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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, and Mr. KEMPTHORNE) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

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,*

1 **SECTION 1. SHORT TITLE.**

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

5 **SEC. 2. COMPETITIVENESS AMENDMENT TO THE DEPART-**
6 **MENT OF ENERGY ORGANIZATION ACT.**

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

10 **“TITLE XI—TECHNOLOGY**
11 **PARTNERSHIPS**

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

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

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

20 “(2) the extensive scientific and technical in-
21 vestments in people, facilities and equipment in the
22 Department of Energy laboratories can be applied to
23 achieve national technology goals in areas such as
24 the environment, health, space, and transportation;

25 “(3) the Department of Energy has pursued ag-
26 gressively the transfer of technology from depart-

1 mental laboratories to the private sector, but the ca-
2 pabilities of the laboratories could be made more
3 fully available to United States industry;

4 “(4) technology development has been increas-
5 ingly driven by the commercial marketplace and pri-
6 vate firms have extraordinary research and develop-
7 ment capabilities in a broad range of generic
8 technologies;

9 “(5) in carrying out their missions, the Depart-
10 ment and the departmental laboratories would great-
11 ly benefit from closer collaboration and partnership
12 with United States industry; and

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

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

22 “(1) enhance partnerships between the private
23 sector and the Department and the departmental
24 laboratories and to establish a minimum goal for the

1 percentage of the multi-program departmental lab-
2 oratory budgets devoted to partnerships;

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

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

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

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

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

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

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

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

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

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

12 “(7) ‘educational institution’ means a college,
13 university, or elementary or secondary school, in-
14 cluding any not-for-profit organization dedicated to
15 education that would be exempt under section
16 501(a) of the Internal Revenue Code of 1986;

17 “(8) ‘minority college or university’ means a
18 historically black college or university that would be
19 considered a ‘part B institution’ by section 322(2) of
20 the Higher Education Act of 1965 (20 U.S.C.
21 1061(2)) or any other institution of higher education
22 where enrollment includes a substantial percentage
23 of students who are disadvantaged;

24 “(9) ‘multi-program departmental laboratory’
25 means any of the following: Argonne National Lab-

1 oratory, Brookhaven National Laboratory, Idaho
2 National Engineering Laboratory, Lawrence Berke-
3 ley Laboratory, Lawrence Livermore National Lab-
4 oratory, Los Alamos National Laboratory, National
5 Renewable Energy Laboratory, Oak Ridge National
6 Laboratory, Pacific Northwest Laboratory, and
7 Sandia National Laboratories;

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

14 “(11) ‘partnership’ means an arrangement, in-
15 cluding an arrangement under section 1109, under
16 which the Secretary or one or more departmental
17 laboratories undertakes research, development, dem-
18 onstration or commercial application activities for
19 the mutual benefit of the partners in cooperation
20 with one or more participants from among the fol-
21 lowing: an educational institution, private sector en-
22 tity, State governmental entity, or other Federal
23 agency; and

24 “(12) ‘Secretary’ means the Secretary of the
25 United States Department of Energy.

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

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

8 “(a) the Atomic Energy Act of 1954;

9 “(b) the Federal Nonnuclear Energy Research
10 and Development Act of 1974;

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

12 “(d) the Stevenson-Wydler Technology Innova-
13 tion Act of 1980;

14 “(e) the National Competitiveness Technology
15 Transfer Act of 1989;

16 “(f) the Federal Technology Transfer Act of
17 1986;

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

20 “(h) the Bayh-Dole Patent and Trademark Act
21 of 1980; or

22 “(i) the National Cooperative Research Act of
23 1984.

1 **“SEC. 1103. ESTABLISHMENT OF GOAL FOR PARTNERSHIPS**
2 **BETWEEN MULTI-PROGRAM DEPARTMENTAL**
3 **LABORATORIES AND UNITED STATES INDUS-**
4 **TRY.**

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

10 “(b) Funds authorized to be appropriated to the Sec-
11 retary and made available for departmental-laboratory-
12 directed research and development shall be available for
13 any partnership.

14 **“SEC. 1104. DEPARTMENT ROLE IN THE DEVELOPMENT OF**
15 **CRITICAL TECHNOLOGY STRATEGIES.**

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

21 “(b) In developing such strategy, the Secretary
22 shall—

23 “(1) develop goals and objectives for the appro-
24 priate role of the Department in each of the critical
25 technologies listed in the report, building on the core
26 competencies of the departmental laboratories;

1 “(2) consult with appropriate representatives of
2 United States industry, including members of United
3 States industry associations and representatives
4 of labor organizations in the United States; and

5 “(3) participate in the executive branch process
6 to develop critical technology strategies such as re-
7 quired by section 822 of the National Defense Au-
8 thorization Act for Fiscal Years 1992 and 1993
9 (Public Law 102-190).

10 **“SEC. 1105. MISSION STATEMENT.**

11 “(a) The Secretary, and the director of each depart-
12 mental laboratory, may enter into partnerships that build
13 on the core competencies of the departmental laboratories
14 to conduct research, development, demonstration or com-
15 mercial application activities in those areas listed in the
16 biennial National Critical Technologies Report or in any
17 of the following areas—

18 “(1) energy efficiency, including efficiency in
19 power generation, transmission, and utilization; en-
20 ergy conservation technologies; process technologies;
21 and transportation;

22 “(2) energy supply, including alternative fuels;
23 advanced forms of renewable energy; advanced clean
24 coal technologies; coal liquefaction and synthetic fos-
25 sil fuels; advanced oil and gas recovery; advanced

1 nuclear reactor technologies; fusion technologies;
2 biofuel technologies; electricity transmission, dis-
3 tribution, and storage; and energy forecasting;

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

18 “(4) the environment, including global climate
19 change; protection of ecological systems; environ-
20 mental restoration and waste management; and de-
21 velopment of technologies for biogeochemical dynam-
22 ics, toxicology, remote sensing, biotechnology, risk
23 analysis, and environmental assessment;

24 “(5) human health, including radio-
25 pharmaceutical and laser applications; mapping of

1 the human genome; structural biology; development
2 of technologies for nuclear and diagnostic medicine
3 and radiation biology, including cancer therapies;
4 and development of sensors, electronics and informa-
5 tion systems to lower health care costs;

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

14 “(7) advanced materials, including materials
15 that may increase efficiency in energy generation,
16 conversion, transmission and use; synthesis and
17 processing for improved and new materials; mate-
18 rials to promote waste minimization and environ-
19 mental protection; and new and improved methods,
20 techniques, and instruments to characterize and
21 analyze properties of materials;

22 “(8) transportation technologies, including
23 those that will improve the efficiency of and reduce
24 the energy consumption and environmental impact

1 associated with conventional transportation tech-
2 nologies;

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

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

12 “(11) technologies listed in the annual defense
13 critical technologies plan submitted to Congress by
14 the Secretary of Defense pursuant to section
15 2506(e) of title 10, United States Code; and

16 “(12) any other generic, precompetitive tech-
17 nology or other critical technology identified by the
18 Secretary.

19 “(b) The Secretary, and the directors of the depart-
20 mental laboratories, shall utilize partnerships with United
21 States industry to ensure that technologies developed in
22 pursuit of the Department’s missions are rapidly applied
23 and commercialized. In carrying out the Department’s
24 missions, the Secretary, and the directors of the depart-
25 mental laboratories, shall, to the maximum extent prac-

1 ticable, work in partnership with United States industry
2 and educational institutions.

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

9 **“SEC. 1106. PARTNERSHIP PREFERENCES.**

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

15 “(b) The Secretary shall issue guidelines to describe
16 the application of section 12(c)(4) of the Stevenson-
17 Wydler Technology Innovation Act of 1980 (15 U.S.C.
18 3710a(c)(4)) to partnerships as prescribed by section (a).

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

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

23 “(a) The Secretary shall develop mechanisms for
24 independent evaluation of the accomplishments of the on-

1 going partnership activities of the Department and the de-
2 partmental laboratories.

3 “(b)(1) The Secretary and the director of each de-
4 partmental laboratory shall develop mechanisms for as-
5 sessing the accomplishments of each partnership and for
6 measuring the progress of each such partnership.

7 “(2) The Secretary and the director of each depart-
8 mental laboratory shall utilize mechanisms developed
9 under subparagraph (1) to evaluate the success of each
10 ongoing multiyear partnership and shall condition contin-
11 ued funding of each such partnership on demonstrated
12 progress.

13 **“SEC. 1108. ANNUAL REPORT.**

14 “(a) The Secretary shall submit an annual report to
15 Congress describing the ongoing partnership activities of
16 the Secretary and each departmental laboratory and, to
17 the extent practicable, the activities planned by the Sec-
18 retary and by each departmental laboratory for the coming
19 fiscal year. In developing the report, the Secretary shall
20 seek the advice of the Laboratory Partnership Advisory
21 Board established in section 1110.

22 “(b) The Secretary shall submit the report under sub-
23 section (a) to the Committees on Appropriations and En-
24 ergy and Natural Resources of the Senate and to the
25 appropriate Committees of the House of Representatives.

1 No later than March 1, 1994, and no later than the first
2 of March of each subsequent year, the Secretary shall sub-
3 mit the report under subsection (a) that covers the fiscal
4 year beginning on the first of October of such year.

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

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

17 “(1) the total funds to be allocated to partner-
18 ship activities by the Secretary and by the director
19 of each departmental laboratory;

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

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

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

7 “(5) the technologies that will be advanced by
8 partnerships and the anticipated benefits of such
9 technologies;

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

12 “(7) the nature of the partnership arrange-
13 ments, including the anticipated level of financial
14 and in-kind contribution from participants and any
15 repayment terms;

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

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

21 “(e) The Secretary shall provide appropriate notice
22 in advance to Congress of any partnership involving the
23 expenditure of departmental funds not described in the
24 report under subsection (a).

1 **“SEC. 1109. COOPERATIVE AGREEMENTS AND OTHER**
2 **TRANSACTIONS AUTHORITY.**

3 “(a) The Secretary, in carrying out partnerships,
4 may enter into cooperative agreements and other trans-
5 actions with any person, any agency or instrumentality of
6 the United States, any unit of State or local government,
7 any educational institution, and any other entity.

8 “(b)(1) Cooperative agreements and other trans-
9 actions entered into by the Secretary under subsection (a)
10 may include a clause that requires a person or other entity
11 to make payments to the Department (or any other de-
12 partment or agency of the Federal Government) as a con-
13 dition for receiving support under the agreement or other
14 transaction.

15 “(2) The amount of any payment received by the
16 Federal Government pursuant to a requirement imposed
17 under paragraph (1) may be credited, to the extent au-
18 thorized by the Secretary, to the account established under
19 subsection (e). Amounts so credited shall be merged with
20 other funds in the account and shall be available for the
21 same purposes and the same period for which other funds
22 in such account are available.

23 “(c) The authority provided under subsection (a) may
24 be exercised without regard to section 3324 of title 31 of
25 the United States Code.

26 “(d) The Secretary shall ensure that—

1 tory Partnership Advisory Board,” to provide the Sec-
2 retary with advice on the implementation of this title.

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

11 “(3) The Laboratory Partnership Advisory Board
12 shall request comment and suggestions from departmental
13 laboratories to assist the Board in providing advice to the
14 Secretary on the implementation of this title.

15 “(b) The director of each multi-program depart-
16 mental laboratory shall establish an advisory group con-
17 sisting of individuals with experience in the industrial
18 sector to—

19 “(1) evaluate new initiatives proposed by the
20 departmental laboratory and identify opportunities
21 for partnerships with United States industry on
22 those initiatives; and

23 “(2) evaluate ongoing programs at the depart-
24 mental laboratory from the perspective of United
25 States industry.

1 “(c) Nothing in this section is intended to preclude
2 the Secretary or the director of a departmental laboratory
3 from utilizing existing advisory boards to achieve the
4 purposes of this section.

5 **“SEC. 1111. FELLOWSHIP PROGRAM.**

6 “The Secretary shall establish a program to encour-
7 age scientists and engineers from departmental labora-
8 tories to serve as visiting scientists and engineers in the
9 research facilities of governments, educational institutions
10 and industrial organizations in the United States and
11 foreign countries.

12 **“SEC. 1112. COOPERATION WITH STATE PROGRAMS FOR**
13 **TECHNOLOGY DEVELOPMENT AND DISSEMI-**
14 **NATION.**

15 “The Secretary and the director of each multi-
16 program departmental laboratory shall seek opportunities
17 to coordinate their activities with programs of state and
18 local governments for technology development and dis-
19 semination, including programs funded in part by the Sec-
20 retary of Defense pursuant to section 2523 of title 10 of
21 the United States Code and section 2513 of title 10 of
22 the United States Code and programs funded in part by
23 the Secretary of Commerce pursuant to sections 25 and
24 26 of the Act of March 3, 1901 (15 U.S.C. 278k and 278l)

1 and section 5121(b) of the Omnibus Trade and Competi-
2 tiveness Act of 1988 (15 U.S.C. 2781 note).

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

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

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

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

18 “Section 12(c)(7) of the Stevenson-Wydler Tech-
19 nology Innovation Act of 1980, relating to the protection
20 of information, shall apply to the partnership activities un-
21 dertaken by the Secretary and by the directors of the
22 departmental laboratories.

23 **“SEC. 1115. EQUALITY OF ACCESS.**

24 “(a) The Secretary and the director of each depart-
25 mental laboratory shall institute such procedures as need-

1 ed to ensure that information on opportunities to partici-
2 pate in partnerships with the Secretary or the depart-
3 mental laboratories is widely disseminated.

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

11 **“SEC. 1116. PRODUCT LIABILITY.**

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

22 **“SEC. 1117. INTELLECTUAL PROPERTY.**

23 “(a) The Secretary shall develop guidelines to govern
24 the distribution of intellectual property resulting from a
25 cost-shared partnership. Such guidelines shall ensure, to

1 the maximum extent practicable, that the intellectual
2 property provisions of any partnership arrangement ad-
3 ministered by a non-federal entity operating a depart-
4 mental laboratory:

5 “(1) maximize the competitiveness of United
6 States industry; and

7 “(2) are uniform among the departmental lab-
8 oratories.

9 “(b) The Secretary shall ensure that the management
10 and operating contracts between the Secretary and the
11 non-federal entities operating the departmental labora-
12 tories are uniform with respect to provisions governing the
13 administration of intellectual property in partnership ar-
14 rangements involving departmental laboratories.”.

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

16 Within one year after the date of enactment of this
17 provision, the Secretary of Energy shall submit to the
18 Committee on Energy and Natural Resources of the Unit-
19 ed States Senate and to the United States House of Rep-
20 resentatives a report addressing opportunities for minority
21 colleges and universities to participate in programs and
22 activities being carried out by the Department or the de-
23 partmental laboratories. The Secretary shall consult with
24 representatives of minority colleges and universities in pre-
25 paring the report. Such report shall—

1 (a) describe current education and training pro-
2 grams being carried out by the Department or the
3 departmental laboratories with respect to or in con-
4 junction with minority colleges and universities in
5 the areas of mathematics, science, and engineering;

6 (b) describe current research, development or
7 demonstration programs involving the Department
8 or the departmental laboratories and minority col-
9 leges and universities;

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

12 (d) identify ways for the Department or the de-
13 partmental laboratories to assist minority colleges
14 and universities in providing education and training
15 in the fields of mathematics, science, and engineer-
16 ing;

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

20 (f) address the need for and potential role of
21 the Department or the departmental laboratories in
22 providing minority colleges and universities:

23 (1) increased research opportunities for
24 faculty and students;

1 (2) assistance in faculty development and
2 recruitment and curriculum enhancement and
3 development; and

4 (3) laboratory instrumentation and equip-
5 ment, including computer equipment, through
6 purchase, loan, or other transfer;

7 (g) address the need for and potential role of
8 the Department or departmental laboratories in pro-
9 viding funding and technical assistance for the devel-
10 opment of infrastructure facilities, including build-
11 ings and laboratory facilities at minority colleges
12 and universities; and

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

22 **SEC. 4. CAREER PATH PROGRAM.**

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

1 (b) The Secretary may utilize the authorities in this
2 section to carry out the career path program. In addition
3 to these authorities, the Secretary may exercise the waiver
4 authorities of section 208(b) of title 18, United States
5 Code, and section 602(c) of the Department of Energy
6 Organization Act, (42 U.S.C. section 7212(c)).

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

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

18 “(B) This paragraph applies to the following:
19 Argonne National Laboratory, Brookhaven National
20 Laboratory, Idaho National Engineering Laboratory,
21 Lawrence Berkeley Laboratory, Lawrence Livermore
22 National Laboratory, Los Alamos National Labora-
23 tory, National Renewable Energy Laboratory, Oak
24 Ridge National Laboratory, Pacific Northwest Lab-
25 oratory, and Sandia National Laboratories”.

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

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

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

15 “(3) This subsection applies to the following: Ar-
16 gonne National Laboratory, Brookhaven National Labora-
17 tory, Idaho National Engineering Laboratory, Lawrence
18 Berkeley Laboratory, Lawrence Livermore National Lab-
19 oratory, Los Alamos National Laboratory, National Re-
20 newable Energy Laboratory, Oak Ridge National Labora-
21 tory, Pacific Northwest Laboratory, and Sandia National
22 Laboratories.”.

23 **SEC. 5. INFORMATION INFRASTRUCTURE AND TECH-**
24 **NOLOGY.**

25 (a) FINDINGS.—

1 (1) High-performance computing and high-
2 speed networking have the potential to revolutionize
3 many fields and to contribute to the enhancement of
4 the economic, scientific, and technological competi-
5 tiveness of United States industry.

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

14 (b) PURPOSE.—

15 The purpose of this section is to—

16 (1) ensure the widest possible application
17 of high-performance computing and high-speed
18 networking in the United States; and

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

23 (c) NATIONAL INFORMATION INFRASTRUCTURE DE-
24 VELOPMENT PROGRAM.—The High-Performance Comput-
25 ing Act of 1991 (Public Law 101–425) is amended—

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

4 “(3) The Program shall also—

5 “(A) provide for a coordinated interagency
6 effort in partnership with the private sector to
7 develop, deploy, and commercialize high-per-
8 formance computing and high-speed networking
9 technologies through a national information in-
10 frastructure for applications in—

11 “(i) education,

12 “(ii) health care,

13 “(iii) manufacturing,

14 “(iv) digital information,

15 “(v) energy demand management,

16 “(vi) environmental monitoring and
17 remediation;

18 “(vii) financial services; and

19 “(viii) such other fields as the Presi-
20 dent deems appropriate;

21 “(B) set forth the role of the Network in
22 making the benefits of applications of high-per-
23 formance computing and high-speed networking
24 available to United States research and edu-
25 cational institutions, government and industry

1 in every State through a national information
2 infrastructure; and

3 “(C) otherwise ensure that services and
4 applications of high-performance computing and
5 high-speed networking technologies are avail-
6 able as needed to United States industry, gov-
7 ernment and academia.”.

8 (2) In section 203 by adding at the end thereof
9 a new subsection (f) as follows:

10 “(f)(1) The Secretary of Energy shall, consist-
11 ent with the Program, provide for cooperative, cost-
12 shared projects involving the Department of Energy
13 or one or more Department of Energy laboratories
14 and appropriate non-Federal entities to develop, test
15 and apply high-performance computing and high-
16 speed networking technologies for—

17 “(A) education and training, including
18 science, mathematics and engineering education
19 and practical post-secondary training in skills
20 needed by United States industry;

21 “(B) health care, including remote diag-
22 nosis and monitoring;

23 “(C) manufacturing;

24 “(D) energy demand management and con-
25 trol, including vehicle efficiency and utilization,

1 energy efficiency in commercial and residential
2 buildings, and industrial energy use and prac-
3 tices;

4 “(E) scientific, technical and energy infor-
5 mation dissemination and analysis, including
6 exhibits and model experiments;

7 “(F) technology transfer among the De-
8 partment of Energy laboratories, United States
9 industry and educational institutions;

10 “(G) environmental monitoring, modeling
11 and remediation;

12 “(H) financial services, including security
13 and data base management of financial data;
14 and

15 “(I) such other areas as the Secretary
16 deems appropriate.

17 “(2) In carrying out projects under subpara-
18 graph (1), the Secretary shall, where appropriate,
19 seek to address the technical, architectural, eco-
20 nomic, regulatory, and market considerations critical
21 to further development of a national information in-
22 frastructure.

23 “(3) There is authorized to be appropriated to
24 the Secretary of Energy for purposes of this sub-
25 section \$50,000,000 for fiscal year 1994,

1 \$100,000,000 for fiscal year 1995 and
2 \$150,000,000 for fiscal year 1996.”.

3 **SEC. 6. AVLIS COMMERCIALIZATION.**

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

13 (1) developing a transition plan for transferring
14 the AVLIS program from research, development,
15 and demonstration activities at the Lawrence Liver-
16 more National Laboratory to deployment of a com-
17 mercial AVLIS production plant;

18 (2) confirming the technical performance of
19 AVLIS technology;

20 (3) developing the economic and industrial as-
21 sessments necessary for the Secretary or his succes-
22 sor to make a commercial decision whether to deploy
23 AVLIS;

1 (4) providing an industrial perspective for the
2 planning and execution of remaining demonstration
3 program activities; and

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

7 (b) ADDITIONAL ACTIVITIES.—Based upon the re-
8 sults of subsection (a), the Secretary may solicit additional
9 proposals to complete the following activities:

10 (1) site selection, site characterization, and en-
11 vironmental documentation activities for a commer-
12 cial AVLIS plant;

13 (2) engineering design of a production plant,
14 developing a project schedule, and initiating oper-
15 ations planning;

16 (3) activities leading to obtaining necessary li-
17 censes from the Nuclear Regulatory Commission;
18 and

19 (4) ensuring the successful integration of
20 AVLIS technology into the commercial nuclear fuel
21 cycle.

22 (c) REPORTS.—The Secretary shall submit to the
23 Committee on Energy and Natural Resources of the Unit-
24 ed States Senate and to the Speaker of the House of Rep-
25 resentatives a written report on the progress made toward

1 the deployment of a commercial AVLIS production plant
2 ninety days after the date of enactment of this Act and
3 each ninety days thereafter.

4 **SEC. 7. DOE MANAGEMENT.**

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

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

12 “(b) There shall be in the Department three Under
13 Secretaries and a General Counsel, who shall be appointed
14 by the President, by and with the advice and consent of
15 the Senate, and who shall perform functions and duties
16 the Secretary prescribes. The Under Secretaries shall be
17 compensated at the rate for level III of the Executive
18 Schedule under section 5314 of title 5, United States
19 Code, and the General Counsel shall be compensated at
20 the rate provided for level IV of the Executive Schedule
21 under section 5315 of title 5, United States Code.”.

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

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

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

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

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

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

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

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

4 “(C)(iv) If an agency fails to complete a review under
5 clause (i) within any of the specified time-periods, the
6 agency shall submit to the Congress, within ten days after
7 the failure to complete the review, a report on the reasons
8 for such failure. The agency shall, at the end of each suc-
9 cessive fifteen-day period thereafter during which such
10 failure continues, submit to Congress another report on
11 the reasons for the continuing failure.”.

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

13 **SEC. 9. GUIDELINES.**

14 The implementation of the provisions of this Act shall
15 not be delayed pending the issuance of guidelines or stand-
16 ards required by sections 1106, 1116, and 1117 of the
17 Department of Energy Organization Act (42 U.S.C. 7101
18 et seq.) as added by section 2 of this Act.

19 **SEC. 10. AUTHORIZATION.**

20 In addition to funds made available for partnerships
21 under section 1113 of the Department of Energy Organi-
22 zation Act (42 U.S.C. 7101 et seq.) as added by section
23 2 of this Act, there is authorized to be appropriated from
24 funds otherwise available to the Secretary—

1 (a) for partnership activities with industry in
2 areas other than atomic energy defense activities
3 \$100,000,000 for fiscal year 1994, \$140,000,000 for
4 fiscal year 1995, \$180,000,000 for fiscal year 1996
5 and \$220,000,000 for fiscal year 1997; and

6 (b) for partnership activities with industry in-
7 volving dual-use technologies within the Depart-
8 ment's atomic energy defense activities, except for
9 the naval nuclear propulsion program, \$240,000,000
10 for fiscal year 1994, \$290,000,000 for fiscal year
11 1995, \$350,000,000 for fiscal year 1996 and
12 \$400,000,000 for fiscal year 1997.

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