**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

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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]

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# 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.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

**SECTION 1. SHORT TITLE.**

This Act may be cited as the ''Department of Energy National Competitiveness Technology Partnership Act of 1993''.

**SEC. 2. COMPETITIVENESS AMENDMENT TO THE DEPARTMENT OF ENERGY ORGANIZATION ACT.**

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

# ''TITLE XI—TECHNOLOGY PARTNERSHIPS

**''SEC. 1101. FINDINGS, PURPOSES AND DEFINITIONS.**

''(a) FINDINGS.—Congress finds that—

''(1) the United States Department of Energy has scientific and technical capabilities and resources within the departmental laboratories in virtually every area of importance to the economic, scientific and technological competitiveness of United States industry;

''(2) the extensive scientific and technical investments in people, facilities and equipment in the Department of Energy laboratories can be applied to

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

''(3) the Department of Energy has pursued aggressively the transfer of technology from departmental laboratories to the private sector, but the capabilities of the laboratories could be made more fully available to United States industry;

''(4) technology development has been increasingly driven by the commercial marketplace and private firms have extraordinary research and development capabilities in a broad range of generic technologies;

''(5) in carrying out their missions, the Department and the departmental laboratories would greatly benefit from closer collaboration and partnership with United States industry; and

''(6) partnerships between the departmental laboratories and United States industry can provide significant benefits to the Nation as a whole, including the creation of high-paying, high value-added jobs for United States workers and the improvement of the competitiveness of United States firms in key sectors such as the aerospace, automotive, chemical and electronics sectors.

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

‘‘(1) enhance partnerships between the private sector and the Department and the departmental laboratories and to establish a minimum goal for the percentage of the multi-program departmental laboratory budgets devoted to partnerships;

‘‘(2) ensure that the Department and the departmental laboratories play an appropriate role, consistent with their core competencies, in implementing the President’s critical technology strategies;

‘‘(3) provide additional authority to the Secretary to enter into partnerships with the private sector in pursuit of research, development, demonstration and commercial application activities; and

‘‘(4) streamline the process by which cooperative research and development agreements proposed by the departmental laboratories receive final disposition within the Department.

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

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

‘‘(2) ‘critical technology’ means a technology identified in the National Critical Technologies Report;

‘‘(3) ‘Department’ means the United States Department of Energy;

‘‘(4) ‘departmental laboratory’ means a facility operated by or on behalf of the Department that would be considered a laboratory as that term is defined in section 12 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a(d)(2));

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

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

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

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

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

''(9) 'multi-program departmental laboratory' means any of the following: Argonne National Laboratory, Brookhaven National Laboratory, Idaho National Engineering Laboratory, Lawrence Berkeley Laboratory, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, National Renewable Energy Laboratory, Oak Ridge National Laboratory, Pacific Northwest Laboratory, and Sandia National Laboratories;

''(10) 'National Critical Technologies Report' means the biennial report on national critical technologies submitted to Congress by the President pursuant to section 603(d) of the National Science and Technology Policy, Organization, and Priorities Act of 1976 (42 U.S.C. 6683(d));

''(11) 'partnership' means an arrangement, including an arrangement under section 1109, under which the Secretary or one or more departmental laboratories undertakes research, development, demonstration or commercial application activities for the mutual benefit of the partners in cooperation with one or more participants from among the fol-

lowing: an educational institution, private sector entity, State governmental entity, or other Federal agency; and

''(12) 'Secretary' means the Secretary of the United States Department of Energy.

**''SEC. 1102. ESTABLISHMENT OF PARTNERSHIPS.**

''The Secretary and the director of each departmental laboratory may enter into any partnership that will enhance the economic, scientific or technological competitiveness of United States industry utilizing the authority of this title or the authority available to the Secretary or the directors under the following—

''(a) the Atomic Energy Act of 1954;

''(b) the Federal Nonnuclear Energy Research and Development Act of 1974;

''(c) the Energy Policy Act of 1992;

''(d) the Stevenson-Wydler Technology Innovation Act of 1980;

''(e) the National Competitiveness Technology Transfer Act of 1989;

''(f) the Federal Technology Transfer Act of 1986;

''(g) the ''Renewable Energy and Energy Efficiency Technology Competitiveness Act of 1989;

‘‘(h) the Bayh-Dole Patent and Trademark Act of 1980; or

‘‘(i) the National Cooperative Research Act of 1984.

**“SEC. 1103. ESTABLISHMENT OF GOAL FOR PARTNERSHIPS BETWEEN MULTI-PROGRAM DEPARTMENTAL LABORATORIES AND UNITED STATES INDUSTRY.**

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

‘‘(b) Funds authorized to be appropriated to the Secretary and made available for departmental laboratory-directed research and development shall be available for any partnership.

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

‘‘(a) The Secretary shall develop a multi-year critical technology strategy for research, development, demonstration and commercial application activities supported by the Department for each critical technology listed in the National Critical Technologies Report.

‘‘(b) In developing such strategy, the Secretary shall—

‘‘(1) develop goals and objectives for the appropriate role of the Department in each of the critical technologies listed in the report, building on the core competencies of the departmental laboratories;

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

‘‘(3) participate in the executive branch process to develop critical technology strategies such as required by section 822 of the National Defense Authorization Act for Fiscal Years 1992 and 1993 (Public Law 102–190).

**“SEC. 1105. MISSION STATEMENT.**

‘‘(a) The Secretary, and the director of each departmental laboratory, may enter into partnerships that build on the core competencies of the departmental laboratories to conduct research, development, demonstration or commercial application activities in those areas listed in the biennial National Critical Technologies Report or in any of the following areas—

‘‘(1) energy efficiency, including efficiency in power generation, transmission, and utilization; en-

ergy conservation technologies; process technologies; and transportation;

''(2) energy supply, including alternative fuels; advanced forms of renewable energy; advanced clean coal technologies; coal liquefaction and synthetic fossil fuels; advanced oil and gas recovery; advanced nuclear reactor technologies; fusion technologies; biofuel technologies; electricity transmission, distribution, and storage; and energy forecasting;

''(3) high-performance computing, including programs to develop and use new computer architectures such as large scale parallel computers, real-time visualization, powerful scientific workstations, high-speed networking, new computer software and algorithms; programs to develop advanced materials for the communication and computing industry such as new memories, optical switches or optical storage disks; programs to address complex scientific challenges such as understanding global climate change, hydrologic modeling, and fundamental combustion processes; and programs with other agencies and the private sector for the development and use of high-performance computer research networks;

''(4) the environment, including global climate change; protection of ecological systems; environ-

mental restoration and waste management; and development of technologies for biogeochemical dynamics, toxicology, remote sensing, biotechnology, risk analysis, and environmental assessment;

''(5) human health, including radiopharmaceutical and laser applications; mapping of the human genome; structural biology; development of technologies for nuclear and diagnostic medicine and radiation biology, including cancer therapies; and development of sensors, electronics and information systems to lower health care costs;

''(6) advanced manufacturing technologies, including laser technologies, robotics and intelligent machines; semiconductors, superconductors, microelectronics, photonics, optoelectronics, and advanced displays; x-ray lithography; sensor and process controls; and those technologies that may affect energy production, energy efficiency, environmental protection or waste minimization;

''(7) advanced materials, including materials that may increase efficiency in energy generation, conversion, transmission and use; synthesis and processing for improved and new materials; materials to promote waste minimization and environmental protection; and new and improved methods,

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

''(8) transportation technologies, including those that will improve the efficiency of and reduce the energy consumption and environmental impact associated with conventional transportation technologies;

''(9) space technologies, including space-based sensors for environmental monitoring, climate modeling, and radio-biological studies;

''(10) quality technologies, including reliability engineering, failure analysis, statistical process control, nondestructive testing and inspection techniques, concurrent engineering and design practices for reliability and testability used to ensure product and process quality specifications are met;

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

''(12) any other generic, precompetitive technology or other critical technology identified by the Secretary.

''(b) The Secretary, and the directors of the departmental laboratories, shall utilize partnerships with United

States industry to ensure that technologies developed in pursuit of the Department's missions are rapidly applied and commercialized. In carrying out the Department's missions, the Secretary, and the directors of the departmental laboratories, shall, to the maximum extent practicable, work in partnership with United States industry and educational institutions.

''(c) The Secretary shall work with other Federal agencies to carry out research, development, demonstration, or commercial application activities where the core competencies of the Department and the departmental laboratories could contribute to the missions of such other agencies.

**''SEC. 1106. PARTNERSHIP PREFERENCES.**

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

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

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

**‘‘SEC. 1107. EVALUATION OF PARTNERSHIP PROGRAMS.**

‘‘(a) The Secretary shall develop mechanisms for independent evaluation of the accomplishments of the ongoing partnership activities of the Department and the departmental laboratories.

‘‘(b)(1) The Secretary and the director of each departmental laboratory shall develop mechanisms for assessing the accomplishments of each partnership and for measuring the progress of each such partnership.

‘‘(2) The Secretary and the director of each departmental laboratory shall utilize mechanisms developed under subparagraph (1) to evaluate the success of each ongoing multiyear partnership and shall condition continued funding of each such partnership on demonstrated progress.

**‘‘SEC. 1108. ANNUAL REPORT.**

‘‘(a) The Secretary shall submit an annual report to Congress describing the ongoing partnership activities of the Secretary and each departmental laboratory and, to the extent practicable, the activities planned by the Secretary and by each departmental laboratory for the coming fiscal year. In developing the report, the Secretary shall

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

''(b) The Secretary shall submit the report under subsection (a) to the Committees on Appropriations and Energy and Natural Resources of the Senate and to the appropriate Committees of the House of Representatives. No later than March 1, 1994, and no later than the first of March of each subsequent year, the Secretary shall submit the report under subsection (a) that covers the fiscal year beginning on the first of October of such year.

''(c) Each director of a departmental laboratory shall provide annually to the Secretary a report on current partnership activities and a plan and such other information as the Secretary may reasonably require describing the partnership activities the director expects will be carried out by such laboratory in the coming fiscal year. The director shall provide such report and plan in a timely manner as prescribed by the Secretary to permit preparation of the report under subsection (a).

''(d) The Secretary's description of planned activities under subsection (a) shall include, to the extent such information is available, appropriate information on—

''(1) the total funds to be allocated to partnership activities by the Secretary and by the director of each departmental laboratory;

‘‘(2) a breakdown of funds to be allocated by the Secretary and by the director of each departmental laboratory for partnership activities in each area of technology identified in section 1105(a);

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

‘‘(4) the partnerships the Secretary and the director of each departmental laboratory expects to undertake in the coming fiscal year;

‘‘(5) the technologies that will be advanced by partnerships and the anticipated benefits of such technologies;

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

‘‘(7) the nature of the partnership arrangements, including the anticipated level of financial and in-kind contribution from participants and any repayment terms;

‘‘(8) the extent of the use of competitive procedures in selecting partnerships; and

‘‘(9) such other information that the Secretary finds relevant to the determination of the appropriate level of Federal support for such partnerships.

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

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

‘‘(a) The Secretary, in carrying out partnerships, may enter into cooperative agreements and other transactions with any person, any agency or instrumentality of the United States, any unit of State or local government, any educational institution, and any other entity.

‘‘(b)(1) Cooperative agreements and other transactions entered into by the Secretary under subsection (a) may include a clause that requires a person or other entity to make payments to the Department (or any other department or agency of the Federal Government) as a condition for receiving support under the agreement or other transaction.

‘‘(2) The amount of any payment received by the Federal Government pursuant to a requirement imposed under paragraph (1) may be credited, to the extent authorized by the Secretary, to the account established under subsection (c). Amounts so credited shall be merged with other funds in the account and shall be available for the

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

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

''(d) The Secretary shall ensure that—

''(1) to the maximum extent practicable, a cooperative agreement or other transaction under this section does not provide for activities that duplicate activities being conducted under existing programs carried out by the Department;

''(2) to the extent the Secretary determines practicable, the funds provided by the Government under the cooperative agreement or other transaction do not exceed the total amount provided by other parties to the cooperative agreement or other transaction; and

''(3) the authority under this section is used only when the use of contracts or grants is not feasible or appropriate.

''(e) There is hereby established in the Treasury an account for support of partnerships provided for in cooperative agreements and other transactions entered into under subsection (a). Funds in such account shall be available to the Secretary for the payment of such support.

**“SEC. 1110. LABORATORY PARTNERSHIP ADVISORY BOARD AND INDUSTRIAL ADVISORY GROUPS AT MULTI-PROGRAM DEPARTMENTAL LABORATORIES.**

‘‘(a)(1) The Secretary shall establish within the Department an advisory board to be known as the ‘‘Laboratory Partnership Advisory Board,’’ to provide the Secretary with advice on the implementation of this title.

‘‘(2) The membership of the Laboratory Partnership Advisory Board shall consist of prominent representatives primarily from United States industry, but also from educational institutions, Federal laboratories of agencies other than the Department, and professional and technical societies in the United States who are qualified to provide the Secretary with advice on the implementation of this title.

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

‘‘(b) The director of each multi-program departmental laboratory shall establish an advisory group consisting of individuals with experience in the industrial sector to—

‘‘(1) evaluate new initiatives proposed by the departmental laboratory and identify opportunities

for partnerships with United States industry on those initiatives; and

''(2) evaluate ongoing programs at the departmental laboratory from the perspective of United States industry.

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

**''SEC. 1111. FELLOWSHIP PROGRAM.**

''The Secretary shall establish a program to encourage scientists and engineers from departmental laboratories to serve as visiting scientists and engineers in the research facilities of governments, educational institutions and industrial organizations in the United States and foreign countries.

**''SEC. 1112. COOPERATION WITH STATE PROGRAMS FOR TECHNOLOGY DEVELOPMENT AND DISSEMINATION.**

''The Secretary and the director of each multiprogram departmental laboratory shall seek opportunities to coordinate their activities with programs of state and local governments for technology development and dissemination, including programs funded in part by the Secretary of Defense pursuant to section 2523 of title 10 of

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

**"SEC. 1113. AVAILABILITY OF FUNDS FOR PARTNERSHIPS.**

''(a) All of the funds authorized to be appropriated to the Secretary for research, development, demonstration or commercial application activities, other than atomic energy defense activities, shall be available for partnerships to the extent such partnerships are consistent with the goals and objectives of such activities.

''(b) All of the funds authorized to be appropriated to the Secretary for research, development, demonstration or commercial application of dual-use technologies within the Department's atomic energy defense activities, except for the naval nuclear propulsion program, shall be available for partnerships to the extent such partnerships are consistent with the goals and objectives of such activities.

**"SEC. 1114. PROTECTION OF INFORMATION.**

''Section 12(c)(7) of the Stevenson-Wydler Technology Innovation Act of 1980, relating to the protection of information, shall apply to the partnership activities un-

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

**“SEC. 1115. EQUALITY OF ACCESS.**

‘‘(a) The Secretary and the director of each departmental laboratory shall institute such procedures as needed to ensure that information on opportunities to participate in partnerships with the Secretary or the departmental laboratories is widely disseminated.

‘‘(b) In cases where the Secretary or the director of a departmental laboratory believes a potential partnership activity would benefit from broad participation from the private sector, the Secretary or the director of such departmental laboratory may take such steps as may be necessary to facilitate formation of a United States industry consortium to pursue the partnership activity.

**“SEC. 1116. PRODUCT LIABILITY.**

‘‘The Secretary and the Attorney General shall enter into a memorandum of understanding to establish a consistent policy and standards regarding the liability of the United States, the non-federal entity operating a departmental laboratory and of any other party to a partnership for claims arising from partnership activities. The Secretary and the director of each departmental laboratory shall, to the maximum extent practicable, incorporate into

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

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

‘‘(a) The Secretary shall develop guidelines to govern the distribution of intellectual property resulting from a cost-shared partnership. Such guidelines shall ensure, to the maximum extent practicable, that the intellectual property provisions of any partnership arrangement administered by a non-federal entity operating a departmental laboratory:

‘‘(1) maximize the competitiveness of United States industry; and

‘‘(2) are uniform among the departmental laboratories.

‘‘(b) The Secretary shall ensure that the management and operating contracts between the Secretary and the non-federal entities operating the departmental laboratories are uniform with respect to provisions governing the administration of intellectual property in partnership arrangements involving departmental laboratories.’’.

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

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

resentatives a report addressing opportunities for minority colleges and universities to participate in programs and activities being carried out by the Department or the departmental laboratories. The Secretary shall consult with representatives of minority colleges and universities in preparing the report. Such report shall—

(a) describe current education and training programs being carried out by the Department or the departmental laboratories with respect to or in conjunction with minority colleges and universities in the areas of mathematics, science, and engineering;

(b) describe current research, development or demonstration programs involving the Department or the departmental laboratories and minority colleges and universities;

(c) describe funding levels for the programs referred to in subsection (a) and (b);

(d) identify ways for the Department or the departmental laboratories to assist minority colleges and universities in providing education and training in the fields of mathematics, science, and engineering;

(e) identify ways for the Department or the departmental laboratories to assist minority colleges and universities in entering into partnerships;

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

(1) increased research opportunities for faculty and students;

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

(3) laboratory instrumentation and equipment, including computer equipment, through purchase, loan, or other transfer;

(g) address the need for and potential role of the Department or departmental laboratories in providing funding and technical assistance for the development of infrastructure facilities, including buildings and laboratory facilities at minority colleges and universities; and

(h) make specific proposals and recommendations, together with estimates of necessary funding levels, for initiatives to be carried out by the Department or the departmental laboratories to assist minority colleges and universities in providing education and training in the areas of mathematics, science, and engineering, and in entering into part-

nerships with the Department or departmental laboratories.

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

(a) The Secretary shall establish a career path program to recruit employees of the national laboratories to serve in positions in the Department.

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

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

''(7) NATIONAL LABORATORIES.—(A) The restrictions contained in subsections (a), (b), (c), and (d) shall not apply to an appearance or communication made, or advice or aid rendered by an employee of a contractor managing and operating a facility described in subparagraph (B), if the appearance or communication is made on behalf of the facility or the advice or aid is provided to the contractor of the facility.

''(B) This paragraph applies to the following: Argonne National Laboratory, Brookhaven National

Laboratory, Idaho National Engineering Laboratory, Lawrence Berkeley Laboratory, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, National Renewable Energy Laboratory, Oak Ridge National Laboratory, Pacific Northwest Laboratory, and Sandia National Laboratories''.

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

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

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

''(3) This subsection applies to the following: Argonne National Laboratory, Brookhaven National Laboratory, Idaho National Engineering Laboratory, Lawrence Berkeley Laboratory, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, National Re-

newable Energy Laboratory, Oak Ridge National Laboratory, Pacific Northwest Laboratory, and Sandia National Laboratories.''.

**SEC. 5. INFORMATION INFRASTRUCTURE AND TECHNOLOGY.**

(a) FINDINGS.—

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

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

(b) PURPOSE.—

The purpose of this section is to—

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

(2) provide for partnerships that will enhance Federal and private efforts to deploy and commercialize these technologies as part of a national information infrastructure.

(c) NATIONAL INFORMATION INFRASTRUCTURE DEVELOPMENT PROGRAM.—The High-Performance Computing Act of 1991 (Public Law 101–425) is amended—

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

''(3) The Program shall also—

''(A) provide for a coordinated interagency effort in partnership with the private sector to develop, deploy, and commercialize high-performance computing and high-speed networking technologies through a national information infrastructure for applications in—

''(i) education,

''(ii) health care,

''(iii) manufacturing,

''(iv) digital information,

''(v) energy demand management,

''(vi) environmental monitoring and remediation;

''(vii) financial services; and

‘‘(viii) such other fields as the President deems appropriate;

‘‘(B) set forth the role of the Network in making the benefits of applications of high-performance computing and high-speed networking available to United States research and educational institutions, government and industry in every State through a national information infrastructure; and

‘‘(C) otherwise ensure that services and applications of high-performance computing and high-speed networking technologies are available as needed to United States industry, government and academia.’’.

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

‘‘(f)(1) The Secretary of Energy shall, consistent with the Program, provide for cooperative, cost-shared projects involving the Department of Energy or one or more Department of Energy laboratories and appropriate non-Federal entities to develop, test and apply high-performance computing and high-speed networking technologies for —

‘‘(A) education and training, including science, mathematics and engineering education

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

‘‘(B) health care, including remote diagnosis and monitoring;

‘‘(C) manufacturing;

‘‘(D) energy demand management and control, including vehicle efficiency and utilization, energy efficiency in commercial and residential buildings, and industrial energy use and practices;

‘‘(E) scientific, technical and energy information dissemination and analysis, including exhibits and model experiments;

‘‘(F) technology transfer among the Department of Energy laboratories, United States industry and educational institutions;

‘‘(G) environmental monitoring, modeling and remediation;

‘‘(H) financial services, including security and data base management of financial data; and

‘‘(I) such other areas as the Secretary deems appropriate.

‘‘(2) In carrying out projects under subparagraph (1), the Secretary shall, where appropriate,

seek to address the technical, architectural, economic, regulatory, and market considerations critical to further development of a national information infrastructure.

''(3) There is authorized to be appropriated to the Secretary of Energy for purposes of this subsection $50,000,000 for fiscal year 1994, $100,000,000 for fiscal year 1995 and $150,000,000 for fiscal year 1996.''.

**SEC. 6. AVLIS COMMERCIALIZATION.**

(a) PREDEPLOYMENT CONTRACTOR.—Not later than ninety days after the date of enactment of this Act, the Secretary shall solicit proposals for a commercial predeployment contractor to conduct such activities as may be necessary to enable the Secretary or any successor to the Secretary's uranium enrichment enterprise to deploy a commercial uranium enrichment plant using the Atomic Vapor Laser Isotope Separation (AVLIS) technology. Such activities shall include:

(1) developing a transition plan for transferring the AVLIS program from research, development, and demonstration activities at the Lawrence Livermore National Laboratory to deployment of a commercial AVLIS production plant;

(2) confirming the technical performance of AVLIS technology;

(3) developing the economic and industrial assessments necessary for the Secretary or his successor to make a commercial decision whether to deploy AVLIS;

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

(5) completing feasibility and risk studies necessary for a commercial decision whether to deploy AVLIS, including financing options.

(b) ADDITIONAL ACTIVITIES.—Based upon the results of subsection (a), the Secretary may solicit additional proposals to complete the following activities:

(1) site selection, site characterization, and environmental documentation activities for a commercial AVLIS plant;

(2) engineering design of a production plant, developing a project schedule, and initiating operations planning;

(3) activities leading to obtaining necessary licenses from the Nuclear Regulatory Commission; and

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

(c) REPORTS.—The Secretary shall submit to the Committee on Energy and Natural Resources of the United States Senate and to the Speaker of the House of Representatives a written report on the progress made toward the deployment of a commercial AVLIS production plant ninety days after the date of enactment of this Act and each ninety days thereafter.

**SEC. 7. DOE MANAGEMENT.**

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

(2) Section 202(b) of the Department of Energy Organization Act (42 U.S.C. 7132(b)) is amended to read as follows:

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

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

(b) Section 203(a) of the Department of Energy Organization Act (42 U.S.C. 7133(a)) is amended by striking ''eight Assistant Secretaries'' and inserting in its place ''eleven Assistant Secretaries''.

**SEC. 8. AMENDMENTS TO STEVENSON-WYDLER TECHNOLOGY INNOVATION ACT.**

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

(a) by deleting subparagraph (C)(i) and inserting in lieu thereof:

''(C)(i) Any agency which has contracted with a non-Federal entity to operate a laboratory shall review and approve, request specific modifications to, or disapprove a joint work statement and cooperative research and development agreement that is submitted by the director of such laboratory within thirty days after such submission. In any case where an agency has requested specific modifications to a joint work statement or cooperative research and development agreement, the agency shall approve or disapprove any resubmission of such joint work statement or cooperative research and development agreement within

fifteen days after such resubmission. No agreement may be entered into by a Government-owned, contractor-operated laboratory under this section before both approval of the cooperative research and development agreement and a joint work statement.'';

(b) by adding after ''joint work statement'' in subparagraph (C)(ii) the words, ''or cooperative research and development agreement''.

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

(d) by deleting subparagraph (C)(v) and inserting in lieu thereof:

''(C)(iv) If an agency fails to complete a review under clause (i) within any of the specified time-periods, the agency shall submit to the Congress, within ten days after the failure to complete the review, a report on the reasons for such failure. The agency shall, at the end of each successive fifteen-day period thereafter during which such failure continues, submit to Congress another report on the reasons for the continuing failure.''.

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

**SEC. 9. GUIDELINES.**

The implementation of the provisions of this Act shall not be delayed pending the issuance of guidelines or standards required by sections 1106, 1116, and 1117 of the

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

**~~SEC. 10. AUTHORIZATION.~~**

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

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

~~(b) for partnership activities with industry involving dual-use technologies within the Department's atomic energy defense activities, except for the naval nuclear propulsion program, $240,000,000 for fiscal year 1994, $290,000,000 for fiscal year 1995, $350,000,000 for fiscal year 1996 and $400,000,000 for fiscal year 1997.~~

***SECTION 1. SHORT TITLE.***

*This Act may be cited as the ''Department of Energy National Competitiveness Technology Partnership Act of 1993''.*

***SEC. 2. DEFINITIONS.***

*For purposes of this Act, the term—*

*(1) ''Department'' means the United States Department of Energy; and*

*(2) ''Secretary'' means the Secretary of the United States Department of Energy.*

***SEC. 3. COMPETITIVENESS AMENDMENT TO THE DEPARTMENT OF ENERGY ORGANIZATION ACT.***

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

# *''TITLE XI—TECHNOLOGY PARTNERSHIPS*

***''SEC. 1101. FINDINGS, PURPOSES AND DEFINITIONS.***

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

*''(1) the Department has scientific and technical resources within the departmental laboratories in many areas of importance to the economic, scientific and technological competitiveness of United States industry;*

*''(2) the extensive scientific and technical investment in people, facilities and equipment in the departmental laboratories can contribute to the achievement of national technology goals in areas such as the environment, health, space, and transportation;*

*''(3) the Department has pursued aggressively the transfer of technology from departmental laboratories to the private sector; however, the capabilities of the laboratories could be made more fully accessible to United States industry and to other Federal agencies;*

*''(4) technology development has been increasingly driven by the commercial marketplace, and the private sector has research and development capabilities in a broad range of generic technologies;*

*''(5) the Department and the departmental laboratories would benefit, in carrying out their missions, from collaboration and partnership with United States industry and other Federal agencies; and*

*''(6) partnerships between the departmental laboratories and United States industry can provide significant benefits to the Nation as a whole, including creation of jobs for United States workers and improvement of the competitive position of the United States in key sectors of the economy such as aerospace, automotive, chemical and electronics.*

*''(b) PURPOSES.—The purposes of this title are—*

*''(1) to promote partnerships among the Department, the departmental laboratories and the private sector;*

*''(2) to establish a goal for the amount of departmental laboratory resources to be committed to partnerships;*

*''(3) to ensure that the Department and the departmental laboratories play an appropriate role, consistent with the core competencies of the laboratories, in implementing the President's critical technology strategies;*

*''(4) to provide additional authority to the Secretary to enter into partnerships with the private sector to carry out research, development, demonstration and commercial application activities;*

*''(5) to streamline the approval process for cooperative research and development agreements proposed by the departmental laboratories; and*

*''(6) to facilitate greater cooperation between the Department and other Federal agencies as part of an integrated national effort to improve United States competitiveness.*

*''(c) DEFINITIONS.—For purposes of this title, the term—*

*''(1) 'cooperative research and development agreement' has the meaning given that term in section 12 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a(d)(1));*

*''(2) 'core competency' means an area in which the Secretary determines a departmental laboratory has developed expertise and demonstrated capabilities;*

*''(3) 'critical technology' means a technology identified in the Report of the National Critical Technologies Panel;*

*''(4) 'departmental laboratory' means a facility operated by or on behalf of the Department that would be considered a laboratory as that term is defined in section 12 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a(d)(2)) or any other laboratory or facility designated by the Secretary;*

*''(5) 'disadvantaged' has the same meaning as that term has in section 8(a) (5) and (6) of the Small Business Act (15 U.S.C. 637(a) (5) and (6));*

*''(6) 'dual-use technology' means a technology that has military and commercial applications;*

*''(7) 'educational institution' means a college, university, or elementary or secondary school, including any not-for-profit organization dedicated to edu-*

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

*''(8) 'minority college or university' means a historically Black college or university that would be considered a 'part B institution' by section 322(2) of the Higher Education Act of 1965 (20 U.S.C. 1061(2)) or a 'minority institution' as that term is defined in section 1046 of the Higher Education Act of 1965 (20 U.S.C. 1135d–5(3)).*

*''(9) 'multi-program departmental laboratory' means any of the following: Argonne National Laboratory, Brookhaven National Laboratory, Idaho Nation Engineering Laboratory, Lawrence Berkeley Laboratory, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, National Renewable Energy Laboratory, Oak Ridge National Laboratory, Pacific Northwest Laboratory, and Sandia National Laboratories;*

*''(10) 'partnership' means any arrangement under which the Secretary or one or more departmental laboratories undertakes research, development, demonstration, commercial application or technical assistance activities in cooperation with one or more non-Federal partners and which may include partners from other Federal agencies;*

*''(11) 'Report of the National Critical Technologies Panel' means the biennial report on national critical technologies submitted to Congress by the President pursuant to section 603(d) of the National Science and Technology Policy, Organization, and Priorities Act of 1976 (42 U.S.C. 6683(d)); and*

*''(12) 'small business' means a business concern that meets the applicable standards prescribed pursuant to section 3(a) of the Small Business Act (15 U.S.C. 632(a)).*

***''SEC. 1102. GENERAL AUTHORITY.***

*''(a)(1) In carrying out the missions of the Department, the Secretary and the departmental laboratories may conduct research, development, demonstration or commercial application activities that build on the core competencies of the departmental laboratories.*

*''(2) In addition to missions established pursuant to other laws, the Secretary may assign to departmental laboratories any of the following missions:*

*''(A) National security, including the—*

*''(i) advancement of the military application of atomic energy;*

*''(ii) support of the production of atomic weapons, or atomic weapons parts, including special nuclear materials;*

*''(iii) support of naval nuclear propulsion programs;*

*''(iv) support for the dismantlement of atomic weapons and the safe storage, transportation and disposal of special nuclear materials;*

*''(v) development of technologies and techniques for the safe storage, processing, treatment, transportation, and disposal of hazardous waste (including radioactive waste) resulting from nuclear materials production, weapons production and surveillance programs, and naval nuclear propulsion programs and of technologies and techniques for the reduction of environmental hazards and contamination due to such waste and the environmental restoration of sites affected by such waste;*

*''(vi) development of technologies and techniques needed for the effective negotiation and verification of international arms control agreements and for the containment of the proliferation of nuclear, chemical, and biological weapons and delivery vehicles of such weapons; and*

*''(vii) protection of health and promotion of safety in carrying out other national security missions.*

*''(B) Energy-related science and technology, including the—*

*''(i) enhancement of the nation's understanding of all forms of energy production and use;*

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

*''(iii) development of energy resources, including solar, geothermal, fossil, and nuclear energy resources, and related fuel cycles;*

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

*''(v) development of technologies and processes to reduce the generation of waste or pollution or the consumption of energy or materials;*

*''(vi) development of technologies and techniques for the safe storage, processing, treatment, management, transportation and disposal of nuclear waste resulting from commercial nuclear activities; and*

*''(vii) improvement of the quality of education in science, mathematics, and engineering.*

*''(C) Industrial infrastructure, in technology areas such as—*

*''(i) microelectronics;*

*''(ii) high-performance computing and communications;*

*''(iii) transportation;*

*''(iv) advanced manufacturing;*

*''(v) advanced materials;*

*''(vi) space;*

*''(vii) human health sciences; and*

*''(viii) environmental science.*

*''(D) Technology transfer.*

*''(3) In carrying out the Department's missions, the Secretary, and the directors of the departmental laboratories, shall, to the maximum extent practicable, make use of partnerships. Such partnerships shall be for purposes of the following:*

*''(A) to lead to the development of technologies that the private sector can commercialize in areas of technology with broad application important to United States technological and economic competitiveness;*

*''(B) to provide Federal support in areas of technology where the cost or risk is too high for the pri-*

*vate sector to support alone but that offer a potentially high payoff to the United States;*

*''(C) to contribute to the education and training of scientists and engineers;*

*''(D) to provide university and private researchers access to departmental laboratory facilities; or*

*''(E) to provide technical expertise to universities, industry or other Federal agencies.*

*''(b) The Secretary, in carrying out partnerships, may enter into agreements using instruments authorized under applicable laws, including but not limited to contracts, cooperative research and development agreements, work for other agreements, user-facility agreements, cooperative agreements, grants, personnel exchange agreements and patent and software licenses with any person, any agency or instrumentality of the United States, any State or local governmental entity, any educational institution, and any other entity, private sector or otherwise.*

*''(c) The Secretary, and the directors of the departmental laboratories, shall utilize partnerships with United States industry, to the maximum extent practicable, to ensure that technologies developed in pursuit of the Department's missions are applied and commercialized in a timely manner.*

*''(d) The Secretary shall work with other Federal agencies to carry out research, development, demonstration or commercial application activities where the core competencies of the departmental laboratories could contribute to the missions of such other agencies.*

***''SEC. 1103. ESTABLISHMENT OF GOAL FOR PARTNERSHIPS BETWEEN DEPARTMENTAL LABORATORIES AND UNITED STATES INDUSTRY.***

*''(a) Beginning in fiscal year 1994, the Secretary shall establish a goal to allocate to cost-shared partnerships with United States industry not less than 20 percent of the annual funds provided by the Secretary to each multi-program departmental laboratory for research, development, demonstration and commercial application activities.*

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

***''SEC. 1104. ROLE OF THE DEPARTMENT IN THE DEVELOPMENT OF CRITICAL TECHNOLOGY STRATEGIES.***

*''(a) The Secretary shall develop a multyear critical technology strategy for research, development, demonstration and commercial application activities supported by the*

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

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

*''(1) identify the core competencies of each departmental laboratory;*

*''(2) develop goals and objectives for the appropriate role of the Department in each of the critical technologies listed in the report, taking into consideration the core competencies of the departmental laboratories;*

*''(3) consult with appropriate representatives of United States industry, including members of industry associations and representatives of labor organizations; and*

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

***''SEC. 1105. PARTNERSHIP PREFERENCES.***

*''(a) The Secretary shall ensure that the principal economic benefits of any partnership accrue to the United States economy.*

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

*''(c) The Secretary shall issue guidelines, after consultation with the Laboratory Partnership Advisory Board established in section 1109, for application of section 12(c)(4) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a(c)(4)) and application of subsection (a) of this section to partnerships.*

*''(d) The Secretary shall encourage partnerships that involve minority colleges or universities or private sector entities owned or controlled by disadvantaged individuals.*

***''SEC. 1106. EVALUATION OF PARTNERSHIP PROGRAMS.***

*''(a) The Secretary, in consultation with the Laboratory Partnership Advisory Board established in section 1109, shall develop mechanisms for independent evaluation of the ongoing partnership activities of the Department and the departmental laboratories.*

*''(b)(1) The Secretary and the director of each departmental laboratory shall develop mechanisms for assessing the progress of each partnership.*

*''(2) The Secretary and the director of each departmental laboratory shall utilize the mechanisms developed under paragraph (1) to evaluate the accomplishments of each ongoing multiyear partnership and shall condition continued Federal participation in each partnership on demonstrated progress.*

***"SEC. 1107. ANNUAL REPORT.***

*"(a) The Secretary shall submit an annual report to Congress describing the ongoing partnership activities of the Secretary and each departmental laboratory and, to the extent practicable, the activities planned by the Secretary and by each departmental laboratory for the coming fiscal year. In developing the report, the Secretary shall seek the advice of the Laboratory Partnership Advisory Board established in section 1109.*

*"(b) The Secretary shall submit the report under subsection (a) to the Committees on Appropriations and Energy and Natural Resources of the Senate and to the appropriate Committees of the House of Representatives. No later than March 1, 1994, and no later than the first of March of each subsequent year, the Secretary shall submit the report under subsection (a) that covers the fiscal year beginning on the first of October of such year.*

*"(c) Each director of a departmental laboratory shall provide annually to the Secretary a report on ongoing partnership activities and a plan and such other information as the Secretary may reasonably require describing the partnership activities the director plans to carry out in the coming fiscal year. The director shall provide such report and plan in a timely manner as prescribed by the Secretary to permit preparation of the report under subsection (a).*

*''(d) The Secretary's description of planned activities under subsection (a) shall include, to the extent such information is available, appropriate information on—*

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

*''(2) a breakdown of funds to be allocated by the Secretary and by the director of each departmental laboratory for partnership activities by areas of technology;*

*''(3) any plans for additional funds not described in paragraph (2) to be set aside for partnerships during the coming fiscal year;*

*''(4) any partnership that involves a federal contribution in excess of $500,000 the Secretary or the director of each departmental laboratory expects to enter into in the coming fiscal year;*

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

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

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

*kind contribution from participants and any repayment terms;*

*''(8) the extent of use of competitive procedures in selecting partnerships; and*

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

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

***''SEC. 1108. PARTNERSHIP PAYMENTS.***

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

*''(2) The amount of any payment received by the Federal Government pursuant to a requirement imposed under paragraph (1) may be credited, to the extent authorized by the Secretary, to the account established under paragraph (3). Amounts so credited shall be available, subject to appropriations, for partnerships.*

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

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

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

*''(1) small businesses;*

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

*''(3) State or local governmental entities.*

***''SEC. 1109. LABORATORY PARTNERSHIP ADVISORY BOARD AND INDUSTRIAL ADVISORY GROUPS AT MULTI-PROGRAM DEPARTMENTAL LABORATORIES.***

*''(a)(1) The Secretary shall establish within the Department an advisory board to be known as the ''Laboratory Partnership Advisory Board'', to provide the Secretary with advice on the implementation of this title.*

*''(2) The membership of the Laboratory Partnership Advisory Board shall consist of persons who are qualified to provide the Secretary with advice on the implementation of this title. Members of the Board shall include representatives primarily from United States industry but shall also include representatives from—*

*''(A) small businesses;*

*''(B) private sector entities owned or controlled by disadvantaged persons;*

*''(C) educational institutions, including representatives from minority colleges or universities;*

*''(D) laboratories of other Federal agencies; and*

*''(E) professional and technical societies in the United States.*

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

*''(b) The director of each multiprogram departmental laboratory shall establish an advisory group consisting of persons from United States industry to—*

*''(1) evaluate new initiatives proposed by the departmental laboratory;*

*''(2) identify opportunities for partnerships with United States industry; and*

*''(3) evaluate ongoing programs at the departmental laboratory from the perspective of United States industry.*

*''(c) Nothing in this section is intended to preclude the Secretary or the director of a departmental laboratory from utilizing existing advisory boards to achieve the purposes of this section.*

***''SEC. 1110. FELLOWSHIP PROGRAM.***

*''The Secretary shall encourage scientists, engineers and technical staff from departmental laboratories to serve as visiting fellows in research and manufacturing facilities of industrial organizations, State and local governments, and educational institutions in the United States and foreign countries. The Secretary may establish a formal fellowship program for this purpose or may authorize such activities on a case-by-case basis. The Secretary shall also encourage scientists and engineers from United States industry to serve as visiting scientists and engineers in the departmental laboratories.*

***''SEC. 1111. COOPERATION WITH STATE AND LOCAL PROGRAMS FOR TECHNOLOGY DEVELOPMENT AND DISSEMINATION.***

*''The Secretary and the director of each departmental laboratory shall seek opportunities to coordinate their activities with programs of State and local governments for technology development and dissemination, including programs funded in part by the Secretary of Defense pursuant to section 2523 of title 10, of the United States Code, and section 2513 of title 10, of the United States Code, and programs funded in part by the Secretary of Commerce pursuant to sections 25 and 26 of the Act of March 3, 1901 (15 U.S.C. 278k and 278l), and section 5121(b) of the Omnibus*

*Trade and Competitiveness Act of 1988 (15 U.S.C. 278l note).*

***"SEC. 1112. AVAILABILITY OF FUNDS FOR PARTNERSHIPS.***

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

*''(b) All of the funds authorized to be appropriated to the Secretary for research, development, demonstration or commercial application of dual-use technologies within the Department's atomic energy defense activities shall be available for partnerships to the extent such partnerships are consistent with the goals and objectives of such activities.*

*''(c) Funds authorized to be appropriated to the Secretary and made available for departmental laboratory-directed research and development shall be available for any partnership.*

***"SEC. 1113. PROTECTION OF INFORMATION.***

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

*ship activities undertaken by the Secretary and by the directors of the departmental laboratories.*

***"SEC. 1114. FAIRNESS OF OPPORTUNITY.***

*''(a) The Secretary and the director of each departmental laboratory shall institute procedures to ensure that information on laboratory capabilities and arrangements for participating in partnerships with the Secretary or the departmental laboratories is publicly disseminated.*

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

*''(c) In cases where the Secretary or the director of a departmental laboratory believes a potential partnership activity would benefit from broad participation from the private sector, the Secretary or the director of such departmental laboratory may take such steps as may be necessary to facilitate formation of a United States industry consortium to pursue the partnership activity.*

***"SEC. 1115. PRODUCT LIABILITY.***

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

*ards regarding the liability of the United States, of the non-Federal entity operating a departmental laboratory and of any other party to a partnership for product liability claims arising from partnership activities. The Secretary and the director of each departmental laboratory shall, to the maximum extent practicable, incorporate into any partnership the policy and standards established in the memorandum of understanding.*

***''SEC. 1116. INTELLECTUAL PROPERTY.***

*''The Secretary shall, after consultation with the Laboratory Partnership Advisory Board established in section 1109, develop guidelines governing the application of intellectual property laws by the Secretary and by the director of each departmental laboratory in partnership arrangements.*

***''SEC. 1117. SMALL BUSINESS.***

*''(a) The Secretary shall develop simplified procedures and guidelines for partnerships involving small businesses to facilitate access to the resources and capabilities of the departmental laboratories.*

*''(b) Notwithstanding any other law, the Secretary may waive, in whole or in part, any cost-sharing requirement for a small business involved in a partnership if the Secretary determines that the cost-sharing requirement*

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

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

***''SEC. 1118. MINORITY COLLEGE AND UNIVERSITY REPORT.***

*''Within one year after the date of enactment of this title, and annually thereafter, the Secretary shall submit to the Committee on Energy and Natural Resources of the United States Senate and to the United States House of Representatives a report identifying opportunities for minority colleges and universities to participate in programs and activities being carried out by the Department or the departmental laboratories. The Secretary shall consult with representatives of minority colleges and universities in preparing the report. Such report shall—*

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

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

*''(b) describe ongoing research, development demonstration or commercial application activities involving the Department or the departmental laboratories and minority colleges and universities;*

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

*''(d) identify ways for the Department or the departmental laboratories to assist minority colleges and universities in providing education and training in the fields of mathematics, science, and engineering;*

*''(e) identify ways for the Department or the departmental laboratories to assist minority colleges and universities in entering into partnerships;*

*''(f) address the need for and potential role of the Department or the departmental laboratories in providing to minority colleges and universities the following:*

*''(1) increased research opportunities for faculty and students;*

*''(2) assistance in faculty development and recruitment and curriculum enhancement and development; and*

*''(3) laboratory instrumentation and equipment, including computer equipment, through purchase, loan, or other transfer;*

*''(g) address the need for and potential role of the Department or departmental laboratories in providing funding and technical assistance for the development of infrastructure facilities, including buildings and laboratory facilities at minority colleges and universities; and*

*''(h) make specific proposals and recommendations, together with estimates of necessary funding levels, for initiatives to be carried out by the Department or the departmental laboratories to assist minority colleges and universities in providing education and training in the areas of mathematics, science, and engineering, and in entering into partnerships with the Department or departmental laboratories.*

***''SEC. 1119. MINORITY COLLEGE AND UNIVERSITY SCHOLARSHIP PROGRAM.***

*''The Secretary shall establish a scholarship program for students attending minority colleges or universities and pursuing a degree in energy-related scientific, mathematical, engineering, and technical disciplines. The program shall include tuition assistance. The program shall provide*

*an opportunity for the scholarship recipient to participate in an applied work experience in a departmental laboratory. Recipients of such scholarships shall be students deemed by the Secretary to have demonstrated (1) a need for such assistance and (2) academic potential in the particular area of study. Scholarships awarded under this program shall be known as Secretary of Energy Scholarships.''.*

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

*''TITLE XI—TECHNOLOGY PARTNERSHIPS*

***SEC. 4. NATIONAL ADVANCED MANUFACTURING TECHNOLOGIES PROGRAM.***

*The Secretary is encouraged to use partnerships to expedite the private sector deployment of advanced manufacturing technologies as required by section 2202(a) of the Energy Policy Act of 1992 (42 U.S.C. 13502).*

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

*The Secretary shall encourage the establishment of not-for-profit organizations, such as the Center for Applied Development of Environmental Technology (CADET), that will facilitate the transfer of technologies from the departmental laboratories to the private sector.*

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

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

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

*''(7) NATIONAL LABORATORIES.—(A) The restrictions contained in subsections (a), (b), (c), and (d) shall not apply to an appearance or communication made, or advice or aid rendered by a person employed at a facility described in subparagraph (B), if the appearance or communication is made on behalf of the*

*facility or the advice or aid is provided to the contractor of the facility.*

*''(B) This paragraph applies to the following: Argonne National Laboratory, Brookhaven National Laboratory, Idaho National Engineering Laboratory, Lawrence Berkeley Laboratory, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, National Renewable Energy Laboratory, Oak Ridge National Laboratory, Pacific Northwest Laboratory, and Sandia National Laboratories.''.*

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

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

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

*''(3) This subsection applies to the following: Argonne National Laboratory, Brookhaven National Laboratory, Idaho National Engineering Laboratory, Lawrence Berkeley Laboratory, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, National Renewable Energy Laboratory, Oak Ridge National Laboratory, Pacific Northwest Laboratory, and Sandia National Laboratories.''.*

***SEC. 7. INFORMATION INFRASTRUCTURE AND TECHNOLOGY.***

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

*(1) high-performance computing has the potential to enhance the economic, scientific and technological competitiveness of United States industry; and*

*(2) the Federal Government should ensure that there is a coordinated interagency program in partnership with the private sector to identify and promote applications of high-performance computing that will significantly improve the use of information, foster and strengthen research and development capabilities, and enhance the competitiveness of United States industry.*

*(b) PURPOSES.—The purposes of this section are to—*

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

*(2) provide for partnerships that will enhance Federal and private efforts to deploy and commercialize these technologies as part of a national information infrastructure.*

*(c) NATIONAL INFORMATION INFRASTRUCTURE DEVELOPMENT PROGRAM.—The High-Performance Computing Act of 1991 (15 U.S.C. 5501 et seq.) is amended—*

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

*''(3) The Program shall also—*

*''(A) provide for a coordinated interagency effort in partnership with the private sector to develop, deploy and commercialize high-performance computing technologies through a national information infrastructure for applications in—*

*''(i) education,*

*''(ii) health care,*

*''(iii) manufacturing,*

*''(iv) digital information,*

*''(v) energy demand management,*

*''(vi) environmental monitoring and remediation,*

*''(vii) financial services,*

*''(viii) law enforcement; and*

*''(ix) such other fields as the President deems appropriate;*

*''(B) set forth the role of the Network in making the benefits of applications of high-performance computing available to United States industry, government and academia through a national information infrastructure; and*

*''(C) otherwise ensure that services and applications of high-performance computing technologies are available as needed to United States industry, government and academia.'';*

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

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

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

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

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

*''(B) health care, including remote diagnosis and monitoring;*

*''(C) manufacturing;*

*''(D) energy demand management and control, including vehicle efficiency and utilization, energy efficiency in commercial and residential buildings, and industrial energy use and practices;*

*''(E) scientific, technical and energy information dissemination and analysis, including exhibits and model experiments;*

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

*''(G) environmental monitoring, modeling and remediation;*

*''(H) financial services, including security and data base management of financial data;*

*''(I) law enforcement; and*

*''(J) such other areas as the Secretary of Energy deems appropriate.*

*''(2) In carrying out projects under paragraph (1), the Secretary of Energy shall, where appropriate, seek to address the technical, architectural, economic, regulatory and market considerations critical to further development of a national information infrastructure.*

*''(3) There is authorized to be appropriated to the Secretary of Energy for purposes of this subsection $50,000,000 for fiscal year 1994, $100,000,000 for fiscal year 1995 and $150,000,000 for fiscal year 1996.''.*

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

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

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

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

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

*(3) developing the economic and industrial assessments necessary for the Secretary or his successor to make a commercial decision whether to deploy AVLIS;*

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

*(5) completing feasibility and risk studies necessary for a commercial decision whether to deploy AVLIS, including financing options.*

*(b) ADDITIONAL ACTIVITIES.—Based upon the results of subsection (a), the Secretary may solicit additional proposals to complete the following activities:*

*(1) site selection, site characterization, and environmental documentation activities for a commercial AVLIS plant;*

*(2) engineering design of a production plant, developing a project schedule, and initiating operations planning;*

*(3) activities leading to obtaining necessary licenses from the Nuclear Regulatory Commission; and*

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

*(c) REPORTS.—The Secretary shall submit to the Committee on Energy and Natural Resources of the United States Senate and to the Speaker of the House of Representatives a written report on the progress made toward the deployment of a commercial AVLIS production plant ninety days after the date of enactment of this Act and each ninety days thereafter.*

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

*(a) Section 202(a) of the Department of Energy Organization Act (42 U.S.C. 7132(a)) is amended by striking ''Under Secretary'' and inserting in its place ''Under Secretaries''.*

*(b) Section 202(b) of the Department of Energy Organization Act (42 U.S.C. 7132(b)) is amended to read as follows:*

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

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

***SEC. 10. AMENDMENTS TO STEVENSON-WYDLER TECHNOLOGY INNOVATION ACT.***

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

*(1) by deleting subparagraph (C)(i) and inserting in lieu thereof:*

*''(C)(i) Any agency that has contracted with a non-Federal entity to operate a laboratory shall review and approve, request specific modifications to, or disapprove a joint work statement and cooperative research and development agreement that is submitted by the director of such laboratory within thirty days after such submission. In any case where an agency has requested specific modifications to a joint work statement or cooperative research and development agreement, the agency shall approve or disapprove any resubmission of such joint work statement or cooperative research and development agreement within fifteen days after such resubmission. No agreement may be entered into by a Government-owned, contractor-operated laboratory under this section before both approval of the cooperative research and development agreement and a joint work statement.'';*

*(2) by adding in subparagraph (C)(ii) the words, ''or cooperative research and development agreement'' after ''joint work statement'';*

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

*(4) by deleting subparagraph (C)(v) and inserting in lieu thereof:*

*''(C)(iv) If an agency fails to complete a review under clause (i) within any of the specified time-periods, the agency shall submit to the Congress, within 10 days after the failure to complete the review, a report on the reasons for such failure. The agency shall, at the end of each successive 15-day period thereafter during which such failure continues, submit to Congress another report on the reasons for the continued failure.''; and*

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

*(b) Section 12(d)(2) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a(d)(2)) is amended—*

*(1) in subparagraph (B) by striking ''substantial'' before ''purpose''; and*

*(2) in subparagraph (C) by striking ''primary''.*

***SEC. 11. GUIDELINES.***

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

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

***SEC. 12. AUTHORIZATION.***

*(a) In addition to funds made available for partnerships under section 1112 of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.) as added by section 3 of this Act, there is authorized to be appropriated from funds otherwise available to the Secretary—*

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

*(2) for partnership activities with industry involving dual-use technologies within the Department's atomic energy defense activities $240,000,000 for fiscal year 1994, $290,000,000 for fiscal year 1995, $350,000,000 for fiscal year 1996 and $400,000,000 for fiscal year 1997.*

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

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

*(c) There is authorized to be appropriated to the Secretary for research or educational programs, carried out through partnerships or otherwise, and for related facilities and equipment that involve minority colleges or universities such sums as may be necessary.*

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