lab-
17 oratories and United States industry can provide sig-
18 nificant benefits to the Nation as a whole, including
19 creation of jobs for United States workers and im-
20 provement of the competitive position of the United
21 States in key sectors of the economy such as aero-
22 space, automotive, chemical and electronics.

23 “(b) PURPOSES.—The purposes of this title are—

1 “(1) to promote partnerships among the Depart-
2 ment, the departmental laboratories and the private
3 sector;

4 “(2) to establish a goal for the amount of depart-
5 mental laboratory resources to be committed to part-
6 nerships;

7 “(3) to ensure that the Department and the de-
8 partmental laboratories play an appropriate role,
9 consistent with the core competencies of the labora-
10 tories, in implementing the President’s critical tech-
11 nology strategies;

12 “(4) to provide additional authority to the Sec-
13 retary to enter into partnerships with the private sec-
14 tor to carry out research, development, demonstration
15 and commercial application activities;

16 “(5) to streamline the approval process for coop-
17 erative research and development agreements proposed
18 by the departmental laboratories; and

19 “(6) to facilitate greater cooperation between the
20 Department and other Federal agencies as part of an
21 integrated national effort to improve United States
22 competitiveness.

23 “(c) *DEFINITIONS.*—For purposes of this title, the
24 term—

1 “(1) ‘cooperative research and development
2 agreement’ has the meaning given that term in sec-
3 tion 12 of the Stevenson-Wydler Technology Innova-
4 tion Act of 1980 (15 U.S.C. 3710a(d)(1));

5 “(2) ‘core competency’ means an area in which
6 the Secretary determines a departmental laboratory
7 has developed expertise and demonstrated capabilities;

8 “(3) ‘critical technology’ means a technology
9 identified in the Report of the National Critical Tech-
10 nologies Panel;

11 “(4) ‘departmental laboratory’ means a facility
12 operated by or on behalf of the Department that
13 would be considered a laboratory as that term is de-
14 fined in section 12 of the Stevenson-Wydler Tech-
15 nology Innovation Act of 1980 (15 U.S.C.
16 3710a(d)(2)) or any other laboratory or facility des-
17 ignated by the Secretary;

18 “(5) ‘disadvantaged’ has the same meaning as
19 that term has in section 8(a) (5) and (6) of the Small
20 Business Act (15 U.S.C. 637(a) (5) and (6));

21 “(6) ‘dual-use technology’ means a technology
22 that has military and commercial applications;

23 “(7) ‘educational institution’ means a college,
24 university, or elementary or secondary school, includ-
25 ing any not-for-profit organization dedicated to edu-

1 *cation that would be exempt under section 501(a) of*
2 *the Internal Revenue Code of 1986;*

3 *“(8) ‘minority college or university’ means a his-*
4 *torically Black college or university that would be*
5 *considered a ‘part B institution’ by section 322(2) of*
6 *the Higher Education Act of 1965 (20 U.S.C.*
7 *1061(2)) or a ‘minority institution’ as that term is*
8 *defined in section 1046 of the Higher Education Act*
9 *of 1965 (20 U.S.C. 1135d-5(3)).*

10 *“(9) ‘multi-program departmental laboratory’*
11 *means any of the following: Argonne National Lab-*
12 *oratory, Brookhaven National Laboratory, Idaho Na-*
13 *tion Engineering Laboratory, Lawrence Berkeley*
14 *Laboratory, Lawrence Livermore National Labora-*
15 *tory, Los Alamos National Laboratory, National Re-*
16 *newable Energy Laboratory, Oak Ridge National*
17 *Laboratory, Pacific Northwest Laboratory, and*
18 *Sandia National Laboratories;*

19 *“(10) ‘partnership’ means any arrangement*
20 *under which the Secretary or one or more depart-*
21 *mental laboratories undertakes research, development,*
22 *demonstration, commercial application or technical*
23 *assistance activities in cooperation with one or more*
24 *non-Federal partners and which may include part-*
25 *ners from other Federal agencies;*

1 “(11) ‘Report of the National Critical Tech-
2 nologies Panel’ means the biennial report on national
3 critical technologies submitted to Congress by the
4 President pursuant to section 603(d) of the National
5 Science and Technology Policy, Organization, and
6 Priorities Act of 1976 (42 U.S.C. 6683(d)); and

7 “(12) ‘small business’ means a business concern
8 that meets the applicable standards prescribed pursu-
9 ant to section 3(a) of the Small Business Act (15
10 U.S.C. 632(a)).

11 **“SEC. 1102. GENERAL AUTHORITY.**

12 “(a)(1) In carrying out the missions of the Depart-
13 ment, the Secretary and the departmental laboratories may
14 conduct research, development, demonstration or commer-
15 cial application activities that build on the core com-
16 petencies of the departmental laboratories.

17 “(2) In addition to missions established pursuant to
18 other laws, the Secretary may assign to departmental lab-
19 oratories any of the following missions:

20 “(A) National security, including the—

21 “(i) advancement of the military applica-
22 tion of atomic energy;

23 “(ii) support of the production of atomic
24 weapons, or atomic weapons parts, including
25 special nuclear materials;

1 “(iii) support of naval nuclear propulsion
2 programs;

3 “(iv) support for the dismantlement of
4 atomic weapons and the safe storage, transpor-
5 tation and disposal of special nuclear materials;

6 “(v) development of technologies and tech-
7 niques for the safe storage, processing, treatment,
8 transportation, and disposal of hazardous waste
9 (including radioactive waste) resulting from nu-
10 clear materials production, weapons production
11 and surveillance programs, and naval nuclear
12 propulsion programs and of technologies and
13 techniques for the reduction of environmental
14 hazards and contamination due to such waste
15 and the environmental restoration of sites af-
16 fected by such waste;

17 “(vi) development of technologies and tech-
18 niques needed for the effective negotiation and
19 verification of international arms control agree-
20 ments and for the containment of the prolifera-
21 tion of nuclear, chemical, and biological weapons
22 and delivery vehicles of such weapons; and

23 “(vii) protection of health and promotion of
24 safety in carrying out other national security
25 missions.

1 “(B) *Energy-related science and technology, in-*
2 *cluding the—*

3 “(i) *enhancement of the nation’s under-*
4 *standing of all forms of energy production and*
5 *use;*

6 “(ii) *support of basic and applied research*
7 *on the fundamental nature of matter and energy,*
8 *including construction and operation of unique*
9 *scientific instruments;*

10 “(iii) *development of energy resources, in-*
11 *cluding solar, geothermal, fossil, and nuclear en-*
12 *ergy resources, and related fuel cycles;*

13 “(iv) *pursuit of a comprehensive program of*
14 *research and development on the environmental*
15 *effects of energy technologies and programs;*

16 “(v) *development of technologies and proc-*
17 *esses to reduce the generation of waste or pollu-*
18 *tion or the consumption of energy or materials;*

19 “(vi) *development of technologies and tech-*
20 *niques for the safe storage, processing, treatment,*
21 *management, transportation and disposal of nu-*
22 *clear waste resulting from commercial nuclear*
23 *activities; and*

24 “(vii) *improvement of the quality of edu-*
25 *cation in science, mathematics, and engineering.*

1 “(C) *Industrial infrastructure, in technology*
2 *areas such as—*

3 “(i) *microelectronics;*

4 “(ii) *high-performance computing and com-*
5 *munications;*

6 “(iii) *transportation;*

7 “(iv) *advanced manufacturing;*

8 “(v) *advanced materials;*

9 “(vi) *space;*

10 “(vii) *human health sciences; and*

11 “(viii) *environmental science.*

12 “(D) *Technology transfer.*

13 “(3) *In carrying out the Department’s missions, the*
14 *Secretary, and the directors of the departmental labora-*
15 *tories, shall, to the maximum extent practicable, make use*
16 *of partnerships. Such partnerships shall be for purposes of*
17 *the following:*

18 “(A) *to lead to the development of technologies*
19 *that the private sector can commercialize in areas of*
20 *technology with broad application important to*
21 *United States technological and economic competitive-*
22 *ness;*

23 “(B) *to provide Federal support in areas of tech-*
24 *nology where the cost or risk is too high for the pri-*

1 *vate sector to support alone but that offer a poten-*
2 *tially high payoff to the United States;*

3 *“(C) to contribute to the education and training*
4 *of scientists and engineers;*

5 *“(D) to provide university and private research-*
6 *ers access to departmental laboratory facilities; or*

7 *“(E) to provide technical expertise to univer-*
8 *sities, industry or other Federal agencies.*

9 *“(b) The Secretary, in carrying out partnerships, may*
10 *enter into agreements using instruments authorized under*
11 *applicable laws, including but not limited to contracts, co-*
12 *operative research and development agreements, work for*
13 *other agreements, user-facility agreements, cooperative*
14 *agreements, grants, personnel exchange agreements and pat-*
15 *ent and software licenses with any person, any agency or*
16 *instrumentality of the United States, any State or local*
17 *governmental entity, any educational institution, and any*
18 *other entity, private sector or otherwise.*

19 *“(c) The Secretary, and the directors of the depart-*
20 *mental laboratories, shall utilize partnerships with United*
21 *States industry, to the maximum extent practicable, to en-*
22 *sure that technologies developed in pursuit of the Depart-*
23 *ment’s missions are applied and commercialized in a*
24 *timely manner.*

1 “(d) The Secretary shall work with other Federal agen-
2 cies to carry out research, development, demonstration or
3 commercial application activities where the core com-
4 petencies of the departmental laboratories could contribute
5 to the missions of such other agencies.

6 **“SEC. 1103. ESTABLISHMENT OF GOAL FOR PARTNERSHIPS**
7 **BETWEEN DEPARTMENTAL LABORATORIES**
8 **AND UNITED STATES INDUSTRY.**

9 “(a) Beginning in fiscal year 1994, the Secretary shall
10 establish a goal to allocate to cost-shared partnerships with
11 United States industry not less than 20 percent of the an-
12 nual funds provided by the Secretary to each multi-pro-
13 gram departmental laboratory for research, development,
14 demonstration and commercial application activities.

15 “(b) Beginning in fiscal year 1994, the Secretary shall
16 establish an appropriate goal for the amount of resources
17 to be committed to cost-shared partnerships with United
18 States industry at other departmental laboratories.

19 **“SEC. 1104. ROLE OF THE DEPARTMENT IN THE DEVELOP-**
20 **MENT OF CRITICAL TECHNOLOGY STRATE-**
21 **GIES.**

22 “(a) The Secretary shall develop a multyear critical
23 technology strategy for research, development, demonstra-
24 tion and commercial application activities supported by the

1 *Department for the critical technologies listed in the Report*
2 *of the National Critical Technologies Panel.*

3 *“(b) In developing such strategy, the Secretary shall—*

4 *“(1) identify the core competencies of each de-*
5 *partmental laboratory;*

6 *“(2) develop goals and objectives for the appro-*
7 *priate role of the Department in each of the critical*
8 *technologies listed in the report, taking into consider-*
9 *ation the core competencies of the departmental lab-*
10 *oratories;*

11 *“(3) consult with appropriate representatives of*
12 *United States industry, including members of indus-*
13 *try associations and representatives of labor organiza-*
14 *tions; and*

15 *“(4) participate in the executive branch process*
16 *to develop critical technology strategies.*

17 **“SEC. 1105. PARTNERSHIP PREFERENCES.**

18 *“(a) The Secretary shall ensure that the principal eco-*
19 *nomie benefits of any partnership accrue to the United*
20 *States economy.*

21 *“(b) Any partnership that would be given preference*
22 *under section 12(c)(4) of the Stevenson-Wydler Technology*
23 *Innovation Act of 1980 (15 U.S.C. 3710a(c)(4) if it were*
24 *a cooperative research and development agreement shall be*
25 *given preference under this title.*

1 “(c) The Secretary shall issue guidelines, after con-
2 sultation with the Laboratory Partnership Advisory Board
3 established in section 1109, for application of section
4 12(c)(4) of the Stevenson-Wydler Technology Innovation
5 Act of 1980 (15 U.S.C. 3710a(c)(4)) and application of sub-
6 section (a) of this section to partnerships.

7 “(d) The Secretary shall encourage partnerships that
8 involve minority colleges or universities or private sector
9 entities owned or controlled by disadvantaged individuals.

10 **“SEC. 1106. EVALUATION OF PARTNERSHIP PROGRAMS.**

11 “(a) The Secretary, in consultation with the Labora-
12 tory Partnership Advisory Board established in section
13 1109, shall develop mechanisms for independent evaluation
14 of the ongoing partnership activities of the Department and
15 the departmental laboratories.

16 “(b)(1) The Secretary and the director of each depart-
17 mental laboratory shall develop mechanisms for assessing
18 the progress of each partnership.

19 “(2) The Secretary and the director of each depart-
20 mental laboratory shall utilize the mechanisms developed
21 under paragraph (1) to evaluate the accomplishments of
22 each ongoing multiyear partnership and shall condition
23 continued Federal participation in each partnership on
24 demonstrated progress.

1 **“SEC. 1107. ANNUAL REPORT.**

2 “(a) *The Secretary shall submit an annual report to*
3 *Congress describing the ongoing partnership activities of the*
4 *Secretary and each departmental laboratory and, to the ex-*
5 *tent practicable, the activities planned by the Secretary and*
6 *by each departmental laboratory for the coming fiscal year.*
7 *In developing the report, the Secretary shall seek the advice*
8 *of the Laboratory Partnership Advisory Board established*
9 *in section 1109.*

10 “(b) *The Secretary shall submit the report under sub-*
11 *section (a) to the Committees on Appropriations and En-*
12 *ergy and Natural Resources of the Senate and to the appro-*
13 *priate Committees of the House of Representatives. No later*
14 *than March 1, 1994, and no later than the first of March*
15 *of each subsequent year, the Secretary shall submit the re-*
16 *port under subsection (a) that covers the fiscal year begin-*
17 *ning on the first of October of such year.*

18 “(c) *Each director of a departmental laboratory shall*
19 *provide annually to the Secretary a report on ongoing part-*
20 *nership activities and a plan and such other information*
21 *as the Secretary may reasonably require describing the*
22 *partnership activities the director plans to carry out in the*
23 *coming fiscal year. The director shall provide such report*
24 *and plan in a timely manner as prescribed by the Secretary*
25 *to permit preparation of the report under subsection (a).*

1 “(d) *The Secretary’s description of planned activities*
2 *under subsection (a) shall include, to the extent such infor-*
3 *mation is available, appropriate information on—*

4 “(1) *the total funds to be allocated to partnership*
5 *activities by the Secretary and by the director of each*
6 *departmental laboratory;*

7 “(2) *a breakdown of funds to be allocated by the*
8 *Secretary and by the director of each departmental*
9 *laboratory for partnership activities by areas of tech-*
10 *nology;*

11 “(3) *any plans for additional funds not de-*
12 *scribed in paragraph (2) to be set aside for partner-*
13 *ships during the coming fiscal year;*

14 “(4) *any partnership that involves a federal con-*
15 *tribution in excess of \$500,000 the Secretary or the*
16 *director of each departmental laboratory expects to*
17 *enter into in the coming fiscal year;*

18 “(5) *the technologies that will be advanced by*
19 *each partnership that involves a Federal contribution*
20 *in excess of \$500,000;*

21 “(6) *the types of entities that will be eligible for*
22 *participation in partnerships;*

23 “(7) *the nature of the partnership arrangements,*
24 *including the anticipated level of financial and in-*

1 *kind contribution from participants and any repay-*
2 *ment terms;*

3 *“(8) the extent of use of competitive procedures*
4 *in selecting partnerships; and*

5 *“(9) such other information that the Secretary*
6 *finds relevant to the determination of the appropriate*
7 *level of Federal support for such partnerships.*

8 *“(e) The Secretary shall provide appropriate notice in*
9 *advance to Congress of any partnership, which has not been*
10 *described previously in the report required by subsection*
11 *(a), that involves a Federal contribution in excess of*
12 *\$500,000.*

13 ***“SEC. 1108. PARTNERSHIP PAYMENTS.***

14 *“(a)(1) Partnership agreements entered into by the*
15 *Secretary may require a person or other entity to make*
16 *payments to the Department, or any other Federal agency,*
17 *as a condition for receiving support under the agreement.*

18 *“(2) The amount of any payment received by the Fed-*
19 *eral Government pursuant to a requirement imposed under*
20 *paragraph (1) may be credited, to the extent authorized by*
21 *the Secretary, to the account established under paragraph*
22 *(3). Amounts so credited shall be available, subject to appro-*
23 *priations, for partnerships.*

24 *“(3) There is hereby established in the United States*
25 *Treasury an account to be known as the ‘Department of*

1 *Energy Partnership Fund*. Funds in such account shall be
 2 available to the Secretary for the support of partnerships.

3 “(b) The Secretary may advance funds under any
 4 partnership without regard to section 3324 of title 31 of
 5 the United States Code to—

6 “(1) small businesses;

7 “(2) not-for-profit organizations that would be
 8 exempt under section 501(a) of the Internal Revenue
 9 Code of 1986; or

10 “(3) State or local governmental entities.

11 **“SEC. 1109. LABORATORY PARTNERSHIP ADVISORY BOARD**
 12 **AND INDUSTRIAL ADVISORY GROUPS AT**
 13 **MULTI-PROGRAM DEPARTMENTAL LABORA-**
 14 **TORIES.**

15 “(a)(1) The Secretary shall establish within the De-
 16 partment an advisory board to be known as the “Labora-
 17 tory Partnership Advisory Board”, to provide the Secretary
 18 with advice on the implementation of this title.

19 “(2) The membership of the Laboratory Partnership
 20 Advisory Board shall consist of persons who are qualified
 21 to provide the Secretary with advice on the implementation
 22 of this title. Members of the Board shall include representa-
 23 tives primarily from United States industry but shall also
 24 include representatives from—

25 “(A) small businesses;

1 “(B) private sector entities owned or controlled
2 by disadvantaged persons;

3 “(C) educational institutions, including rep-
4 resentatives from minority colleges or universities;

5 “(D) laboratories of other Federal agencies; and

6 “(E) professional and technical societies in the
7 United States.

8 “(3) The Laboratory Partnership Advisory Board shall
9 request comment and suggestions from departmental labora-
10 tories to assist the Board in providing advice to the Sec-
11 retary on the implementation of this title.

12 “(b) The director of each multiprogram departmental
13 laboratory shall establish an advisory group consisting of
14 persons from United States industry to—

15 “(1) evaluate new initiatives proposed by the de-
16 partmental laboratory;

17 “(2) identify opportunities for partnerships with
18 United States industry; and

19 “(3) evaluate ongoing programs at the depart-
20 mental laboratory from the perspective of United
21 States industry.

22 “(c) Nothing in this section is intended to preclude the
23 Secretary or the director of a departmental laboratory from
24 utilizing existing advisory boards to achieve the purposes
25 of this section.

1 **“SEC. 1110. FELLOWSHIP PROGRAM.**

2 *“The Secretary shall encourage scientists, engineers*
3 *and technical staff from departmental laboratories to serve*
4 *as visiting fellows in research and manufacturing facilities*
5 *of industrial organizations, State and local governments,*
6 *and educational institutions in the United States and for-*
7 *ign countries. The Secretary may establish a formal fellow-*
8 *ship program for this purpose or may authorize such activi-*
9 *ties on a case-by-case basis. The Secretary shall also encour-*
10 *age scientists and engineers from United States industry*
11 *to serve as visiting scientists and engineers in the depart-*
12 *mental laboratories.*

13 **“SEC. 1111. COOPERATION WITH STATE AND LOCAL PRO-**
14 **GRAMS FOR TECHNOLOGY DEVELOPMENT**
15 **AND DISSEMINATION.**

16 *“The Secretary and the director of each departmental*
17 *laboratory shall seek opportunities to coordinate their ac-*
18 *tivities with programs of State and local governments for*
19 *technology development and dissemination, including pro-*
20 *grams funded in part by the Secretary of Defense pursuant*
21 *to section 2523 of title 10, of the United States Code, and*
22 *section 2513 of title 10, of the United States Code, and pro-*
23 *grams funded in part by the Secretary of Commerce pursu-*
24 *ant to sections 25 and 26 of the Act of March 3, 1901 (15*
25 *U.S.C. 278k and 278l), and section 5121(b) of the Omnibus*

1 *Trade and Competitiveness Act of 1988 (15 U.S.C. 2781*
2 *note).*

3 ***“SEC. 1112. AVAILABILITY OF FUNDS FOR PARTNERSHIPS.***

4 *“(a) All of the funds authorized to be appropriated to*
5 *the Secretary for research, development, demonstration or*
6 *commercial application activities, other than atomic energy*
7 *defense programs, shall be available for partnerships to the*
8 *extent such partnerships are consistent with the goals and*
9 *objectives of such activities.*

10 *“(b) All of the funds authorized to be appropriated to*
11 *the Secretary for research, development, demonstration or*
12 *commercial application of dual-use technologies within the*
13 *Department’s atomic energy defense activities shall be*
14 *available for partnerships to the extent such partnerships*
15 *are consistent with the goals and objectives of such activi-*
16 *ties.*

17 *“(c) Funds authorized to be appropriated to the Sec-*
18 *retary and made available for departmental laboratory-di-*
19 *rected research and development shall be available for any*
20 *partnership.*

21 ***“SEC. 1113. PROTECTION OF INFORMATION.***

22 *“Section 12(c)(7) of the Stevenson-Wydler Technology*
23 *Innovation Act of 1980 (15 U.S.C. 3710a(c)(7)), relating*
24 *to the protection of information, shall apply to the partner-*

1 *ship activities undertaken by the Secretary and by the di-*
2 *rectors of the departmental laboratories.*

3 **“SEC. 1114. FAIRNESS OF OPPORTUNITY.**

4 “(a) *The Secretary and the director of each depart-*
5 *mental laboratory shall institute procedures to ensure that*
6 *information on laboratory capabilities and arrangements*
7 *for participating in partnerships with the Secretary or the*
8 *departmental laboratories is publicly disseminated.*

9 “(b) *Prior to entering into any partnership having a*
10 *Federal contribution in excess of \$5,000,000, the Secretary*
11 *or director of a departmental laboratory shall ensure that*
12 *the opportunity to participate in such partnership has been*
13 *publicly announced to potential participants.*

14 “(c) *In cases where the Secretary or the director of a*
15 *departmental laboratory believes a potential partnership*
16 *activity would benefit from broad participation from the*
17 *private sector, the Secretary or the director of such depart-*
18 *mental laboratory may take such steps as may be necessary*
19 *to facilitate formation of a United States industry consor-*
20 *tium to pursue the partnership activity.*

21 **“SEC. 1115. PRODUCT LIABILITY.**

22 “*The Secretary, after consultation with the Laboratory*
23 *Partnership Advisory Board established in section 1109,*
24 *and the Attorney General shall enter into a memorandum*
25 *of understanding establishing a consistent policy and stand-*

1 ards regarding the liability of the United States, of the non-
2 Federal entity operating a departmental laboratory and of
3 any other party to a partnership for product liability
4 claims arising from partnership activities. The Secretary
5 and the director of each departmental laboratory shall, to
6 the maximum extent practicable, incorporate into any part-
7 nership the policy and standards established in the memo-
8 randum of understanding.

9 **“SEC. 1116. INTELLECTUAL PROPERTY.**

10 “The Secretary shall, after consultation with the Lab-
11 oratory Partnership Advisory Board established in section
12 1109, develop guidelines governing the application of intel-
13 lectual property laws by the Secretary and by the director
14 of each departmental laboratory in partnership arrange-
15 ments.

16 **“SEC. 1117. SMALL BUSINESS.**

17 “(a) The Secretary shall develop simplified procedures
18 and guidelines for partnerships involving small businesses
19 to facilitate access to the resources and capabilities of the
20 departmental laboratories.

21 “(b) Notwithstanding any other law, the Secretary
22 may waive, in whole or in part, any cost-sharing require-
23 ment for a small business involved in a partnership if the
24 Secretary determines that the cost-sharing requirement

1 *would impose an undue hardship on the small business and*
2 *would prevent the formation of the partnership.*

3 “(c) Notwithstanding section 12(d) of the Stevenson-
4 Wydler Innovation Act of 1980 (15 U.S.C. 3710a(d)(1)),
5 the Secretary may provide funds as part of a cooperative
6 research and development agreement to a small business if
7 the Secretary determines that the funds are necessary to
8 prevent imposing an undue hardship on the small business
9 and necessary for the formation of the cooperative research
10 and development agreement.

11 **“SEC. 1118. MINORITY COLLEGE AND UNIVERSITY REPORT.**

12 “Within one year after the date of enactment of this
13 title, and annually thereafter, the Secretary shall submit
14 to the Committee on Energy and Natural Resources of the
15 United States Senate and to the United States House of
16 Representatives a report identifying opportunities for mi-
17 nority colleges and universities to participate in programs
18 and activities being carried out by the Department or the
19 departmental laboratories. The Secretary shall consult with
20 representatives of minority colleges and universities in pre-
21 paring the report. Such report shall—

22 “(a) describe ongoing education and training
23 programs being carried out by the Department or the
24 departmental laboratories with respect to or in con-

1 *junction with minority colleges and universities in*
2 *the areas of mathematics, science, and engineering;*

3 *“(b) describe ongoing research, development dem-*
4 *onstration or commercial application activities in-*
5 *volving the Department or the departmental labora-*
6 *tories and minority colleges and universities;*

7 *“(c) describe funding levels for the programs and*
8 *activities described in subsections (a) and (b);*

9 *“(d) identify ways for the Department or the de-*
10 *partmental laboratories to assist minority colleges*
11 *and universities in providing education and training*
12 *in the fields of mathematics, science, and engineering;*

13 *“(e) identify ways for the Department or the de-*
14 *partmental laboratories to assist minority colleges*
15 *and universities in entering into partnerships;*

16 *“(f) address the need for and potential role of the*
17 *Department or the departmental laboratories in pro-*
18 *viding to minority colleges and universities the fol-*
19 *lowing:*

20 *“(1) increased research opportunities for*
21 *faculty and students;*

22 *“(2) assistance in faculty development and*
23 *recruitment and curriculum enhancement and*
24 *development; and*

1 *an opportunity for the scholarship recipient to participate*
 2 *in an applied work experience in a departmental labora-*
 3 *tory. Recipients of such scholarships shall be students*
 4 *deemed by the Secretary to have demonstrated (1) a need*
 5 *for such assistance and (2) academic potential in the par-*
 6 *ticular area of study. Scholarships awarded under this pro-*
 7 *gram shall be known as Secretary of Energy Scholarships.”.*

8 (b) *CONFORMING AMENDMENT—The table of contents*
 9 *of the Department of Energy Organization Act (42 U.S.C.*
 10 *7101 et. seq.) is amended by adding at the end thereof the*
 11 *following items:*

“TITLE XI—TECHNOLOGY PARTNERSHIPS

“Sec. 1101. Finding, Purposes and Definitions.

“Sec. 1102. General Authority.

“Sec. 1103. Establishment of Goal for Partnerships Between Departmental Laboratories and United States Industry.

“Sec. 1104. Role of the Department in the Development of Critical Technology Strategies.

“Sec. 1105. Partnership Preferences.

“Sec. 1106. Evaluation of Partnership Programs.

“Sec. 1107. Annual Report.

“Sec. 1108. Partnership Payments.

“Sec. 1109. Laboratory Partnership Advisory Board and Industrial Advisory Groups at Multi-Program Departmental Laboratories.

“Sec. 1110. Fellowship Program.

“Sec. 1111. Cooperation with State and Local Programs for Technology Development and Dissemination.

“Sec. 1112. Availability of Funds for Partnerships.

“Sec. 1113. Protection of Information.

“Sec. 1114. Fairness of Opportunity.

“Sec. 1115. Product Liability.

“Sec. 1116. Intellectual Property.

“Sec. 1117. Small Business.

“Sec. 1118. Minority College and University Report.

“Sec. 1119. Minority College and University Scholarship program.”.

1 **SEC. 4. NATIONAL ADVANCED MANUFACTURING TECH-**
2 **NOLOGIES PROGRAM.**

3 *The Secretary is encouraged to use partnerships to ex-*
4 *pedite the private sector deployment of advanced manufac-*
5 *turing technologies as required by section 2202(a) of the*
6 *Energy Policy Act of 1992 (42 U.S.C. 13502).*

7 **SEC. 5. NOT-FOR-PROFIT ORGANIZATIONS.**

8 *The Secretary shall encourage the establishment of not-*
9 *for-profit organizations, such as the Center for Applied De-*
10 *velopment of Environmental Technology (CADET), that*
11 *will facilitate the transfer of technologies from the depart-*
12 *mental laboratories to the private sector.*

13 **SEC. 6. CAREER PATH PROGRAM.**

14 *(a) The Secretary, utilizing authority under other ap-*
15 *plicable law and the authority of this section, shall establish*
16 *a career path program to recruit employees of the national*
17 *laboratories to serve in positions in the Department.*

18 *(b) Section 207 of title 18, United States Code, is*
19 *amended by inserting after subsection (j)(6) the following:*

20 *“(7) NATIONAL LABORATORIES.—(A) The restric-*
21 *tions contained in subsections (a), (b), (c), and (d)*
22 *shall not apply to an appearance or communication*
23 *made, or advice or aid rendered by a person employed*
24 *at a facility described in subparagraph (B), if the ap-*
25 *pearance or communication is made on behalf of the*

1 *facility or the advice or aid is provided to the con-*
2 *tractor of the facility.*

3 *“(B) This paragraph applies to the following:*
4 *Argonne National Laboratory, Brookhaven National*
5 *Laboratory, Idaho National Engineering Laboratory,*
6 *Lawrence Berkeley Laboratory, Lawrence Livermore*
7 *National Laboratory, Los Alamos National Labora-*
8 *tory, National Renewable Energy Laboratory, Oak*
9 *Ridge National Laboratory, Pacific Northwest Lab-*
10 *oratory, and Sandia National Laboratories.”*

11 *(c) Section 27 of the Office of Federal Procurement*
12 *Policy Act (41 U.S.C. section 423) is amended by inserting*
13 *the following new subsection:*

14 *“(q) NATIONAL LABORATORIES.—(1) The restrictions*
15 *on obtaining a recusal contained in paragraphs (c)(2) and*
16 *(c)(3) shall not apply to discussions of future employment*
17 *or business opportunity between a procurement official and*
18 *a competing contractor managing and operating a facility*
19 *described in paragraph (3): Provided, That such discussions*
20 *concern the employment of the procurement official at such*
21 *facility.*

22 *“(2) The restrictions contained in paragraph (f)(1)*
23 *shall not apply to activities performed on behalf of a facility*
24 *described in paragraph (3).*

1 (1) *ensure the widest possible application of*
2 *high-performance computing in the United States;*
3 *and*

4 (2) *provide for partnerships that will enhance*
5 *Federal and private efforts to deploy and commer-*
6 *cialize these technologies as part of a national infor-*
7 *mation infrastructure.*

8 (c) *NATIONAL INFORMATION INFRASTRUCTURE DE-*
9 *VELOPMENT PROGRAM.—The High-Performance Comput-*
10 *ing Act of 1991 (15 U.S.C. 5501 et seq.) is amended—*

11 (1) *in section 101(a), by adding after paragraph*
12 *(2) a new paragraph (3) as follows and renumbering*
13 *subsequent paragraphs accordingly:*

14 “(3) *The Program shall also—*

15 “(A) *provide for a coordinated interagency*
16 *effort in partnership with the private sector to*
17 *develop, deploy and commercialize high-perform-*
18 *ance computing technologies through a national*
19 *information infrastructure for applications in—*

20 “(i) *education,*

21 “(ii) *health care,*

22 “(iii) *manufacturing,*

23 “(iv) *digital information,*

24 “(v) *energy demand management,*

1 “(vi) environmental monitoring and
2 remediation,

3 “(vii) financial services,

4 “(viii) law enforcement; and

5 “(ix) such other fields as the President
6 deems appropriate;

7 “(B) set forth the role of the Network in
8 making the benefits of applications of high-per-
9 formance computing available to United States
10 industry, government and academia through a
11 national information infrastructure; and

12 “(C) otherwise ensure that services and ap-
13 plications of high-performance computing tech-
14 nologies are available as needed to United States
15 industry, government and academia.”;

16 (2) in section 101, by changing the reference to
17 section 101(a)(3)(A) each time it appears to section
18 101(a)(4)(A); and

19 (3) in section 203, by adding at the end thereof
20 a new subsection (f) as follows:

21 “(f) APPLICATIONS.—(1) The Secretary of Energy
22 shall, consistent with the Program, provide for cooperative
23 projects involving the Department of Energy or one or more
24 Department of Energy laboratories and appropriate non-

1 *Federal entities to develop, test and apply high-performance*
2 *computing technologies for—*

3 “(A) *education and training, including science,*
4 *mathematics and engineering education and practical*
5 *post-secondary training in skills needed by United*
6 *States industry;*

7 “(B) *health care, including remote diagnosis and*
8 *monitoring;*

9 “(C) *manufacturing;*

10 “(D) *energy demand management and control,*
11 *including vehicle efficiency and utilization, energy ef-*
12 *iciency in commercial and residential buildings, and*
13 *industrial energy use and practices;*

14 “(E) *scientific, technical and energy information*
15 *dissemination and analysis, including exhibits and*
16 *model experiments;*

17 “(F) *technology transfer among the Department*
18 *of Energy laboratories, United States industry and*
19 *educational institutions;*

20 “(G) *environmental monitoring, modeling and*
21 *remediation;*

22 “(H) *financial services, including security and*
23 *data base management of financial data;*

24 “(I) *law enforcement; and*

1 “(J) such other areas as the Secretary of Energy
2 deems appropriate.

3 “(2) In carrying out projects under paragraph (1), the
4 Secretary of Energy shall, where appropriate, seek to ad-
5 dress the technical, architectural, economic, regulatory and
6 market considerations critical to further development of a
7 national information infrastructure.

8 “(3) There is authorized to be appropriated to the Sec-
9 retary of Energy for purposes of this subsection \$50,000,000
10 for fiscal year 1994, \$100,000,000 for fiscal year 1995 and
11 \$150,000,000 for fiscal year 1996.”.

12 **SEC. 8. AVLIS COMMERCIALIZATION.**

13 (a) *PREDEPLOYMENT CONTRACTOR.*—Not later than
14 ninety days after the date of enactment of this Act, the Sec-
15 retary shall solicit proposals for a commercial
16 predeployment contractor to conduct such activities as may
17 be necessary to enable the Secretary or any successor to the
18 Secretary’s uranium enrichment enterprise to deploy a
19 commercial uranium enrichment plant using the Atomic
20 Vapor Laser Isotope Separation (AVLIS) technology. Such
21 activities shall include—

22 (1) developing a transition plan for transferring
23 the AVLIS program from research, development, and
24 demonstration activities at the Lawrence Livermore

1 *National Laboratory to deployment of a commercial*
2 *AVLIS production plant;*

3 *(2) confirming the technical performance of*
4 *AVLIS technology;*

5 *(3) developing the economic and industrial as-*
6 *sessments necessary for the Secretary or his successor*
7 *to make a commercial decision whether to deploy*
8 *AVLIS;*

9 *(4) providing an industrial perspective for the*
10 *planning and execution of remaining demonstration*
11 *program activities; and*

12 *(5) completing feasibility and risk studies nec-*
13 *essary for a commercial decision whether to deploy*
14 *AVLIS, including financing options.*

15 *(b) ADDITIONAL ACTIVITIES.—Based upon the results*
16 *of subsection (a), the Secretary may solicit additional pro-*
17 *posals to complete the following activities:*

18 *(1) site selection, site characterization, and envi-*
19 *ronmental documentation activities for a commercial*
20 *AVLIS plant;*

21 *(2) engineering design of a production plant, de-*
22 *veloping a project schedule, and initiating operations*
23 *planning;*

24 *(3) activities leading to obtaining necessary li-*
25 *ceses from the Nuclear Regulatory Commission; and*

1 (4) *ensuring the successful integration of AVLIS*
2 *technology into the commercial nuclear fuel cycle.*

3 (c) *REPORTS.*—*The Secretary shall submit to the Com-*
4 *mittee on Energy and Natural Resources of the United*
5 *States Senate and to the Speaker of the House of Represent-*
6 *atives a written report on the progress made toward the*
7 *deployment of a commercial AVLIS production plant nine-*
8 *ty days after the date of enactment of this Act and each*
9 *ninety days thereafter.*

10 ***SEC. 9. DOE MANAGEMENT.***

11 (a) *Section 202(a) of the Department of Energy Orga-*
12 *nization Act (42 U.S.C. 7132(a)) is amended by striking*
13 *“Under Secretary” and inserting in its place “Under*
14 *Secretaries”.*

15 (b) *Section 202(b) of the Department of Energy Orga-*
16 *nization Act (42 U.S.C. 7132(b)) is amended to read as*
17 *follows:*

18 “(b) *There shall be in the Department three Under Sec-*
19 *retaries and a General Counsel, who shall be appointed by*
20 *the President, by and with the advice and consent of the*
21 *Senate, and who shall perform functions and duties the Sec-*
22 *retary prescribes. The Under Secretaries shall be com-*
23 *pensated at the rate for level III of the Executive Schedule*
24 *under section 5314 of title 5, United States Code, and the*
25 *General Counsel shall be compensated at the rate provided*

1 *for level IV of the Executive Schedule under section 5315*
2 *of title 5, United States Code.”.*

3 **SEC. 10. AMENDMENTS TO STEVENSON-WYDLER TECH-**
4 **NOLOGY INNOVATION ACT.**

5 *(a) Section 12(c)(5) of the Stevenson-Wydler Tech-*
6 *nology Innovation Act of 1980 (15 U.S.C. 3710a(c)(5)) is*
7 *amended—*

8 *(1) by deleting subparagraph (C)(i) and insert-*
9 *ing in lieu thereof:*

10 *“(C)(i) Any agency that has contracted with a non-*
11 *Federal entity to operate a laboratory shall review and ap-*
12 *prove, request specific modifications to, or disapprove a*
13 *joint work statement and cooperative research and develop-*
14 *ment agreement that is submitted by the director of such*
15 *laboratory within thirty days after such submission. In any*
16 *case where an agency has requested specific modifications*
17 *to a joint work statement or cooperative research and devel-*
18 *opment agreement, the agency shall approve or disapprove*
19 *any resubmission of such joint work statement or coopera-*
20 *tive research and development agreement within fifteen*
21 *days after such resubmission. No agreement may be entered*
22 *into by a Government-owned, contractor-operated labora-*
23 *tory under this section before both approval of the coopera-*
24 *tive research and development agreement and a joint work*
25 *statement.”;*

1 (2) by adding in subparagraph (C)(ii) the
2 words, “or cooperative research and development
3 agreement” after “joint work statement”;

4 (3) by deleting subparagraph (C)(iv);

5 (4) by deleting subparagraph (C)(v) and insert-
6 ing in lieu thereof:

7 “(C)(iv) If an agency fails to complete a review under
8 clause (i) within any of the specified time-periods, the agen-
9 cy shall submit to the Congress, within 10 days after the
10 failure to complete the review, a report on the reasons for
11 such failure. The agency shall, at the end of each successive
12 15-day period thereafter during which such failure contin-
13 ues, submit to Congress another report on the reasons for
14 the continued failure.”; and

15 (5) by deleting subparagraph (C)(vi).

16 (b) Section 12(d)(2) of the Stevenson-Wydler Tech-
17 nology Innovation Act of 1980 (15 U.S.C. 3710a(d)(2)) is
18 amended—

19 (1) in subparagraph (B) by striking “substan-
20 tial” before “purpose”; and

21 (2) in subparagraph (C) by striking “primary”.

22 **SEC. 11. GUIDELINES.**

23 The implementation of the provisions of this Act shall
24 not be delayed pending the issuance of guidelines, policies
25 or standards required by sections 1105, 1115 and 1116 of

1 *the Department of Energy Organization Act (42 U.S.C.*
2 *7101 et. seq.) as added by section 3 of this Act.*

3 **SEC. 12. AUTHORIZATION.**

4 *(a) In addition to funds made available for partner-*
5 *ships under section 1112 of the Department of Energy Or-*
6 *ganization Act (42 U.S.C. 7101 et seq.) as added by section*
7 *3 of this Act, there is authorized to be appropriated from*
8 *funds otherwise available to the Secretary—*

9 *(1) for partnership activities with industry in*
10 *areas other than atomic energy defense activities*
11 *\$100,000,000 for fiscal year 1994, \$140,000,000 for*
12 *fiscal year 1995, \$180,000,000 for fiscal year 1996*
13 *and \$220,000,000 for fiscal year 1997; and*

14 *(2) for partnership activities with industry in-*
15 *volving dual-use technologies within the Department's*
16 *atomic energy defense activities \$240,000,000 for fis-*
17 *cal year 1994, \$290,000,000 for fiscal year 1995,*
18 *\$350,000,000 for fiscal year 1996 and \$400,000,000*
19 *for fiscal year 1997.*

20 *(b) There is authorized to be appropriated to the Sec-*
21 *retary for the Minority College and University Scholarship*
22 *Program established in section 1119 of the Department of*
23 *Energy Organization Act (42 U.S.C. 7101 et seq.) as added*
24 *by section 3 of this Act \$1,000,000 for fiscal year 1994,*

1 \$2,000,000 for fiscal year 1995 and \$3,000,000 for fiscal
2 year 1996.

3 (c) There is authorized to be appropriated to the Sec-
4 retary for research or educational programs, carried out
5 through partnerships or otherwise, and for related facilities
6 and equipment that involve minority colleges or universities
7 such sums as may be necessary.

S 473 RS—2

S 473 RS—3

S 473 RS—4

S 473 RS—5

S 473 RS—6