America COMPETES Act

[Public Law 110–69]

[As Amended Through P.L. 117–167, Enacted August 9, 2022]

[Currency: This publication is a compilation of the text of Public Law 110–69. It was last amended by the public law listed in the As Amended Through note above and below at the bottom of each page of the pdf version and reflects current law through the date of the enactment of the public law listed at https://www.govinfo.gov/app/collection/comps/]

[Note: While this publication does not represent an official version of any Federal statute, substantial efforts have been made to ensure the accuracy of its contents. The official version of Federal law is found in the United States Statutes at Large and in the United States Code. The legal effect to be given to the Statutes at Large and the United States Code is established by statute (1 U.S.C. 112, 204).]

AN ACT To invest in innovation through research and development, and to improve the competitiveness of the United States.

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

SECTION 1. [20 U.S.C. 9801 nt] SHORT TITLE.

This Act may be cited as the "America COMPETES Act" or the "America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Act".

SEC. 2. TABLE OF CONTENTS

The table of contents of this Act is as follows:

[1] Section 2003 was repealed by section 6 of Public Law 111-314 and there was no conforming amendment to the item relating to such section in the table of contents.

[2] The items in title VI are so in original. Section 1002 of Public Law 111–358 (124 Stat. 4048) provides for amendments to repeal and redesignate various provisions throughout title VI that were carried out in the legislative text; however, such Public Law does not provide for conforming amendments to items relating to those provisions in the table of contents.

TITLE I—OFFICE OF SCIENCE AND TECHNOLOGY POLICY; GOVERNMENT-WIDE SCIENCE

SEC. 1001. NATIONAL SCIENCE AND TECHNOLOGY SUMMIT.

(a) IN GENERAL.—Not later than 180 days after the date of the enactment of this Act, the President shall convene a National Science and Technology Summit to examine the health and direction of the United States' science, technology, engineering, and mathematics enterprises. The Summit shall include representatives of industry, small business, labor, academia, State government, Federal research and development agencies, non-profit environmental and energy policy groups concerned with science and technology issues, and other nongovernmental organizations, including representatives of science, technology, and engineering organizations and associations that represent individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b).

(b) REPORT.—Not later than 90 days after the date of the conclusion of the Summit, the President shall submit to Congress a report on the results of the Summit. The report shall identify key research and technology challenges and recommendations, including recommendations to increase the representation of individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b) in science, engineering, and technology enterprises, for areas of investment for Federal research and technology programs to be carried out during the 5-year period beginning on the date the report is issued.

(c) ANNUAL EVALUATION.—Beginning with the President's budget submission for the fiscal year following the conclusion of the National Science and Technology Summit and for each of the following 4 budget submissions, the Analytical Perspectives component of the budget document that describes the Research and Development budget priorities shall include a description of how those priorities relate to the conclusions and recommendations of the Summit contained in the report required under subsection (b).

SEC. 1002. STUDY ON BARRIERS TO INNOVATION.

(a) IN GENERAL.—Not later than 90 days after the date of the enactment of this Act, the Director of the Office of Science and

Technology Policy shall enter into a contract with the National Academy of Sciences to conduct and complete a study to identify, and to review methods to mitigate, new forms of risk for businesses beyond conventional operational and financial risk that affect the ability to innovate, including studying and reviewing—

(1) incentive and compensation structures that could effectively encourage long-term value creation and innovation;

(2) methods of voluntary and supplemental disclosure by industry of intellectual capital, innovation performance, and indicators of future valuation;

(3) means by which government could work with industry to enhance the legal and regulatory framework to encourage the disclosures described in paragraph (2);

(4) practices that may be significant deterrents to United States businesses engaging in innovation risk-taking compared to foreign competitors;

(5) costs faced by United States businesses engaging in innovation compared to foreign competitors, including the burden placed on businesses by high and rising health care costs;

(6) means by which industry, trade associations, and universities could collaborate to support research on management practices and methodologies for assessing the value and risks of longer term innovation strategies;

(7) means to encourage new, open, and collaborative dialogue between industry associations, regulatory authorities, management, shareholders, labor, and other concerned interests to encourage appropriate approaches to innovation risk-taking;

(8) incentives to encourage participation among institutions of higher education, especially those in rural and underserved areas, to engage in innovation;

(9) relevant Federal regulations that may discourage or encourage innovation;

(10) all provisions of the Internal Revenue Code of 1986, including tax provisions, compliance costs, and reporting requirements, that discourage innovation;

(11) the extent to which Federal funding promotes or hinders innovation; and

(12) the extent to which individuals are being equipped with the knowledge and skills necessary for success in the 21st century workforce, as measured by—

(A) elementary school and secondary school student academic achievement on the State academic assessments required under section 1111(b)(3) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311 (b)(3)), especially in mathematics, science, and reading, identified by ethnicity, race, and gender;

(B) the rate of student entrance into institutions of higher education, identified by ethnicity, race, and gender, by type of institution, and barriers to access to institutions of higher education;

(C) the rates of—

(i) students successfully completing postsecondary education programs, identified by ethnicity, race, and gender; and

(ii) certificates, associate degrees, and baccalaureate degrees awarded in the fields of science, technology, engineering, and mathematics, identified by ethnicity, race, and gender; and

(D) access to, and availability of, high quality job training programs.

(b) REPORT REQUIRED.—Not later than 1 year after entering into the contract required by subsection (a) and 4 years after entering into such contract, the National Academy of Sciences shall submit to Congress a report on the study conducted under such subsection.

(c) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Office of Science and Technology Policy $1,000,000 for fiscal year 2008 for the purpose of carrying out the study required under this section.

SEC. 1003. NATIONAL TECHNOLOGY AND INNOVATION MEDAL.

Section 16 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3711) is amended—

(1) in the section heading, by striking "**national medal**" and inserting "**national technology and innovation medal**"; and

(2) in subsection (a), by striking "Technology Medal" and inserting "Technology and Innovation Medal".

SEC. 1004. SEMIANNUAL SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS DAYS.

It is the sense of Congress that the Director of the Office of Science and Technology Policy should—

(1) encourage all elementary and middle schools to observe a Science, Technology, Engineering, and Mathematics Day twice in every school year for the purpose of bringing in science, technology, engineering, and mathematics mentors to provide hands-on lessons to excite and inspire students to pursue the science, technology, engineering, and mathematics fields (including continuing education and career paths);

(2) initiate a program, in consultation with Federal agencies and departments, to provide support systems, tools (from existing outreach offices), and mechanisms to allow and encourage Federal employees with scientific, technological, engineering, or mathematical responsibilities to reach out to local classrooms on such Science, Technology, Engineering, and Mathematics Days to instruct and inspire school children, focusing on real life science, technology, engineering, and mathematics-related applicable experiences along with hands-on demonstrations in order to demonstrate the advantages and direct applications of studying the science, technology, engineering, and mathematics fields; and

(3) promote Science, Technology, Engineering, and Mathematics Days involvement by private sector and institutions of higher education employees, including partnerships with scientific, engineering, and mathematical professional organiza-

tions representing individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b), in a manner similar to the Federal employee involvement described in paragraph (2).

SEC. 1005. STUDY OF SERVICE SCIENCE.

(a) SENSE OF CONGRESS.—It is the sense of Congress that, in order to strengthen the competitiveness of United States enterprises and institutions and to prepare the people of the United States for high-wage, high-skill employment, the Federal Government should better understand and respond strategically to the emerging management and learning discipline known as service science.

(b) STUDY.—Not later than 1 year after the date of the enactment of this Act, the Director of the Office of Science and Technology Policy shall, through the National Academy of Sciences, conduct a study and report to Congress on how the Federal Government should support, through research, education, and training, the emerging management and learning discipline known as service science.

(c) OUTSIDE RESOURCES.—In conducting the study under subsection (b), the National Academy of Sciences shall consult with leaders from 2- and 4-year institutions of higher education, as defined in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)), leaders from corporations, and other relevant parties.

(d) SERVICE SCIENCE DEFINED.—In this section, the term "service science" means curricula, training, and research programs that are designed to teach individuals to apply scientific, engineering, and management disciplines that integrate elements of computer science, operations research, industrial engineering, business strategy, management sciences, and social and legal sciences, in order to encourage innovation in how organizations create value for customers and shareholders that could not be achieved through such disciplines working in isolation.

SEC. 1006. [15 U.S.C. 3718] PRESIDENT'S COUNCIL ON INNOVATION AND COMPETITIVENESS.

(a) IN GENERAL.—The President shall establish a President's Council on Innovation and Competitiveness.

(b) DUTIES.—The duties of the Council shall include—

(1) monitoring implementation of public laws and initiatives for promoting innovation, including policies related to research funding, taxation, immigration, trade, and education that are proposed in this Act or in any other Act;

(2) providing advice to the President with respect to global trends in competitiveness and innovation and allocation of Federal resources in education, job training, and technology research and development considering such global trends in competitiveness and innovation;

(3) in consultation with the Director of the Office of Management and Budget, developing a process for using metrics to assess the impact of existing and proposed policies and rules that affect innovation capabilities in the United States;

(4) identifying opportunities and making recommendations for the heads of executive agencies to improve innovation, monitoring, and reporting on the implementation of such recommendations;

(5) developing metrics for measuring the progress of the Federal Government with respect to improving conditions for innovation, including through talent development, investment, and infrastructure improvements; and

(6) submitting to the President and Congress an annual report on such progress.

(c) MEMBERSHIP AND COORDINATION.—

(1) MEMBERSHIP.—The Council shall be composed of the Secretary or head of each of the following:

(A) The Department of Commerce.

(B) The Department of Defense.

(C) The Department of Education.

(D) The Department of Energy.

(E) The Department of Health and Human Services.

(F) The Department of Homeland Security.

(G) The Department of Labor.

(H) The Department of the Treasury.

(I) The National Aeronautics and Space Administration.

(J) The Securities and Exchange Commission.

(K) The National Science Foundation.

(L) The Office of the United States Trade Representative.

(M) The Office of Management and Budget.

(N) The Office of Science and Technology Policy.

(O) The Environmental Protection Agency.

(P) The Small Business Administration.

(Q) Any other department or agency designated by the President.

(2) CHAIRPERSON.—The Secretary of Commerce shall serve as Chairperson of the Council.

(3) COORDINATION.—The Chairperson of the Council shall ensure appropriate coordination between the Council and the National Economic Council, the National Security Council, and the National Science and Technology Council.

(4) MEETINGS.—The Council shall meet on a semi-annual basis at the call of the Chairperson and the initial meeting of the Council shall occur not later than 6 months after the date of the enactment of this Act.

(d) DEVELOPMENT OF INNOVATION AGENDA.—

(1) IN GENERAL.—The Council shall develop a comprehensive agenda for strengthening the innovation and competitiveness capabilities of the Federal Government, State governments, academia, and the private sector in the United States.

(2) CONTENTS.—The comprehensive agenda required by paragraph (1) shall include the following:

(A) An assessment of current strengths and weaknesses of the United States investment in research and development.

(B) Recommendations for addressing weaknesses and maintaining the United States as a world leader in research and development and technological innovation, including strategies for increasing the participation of individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b) in science, technology, engineering, and mathematics fields.

(C) Recommendations for strengthening the innovation and competitiveness capabilities of the Federal Government, State governments, academia, and the private sector in the United States.

(3) ADVISORS.—

(A) RECOMMENDATION.—Not later than 30 days after the date of the enactment of this Act, the National Academy of Sciences, in consultation with the National Academy of Engineering, the Institute of Medicine, and the National Research Council, shall develop and submit to the President a list of 50 individuals that are recommended to serve as advisors to the Council during the development of the comprehensive agenda required by paragraph (1). The list of advisors shall include appropriate representatives from the following:

(i) The private sector of the economy.

(ii) Labor.

(iii) Various fields including information technology, energy, engineering, high-technology manufacturing, health care, and education.

(iv) Scientific organizations.

(v) Academic organizations and other nongovernmental organizations working in the area of science or technology.

(vi) Nongovernmental organizations, such as professional organizations, that represent individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b) in the areas of science, engineering, technology, and mathematics.

(B) DESIGNATION.—Not later than 30 days after the date that the National Academy of Sciences submits the list of recommended individuals to serve as advisors, the President shall designate 50 individuals to serve as advisors to the Council.

(C) REQUIREMENT TO CONSULT.—The Council shall develop the comprehensive agenda required by paragraph (1) in consultation with the advisors.

(4) INITIAL SUBMISSION AND UPDATES.—

(A) INITIAL SUBMISSION.—Not later than 1 year after the date of the enactment of this Act, the Council shall submit to Congress and the President the comprehensive agenda required by paragraph (1).

(B) UPDATES.—At least once every 2 years, the Council shall update the comprehensive agenda required by para-

graph (1) and submit each such update to Congress and the President.

(e) OPTIONAL ASSIGNMENT.—Notwithstanding subsection (a) and paragraphs (1) and (2) of subsection (c), the President may designate an existing council to carry out the requirements of this section.

SEC. 1007. [42 U.S.C. 6619] NATIONAL COORDINATION OF RESEARCH INFRASTRUCTURE.

(a) IDENTIFICATION AND PRIORITIZATION OF DEFICIENCIES IN FEDERAL RESEARCH FACILITIES.—Each year the Director of the Office of Science and Technology Policy shall, through the National Science and Technology Council, identify and prioritize the deficiencies in research facilities and major instrumentation located at Federal laboratories and national user facilities at academic institutions that are widely accessible for use by researchers in the United States. In prioritizing such deficiencies, the Director shall consider research needs in areas relevant to the specific mission requirements of Federal agencies.

(b) PLANNING FOR ACQUISITION, REFURBISHMENT, AND MAINTENANCE OF RESEARCH FACILITIES AND MAJOR INSTRUMENTATION.—The Director shall, through the National Science and Technology Council, coordinate the planning by Federal agencies for the acquisition, refurbishment, and maintenance of research facilities and major instrumentation to address the deficiencies identified under subsection (a).

(c) REPORT.—The Director shall submit to Congress each year, together with documents submitted to Congress in support of the budget of the President for the fiscal year beginning in such year (as submitted pursuant to section 1105 of title 31, United States Code), a report, current as of the fiscal year ending in the year before such report is submitted, setting forth the following:

(1) A description of the deficiencies in research infrastructure identified in accordance with subsection (a).

(2) A list of projects and budget proposals of Federal research facilities, set forth by agency, for major instrumentation acquisitions that are included in the budget proposal of the President.

(3) An explanation of how the projects and instrumentation acquisitions described in paragraph (2) relate to the deficiencies and priorities identified pursuant to subsection (a).

SEC. 1008. [42 U.S.C. 6603] SENSE OF CONGRESS ON INNOVATION ACCELERATION RESEARCH.

(a) SENSE OF CONGRESS ON SUPPORT AND PROMOTION OF INNOVATION IN THE UNITED STATES.—It is the sense of Congress that each Federal research agency should strive to support and promote innovation in the United States through high-risk, high-reward basic research projects that—

(1) meet fundamental technological or scientific challenges;

(2) involve multidisciplinary work; and

(3) involve a high degree of novelty.

(b) SENSE OF CONGRESS ON SETTING ANNUAL FUNDING GOALS FOR BASIC RESEARCH.—It is the sense of Congress that each Executive agency that funds research in science, technology, engineering,

or mathematics should set a goal of allocating an appropriate percentage of the annual basic research budget of such agency to funding high-risk, high-reward basic research projects described in subsection (a).

(c) DEFINITIONS.—In this section:

(1) BASIC RESEARCH.—The term "basic research" has the meaning given such term in the Office of Management and Budget Circular No. A-11.

(2) EXECUTIVE AGENCY.—The term "Executive agency" has the meaning given such term in section 105 of title 5, United States Code.

SEC. 1009. [42 U.S.C. 6620] RELEASE OF SCIENTIFIC RESEARCH RESULTS.

(a) PRINCIPLES.—Not later than 90 days after the date of the enactment of this Act, the Director of the Office of Science and Technology Policy, in consultation with the Director of the Office of Management and Budget and the heads of all Federal civilian agencies that conduct scientific research, shall develop and issue an overarching set of principles to ensure the communication and open exchange of data and results to other agencies, policymakers, and the public of research conducted by a scientist employed by a Federal civilian agency and to prevent the intentional or unintentional suppression or distortion of such research findings. The principles shall encourage the open exchange of data and results of research undertaken by a scientist employed by such an agency and shall be consistent with existing Federal laws, including chapter 18 of title 35, United States Code (commonly known as the "Bayh-Dole Act"). The principles shall also take into consideration the policies of peer-reviewed scientific journals in which Federal scientists may currently publish results.

(b) IMPLEMENTATION.—Not later than 180 days after the date of the enactment of this Act, the Director of the Office of Science and Technology Policy shall ensure that all civilian Federal agencies that conduct scientific research develop specific policies and procedures regarding the public release of data and results of research conducted by a scientist employed by such an agency consistent with the principles established under subsection (a). Such polices and procedures shall—

(1) specifically address what is and what is not permitted or recommended under such policies and procedures;

(2) be specifically designed for each such agency;

(3) be applied uniformly throughout each such agency; and

(4) be widely communicated and readily accessible to all employees of each such agency and the public.

TITLE II—NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

SEC. 2001.[3] NASA'S CONTRIBUTION TO INNOVATION.

(d) SENSE OF CONGRESS ON CONTRIBUTION OF APPROPRIATELY FUNDED NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.—It is the sense of Congress that a robust National Aeronautics and Space Administration, funded at the levels authorized for fiscal years 2007 and 2008 under sections 202 and 203 of the National Aeronautics and Space Administration Authorization Act of 2005 (42 U.S.C. 16631 and 16632) and at appropriate levels in subsequent fiscal years—

(1) can contribute significantly to innovation in, and the competitiveness of, the United States;

(2) would enable a fair balance among science, aeronautics, education, exploration, and human space flight programs; and

(3) would allow full participation in any interagency efforts to promote innovation and economic competitiveness.

(f) ASSESSMENT PLAN.—Not later than 1 year after the date of the enactment of this Act, the Administrator shall submit to Congress a report on its plan for instituting assessments of the effectiveness of the National Aeronautics and Space Administration's science, technology, engineering, and mathematics education programs in improving student achievement, including with regard to challenging State achievement standards.

SEC. 2002. AERONAUTICS.

(a) SENSE OF CONGRESS.—It is the sense of Congress that the aeronautics research and development program of the National Aeronautics and Space Administration has been an important contributor to innovation and to the competitiveness of the United States and the National Aeronautics and Space Administration should maintain its capabilities to advance the state of aeronautics.

[Section 2003 was repealed by section 6 of Public Law 111-314.]

SEC. 2004. AGING WORKFORCE ISSUES PROGRAM.

It is the sense of Congress that the Administrator of the National Aeronautics and Space Administration should implement a program to address aging work force issues in aerospace that—

(1) documents technical and management experiences before senior people leave the National Aeronautics and Space Administration, including—

(A) documenting lessons learned;

(B) briefing organizations;

(C) providing opportunities for archiving lessons in a database; and

(D) providing opportunities for near-term retirees to transition out early from their primary assignment in order to document their career lessons learned and brief

[3] Subsections (a), (b), (c), and (e) of section 2001 of Public Law 110-69 were repealed and reenacted as subsections (a), (b), (c), and (d), respectively, of section 20303 of Title 51 by section 3 and 6 of Public Law 111–314, which Act enacted Title 51.

new employees prior to their separation from the National Aeronautics and Space Administration;

(2) provides incentives for retirees to return and teach new employees about their career lessons and experiences; and

(3) provides for the development of an award to recognize and reward outstanding senior employees for their contributions to knowledge sharing.

SEC. 2005. SENSE OF CONGRESS REGARDING NASA'S UNDERGRADUATE STUDENT RESEARCH PROGRAM.

It is the sense of Congress that in order to generate interest in careers in science, technology, engineering, and mathematics and to help train the next generation of space and aeronautical scientists, technologists, engineers, and mathematicians the Administrator of the National Aeronautics and Space Administration should utilize the existing Undergraduate Student Research Program of the National Aeronautics and Space Administration to support basic research projects on subjects of relevance to the National Aeronautics and Space Administration that—

(1) are to be carried out primarily by undergraduate students; and

(2) combine undergraduate research with other research supported by the National Aeronautics and Space Administration.

SEC. 2006. [51 U.S.C. 70901 nt] USE OF INTERNATIONAL SPACE STATION NATIONAL LABORATORY TO SUPPORT MATH AND SCIENCE EDUCATION AND COMPETITIVENESS.

(a) SENSE OF CONGRESS.—It is the sense of Congress that the International Space Station National Laboratory offers unique opportunities for educational activities and provides a unique resource for research and development in science, technology, and engineering, which can enhance the global competitiveness of the United States.

(b) DEVELOPMENT OF EDUCATIONAL PROJECTS.—The Administrator of the National Aeronautics and Space Administration shall develop a detailed plan for implementation of 1 or more education projects that utilize the resources offered by the International Space Station. In developing any detailed plan according to this paragraph, the Administrator shall make use of the findings and recommendations of the International Space Station National Laboratory Education Concept Development Task Force.

(c) DEVELOPMENT OF RESEARCH PLANS FOR COMPETITIVENESS ENHANCEMENT.—The Administrator shall develop a detailed plan for identification and support of research to be conducted aboard the International Space Station, which offers the potential for enhancement of United States competitiveness in science, technology, and engineering. In developing any detailed plan pursuant to this subsection, the Administrator shall consult with agencies and entities with which cooperative agreements have been reached regarding utilization of International Space Station National Laboratory facilities.

TITLE III—NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

SEC. 3001. AUTHORIZATION OF APPROPRIATIONS.

(a) SCIENTIFIC AND TECHNICAL RESEARCH AND SERVICES.—

(1) LABORATORY ACTIVITIES.—There are authorized to be appropriated to the Secretary of Commerce for the scientific and technical research and services laboratory activities of the National Institute of Standards and Technology—

(A) $502,100,000 for fiscal year 2008;

(B) $541,900,000 for fiscal year 2009; and

(C) $584,800,000 for fiscal year 2010.

(2) CONSTRUCTION AND MAINTENANCE.—There are authorized to be appropriated to the Secretary of Commerce for construction and maintenance of facilities of the National Institute of Standards and Technology—

(A) $150,900,000 for fiscal year 2008;

(B) $86,400,000 for fiscal year 2009; and

(C) $49,700,000 for fiscal year 2010.

(b) INDUSTRIAL TECHNOLOGY SERVICES.—There are authorized to be appropriated to the Secretary of Commerce for Industrial Technology Services activities of the National Institute of Standards and Technology—

(1) $210,000,000 for fiscal year 2008, of which—

(A) $100,000,000 shall be for the Technology Innovation Program under section 28 of the National Institute of Standards and Technology Act (15 U.S.C. 278n), of which at least $40,000,000 shall be for new awards; and

(B) $110,000,000 shall be for the Manufacturing Extension Partnership program under sections 25 and 26 of the National Institute of Standards and Technology Act (15 U.S.C. 278k and 278l), of which not more than $1,000,000 shall be for the competitive grant program under section 25(f) of such Act;

(2) $253,500,000 for fiscal year 2009, of which—

(A) $131,500,000 shall be for the Technology Innovation Program under section 28 of the National Institute of Standards and Technology Act (15 U.S.C. 278n), of which at least $40,000,000 shall be for new awards; and

(B) $122,000,000 shall be for the Manufacturing Extension Partnership Program under sections 25 and 26 of the National Institute of Standards and Technology Act (15 U.S.C. 278k and 278l), of which not more than $4,000,000 shall be for the competitive grant program under section 25(f) of such Act; and

(3) $272,300,000 for fiscal year 2010, of which—

(A) $140,500,000 shall be for the Technology Innovation Program under section 28 of the National Institute of Standards and Technology Act (15 U.S.C. 278n), of which at least $40,000,000 shall be for new awards; and

(B) $131,800,000 shall be for the Manufacturing Extension Partnership Program under sections 25 and 26 of the National Institute of Standards and Technology Act

(15 U.S.C. 278k and 278l), of which not more than $4,000,000 shall be for the competitive grant program under section 25(f) of such Act.

SEC. 3002. AMENDMENTS TO THE STEVENSON-WYDLER TECHNOLOGY INNOVATION ACT OF 1980.

(a) IN GENERAL.—Section 5 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3704) is amended—

(1) by striking subsections (a) through (e);

(2) by redesignating subsection (f) as subsection (a);

(3) in subsection (a), as redesignated by paragraph (2)—

(A) in paragraph (1), by striking "The Secretary, acting through the Under Secretary, shall establish for fiscal year 1999" and inserting "Beginning in fiscal year 1999, the Secretary shall establish";

(B) by striking ", acting through the Under Secretary," each place it appears;

(C) by redesignating paragraph (6) as subsection (b);

(D) by striking paragraph (7); and

(E) in the subsection heading, by striking "**Experimental Program to Stimulate Competitive Technology**" and inserting "**Program Establishment**";

(4) in subsection (b), as redesignated by paragraph (3)(C), by striking "this subsection" and inserting "subsection (a)"; and

(5) in the section heading by striking "**commerce and technological innovation**" and inserting "**experimental program to stimulate competitive technology**".

(b) **[**15 U.S.C. 3704 nt**]** CONSTRUCTION.—The amendments made by subsection (a) shall not be construed to eliminate the National Institute of Standards and Technology or the National Technical Information Service.

(c) CONFORMING AMENDMENTS.—

(1) TITLE 5, UNITED STATES CODE.—Section 5314 of title 5, United States Code, is amended by striking "Under Secretary of Commerce for Technology.".

(2) NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.—The National Institute of Standards and Technology Act (15 U.S.C. 271 et seq.) is amended—

(A) in section 2 of such Act (15 U.S.C. 272)—

(i) in subsection (b), by striking "and, if appropriate, through other officials,"; and

(ii) in subsection (c), by striking "and, if appropriate, through other appropriate officials,"; and

(B) in section 5 of such Act (15 U.S.C. 274), by striking "The Director shall have the general" and inserting "The Director shall report directly to the Secretary and shall have the general".

(3) DEFINITIONS.—Section 4 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3703) is amended—

(A) by striking paragraphs (1) and (3); and

(B) by redesignating paragraphs (2) through (13) as paragraphs (1) through (11), respectively.

(4) FUNCTIONS OF SECRETARY.—Section 11(g)(1) of such Act (15 U.S.C. 3710(g)(1)) is amended by striking "through the Under Secretary, and".

(5) REPEAL OF AUTHORIZATION.—Section 21(a) of such Act (15 U.S.C. 3713(a)) is amended—

(A) in paragraph (1), by striking "sections 5, 11(g), and 16" and inserting "sections 11(g) and 16"; and

(B) in paragraph (2), by striking "$500,000 is authorized only for the purpose of carrying out the requirements of the Japanese technical literature program established under section 5(d) of this Act;".

(6) HIGH-PERFORMANCE COMPUTING ACT OF 1991.—Section 208 of the High-Performance Computing Act of 1991 (15 U.S.C. 5528) is amended by striking subsection (c) and redesignating subsection (d) as subsection (c).

(7) ASSISTIVE TECHNOLOGY ACT OF 1998.—Section 6(b)(4)(B)(v) of the Assistive Technology Act of 1998 (29 U.S.C. 3005(b)(4)(B)(v)) is amended by striking "the Technology Administration of the Department of Commerce," and inserting "the National Institute of Standards and Technology,".

SEC. 3003. MANUFACTURING EXTENSION PARTNERSHIP.

(a) CLARIFICATION OF ELIGIBLE CONTRIBUTIONS IN CONNECTION WITH REGIONAL CENTERS RESPONSIBLE FOR IMPLEMENTING THE OBJECTIVES OF THE PROGRAM.—Paragraph (3) of section 25(c) of the National Institute of Standards and Technology Act (15 U.S.C. 278k(c)(3)) is amended to read as follows:

"(3)(A) Any nonprofit institution, or group thereof, or consortia of nonprofit institutions, including entities existing on August 23, 1988, may submit to the Secretary an application for financial support under this subsection, in accordance with the procedures established by the Secretary and published in the Federal Register under paragraph (2).

"(B) In order to receive assistance under this section, an applicant for financial assistance under subparagraph (A) shall provide adequate assurances that non-Federal assets obtained from the applicant and the applicant's partnering organizations will be used as a funding source to meet not less than 50 percent of the costs incurred for the first 3 years and an increasing share for each of the last 3 years. For purposes of the preceding sentence, the costs incurred means the costs incurred in connection with the activities undertaken to improve the management, productivity, and technological performance of small- and medium-sized manufacturing companies.

"(C) In meeting the 50 percent requirement, it is anticipated that a Center will enter into agreements with other entities such as private industry, universities, and State governments to accomplish programmatic objectives and access new and existing resources that will further the impact of the Federal investment made on behalf of small- and medium-sized manufacturing companies. All non-Federal costs, contributed by such entities and determined by a Center as programmatically reasonable and allocable under MEP program procedures are includable as a portion of the Center's contribution.

"(D) Each applicant under subparagraph (A) shall also submit a proposal for the allocation of the legal rights associ-

ated with any invention which may result from the proposed Center's activities.".

(b) MANUFACTURING CENTER EVALUATION.—Paragraph (5) of section 25(c) of the National Institute of Standards and Technology Act (15 U.S.C. 278k(c)(5)) is amended by inserting "A Center that has not received a positive evaluation by the evaluation panel shall be notified by the panel of the deficiencies in its performance and shall be placed on probation for one year, after which time the panel shall reevaluate the Center. If the Center has not addressed the deficiencies identified by the panel, or shown a significant improvement in its performance, the Director shall conduct a new competition to select an operator for the Center or may close the Center." after "at declining levels.".

(c) FEDERAL SHARE.—Section 25 of the National Institute of Standards and Technology Act (15 U.S.C. 278k) is amended by striking subsection (d) and inserting the following:

"(d) ACCEPTANCE OF FUNDS.—

"(1) IN GENERAL.—In addition to such sums as may be appropriated to the Secretary and Director to operate the Centers program, the Secretary and Director also may accept funds from other Federal departments and agencies and under section 2(c)(7) from the private sector for the purpose of strengthening United States manufacturing.

"(2) ALLOCATION OF FUNDS.—

"(A) FUNDS ACCEPTED FROM OTHER FEDERAL DEPARTMENTS OR AGENCIES.—The Director shall determine whether funds accepted from other Federal departments or agencies shall be counted in the calculation of the Federal share of capital and annual operating and maintenance costs under subsection (c).

"(B) FUNDS ACCEPTED FROM THE PRIVATE SECTOR.—Funds accepted from the private sector under section 2(c)(7), if allocated to a Center, shall not be considered in the calculation of the Federal share under subsection (c) of this section.".

(d) MEP ADVISORY BOARD.—Such section 25 is further amended by adding at the end the following:

"(e) MEP ADVISORY BOARD.—

"(1) ESTABLISHMENT.—There is established within the Institute a Manufacturing Extension Partnership Advisory Board (in this subsection referred to as the 'MEP Advisory Board').

"(2) MEMBERSHIP.—

"(A) IN GENERAL.—The MEP Advisory Board shall consist of 10 members broadly representative of stakeholders, to be appointed by the Director. At least 2 members shall be employed by or on an advisory board for the Centers, and at least 5 other members shall be from United States small businesses in the manufacturing sector. No member shall be an employee of the Federal Government.

"(B) TERM.—Except as provided in subparagraph (C) or (D), the term of office of each member of the MEP Advisory Board shall be 3 years.

"(C) CLASSES.—The original members of the MEP Advisory Board shall be appointed to 3 classes. One class of

3 members shall have an initial term of 1 year, one class of 3 members shall have an initial term of 2 years, and one class of 4 members shall have an initial term of 3 years.

"(D) VACANCIES.—Any member appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed shall be appointed for the remainder of such term.

"(E) SERVING CONSECUTIVE TERMS.—Any person who has completed two consecutive full terms of service on the MEP Advisory Board shall thereafter be ineligible for appointment during the one-year period following the expiration of the second such term.

"(3) MEETINGS.—The MEP Advisory Board shall meet not less than 2 times annually, and provide to the Director—

"(A) advice on Manufacturing Extension Partnership programs, plans, and policies;

"(B) assessments of the soundness of Manufacturing Extension Partnership plans and strategies; and

"(C) assessments of current performance against Manufacturing Extension Partnership program plans.

"(4) FEDERAL ADVISORY COMMITTEE ACT.—In discharging its duties under this subsection, the MEP Advisory Board shall function solely in an advisory capacity, in accordance with the Federal Advisory Committee Act.

"(5) REPORT.—The MEP Advisory Board shall transmit an annual report to the Secretary for transmittal to Congress within 30 days after the submission to Congress of the President's annual budget request in each year. Such report shall address the status of the program established pursuant to this section and comment on the relevant sections of the programmatic planning document and updates thereto transmitted to Congress by the Director under subsections (c) and (d) of section 23.".

(e) MANUFACTURING EXTENSION CENTER COMPETITIVE GRANT PROGRAM.—Such section 25 is further amended by adding at the end the following:

"(f) COMPETITIVE GRANT PROGRAM.—

"(1) ESTABLISHMENT.—The Director shall establish, within the Centers program under this section and section 26 of this Act, a program of competitive awards among participants described in paragraph (2) for the purposes described in paragraph (3).

"(2) PARTICIPANTS.—Participants receiving awards under this subsection shall be the Centers, or a consortium of such Centers.

"(3) PURPOSE.—The purpose of the program under this subsection is to develop projects to solve new or emerging manufacturing problems as determined by the Director, in consultation with the Director of the Centers program, the Manufacturing Extension Partnership Advisory Board, and small and medium-sized manufacturers. One or more themes for the competition may be identified, which may vary from year to year, depending on the needs of manufacturers and the success of previous competitions. These themes shall be related to

projects associated with manufacturing extension activities, including supply chain integration and quality management, and including the transfer of technology based on the technological needs of manufacturers and available technologies from institutions of higher education, laboratories, and other technology producing entities, or extend beyond these traditional areas.

"(4) APPLICATIONS.—Applications for awards under this subsection shall be submitted in such manner, at such time, and containing such information as the Director shall require, in consultation with the Manufacturing Extension Partnership Advisory Board.

"(5) SELECTION.—Awards under this subsection shall be peer reviewed and competitively awarded. The Director shall select proposals to receive awards—

"(A) that utilize innovative or collaborative approaches to solving the problem described in the competition;

"(B) that will improve the competitiveness of industries in the region in which the Center or Centers are located; and

"(C) that will contribute to the long-term economic stability of that region.

"(6) PROGRAM CONTRIBUTION.—Recipients of awards under this subsection shall not be required to provide a matching contribution.".

SEC. 3004. INSTITUTE-WIDE PLANNING REPORT.

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

"(c) THREE-YEAR PROGRAMMATIC PLANNING DOCUMENT.—Concurrent with the submission to Congress of the President's annual budget request in the first year after the date of enactment of this subsection, the Director shall submit to Congress a 3-year programmatic planning document for the Institute, including programs under the Scientific and Technical Research and Services, Industrial Technology Services, and Construction of Research Facilities functions.

"(d) ANNUAL UPDATE ON THREE-YEAR PROGRAMMATIC PLANNING DOCUMENT.—Concurrent with the submission to the Congress of the President's annual budget request in each year after the date of enactment of this subsection, the Director shall submit to Congress an update to the 3-year programmatic planning document submitted under subsection (c), revised to cover the first 3 fiscal years after the date of that update.".

SEC. 3005. REPORT BY VISITING COMMITTEE.

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

(1) by striking "on or before January 31 in each year" and inserting "not later than 30 days after the submittal to Congress of the President's annual budget request in each year"; and

(2) by adding to the end the following: "Such report also shall comment on the programmatic planning document and

updates thereto submitted to Congress by the Director under subsections (c) and (d) of section 23.".

SEC. 3006. MEETINGS OF VISITING COMMITTEE ON ADVANCED TECHNOLOGY.

Section 10(d) of the National Institute of Standards and Technology Act (15 U.S.C. 278(d)) is amended by striking "quarterly" and inserting "twice each year".

SEC. 3007. COLLABORATIVE MANUFACTURING RESEARCH PILOT GRANTS.

The National Institute of Standards and Technology Act is amended—

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

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

"SEC. 33. COLLABORATIVE MANUFACTURING RESEARCH PILOT GRANTS

"(a) AUTHORITY.—

"(1) ESTABLISHMENT.—The Director shall establish a pilot program of awards to partnerships among participants described in paragraph (2) for the purposes described in paragraph (3). Awards shall be made on a peer-reviewed, competitive basis.

"(2) PARTICIPANTS.—Such partnerships shall include at least—

"(A) 1 manufacturing industry partner; and

"(B) 1 nonindustry partner.

"(3) PURPOSE.—The purpose of the program under this section is to foster cost-shared collaborations among firms, educational institutions, research institutions, State agencies, and nonprofit organizations to encourage the development of innovative, multidisciplinary manufacturing technologies. Partnerships receiving awards under this section shall conduct applied research to develop new manufacturing processes, techniques, or materials that would contribute to improved performance, productivity, and competitiveness of United States manufacturing, and build lasting alliances among collaborators.

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

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

"(1) how each partner will participate in developing and carrying out the research agenda of the partnership;

"(2) the research that the grant would fund; and

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

"(d) SELECTION CRITERIA.—In selecting applications for awards under this section, the Director shall consider at a minimum—

"(1) the degree to which projects will have a broad impact on manufacturing;

"(2) the novelty and scientific and technical merit of the proposed projects; and

"(3) the demonstrated capabilities of the applicants to successfully carry out the proposed research.

"(e) DISTRIBUTION.—In selecting applications under this section the Director shall ensure, to the extent practicable, a distribution of overall awards among a variety of manufacturing industry sectors and a range of firm sizes.

"(f) DURATION.—In carrying out this section, the Director shall run a single pilot competition to solicit and make awards. Each award shall be for a 3-year period.".

SEC. 3008. MANUFACTURING FELLOWSHIP PROGRAM.

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

(1) by inserting "(a) In General.—" before "The Director is authorized"; and

(2) by adding at the end the following new subsection:.

"(b) MANUFACTURING FELLOWSHIP PROGRAM.—

"(1) ESTABLISHMENT.—To promote the development of a robust research community working at the leading edge of manufacturing sciences, the Director shall establish a program to award—

"(A) postdoctoral research fellowships at the Institute for research activities related to manufacturing sciences; and

"(B) senior research fellowships to established researchers in industry or at institutions of higher education who wish to pursue studies related to the manufacturing sciences at the Institute.

"(2) APPLICATIONS.—To be eligible for an award under this subsection, an individual shall submit an application to the Director at such time, in such manner, and containing such information as the Director may require.

"(3) STIPEND LEVELS.—Under this subsection, the Director shall provide stipends for postdoctoral research fellowships at a level consistent with the National Institute of Standards and Technology Postdoctoral Research Fellowship Program, and senior research fellowships at levels consistent with support for a faculty member in a sabbatical position.".

SEC. 3009. [15 U.S.C. 275 nt] PROCUREMENT OF TEMPORARY AND INTERMITTENT SERVICES.

(a) IN GENERAL.—The Director of the National Institute of Standards and Technology may procure the temporary or intermittent services of experts or consultants (or organizations thereof) in accordance with section 3109(b) of title 5, United States Code, to assist with urgent or short-term research projects.

(b) EXTENT OF AUTHORITY.—A procurement under this section may not exceed 1 year in duration, and the Director shall procure no more than 200 experts and consultants per year.

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

(d) REPORT TO CONGRESS.—Not later than 2 years after the date of the enactment of this Act, the Comptroller General shall submit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report on whether additional safeguards would be needed with respect to the use of authorities granted under this section if such authorities were to be made permanent.

SEC. 3010. MALCOLM BALDRIGE AWARDS.

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

"(3) In any year, not more than 18 awards may be made under this section to recipients who have not previously received an award under this section, and no award shall be made within any category described in paragraph (1) if there are no qualifying enterprises in that category.".

SEC. 3011. REPORT ON NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY EFFORTS TO RECRUIT AND RETAIN EARLY CAREER SCIENCE AND ENGINEERING RESEARCHERS.

Not later than 3 months after the date of the enactment of this Act, the Director of the National Institute of Standards and Technology shall submit to the Committee on Science and Technology of the House of Representatives and to the Committee on Commerce, Science, and Transportation of the Senate a report on efforts to recruit and retain young scientists and engineers at the early stages of their careers at the National Institute of Standards and Technology laboratories and joint institutes. The report shall include—

(1) a description of National Institute of Standards and Technology policies and procedures, including financial incentives, awards, promotions, time set aside for independent research, access to equipment or facilities, and other forms of recognition, designed to attract and retain young scientists and engineers;

(2) an evaluation of the impact of these incentives on the careers of young scientists and engineers at the National Institute of Standards and Technology, and also on the quality of the research at the National Institute of Standards and Technology's laboratories and in the National Institute of Standards and Technology's programs;

(3) a description of what barriers, if any, exist to efforts to recruit and retain young scientists and engineers, including limited availability of full time equivalent positions, legal and procedural requirements, and pay grading systems; and

(4) the amount of funding devoted to efforts to recruit and retain young researchers and the source of such funds.

SEC. 3012. TECHNOLOGY INNOVATION PROGRAM.

(a) REPEAL OF ADVANCED TECHNOLOGY PROGRAM.—Section 28 of the National Institute of Standards and Technology Act (15 U.S.C. 278n) is repealed.

(b) ESTABLISHMENT OF TECHNOLOGY INNOVATION PROGRAM.—The National Institute of Standards and Technology Act (15 U.S.C. 271 et seq.) is amended by inserting after section 27 the following:

"SEC. 28. TECHNOLOGY INNOVATION PROGRAM

"(a) ESTABLISHMENT.—There is established within the Institute a program linked to the purpose and functions of the Institute, to be known as the 'Technology Innovation Program' for the purpose of assisting United States businesses and institutions of higher education or other organizations, such as national laboratories and nonprofit research institutions, to support, promote, and accelerate innovation in the United States through high-risk, high-reward research in areas of critical national need.

"(b) EXTERNAL FUNDING.—

"(1) IN GENERAL.—The Director shall award competitive, merit-reviewed grants, cooperative agreements, or contracts to—

"(A) eligible companies that are small-sized businesses or medium-sized businesses; or

"(B) joint ventures.

"(2) SINGLE COMPANY AWARDS.—No award given to a single company shall exceed $3,000,000 over 3 years.

"(3) JOINT VENTURE AWARDS.—No award given to a joint venture shall exceed $9,000,000 over 5 years.

"(4) FEDERAL COST SHARE.—The Federal share of a project funded by an award under the program shall not be more than 50 percent of total project costs.

"(5) PROHIBITIONS.—Federal funds awarded under this program may be used only for direct costs and not for indirect costs, profits, or management fees of a contractor. Any business that is not a small-sized or medium-sized business may not receive any funding under this program.

"(c) AWARD CRITERIA.—The Director shall only provide assistance under this section to an entity—

"(1) whose proposal has scientific and technical merit and may result in intellectual property vesting in a United States entity that can commercialize the technology in a timely manner;

"(2) whose application establishes that the proposed technology has strong potential to address critical national needs through transforming the Nation's capacity to deal with major societal challenges that are not currently being addressed, and generate substantial benefits to the Nation that extend significantly beyond the direct return to the applicant;

"(3) whose application establishes that the research has strong potential for advancing the state-of-the-art and contributing significantly to the United States science and technology knowledge base;

"(4) whose proposal explains why Technology Innovation Program support is necessary, including evidence that the research will not be conducted within a reasonable time period in the absence of financial assistance under this section;

"(5) whose application demonstrates that reasonable efforts have been made to secure funding from alternative funding

sources and no other alternative funding sources are reasonably available to support the proposal; and

"(6) whose application explains the novelty of the technology and demonstrates that other entities have not already developed, commercialized, marketed, distributed, or sold similar technologies.

"(d) COMPETITIONS.—The Director shall solicit proposals at least annually to address areas of critical national need for high-risk, high-reward projects.

"(e) INTELLECTUAL PROPERTY RIGHTS OWNERSHIP.—

"(1) IN GENERAL.—Title to any intellectual property developed by a joint venture from assistance provided under this section may vest in any participant in the joint venture, as agreed by the members of the joint venture, notwithstanding section 202 (a) and (b) of title 35, United States Code. The United States may reserve a nonexclusive, nontransferable, irrevocable paid-up license, to have practice for or on behalf of the United States in connection with any such intellectual property, but shall not in the exercise of such license publicly disclose proprietary information related to the license. Title to any such intellectual property shall not be transferred or passed, except to a participant in the joint venture, until the expiration of the first patent obtained in connection with such intellectual property.

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

"(3) DEFINITION.—For purposes of this subsection, the term 'intellectual property' means an invention patentable under title 35, United States Code, or any patent on such an invention, or any work for which copyright protection is available under title 17, United States Code.

"(f) PROGRAM OPERATION.—Not later than 9 months after the date of the enactment of this section, the Director shall promulgate regulations—

"(1) establishing criteria for the selection of recipients of assistance under this section;

"(2) establishing procedures regarding financial reporting and auditing to ensure that awards are used for the purposes specified in this section, are in accordance with sound accounting practices, and are not funding existing or planned research programs that would be conducted within a reasonable time period in the absence of financial assistance under this section; and

"(3) providing for appropriate dissemination of Technology Innovation Program research results.

"(g) ANNUAL REPORT.—The Director shall submit annually to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science and Technology of the House of Representatives a report describing the Technology Innovation Program's activities, including a description of the metrics upon which award funding decisions were made in the previous fiscal year, any proposed changes to those metrics, metrics for evaluating

the success of ongoing and completed awards, and an evaluation of ongoing and completed awards. The first annual report shall include best practices for management of programs to stimulate high-risk, high-reward research.

"(h) CONTINUATION OF ATP GRANTS.—The Director shall, through the Technology Innovation Program, continue to provide support originally awarded under the Advanced Technology Program, in accordance with the terms of the original award and consistent with the goals of the Technology Innovation Program.

"(i) COORDINATION WITH OTHER STATE AND FEDERAL TECHNOLOGY PROGRAMS.—In carrying out this section, the Director shall, as appropriate, coordinate with other senior State and Federal officials to ensure cooperation and coordination in State and Federal technology programs and to avoid unnecessary duplication of efforts.

"(j) ACCEPTANCE OF FUNDS FROM OTHER FEDERAL AGENCIES.—In addition to amounts appropriated to carry out this section, the Secretary and the Director may accept funds from other Federal agencies to support awards under the Technology Innovation Program. Any award under this section which is supported with funds from other Federal agencies shall be selected and carried out according to the provisions of this section. Funds accepted from other Federal agencies shall be included as part of the Federal cost share of any project funded under this section.

"(k) TIP ADVISORY BOARD.—

"(1) ESTABLISHMENT.—There is established within the Institute a TIP Advisory Board.

"(2) MEMBERSHIP.—

"(A) IN GENERAL.—The TIP Advisory Board shall consist of 10 members appointed by the Director, at least 7 of whom shall be from United States industry, chosen to reflect the wide diversity of technical disciplines and industrial sectors represented in Technology Innovation Program projects. No member shall be an employee of the Federal Government.

"(B) TERM.—Except as provided in subparagraph (C) or (D), the term of office of each member of the TIP Advisory Board shall be 3 years.

"(C) CLASSES.—The original members of the TIP Advisory Board shall be appointed to 3 classes. One class of 3 members shall have an initial term of 1 year, one class of 3 members shall have an initial term of 2 years, and one class of 4 members shall have an initial term of 3 years.

"(D) VACANCIES.—Any member appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed shall be appointed for the remainder of such term.

"(E) SERVING CONSECUTIVE TERMS.—Any person who has completed 2 consecutive full terms of service on the TIP Advisory Board shall thereafter be ineligible for appointment during the 1-year period following the expiration of the second such term.

"(3) PURPOSE.—The TIP Advisory Board shall meet not less than 2 times annually, and provide the Director—

"(A) advice on programs, plans, and policies of the Technology Innovation Program;

"(B) reviews of the Technology Innovation Program's efforts to accelerate the research and development of challenging, high-risk, high-reward technologies in areas of critical national need;

"(C) reports on the general health of the program and its effectiveness in achieving its legislatively mandated mission; and

"(D) guidance on investment areas that are appropriate for Technology Innovation Program funding;

"(4) ADVISORY CAPACITY.—In discharging its duties under this subsection, the TIP Advisory Board shall function solely in an advisory capacity, in accordance with the Federal Advisory Committee Act.

"(5) ANNUAL REPORT.—The TIP Advisory Board shall transmit an annual report to the Secretary for transmittal to the Congress not later than 30 days after the submission to Congress of the President's annual budget request in each year. Such report shall address the status of the Technology Innovation Program and comment on the relevant sections of the programmatic planning document and updates thereto transmitted to Congress by the Director under subsections (c) and (d) of section 23.

"(l) DEFINITIONS.—In this section—

"(1) the term 'eligible company' means a small-sized or medium-sized business that is incorporated in the United States and does a majority of its business in the United States, and that either—

"(A) is majority owned by citizens of the United States; or

"(B) is owned by a parent company incorporated in another country and the Director finds that—

"(i) the company's participation in the Technology Innovation Program would be in the economic interest of the United States, as evidenced by—

"(I) investments in the United States in research and manufacturing;

"(II) significant contributions to employment in the United States; and

"(III) agreement with respect to any technology arising from assistance provided under this section to promote the manufacture within the United States of products resulting from that technology; and

"(ii) the company is incorporated in a country which—

"(I) affords to United States-owned companies opportunities, comparable to those afforded to any other company, to participate in any joint venture similar to those receiving funding under this section;

"(II) affords to United States-owned companies local investment opportunities comparable to those afforded any other company; and

"(III) affords adequate and effective protection for intellectual property rights of United States-owned companies;

"(2) the term 'high-risk, high-reward research' means research that—

"(A) has the potential for yielding transformational results with far-ranging or wide-ranging implications;

"(B) addresses critical national needs within the National Institute of Standards and Technology's areas of technical competence; and

"(C) is too novel or spans too diverse a range of disciplines to fare well in the traditional peer-review process;

"(3) the term 'institution of higher education' has the meaning given that term in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001);

"(4) the term 'joint venture' means a joint venture that—

"(A) includes either—

"(i) at least 2 separately owned for-profit companies that are both substantially involved in the project and both of which are contributing to the cost-sharing required under this section, with the lead entity of the joint venture being one of those companies that is a small-sized or medium-sized business; or

"(ii) at least 1 small-sized or medium-sized business and 1 institution of higher education or other organization, such as a national laboratory or nonprofit research institute, that are both substantially involved in the project and both of which are contributing to the cost-sharing required under this section, with the lead entity of the joint venture being either that small-sized or medium-sized business or that institution of higher education; and

"(B) may include additional for-profit companies, institutions of higher education, and other organizations, such as national laboratories and nonprofit research institutes, that may or may not contribute non-Federal funds to the project; and

"(5) the term 'TIP Advisory Board' means the advisory board established under subsection (k).".

(c) TRANSITION.—Notwithstanding the repeal made by subsection (a), the Director shall carry out section 28 of the National Institute of Standards and Technology Act (15 U.S.C. 278n) as such section was in effect on the day before the date of the enactment of this Act, with respect to applications for grants under such section submitted before such date, until the earlier of—

(1) the date that the Director promulgates the regulations required under section 28(f) of the National Institute of Standards and Technology Act, as added by subsection (b); or

(2) December 31, 2007.

SEC. 3013. TECHNICAL AMENDMENTS TO THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY ACT AND OTHER TECHNICAL AMENDMENTS.

(a) RESEARCH FELLOWSHIPS.—Section 18 of the National Institute of Standards and Technology Act (15 U.S.C. 278g-l) is amended by striking "up to 1 per centum of the" and inserting "up to 1.5 percent of the".

(b) FINANCIAL AGREEMENTS CLARIFICATION.—Section 2(b)(4) of the National Institute of Standards and Technology Act (15 U.S.C. 272(b)(4)) is amended by inserting "and grants and cooperative agreements," after "arrangements,".

(c) OUTDATED SPECIFICATIONS.—

(1) REDEFINITION OF THE METRIC SYSTEM.—Section 3570 of the Revised Statutes of the United States (derived from section 2 of the Act of July 28, 1866, entitled "An Act to authorize the Use of the Metric System of Weights and Measures" (15 U.S.C. 205; 14 Stat. 339)) is amended to read as follows:

"SEC. 3570. METRIC SYSTEM DEFINED

"The metric system of measurement shall be defined as the International System of Units as established in 1960, and subsequently maintained, by the General Conference of Weights and Measures, and as interpreted or modified for the United States by the Secretary of Commerce.".

(2) REPEAL OF REDUNDANT AND OBSOLETE AUTHORITY.—The Act of July 21, 1950, entitled, "An Act To redefine the units and establish the standards of electrical and photometric measurements." (15 U.S.C. 223 and 224) is hereby repealed.

(3) STANDARD TIME.—Section 1 of the Act of March 19, 1918, (commonly known as the "Calder Act") (15 U.S.C. 261) is amended—

(A) by inserting "(a) In General.—" before "For the purpose";

(B) by striking the second sentence and the extra period after it and inserting "Except as provided in section 3(a) of the Uniform Time Act of 1966 (15 U.S.C. 260a), the standard time of the first zone shall be Coordinated Universal Time retarded by 4 hours; that of the second zone retarded by 5 hours; that of the third zone retarded by 6 hours; that of the fourth zone retarded by 7 hours; that of the fifth zone retarded 8 hours; that of the sixth zone retarded by 9 hours; that of the seventh zone retarded by 10 hours; that of the eighth zone retarded by 11 hours; and that of the ninth zone shall be Coordinated Universal Time advanced by 10 hours."; and

(C) by adding at the end the following:

"(b) COORDINATED UNIVERSAL TIME DEFINED.—In this section, the term 'Coordinated Universal Time' means the time scale maintained through the General Conference of Weights and Measures and interpreted or modified for the United States by the Secretary of Commerce in coordination with the Secretary of the Navy.".

(4) IDAHO TIME ZONE.—Section 3 of the Act of March 19, 1918, (commonly known as the "Calder Act") (15 U.S.C. 264) is amended by striking "third zone" and inserting "fourth zone".

(d) NON-ENERGY INVENTIONS PROGRAM.—Section 27 of the National Institute of Standards and Technology Act (15 U.S.C. 278m) is repealed.

SEC. 3014. RETENTION OF DEPRECIATION SURCHARGE.

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

(1) by inserting "(a) In General.—" before "Within"; and

(2) by adding at the end the following:

"(b) RETENTION OF FEES.—The Director is authorized to retain all building use and depreciation surcharge fees collected pursuant to OMB Circular A-25. Such fees shall be collected and credited to the Construction of Research Facilities Appropriation Account for use in maintenance and repair of the Institute's existing facilities.".

SEC. 3015. POST-DOCTORAL FELLOWS.

Section 19 of the National Institute of Standards and Technology Act (15 U.S.C. 278g-2) is amended by striking "nor more than 60 new fellows" and inserting "nor more than 120 new fellows".

TITLE IV—OCEAN AND ATMOSPHERIC PROGRAMS

SEC. 4001. [33 U.S.C. 893] OCEAN AND ATMOSPHERIC RESEARCH AND DEVELOPMENT PROGRAM.

(a) IN GENERAL.—The Administrator of the National Oceanic and Atmospheric Administration, in consultation with the Director of the National Science Foundation and the Administrator of the National Aeronautics and Space Administration, shall establish a coordinated program of ocean, coastal, Great Lakes, and atmospheric research and development, in collaboration with academic institutions and other nongovernmental entities, that shall focus on the development of advanced technologies and analytical methods that will promote United States leadership in ocean and atmospheric science and competitiveness in the applied uses of such knowledge.

(b) OCEANIC AND ATMOSPHERIC RESEARCH AND DEVELOPMENT PROGRAM.—The Administrator shall implement programs and activities—

(1) to identify emerging and innovative research and development priorities to enhance United States competitiveness, support development of new economic opportunities based on NOAA research, observations, monitoring modeling, and predictions that sustain ecosystem services;

(2) to promote United States leadership in oceanic and atmospheric science and competitiveness in the applied uses of such knowledge, including for the development and expansion of economic opportunities; and

(3) to advance ocean, coastal, Great Lakes, and atmospheric research and development, including potentially transformational research, in collaboration with other relevant Federal agencies, academic institutions, the private sector, and nongovernmental programs, consistent with NOAA's mission to

understand, observe, and model the Earth's atmosphere and biosphere, including the oceans, in an integrated manner.

(c) REPORT.—No later than 12 months after the date of enactment of the America COMPETES Reauthorization Act of 2010, the Administrator, in consultation with the National Science Foundation or other such agencies with mature transformational research portfolios, shall develop and submit a report to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science and Technology that describes NOAA's strategy for enhancing transformational research in its research and development portfolio to increase United States competitiveness in oceanic and atmospheric science and technology. The report shall—

(1) define "transformational research";

(2) identify emerging and innovative areas of research and development where transformational research has the potential to make significant and revolutionary -advancements in both understanding and U.S. science leadership;

(3) describe how transformational research priorities are identified and appropriately -balanced in the context of NOAA's broader research portfolio;

(4) describe NOAA's plan for developing a competitive peer review and priority-setting -process, funding mechanisms, performance and evaluation measures, and transition-to-operation guidelines for transformational research; and

(5) describe partnerships with other agencies involved in transformational research.

SEC. 4002. [33 U.S.C. 893a] NOAA OCEAN AND ATMOSPHERIC SCIENCE EDUCATION PROGRAMS.

(a) IN GENERAL.—The Administrator of the National Oceanic and Atmospheric Administration shall conduct, develop, support, promote, and coordinate formal and informal educational activities at all levels to enhance public awareness and understanding of ocean, coastal, Great Lakes, and atmospheric science and stewardship by the general public and other coastal stakeholders, including underrepresented groups in ocean and atmospheric science and policy careers. In conducting those activities, the Administrator shall build upon the educational programs and activities of the agency, with consideration given to the goal of promoting the participation of individuals identified in sections 33 and 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a, 1885b) in STEM fields and in promoting the acquisition and retention of highly qualified and motivated young scientists to complement and supplement workforce needs.

(b) EDUCATIONAL PROGRAM GOALS.—The education programs developed by NOAA shall, to the extent applicable—

(1) carry out and support research based programs and activities designed to increase student interest and participation in STEM;

(2) improve public literacy in STEM;

(3) employ proven strategies and methods for improving student learning and teaching in STEM;

(4) provide curriculum support materials and other resources that—

(A) are designed to be integrated with comprehensive STEM education;

(B) are aligned with national science education standards;

(C) are designed considering the unique needs of underrepresented groups, translating such materials and other resources;

(D) promote the adoption and implementation of high-quality education practices that build toward college and career-readiness; and

(E) are promoted widely, especially among individuals identified in sections 33 and 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a, 1885b); and

(5) create and support opportunities for enhanced and ongoing professional development for teachers using best practices that improves the STEM content and knowledge of the teachers, including through programs linking STEM teachers with STEM educators at the higher education level.

(c) NOAA SCIENCE EDUCATION PLAN.—The Administrator, appropriate National Oceanic and Atmospheric Administration programs, ocean atmospheric science and education experts, and interested members of the public shall maintain a science education plan setting forth education goals and strategies for the Administration, as well as programmatic actions to carry out such goals and priorities over the next 20 years, and evaluate and update such plan every 5 years.

(d) METRICS.—In executing the National Oceanic and Atmospheric Administration science education plan under subsection (c), the Administrator shall maintain a comprehensive system for evaluating the Administration's educational programs and activities. In so doing, the Administrator shall ensure that such education programs have measurable objectives and milestones as well as clear, documented metrics for evaluating programs. For each such education program or portfolio of similar programs, the Administrator shall—

(1) encourage the collection of evidence as relevant to the measurable objectives and milestones; and

(2) ensure that program or portfolio evaluations focus on educational outcomes and not just inputs, activities completed, or the number of participants.

(e) CONSTRUCTION.—Nothing in this section may be construed to affect the application of section 438 of the General Education Provisions Act (20 U.S.C. 1232a) or sections 504 and 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794 and 794d).

(f) STEM DEFINED.—In this section, the term "STEM" means the academic and professional disciplines of science, technology, engineering, and mathematics.

SEC. 4003. [33 U.S.C. 893b] NOAA'S CONTRIBUTION TO INNOVATION.

(a) PARTICIPATION IN INTERAGENCY ACTIVITIES.—The National Oceanic and Atmospheric Administration shall be a full participant in any interagency effort to promote innovation and economic competitiveness through near-term and long-term basic scientific re-

search and development and the promotion of science, technology, engineering, and mathematics education, consistent with the agency mission, including authorized activities.

(b) HISTORIC FOUNDATION.—In order to carry out the participation described in subsection (a), the Administrator of the National Oceanic and Atmospheric Administration shall build on the historic role of the National Oceanic and Atmospheric Administration in stimulating excellence in the advancement of ocean and atmospheric science and engineering disciplines and in providing opportunities and incentives for the pursuit of academic studies in science, technology, engineering, and mathematics.

TITLE V—DEPARTMENT OF ENERGY

SEC. 5001. [42 U.S.C. 15801 nt] SHORT TITLE.

This title may be cited as the "Protecting America's Competitive Edge Through Energy Act" or the "PACE-Energy Act".

SEC. 5002. [42 U.S.C. 16531 nt] DEFINITIONS.

In this title:

(1) DEPARTMENT.—The term "Department" means the Department of Energy.

(2) INSTITUTION OF HIGHER EDUCATION.—The term "institution of higher education" has the meaning given the term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

(3) NATIONAL LABORATORY.—The term "National Laboratory" has the meaning given the term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).

(4) SECRETARY.—The term "Secretary" means the Secretary of Energy.

SEC. 5003. SCIENCE, ENGINEERING, AND MATHEMATICS EDUCATION AT THE DEPARTMENT OF ENERGY.

(a) SCIENCE EDUCATION PROGRAMS.—Section 3164 of the Department of Energy Science Education Enhancement Act (42 U.S.C. 7381a) is amended—

(1) by redesignating subsections (b), (c), and (d) as subsections (c), (d), and (f), respectively;

(2) by inserting after subsection (a) the following:

"(b) ORGANIZATION OF SCIENCE, ENGINEERING, AND MATHEMATICS EDUCATION PROGRAMS.—

"(1) DIRECTOR OF SCIENCE, ENGINEERING, AND MATHEMATICS EDUCATION.—Notwithstanding any other provision of law, the Secretary, acting through the Under Secretary for Science (referred to in this subsection as the 'Under Secretary'), shall appoint a Director of Science, Engineering, and Mathematics Education (referred to in this subsection as the 'Director') with the principal responsibility for administering science, engineering, and mathematics education programs across all functions of the Department.

"(2) QUALIFICATIONS.—The Director shall be an individual, who by reason of professional background and experience, is specially qualified to advise the Under Secretary on all matters

pertaining to science, engineering, and mathematics education at the Department.

"(3) DUTIES.—The Director shall—

"(A) oversee all science, engineering, and mathematics education programs of the Department;

"(B) represent the Department as the principal interagency liaison for all science, engineering, and mathematics education programs, unless otherwise represented by the Secretary or the Under Secretary;

"(C) prepare the annual budget and advise the Under Secretary on all budgetary issues for science, engineering, and mathematics education programs of the Department;

"(D) increase, to the maximum extent practicable, the participation and advancement of women and underrepresented minorities at every level of science, technology, engineering, and mathematics education; and

"(E) perform other such matters relating to science, engineering, and mathematics education as are required by the Secretary or the Under Secretary.

"(4) STAFF AND OTHER RESOURCES.—The Secretary shall assign to the Director such personnel and other resources as the Secretary considers necessary to permit the Director to carry out the duties of the Director.

"(5) ASSESSMENT.—

"(A) IN GENERAL.—The Secretary shall offer to enter into a contract with the National Academy of Sciences under which the National Academy, not later than 5 years after, and not later than 10 years after, the date of enactment of this paragraph, shall assess the performance of the science, engineering, and mathematics education programs of the Department.

"(B) CONSIDERATIONS.—An assessment under this paragraph shall be conducted taking into consideration, where applicable, the effect of science, engineering, and mathematics education programs of the Department on student academic achievement in science and mathematics.

"(6) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated such sums as are necessary to carry out this subsection."; and

(3) by striking subsection (d) (as redesignated by paragraph (1)) and inserting the following:

"(d) SCIENCE, ENGINEERING, AND MATHEMATICS EDUCATION FUND.—The Secretary shall establish a Science, Engineering, and Mathematics Education Fund, using not less than 0.3 percent of the amount made available to the Department for research, development, demonstration, and commercial application for each fiscal year, to carry out sections 3165, 3166, and 3167.

"(e) ANNUAL PLAN FOR ALLOCATION OF EDUCATION FUNDING.—The Secretary shall submit to Congress as part of the annual budget submission for a fiscal year a report describing the manner in which the Department has complied with subsection (d) for the prior fiscal year and the manner in which the Department proposes

to comply with subsection (d) during the following fiscal year, including—

"(1) the total amount of funding for research, development, demonstration, and commercial application activities for the corresponding fiscal year;

"(2) the amounts set aside for the Science, Engineering, and Mathematics Education Fund under subsection (d) from funding for research activities, development activities, demonstration activities, and commercial application activities for the corresponding fiscal year; and

"(3) a description of how the funds set aside under subsection (d) were allocated for the prior fiscal year and will be allocated for the following fiscal year.".

(b) [42 U.S.C. 7381g nt] CONSULTATION.—The Secretary shall—

(1) consult with the Secretary of Education and the Director of the National Science Foundation regarding activities authorized under subpart B of the Department of Energy Science Education Enhancement Act (as added by subsection (d)(3)) to improve science and mathematics education; and

(2) otherwise make available to the Secretary of Education reports associated with programs authorized under that section.

(c) DEFINITION.—Section 3168 of the Department of Energy Science Education Enhancement Act (42 U.S.C. 7381d) is amended by adding at the end the following:

"(5) NATIONAL LABORATORY.—The term 'National Laboratory' has the meaning given the term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).".

(d) SCIENCE, ENGINEERING, AND MATHEMATICS EDUCATION PROGRAMS.—The Department of Energy Science Education Enhancement Act (42 U.S.C. 7381 et seq.) is amended—

(1) by inserting after section 3162 (42 U.S.C. 7381) the following:

"Subpart A—Science Education Enhancement";

(2) in section 3169 (42 U.S.C. 7381e), by striking "part" and inserting "subpart"; and

(3) by adding at the end the following:

"Subpart B—Science, Engineering, and Mathematics Education Programs

"SEC. 3170. DEFINITIONS

"In this subpart:

"(1) DIRECTOR.—The term 'Director' means the Director of Science, Engineering, and Mathematics Education.

"(2) NATIONAL LABORATORY.—The term 'National Laboratory' has the meaning given the term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).

"CHAPTER 1—PILOT PROGRAM OF GRANTS TO SPECIALTY SCHOOLS FOR SCIENCE AND MATHEMATICS

"SEC. 3171. PILOT PROGRAM OF GRANTS TO SPECIALTY SCHOOLS FOR SCIENCE AND MATHEMATICS

"(a) PURPOSE.—The purpose of this section is to establish a pilot program of grants to States to help establish or expand public, statewide specialty secondary schools that provide comprehensive science and mathematics (including technology and engineering) education to improve the academic achievement of students in science and mathematics.

"(b) DEFINITION OF SPECIALTY SCHOOL FOR SCIENCE AND MATHEMATICS.—In this chapter, the term 'specialty school for science and mathematics' means a public secondary school (including a school that provides residential services to students) that—

"(1) serves students residing in the State in which the school is located; and

"(2) offers to those students a high-quality, comprehensive science and mathematics (including technology and engineering) curriculum designed to improve the academic achievement of students in science and mathematics.

"(c) PILOT PROGRAM AUTHORIZED.—

"(1) IN GENERAL.—From the amounts authorized under subsection (i), the Secretary, acting through the Director and in consultation with the Director of the National Science Foundation, shall award grants, on a competitive basis, to States in order to provide assistance to the States for the costs of establishing or expanding public, statewide specialty schools for science and mathematics.

"(2) RESOURCES.—The Director shall ensure that appropriate resources of the Department, including the National Laboratories, are available to schools funded under this section in order to—

"(A) increase experiential, hands-on learning opportunities in science, technology, engineering, and mathematics for students attending such schools; and

"(B) provide ongoing professional development opportunities for teachers employed at such schools.

"(3) ASSISTANCE.—Consistent with sections 3165 and 3166, the Director shall make available from funds authorized in this section to carry out a program using scientific and engineering staff of the National Laboratories, during which the staff—

"(A) assists teachers in teaching courses at the schools funded under this section;

"(B) uses National Laboratory scientific equipment in teaching the courses; and

"(C) uses distance education and other technologies to provide assistance described in subparagraphs (A) and (B) to schools funded under this section that are not located near the National Laboratories.

"(4) RESTRICTIONS.—

"(A) MAXIMUM NUMBER OF FUNDED SPECIALTY SCHOOLS PER STATE.—No State shall receive funding for more than

1 specialty school for science and mathematics for a fiscal year.

"(B) MAXIMUM AMOUNT AND DURATION OF GRANTS.—A grant awarded to a State for a specialty school for science and mathematics under this section—

"(i) shall not exceed $2,000,000 for a fiscal year; and

"(ii) shall not be provided for more than 3 fiscal years.

"(d) FEDERAL AND NON-FEDERAL SHARES.—

"(1) FEDERAL SHARE.—The Federal share of the costs described in subsection (c)(1) shall not exceed 33 percent.

"(2) NON-FEDERAL SHARE.—The non-Federal share of the costs described in subsection (c)(1) shall be—

"(A) not less than 67 percent; and

"(B) provided from non-Federal sources, in cash or in kind, fairly evaluated, including services.

"(e) APPLICATION.—To be eligible to receive a grant under this section, a State shall submit to the Director an application at such time, in such manner, and containing such information as the Director may require that describes—

"(1) the process by which and selection criteria with which the State will select and designate a school as a specialty school for science and mathematics in accordance with this section;

"(2) how the State will ensure that funds made available under this section are used to establish or expand a specialty school for science and mathematics—

"(A) in accordance with the activities described in subsection (g); and

"(B) that has the capacity to improve the academic achievement of all students in all core academic subjects, and particularly in science and mathematics;

"(3) how the State will measure the extent to which the school increases student academic achievement on State academic achievement standards in science, mathematics, and, to the maximum extent applicable, technology and engineering;

"(4) the curricula and materials to be used in the school;

"(5) the availability of funds from non-Federal sources for the costs of the activities authorized under this section; and

"(6) how the State will use technical assistance and support from the Department, including the National Laboratories, and other entities with experience and expertise in science, technology, engineering, and mathematics education, including institutions of higher education.

"(f) DISTRIBUTION.—In awarding grants under this section, the Director shall—

"(1) ensure a wide, equitable distribution among States that propose to serve students from urban and rural areas; and

"(2) provide equal consideration to States without National Laboratories.

"(g) USES OF FUNDS.—

"(1) REQUIREMENT.—A State that receives a grant under this section shall use the funds made available through the grant to—

"(A) employ proven strategies and methods for improving student learning and teaching in science, technology, engineering, and mathematics;

"(B) integrate into the curriculum of the school comprehensive science and mathematics education, including instruction and assessments in science, mathematics, and to the extent applicable, technology and engineering that are aligned with the academic content and student academic achievement standards of the State, within the meaning of section 1111 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311);

"(C) create opportunities for enhanced and ongoing professional development for teachers that improves the science, technology, engineering, and mathematics content knowledge of the teachers; and

"(D) design and implement hands-on laboratory experiences to help prepare students to pursue postsecondary studies in science, technology, engineering, and mathematics fields.

"(2) SPECIAL RULE.—Grant funds under this section may be used for activities described in paragraph (1) only if the activities are directly relating to improving student academic achievement in science, mathematics, and to the extent applicable, technology and engineering.

"(h) EVALUATION AND REPORT.—

"(1) STATE EVALUATION AND REPORT.—

"(A) EVALUATION.—Each State that receives a grant under this section shall develop and carry out an evaluation and accountability plan for the activities funded through the grant that measures the impact of the activities, including measurable objectives for improved student academic achievement on State science, mathematics, and, to the maximum extent applicable, technology and engineering assessments.

"(B) REPORT.—The State shall submit to the Director a report containing the results of the evaluation and accountability plan.

"(2) REPORT TO CONGRESS.—Not later than 2 years after the date of enactment of the PACE-Energy Act, the Director shall submit a report detailing the impact of the activities assisted with funds made available under this section to—

"(A) the Committee on Science and Technology of the House of Representatives;

"(B) the Committee on Energy and Natural Resources of the Senate; and

"(C) the Committee on Health, Education, Labor, and Pensions of the Senate.

"(i) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section—

"(1) $14,000,000 for fiscal year 2008;

"(2) $22,500,000 for fiscal year 2009; and

"(3) $30,000,000 for fiscal year 2010.

"CHAPTER 2—EXPERIENTIAL-BASED LEARNING OPPORTUNITIES

"SEC. 3175. EXPERIENTIAL-BASED LEARNING OPPORTUNITIES

"(a) INTERNSHIPS AUTHORIZED.—

"(1) IN GENERAL.—From the amounts authorized under subsection (f), the Secretary, acting through the Director, shall establish a summer internship program for middle school and secondary school students that shall—

"(A) provide the students with internships at the National Laboratories;

"(B) promote experiential, hands-on learning in science, technology, engineering, or mathematics; and

"(C) be of at least 2 weeks in duration.

"(2) RESIDENTIAL SERVICES.—The Director may provide residential services to students participating in the internship program authorized under paragraph (1).

"(b) SELECTION CRITERIA.—

"(1) IN GENERAL.—The Director shall establish criteria to determine the sufficient level of academic preparedness necessary for a student to be eligible for an internship under this section.

"(2) PARTICIPATION.—The Director shall ensure the participation of students from a wide distribution of States, including States without National Laboratories.

"(3) STUDENT ACHIEVEMENT.—The Director may consider the academic achievement of middle and secondary school students in determining eligibility under this section, in accordance with paragraphs (1) and (2).

"(c) PRIORITY.—

"(1) IN GENERAL.—The Director shall give priority for an internship under this section to a student who meets the eligibility criteria described in subsection (b) and who attends a school—

"(A)(i) in which not less than 30 percent of the children enrolled in the school are from low-income families; or

"(ii) that is designated with a school locale code of 41, 42, or 43, as determined by the Secretary of Education; and

"(B) for which there is—

"(i) a high percentage of teachers who are not teaching in the academic subject areas or grade levels in which the teachers were trained to teach;

"(ii) a high teacher turnover rate; or

"(iii) a high percentage of teachers with emergency, provisional, or temporary certification or licenses.

"(2) COORDINATION.—The Director shall consult with the Secretary of Education in order to determine whether a student meets the priority requirements of this subsection.

"(d) OUTREACH AND EXPERIENTIAL-BASED PROGRAMS FOR MINORITY STUDENTS.—

"(1) IN GENERAL.—The Secretary, acting through the Director, in cooperation with Hispanic-serving institutions, historically Black colleges and universities, tribally controlled colleges and universities, Alaska Native- and Native Hawaiian-serving institutions, and other minority-serving institutions and nonprofit entities with substantial experience relating to outreach and experiential-based learning projects, shall establish outreach and experiential-based learning programs that will encourage underrepresented minority students in kindergarten through grade 12 to pursue careers in science, engineering, and mathematics.

"(2) COMMUNITY INVOLVEMENT.—The Secretary shall ensure that the programs established under paragraph (1) involve, to the maximum extent practicable—

"(A) participation by parents and educators; and

"(B) the establishment of partnerships with business organizations and appropriate Federal, State, and local agencies.

"(3) DISTRIBUTION.—The Secretary shall ensure that the programs established under paragraph (1) are located in diverse geographic regions of the United States, to the maximum extent practicable.

"(e) EVALUATION AND ACCOUNTABILITY PLAN.—The Director shall develop an evaluation and accountability plan for the activities funded under this chapter that objectively measures the impact of the activities.

"(f) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section $7,500,000 for each of fiscal years 2008 through 2010.

"CHAPTER 3—NATIONAL LABORATORIES CENTERS OF EXCELLENCE IN SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS EDUCATION

"SEC. 3181. NATIONAL LABORATORIES CENTERS OF EXCELLENCE IN SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS EDUCATION

"(a) DEFINITION OF HIGH-NEED PUBLIC SECONDARY SCHOOL.—In this section, the term 'high-need public secondary school' means a secondary school—

"(1) with a high concentration of low-income individuals (as defined in section 1707 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6537)); or

"(2) designated with a school locale code of 41, 42, or 43, as determined by the Secretary of Education.

"(b) ESTABLISHMENT.—The Secretary shall establish at each of the National Laboratories a program to support a Center of Excellence in Science, Technology, Engineering, and Mathematics (referred to in this section as a 'Center of Excellence') in at least 1 high-need public secondary school located in the region served by the National Laboratory to provide assistance in accordance with subsection (f).

"(c) COLLABORATION.—

"(1) IN GENERAL.—To comply with subsection (g), each high-need public secondary school selected as a Center of Excellence and the National Laboratory shall form a partnership with a school, department, or program of education at an institution of higher education.

"(2) NONPROFIT ENTITIES.—The partnership may include a nonprofit entity with demonstrated experience and effectiveness in science or mathematics, as agreed to by other members of the partnership.

"(d) SELECTION.—

"(1) IN GENERAL.—The Secretary, acting through the Director, shall establish criteria to guide the National Laboratories in selecting the sites for Centers of Excellence.

"(2) PROCESS.—A National Laboratory shall select a site for a Center of Excellence through an open, widely-publicized, and competitive process.

"(e) GOALS.—The Secretary shall establish goals and performance assessments for each Center of Excellence authorized under subsection (b).

"(f) ASSISTANCE.—Consistent with sections 3165 and 3166, the Director shall make available necessary assistance for a program established under this section through the use of scientific and engineering staff of a National Laboratory, including the use of staff—

"(1) to assist teachers in teaching a course at a Center of Excellence in Science, Technology, Engineering, and Mathematics; and

"(2) to use National Laboratory scientific equipment in the teaching of the course.

"(g) SPECIAL RULES.—A Center of Excellence in a region shall ensure—

"(1) provision of clinical practicum, student teaching, or internship experiences for science, technology, and mathematics teacher candidates as part of the teacher preparation program of the Center of Excellence;

"(2) provision of supervision and mentoring for teacher candidates in the teacher preparation program; and

"(3) to the maximum extent practicable, provision of professional development for veteran teachers in the public secondary schools in the region.

"(h) EVALUATION.—The Secretary shall consider the results of performance assessments required under subsection (e) in determining the contract award fee of a National Laboratory management and operations contractor.

"(i) PLAN.—The Director shall—

"(1) develop an evaluation and accountability plan for the activities funded under this section that objectively measures the impact of the activities; and

"(2) disseminate information obtained from those measurements.

"(j) NO EFFECT ON SIMILAR PROGRAMS.—Nothing in this section displaces or otherwise affects any similar program being carried out as of the date of enactment of this section at any National Laboratory under any other provision of law.

"CHAPTER 4—SUMMER INSTITUTES

"SEC. 3185. SUMMER INSTITUTES

"(a) DEFINITIONS.—In this section:

"(1) ELIGIBLE PARTNER.—The term 'eligible partner' means—

"(A) the science, engineering, or mathematics department at an institution of higher education, acting in coordination with a school, department, or program of education at an institution of higher education that provides training for teachers and principals; or

"(B) a nonprofit entity with expertise in providing professional development for science, technology, engineering, or mathematics teachers.

"(2) SUMMER INSTITUTE.—The term 'summer institute' means an institute, operated during the summer, that—

"(A) is hosted by a National Laboratory or an eligible partner;

"(B) is operated for a period of not less than 2 weeks;

"(C) includes, as a component, a program that provides direct interaction between students and faculty, including personnel of 1 or more National Laboratories who have scientific expertise;

"(D) provides for follow-up training, during the academic year, that is conducted in the classroom; and

"(E) provides hands-on science, technology, engineering, or mathematics laboratory experience for not less than 2 days.

"(b) SUMMER INSTITUTE PROGRAMS AUTHORIZED.—

"(1) PROGRAMS AT THE NATIONAL LABORATORIES.—The Secretary, acting through the Director, shall establish or expand programs of summer institutes at each of the National Laboratories to provide additional training to strengthen the science, technology, engineering, and mathematics teaching skills of teachers employed at public schools for kindergarten through grade 12, in accordance with the activities authorized under paragraphs (3) and (4).

"(2) PROGRAMS WITH ELIGIBLE PARTNERS.—

"(A) IN GENERAL.—The Secretary, acting through the Director, shall identify and provide assistance as described in subparagraph (C) to eligible partners to establish or expand programs of summer institutes that provide additional training to strengthen the science, technology, engineering, and mathematics teaching skills of teachers employed at public schools for kindergarten through grade 12, in accordance with paragraphs (3) and (4).

"(B) SELECTION CRITERIA.—In identifying eligible partners under subparagraph (A), the Secretary shall require that partner institutions describe—

"(i) how the partner institution has the capability to administer the program in accordance with this section, which may include a description of any existing programs at the institution of the applicant that are targeted at education of science and mathematics

teachers and the number of teachers graduated annually from the programs; and

"(ii) how the partner institution will assist the National Laboratory in carrying out the activities described in paragraphs (3) and (4).

"(C) ASSISTANCE.—Consistent with sections 3165 and 3166, the Director shall make available funds authorized under this section to carry out a program using scientific and engineering staff of the National Laboratories, during which the staff—

"(i) assists in providing training to teachers at summer institutes; and

"(ii) uses National Laboratory scientific equipment in the training.

"(3) REQUIRED ACTIVITIES.—Funds authorized under this section shall be used for—

"(A) creating opportunities for enhanced and ongoing professional development for teachers that improves the science, technology, engineering, and mathematics content knowledge of the teachers;

"(B) training to improve the ability of science, technology, engineering, and mathematics teachers to translate content knowledge and recent developments in pedagogy into classroom practice, including training to use curricula that are—

"(i) based on scientific research; and

"(ii) aligned with challenging State academic content standards;

"(C) training on the use and integration of technology in the classrooms; and

"(D) supplemental and follow-up professional development activities as described in subsection (a)(2)(D).

"(4) ADDITIONAL USES OF FUNDS.—Funds authorized under this section may be used for—

"(A) training and classroom materials to assist in carrying out paragraph (3);

"(B) expenses associated with scientific and engineering staff at the National Laboratories assisting in providing training to teachers at summer institutes;

"(C) instruction in the use and integration of data and assessments to inform and instruct classroom practice; and

"(D) stipends and travel expenses for teachers participating in the program.

"(c) PRIORITY.—To the maximum extent practicable, the Director shall ensure that each summer institute program authorized under subsection (b) provides training to—

"(1) teachers from a wide range of school districts;

"(2) teachers from high-need school districts; and

"(3) teachers from groups underrepresented in the fields of science, technology, engineering, and mathematics teaching, including women and members of minority groups.

"(d) COORDINATION AND CONSULTATION.—The Director shall consult and coordinate with the Secretary of Education and the Di-

rector of the National Science Foundation regarding the implementation of the programs authorized under subsection (b).

"(e) EVALUATION AND ACCOUNTABILITY PLAN.—

"(1) IN GENERAL.—The Director shall develop an evaluation and accountability plan for the activities funded under this section that measures the impact of the activities.

"(2) CONTENTS.—The evaluation and accountability plan shall include—

"(A) measurable objectives to increase the number of science, technology, and mathematics teachers who participate in the summer institutes involved; and

"(B) measurable objectives for improved student academic achievement on State science, mathematics, and to the maximum extent applicable, technology and engineering assessments.

"(3) REPORT TO CONGRESS.—The Secretary shall submit to Congress with the annual budget submission of the Secretary a report on how the activities assisted under this section improve the science, technology, engineering, and mathematics teaching skills of participating teachers.

"(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section—

"(1) $15,000,000 for fiscal year 2008;

"(2) $20,000,000 for fiscal year 2009; and

"(3) $25,000,000 for fiscal year 2010.

"CHAPTER 5—NATIONAL ENERGY EDUCATION DEVELOPMENT

"SEC. 3191. NATIONAL ENERGY EDUCATION DEVELOPMENT

"(a) IN GENERAL.—The Secretary, acting through the Director and in consultation with the Director of the National Science Foundation, shall establish a program to coordinate and make available to teachers and students web-based kindergarten through high school science, technology, engineering, and mathematics education resources relating to the science and energy mission of the Department, including existing instruction materials and protocols for classroom laboratory experiments.

"(b) ENERGY EDUCATION.—The materials and other resources required under subsection (a) shall include instruction relating to—

"(1) the science of energy;

"(2) the sources of energy;

"(3) the uses of energy in society; and

"(4) the environmental consequences and benefits of all energy sources and uses.

"(c) DISSEMINATION.—The Secretary, acting through the Director, shall take all steps necessary, such as through participation in education association conferences, to advertise the program authorized under this section to K-12 teachers and science education coordinators across the United States.

"(d) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section—

"(1) $500,000 for fiscal year 2008; and

"(2) such sums as necessary for each fiscal year thereafter.

"CHAPTER 6—ADMINISTRATION

"SEC. 3195. MENTORING PROGRAM

"(a) IN GENERAL.—As part of the programs established under chapters 1, 3, and 4, the Director shall establish a program to recruit and provide mentors for women and underrepresented minorities who are interested in careers in science, engineering, and mathematics.

"(b) PAIRING.—The program shall pair mentors with women and minorities who are in programs of study at specialty schools for science and mathematics, Centers of Excellence, and summer institutes established under chapters 1, 3, and 4, respectively.

"(c) PROGRAM EVALUATION.—The Secretary shall annually—

"(1) use metrics to evaluate the success of the programs established under subsection (a); and

"(2) submit to Congress a report that describes the results of each evaluation.".

SEC. 5004. [42 U.S.C. 16532] NUCLEAR SCIENCE TALENT EXPANSION PROGRAM FOR INSTITUTIONS OF HIGHER EDUCATION.

(a) PURPOSES.—The purposes of this section are—

(1) to address the decline in the number of and resources available to nuclear science programs at institutions of higher education; and

(2) to increase the number of graduates with degrees in nuclear science, an area of strategic importance to the economic competitiveness and energy security of the United States.

(b) DEFINITION OF NUCLEAR SCIENCE.—In this section, the term "nuclear science" includes—

(1) nuclear science;

(2) nuclear engineering;

(3) nuclear chemistry;

(4) radio chemistry; and

(5) health physics.

(c) ESTABLISHMENT.—The Secretary shall establish, in accordance with this section, a program to expand and enhance institution of higher education nuclear science educational capabilities.

(d) NUCLEAR SCIENCE PROGRAM EXPANSION GRANTS FOR INSTITUTIONS OF HIGHER EDUCATION.—

(1) IN GENERAL.—The Secretary shall award up to 3 competitive grants for each fiscal year to institutions of higher education that establish new academic degree programs in nuclear science.

(2) PRIORITY.—In evaluating grants under this subsection, the Secretary shall give priority to proposals that involve partnerships with a National Laboratory or other eligible nuclear-related entity, as determined by the Secretary.

(3) CRITERIA.—Criteria for a grant awarded under this subsection shall be based on—

(A) the potential to attract new students to the program;

(B) academic rigor; and

(C) the ability to offer hands-on learning opportunities.

(4) DURATION AND AMOUNT.—

(A) DURATION.—A grant under this subsection may be up to 5 years in duration.

(B) AMOUNT.—An institution of higher education that receives a grant under this subsection shall be eligible for up to $1,000,000 for each year of the grant period.

(5) USE OF FUNDS.—An institution of higher education that receives a grant under this subsection may use the grant to—

(A) recruit and retain new faculty;

(B) develop core and specialized course content;

(C) encourage collaboration between faculty and researchers in the nuclear science field; and

(D) support outreach efforts to recruit students.

(e) NUCLEAR SCIENCE COMPETITIVENESS GRANTS FOR INSTITUTIONS OF HIGHER EDUCATION.—

(1) IN GENERAL.—The Secretary shall award up to 5 competitive grants for each fiscal year to institutions of higher education with existing academic degree programs that produce graduates in nuclear science.

(2) CRITERIA.—Criteria for a grant awarded under this subsection shall be based on the potential for increasing the number and academic quality of graduates in the nuclear sciences who enter into careers in nuclear-related fields.

(3) DURATION AND AMOUNT.—

(A) DURATION.—A grant under this subsection may be up to 5 years in duration.

(B) AMOUNT.—An institution of higher education that receives a grant under this subsection shall be eligible for up to $500,000 for each year of the grant period.

(4) USE OF FUNDS.—An institution of higher education that receives a grant under this subsection may use the grant to—

(A) increase the number of graduates in nuclear science that enter into careers in the nuclear science field;

(B) enhance the teaching of advanced nuclear technologies;

(C) aggressively pursue collaboration opportunities with industry and National Laboratories;

(D) bolster or sustain nuclear infrastructure and research facilities of the institution of higher education, such as research and training reactors or laboratories; and

(E) provide tuition assistance and stipends to undergraduate and graduate students.

(f) AUTHORIZATION OF APPROPRIATIONS.—

(1) NUCLEAR SCIENCE PROGRAM EXPANSION GRANTS FOR INSTITUTIONS OF HIGHER EDUCATION.—There are authorized to be appropriated to carry out subsection (d)—

(A) $3,500,000 for fiscal year 2008;

(B) $6,500,000 for fiscal year 2009;

(C) $9,500,000 for fiscal year 2010;

(D) $9,800,000 for fiscal year 2011;

(E) $10,100,000 for fiscal year 2012; and

(F) $10,400,000 for fiscal year 2013.

(2) NUCLEAR SCIENCE COMPETITIVENESS GRANTS FOR INSTITUTIONS OF HIGHER EDUCATION.—There are authorized to be appropriated to carry out subsection (e)—

(A) $3,000,000 for fiscal year 2008;
(B) $5,500,000 for fiscal year 2009;
(C) $8,000,000 for fiscal year 2010;
(D) $8,240,000 for fiscal year 2011;
(E) $8,500,000 for fiscal year 2012; and
(F) $8,750,000 for fiscal year 2013.

SEC. 5005. [42 U.S.C. 16533] HYDROCARBON SYSTEMS SCIENCE TALENT EXPANSION PROGRAM FOR INSTITUTIONS OF HIGHER EDUCATION.

(a) PURPOSES.—The purposes of this section are—

(1) to address the decline in the number of and resources available to hydrocarbon systems science programs at institutions of higher education; and

(2) to increase the number of graduates with degrees in hydrocarbon systems science, an area of strategic importance to the economic competitiveness and energy security of the United States.

(b) DEFINITION OF HYDROCARBON SYSTEMS SCIENCE.—In this section:

(1) IN GENERAL.—The term "hydrocarbon systems science" means a science involving natural gas or other petroleum exploration, development, or production.

(2) INCLUSIONS.—The term "hydrocarbon systems science" includes—

(A) petroleum or reservoir engineering;
(B) environmental geoscience;
(C) petrophysics;
(D) geophysics;
(E) geochemistry;
(F) petroleum geology;
(G) ocean engineering;
(H) environmental engineering;
(I) computer science, as computer science relates to a science described in this subsection; and
(J) hydrocarbon spill response and remediation.

(c) ESTABLISHMENT.—The Secretary shall establish, in accordance with this section, a program to expand and enhance institution of higher education hydrocarbon systems science educational capabilities.

(d) HYDROCARBON SYSTEMS SCIENCE PROGRAM EXPANSION GRANTS FOR INSTITUTIONS OF HIGHER EDUCATION.—

(1) IN GENERAL.—The Secretary shall award up to 3 competitive grants for each fiscal year to institutions of higher education that establish new academic degree programs in hydrocarbon systems science.

(2) ELIGIBILITY.—In evaluating grants under this subsection, the Secretary shall give priority to proposals that involve partnerships with the National Laboratories, including the National Energy Technology Laboratory, or other hydrocarbon systems scientific entities, as determined by the Secretary.

(3) CRITERIA.—Criteria for a grant awarded under this subsection shall be based on—

(A) the potential to attract new students to the program;

(B) academic rigor; and

(C) the ability to offer hands-on learning opportunities.

(4) DURATION AND AMOUNT.—

(A) DURATION.—A grant under this subsection may be up to 5 years in duration.

(B) AMOUNT.—An institution of higher education that receives a grant under this subsection shall be eligible for up to $1,000,000 for each year of the grant period.

(5) USE OF FUNDS.—An institution of higher education that receives a grant under this subsection may use the grant to—

(A) recruit and retain new faculty;

(B) develop core and specialized course content;

(C) encourage collaboration between faculty and researchers in the hydrocarbon systems science field; and

(D) support outreach efforts to recruit students.

(e) HYDROCARBON SYSTEMS SCIENCE COMPETITIVENESS GRANTS FOR INSTITUTIONS OF HIGHER EDUCATION.—

(1) IN GENERAL.—The Secretary shall award up to 5 competitive grants for each fiscal year to institutions of higher education with existing academic degree programs that produce graduates in hydrocarbon systems science.

(2) CRITERIA.—Criteria for a grant awarded under this subsection shall be based on the potential for increasing the number and academic quality of graduates in hydrocarbon systems sciences who enter into careers in natural gas and other petroleum exploration, development, and production related fields.

(3) DURATION AND AMOUNT.—

(A) DURATION.—A grant under this subsection may be up to 5 years in duration.

(B) AMOUNT.—An institution of higher education that receives a grant under this subsection shall be eligible for up to $500,000 for each year of the grant period.

(4) USE OF FUNDS.—An institution of higher education that receives a grant under this subsection may use the grant to—

(A) increase the number of graduates in the hydrocarbon systems sciences that enter into careers in the natural gas and other petroleum exploration, development, and production science fields;

(B) enhance the teaching of advanced natural gas and other petroleum exploration, development, and production technologies;

(C) aggressively pursue collaboration opportunities with industry and the National Laboratories, including the National Energy Technology Laboratory;

(D) bolster or sustain natural gas and other petroleum exploration, development, and production infrastructure and research facilities of the institution of higher education, such as research and training or laboratories; and

(E) provide tuition assistance and stipends to undergraduate and graduate students.

(f) AUTHORIZATION OF APPROPRIATIONS.—

(1) HYDROCARBON SYSTEMS SCIENCE PROGRAM EXPANSION GRANTS FOR INSTITUTIONS OF HIGHER EDUCATION.—There are authorized to be appropriated to carry out subsection (d)—

(A) $3,500,000 for fiscal year 2008;
(B) $6,500,000 for fiscal year 2009;
(C) $9,500,000 for fiscal year 2010;
(D) $9,800,000 for fiscal year 2011;
(E) $10,000,000 for fiscal year 2012; and
(F) $10,400,000 for fiscal year 2013.

(2) HYDROCARBON SYSTEMS SCIENCE COMPETITIVENESS GRANTS FOR INSTITUTIONS OF HIGHER EDUCATION.—There are authorized to be appropriated to carry out subsection (e)—

(A) $3,000,000 for fiscal year 2008;
(B) $5,500,000 for fiscal year 2009; and
(C) $8,000,000 for fiscal year 2010.

SEC. 5006. [42 U.S.C. 16534] DEPARTMENT OF ENERGY EARLY CAREER AWARDS FOR SCIENCE. ENGINEERING, AND MATHEMATICS RESEARCHERS.

(a) GRANT AWARDS.—The Director of the Office of Science of the Department (referred to in this section as the "Director") shall carry out a program to award grants to scientists and engineers at an early career stage at institutions of higher education and organizations described in subsection (c) to conduct research in fields relevant to the mission of the Department.

(b) AMOUNT AND DURATION.—

(1) AMOUNT.—The amount of a grant awarded under this section shall be—

(A) not less than $80,000; and
(B) not more than $125,000.

(2) DURATION.—The term of a grant awarded under this section shall be not more than 5 years.

(c) ELIGIBILITY.—

(1) IN GENERAL.—To be eligible to receive a grant under this section, an individual shall, as determined by the Director—

(A) subject to paragraph (2), have completed a doctorate or other terminal degree not more than 10 years before the date on which the proposal for a grant is submitted under subsection (e)(1);

(B) have demonstrated promise in a science, engineering, or mathematics field relevant to the missions of the Department; and

(C) be employed—

(i) in a tenure track-position as an assistant professor or equivalent title at an institution of higher education in the United States;

(ii) at an organization in the United States that is a nonprofit, nondegree-granting research organization such as a museum, observatory, or research laboratory; or

(iii) as a scientist at a National Laboratory.

(2) WAIVER.—Notwithstanding paragraph (1)(A), the Director may determine that an individual who has completed a doctorate more than 10 years before the date of submission of a proposal under subsection (e)(1) is eligible to receive a grant under this section if the individual was unable to conduct research for a period of time because of extenuating circumstances, including military service or family responsibilities, as determined by the Director.

(d) SELECTION.—Grant recipients shall be selected on a competitive, merit-reviewed basis.

(e) SELECTION PROCESS AND CRITERIA.—

(1) PROPOSAL.—To be eligible to receive a grant under this section, an individual shall submit to the Director a proposal at such time, in such manner, and containing such information as the Director may require.

(2) EVALUATION.—In evaluating the proposals submitted under paragraph (1), the Director shall take into consideration, at a minimum—

(A) the intellectual merit of the proposed project;

(B) the innovative or transformative nature of the proposed research;

(C) the extent to which the proposal integrates research and education, including undergraduate education in science and engineering disciplines; and

(D) the potential of the applicant for leadership at the frontiers of knowledge.

(f) DIVERSITY REQUIREMENT.—

(1) IN GENERAL.—In awarding grants under this section, the Director shall endeavor to ensure that the grant recipients represent a variety of types of institutions of higher education and nonprofit, nondegree-granting research organizations.

(2) REQUIREMENT.—In support of the goal described in paragraph (1), the Director shall broadly disseminate information regarding the deadlines applicable to, and manner in which to submit, proposals for grants under this section, including by conducting outreach activities for—

(A) part B institutions, as defined in section 322 of the Higher Education Act of 1965 (20 U.S.C. 1061); and

(B) minority institutions, as defined in section 365 of that Act (20 U.S.C. 1067k).

(g) REPORT ON RECRUITING AND RETAINING EARLY CAREER SCIENCE AND ENGINEERING RESEARCHERS AT NATIONAL LABORATORIES.—

(1) IN GENERAL.—Not later than 90 days after the date of enactment of this Act, the Director shall submit to the Committee on Science and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a report describing efforts of the Director to recruit and retain young scientists and engineers at early career stages at the National Laboratories.

(2) INCLUSIONS.—The report under paragraph (1) shall include—

(A) a description of applicable Department and National Laboratory policies and procedures, including poli-

cies and procedures relating to financial incentives, awards, promotions, time reserved for independent research, access to equipment or facilities, and other forms of recognition, designed to attract and retain young scientists and engineers;

(B) an evaluation of the impact of the incentives described in subparagraph (A) on—

(i) the careers of young scientists and engineers at the National Laboratories; and

(ii) the quality of the research at the National Laboratories and in Department programs;

(C) a description of barriers, if any, that exist with respect to efforts to recruit and retain young scientists and engineers, including the limited availability of full-time equivalent positions, legal and procedural requirements, and pay grading systems; and

(D) the amount of funding devoted to efforts to recruit and retain young researchers, and the source of the funds.

(h) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to the Secretary, acting through the Director, to carry out this section $25,000,000 for each of fiscal years 2008 through 2013.

SEC. 5007. AUTHORIZATION OF APPROPRIATIONS FOR DEPARTMENT OF ENERGY FOR BASIC RESEARCH.

Section 971(b) of the Energy Policy Act of 2005 (42 U.S.C. 16311(b)) is amended—

(1) in paragraph (2), by striking "and" at the end;

(2) in paragraph (3), by striking the period at the end and inserting "; and"; and

(3) by adding at the end the following:

"(4) $5,814,000,000 for fiscal year 2010.".

SEC. 5008. [42 U.S.C. 16535] DISCOVERY SCIENCE AND ENGINEERING INNOVATION INSTITUTES.

(a) IN GENERAL.—The Secretary shall establish distributed, multidisciplinary institutes (referred to in this section as "Institutes") centered at National Laboratories to apply fundamental science and engineering discoveries to technological innovations relating to—

(1) the missions of the Department; and

(2) the global competitiveness of the United States.

(b) TOPICAL AREAS.—The Institutes shall support scientific and engineering research and education activities on critical emerging technologies determined by the Secretary to be essential to global competitiveness, including activities relating to—

(1) sustainable energy technologies;

(2) multiscale materials and processes;

(3) micro- and nano-engineering;

(4) computational and information engineering; and

(5) genomics and proteomics.

(c) PARTNERSHIPS.—In carrying out this section, the Secretary shall establish partnerships between the Institutes and—

(1) institutions of higher education—

(A) to train undergraduate and graduate science and engineering students;

(B) to develop innovative undergraduate and graduate educational curricula; and

(C) to conduct research within the topical areas described in subsection (b); and

(2) private industry to develop innovative technologies within the topical areas described in subsection (b).

(d) GRANTS.—

(1) IN GENERAL.—For each fiscal year, the Secretary may select not more than 3 Institutes to receive a grant under this section.

(2) MERIT-BASED SELECTION.—The selection of Institutes under paragraph (1) shall be—

(A) merit-based; and

(B) made through an open, competitive selection process.

(3) TERM.—An Institute shall receive a grant under this section for not more than 3 fiscal years.

(e) REVIEW.—The Secretary shall offer to enter into an agreement with the National Academy of Sciences under which the Academy shall, by not later than 3 years after the date of enactment of this Act—

(1) review the performance of the Institutes under this section; and

(2) submit to Congress and the Secretary a report describing the results of the review.

(f) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to provide grants to each Institute selected under this section $10,000,000 for each of fiscal years 2008 through 2010.

SEC. 5009. [42 U.S.C. 16536] PROTECTING AMERICA'S COMPETITIVE EDGE (PACE) GRADUATE FELLOWSHIP PROGRAM.

(a) DEFINITION OF ELIGIBLE STUDENT.—In this section, the term "eligible student" means a student who attends an institution of higher education that offers a doctoral degree in a field relevant to a mission area of the Department.

(b) ESTABLISHMENT.—The Secretary shall establish a graduate fellowship program for eligible students pursuing a doctoral degree in a mission area of the Department.

(c) SELECTION.—

(1) IN GENERAL.—The Secretary shall award fellowships to eligible students under this section through a competitive merit review process, involving written and oral interviews, that will result in a wide distribution of awards throughout the United States, as determined by the Secretary.

(2) CRITERIA.—The Secretary shall establish selection criteria for awarding fellowships under this section that require an eligible student—

(A) to pursue a field of science or engineering of importance to a mission area of the Department;

(B) to demonstrate to the Secretary—

(i) the capacity of the eligible student to understand technical topics relating to the fellowship that

can be derived from the first principles of the technical topics;

(ii) imagination and creativity;

(iii) leadership skills in organizations or intellectual endeavors, demonstrated through awards and past experience; and

(iv) excellent verbal and communication skills to explain, defend, and demonstrate an understanding of technical subjects relating to the fellowship; and

(C) to be a citizen or legal permanent resident of the United States.

(d) AWARDS.—

(1) AMOUNT.—A fellowship awarded under this section shall—

(A) provide an annual living stipend; and

(B) cover—

(i) graduate tuition at an institution of higher education described in subsection (a); and

(ii) incidental expenses associated with curricula and research at the institution of higher education (including books, computers, and software).

(2) DURATION.—A fellowship awarded under this section shall be up to 3 years duration within a 5-year period.

(3) PORTABILITY.—A fellowship awarded under this section shall be portable with the eligible student.

(e) ADMINISTRATION.—The Secretary, acting through the Director of Science, Engineering, and Mathematics Education—

(1) shall administer the program established under this section; and

(2) may enter into a contract with a nonprofit entity to administer the program, including the selection and award of fellowships.

(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section—

(1) $7,500,000 for fiscal year 2008;

(2) $12,000,000 for fiscal year 2009, including nonexpiring fellowships for the preceding fiscal year;

(3) $20,000,000 for fiscal year 2010, including nonexpiring fellowships for preceding fiscal years;

(4) $20,600,000 for fiscal year 2011;

(5) $21,200,000 for fiscal year 2012; and

(6) $21,900,000 for fiscal year 2013.

SEC. 5010. SENSE OF CONGRESS REGARDING CERTAIN RECOMMENDATIONS AND REVIEWS.

It is the sense of Congress that—

(1) the Department of Energy should implement the recommendations contained in the report of the Government Accountability Office numbered 04-639; and

(2) the Secretary of Energy should annually conduct reviews in accordance with title IX of the Education Amendments of 1972 (20 U.S.C. 1681 et seq.) of at least 2 recipients of grants provided by the Department of Energy.

SEC. 5011. [42 U.S.C. 16537] DISTINGUISHED SCIENTIST PROGRAM.

(a) PURPOSE.—The purpose of this section is to promote scientific and academic excellence through collaborations between institutions of higher education and National Laboratories.

(b) ESTABLISHMENT.—The Secretary shall establish a program to support the joint appointment of distinguished scientists by institutions of higher education and National Laboratories.

(c) QUALIFICATIONS.—To be eligible for appointment as a distinguished scientist under this section, an individual, by reason of professional background and experience, shall be able to bring international recognition to the appointing institution of higher education or National Laboratory in the field of scientific endeavor of the individual.

(d) SELECTION.—A distinguished scientist appointed under this section shall be selected through an open, competitive process.

(e) APPOINTMENT.—

(1) INSTITUTION OF HIGHER EDUCATION.—An appointment by an institution of higher education under this section shall be filled within the tenure allotment of the institution of higher education, at a minimum rank of professor.

(2) NATIONAL LABORATORY.—An appointment by a National Laboratory under this section shall be at the rank of the highest grade of distinguished scientist or technical staff of the National Laboratory.

(f) DURATION.—An appointment under this section shall—

(1) be for a term of 6 years; and

(2) consist of 2 3-year funding allotments.

(g) USE OF FUNDS.—Funds made available under this section may be used for—

(1) the salary of the distinguished scientist and support staff;

(2) undergraduate, graduate, and post-doctoral appointments;

(3) research-related equipment;

(4) professional travel; and

(5) such other requirements as the Secretary determines to be necessary to carry out the purpose of the program.

(h) REVIEW.—

(1) IN GENERAL.—The appointment of a distinguished scientist under this section shall be reviewed at the end of the first 3-year allotment for the distinguished scientist through an open peer-review process to determine whether the appointment is meeting the purpose of this section under subsection (a).

(2) FUNDING.—Funding of the appointment of the distinguished scientist for the second 3-year allotment shall be determined based on the review conducted under paragraph (1).

(i) COST SHARING.—To be eligible for assistance under this section, an appointing institution of higher education shall pay at least 50 percent of the total costs of the appointment.

(j) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section—

(1) $15,000,000 for fiscal year 2008;

(2) $20,000,000 for fiscal year 2009;

(3) $30,000,000 for fiscal year 2010;
(4) $31,000,000 for fiscal year 2011;
(5) $32,000,000 for fiscal year 2012; and
(6) $33,000,000 for fiscal year 2013.

SEC. 5012. [42 U.S.C. 16538] ADVANCED RESEARCH PROJECTS AGENCY—ENERGY.

(a) DEFINITIONS.—In this section:

(1) ARPA-E.—The term "ARPA-E" means the Advanced Research Projects Agency—Energy established by subsection (b).

(2) DIRECTOR.—The term "Director" means the Director of ARPA-E appointed under subsection (d).

(3) FUND.—The term "Fund" means the Energy Transformation Acceleration Fund established under subsection (o)(1).

(b) ESTABLISHMENT.—There is established the Advanced Research Projects Agency—Energy within the Department to overcome the long-term and high-risk technological barriers in the development of transformative science and technology solutions to address the energy and environmental missions of the Department.

(c) GOALS.—

(1) IN GENERAL.—The goals of ARPA-E shall be—

(A) to enhance the economic and energy security of the United States through the development of energy technologies that—

(i) reduce imports of energy from foreign sources;

(ii) reduce energy-related emissions, including greenhouse gases;

(iii) improve the energy efficiency of all economic sectors;

(iv) provide transformative solutions to improve the management, clean-up, and disposal of radioactive waste and spent nuclear fuel; and

(v) improve the resilience, reliability, and security of infrastructure to produce, deliver, and store energy; and

(B) to ensure that the United States maintains a technological lead in developing and deploying advanced energy technologies.

(2) MEANS.—ARPA-E shall achieve the goals established under paragraph (1) through advanced technology projects by—

(A) identifying and promoting revolutionary advances in fundamental and applied sciences;

(B) translating scientific discoveries and cutting-edge inventions into technological innovations; and

(C) accelerating transformational technological advances in areas that industry by itself is not likely to undertake because of technical and financial uncertainty.

(d) DIRECTOR.—

(1) APPOINTMENT.—There shall be in the Department of Energy a Director of ARPA-E, who shall be appointed by the President, by and with the advice and consent of the Senate.

(2) QUALIFICATIONS.—The Director shall be an individual who, by reason of professional background and experience, is especially qualified to advise the Secretary on, and manage research programs addressing, matters pertaining to long-term and high-risk technological barriers to the development of energy technologies.

(3) RELATIONSHIP TO SECRETARY.—The Director shall report to the Secretary.

(4) RELATIONSHIP TO OTHER PROGRAMS.—No other programs within the Department shall report to the Director.

(e) RESPONSIBILITIES.—The responsibilities of the Director shall include—

(1) approving all new programs within ARPA-E;

(2) developing funding criteria and assessing the success of programs through the establishment of technical milestones;

(3) administering the Fund through awards to institutions of higher education, companies, research foundations, trade and industry research collaborations, or consortia of such entities, which may include federally-funded research and development centers, to achieve the goals described in subsection (c) through targeted acceleration of—

(A) novel early-stage research with possible technology applications;

(B) development of techniques, processes, and technologies, and related testing and evaluation;

(C) research and development of advanced manufacturing process and technologies for the domestic manufacturing of novel energy technologies; and

(D) coordination with nongovernmental entities for demonstration of technologies and research applications to facilitate technology transfer;

(4) terminating programs carried out under this section that are not achieving the goals of the programs; and

(5) pursuant to subsection (c)(2)(C)—

(A) ensuring that applications for funding disclose the extent of current and prior efforts, including monetary investments as appropriate, in pursuit of the technology area for which funding is being requested;

(B) adopting measures to ensure that, in making awards, program managers adhere to the purposes of subsection (c)(2)(C); and

(C) providing as part of the annual report required by subsection (h)(1) a summary of the instances of and reasons for ARPA–E funding projects in technology areas already being undertaken by industry.

(f) AWARDS.—In carrying out this section, the Director may provide awards in the form of grants, contracts, cooperative agreements, cash prizes, and other transactions.

(g) PERSONNEL.—

(1) IN GENERAL.—The Director shall establish and maintain within ARPA–E a staff with sufficient qualifications and expertise to enable ARPA–E to carry out the responsibilities of ARPA–E under this section in conjunction with other operations of the Department.

(2) PROGRAM DIRECTORS.—

(A) IN GENERAL.—The Director shall designate employees to serve as program directors for the programs established pursuant to the responsibilities established for ARPA-E under subsection (e).

(B) RESPONSIBILITIES.—A program director of a program shall be responsible for—

(i) establishing research and development goals for the program, including through the convening of workshops and conferring with outside experts, and publicizing the goals of the program to the public and private sectors;

(ii) soliciting applications for specific areas of particular promise, especially areas that the private sector or the Federal Government are not likely to undertake alone;

(iii) building research collaborations for carrying out the program;

(iv) selecting on the basis of merit each of the projects to be supported under the program after considering—

(I) the novelty and scientific and technical merit of the proposed projects;

(II) the demonstrated capabilities of the applicants to successfully carry out the proposed project;

(III) the consideration by the applicant of future commercial applications of the project, including the feasibility of partnering with 1 or more commercial entities; and

(IV) such other criteria as are established by the Director;

(v) identifying innovative cost-sharing arrangements for ARPA–E projects, including through use of the authority provided under section 988(b)(3) of the Energy Policy Act of 2005 (42 U.S.C. 16352(b)(3));

(vi) monitoring the progress of projects supported under the program;

(vii) identifying mechanisms for commercial application of successful energy technology development projects, including through establishment of partnerships between awardees and commercial entities; and

(viii) recommending program restructure or termination of research partnerships or whole projects.

(C) TERM.—The term of a program manager shall be not more than 3 years and may be renewed.

(3) HIRING AND MANAGEMENT.—

(A) IN GENERAL.—The Director shall have the authority to—

(i) make appointments of scientific, engineering, and professional personnel without regard to the civil service laws;

(ii) fix the basic pay of such personnel at a rate to be determined by the Director at rates not in excess

of Level II of the Executive Schedule (EX–II) without regard to the civil service laws; and

(iii) pay any employee appointed under this subparagraph payments in addition to basic pay, except that the total amount of additional payments paid to an employee under this subparagraph for any 12-month period shall not exceed the least of the following amounts:

(I) $25,000.

(II) The amount equal to 25 percent of the annual rate of basic pay of the employee.

(III) The amount of the limitation that is applicable for a calendar year under section 5307(a)(1) of title 5, United States Code.

(B) NUMBER.—The Director shall appoint not more than 120 personnel under this section.

(C) PRIVATE RECRUITING FIRMS.—The Secretary, or the Director serving as an agent of the Secretary, may contract with private recruiting firms for the hiring of qualified technical staff to carry out this section.

(D) ADDITIONAL STAFF.—The Director may use all authorities in existence on the date of enactment of this Act that are provided to the Secretary to hire administrative, financial, and clerical staff as necessary to carry out this section.

(h) REPORTS AND ROADMAPS.—

(1) ANNUAL REPORT.—As part of the annual budget request submitted for each fiscal year, the Director shall provide to the relevant authorizing and appropriations committees of Congress a report that—

(A) describes projects supported by ARPA–E during the previous fiscal year;

(B) describes projects supported by ARPA–E during the previous fiscal year that examine topics and technologies closely related to other activities funded by the Department, and includes an analysis of whether in supporting such projects, the Director is in compliance with subsection (i)(1); and

(C) describes current, proposed, and planned projects to be carried out pursuant to subsection (e)(3)(D).

(2) STRATEGIC VISION ROADMAP.—Not later than October 1, 2021, and every four years thereafter, the Director shall provide to the relevant authorizing and appropriations committees of Congress a roadmap describing the strategic vision that ARPA–E will use to guide the choices of ARPA–E for future technology investments over the following 4 fiscal years.

(i) COORDINATION AND NONDUPLICATION.—

(1) IN GENERAL.—To the maximum extent practicable, the Director shall ensure that—

(A) the activities of ARPA–E are coordinated with, and do not duplicate the efforts of, programs and laboratories within the Department and other relevant research agencies; and

(B) ARPA–E does not provide funding for a project unless the prospective grantee demonstrates sufficient attempts to secure private financing or indicates that the project is not independently commercially viable.

(2) TECHNOLOGY TRANSFER COORDINATOR.—To the extent appropriate, the Director may coordinate technology transfer efforts with the Technology Transfer Coordinator appointed under section 1001 of the Energy Policy Act of 2005 (42 U.S.C. 16391).

(j) FEDERAL DEMONSTRATION OF TECHNOLOGIES.—The Director shall seek opportunities to partner with purchasing and procurement programs of Federal agencies to demonstrate energy technologies resulting from activities funded through ARPA–E.

(k) ADVICE.—

(1) ADVISORY COMMITTEES.—The Director may seek advice on any aspect of ARPA-E from—

(A) an existing Department of Energy advisory committee; and

(B) a new advisory committee organized to support the programs of ARPA-E and to provide advice and assistance on—

(i) specific program tasks; or

(ii) overall direction of ARPA-E.

(2) ADDITIONAL SOURCES OF ADVICE.—In carrying out this section, the Director may seek advice and review from—

(A) the President's Committee of Advisors on Science and Technology; and

(B) any professional or scientific organization with expertise in specific processes or technologies under development by ARPA-E.

(l) ARPA-E EVALUATION.—

(1) IN GENERAL.—Not later than 3 years after the date of enactment of this paragraph, the Secretary is authorized to enter into a contract with the National Academy of Sciences under which the National Academy shall conduct an evaluation of how well ARPA–E is achieving the goals and mission of ARPA–E.

(2) INCLUSIONS.—The evaluation may include—

(A) a recommendation on whether ARPA-E should be continued or terminated; and

(B) a description of lessons learned from operation of ARPA-E, and the manner in which those lessons may apply to the operation of other programs of the Department.

(3) AVAILABILITY.—On completion of the evaluation, the evaluation shall be made available to Congress and the public.

(m) EXISTING AUTHORITIES.—The authorities granted by this section are—

(1) in addition to existing authorities granted to the Secretary; and

(2) are not intended to supersede or modify any existing authorities.

(n) PROTECTION OF INFORMATION.—The following types of information collected by ARPA–E from recipients of financial assistance

awards shall be considered commercial and financial information obtained from a person and privileged or confidential and not subject to disclosure under section 552(b)(4) of title 5, United States Code:

(1) Plans for commercialization of technologies developed under the award, including business plans, technology-to-market plans, market studies, and cost and performance models.

(2) Investments provided to an awardee from third parties (such as venture capital firms, hedge funds, and private equity firms), including amounts and the percentage of ownership of the awardee provided in return for the investments.

(3) Additional financial support that the awardee—

(A) plans to or has invested into the technology developed under the award; or

(B) is seeking from third parties.

(4) Revenue from the licensing or sale of new products or services resulting from research conducted under the award.

(o) FUNDING.—

(1) FUND.—There is established in the Treasury of the United States a fund, to be known as the "Energy Transformation Acceleration Fund", which shall be administered by the Director for the purposes of carrying out this section.

(2) AUTHORIZATION OF APPROPRIATIONS.—Subject to paragraph (4), there are authorized to be appropriated to the Director for deposit in the Fund, without fiscal year limitation—

(A) $435,000,000 for fiscal year 2021;

(B) $500,000,000 for fiscal year 2022;

(C) $575,000,000 for fiscal year 2023;

(D) $662,000,000 for fiscal year 2024; and

(E) $761,000,000 for fiscal year 2025.

(3) SEPARATE BUDGET AND APPROPRIATION.—

(A) BUDGET REQUEST.—The budget request for ARPA-E shall be separate from the rest of the budget of the Department.

(B) APPROPRIATIONS.—Appropriations to the Fund shall be separate and distinct from the rest of the budget for the Department.

(4) ALLOCATION.—Of the amounts appropriated for a fiscal year under paragraph (2)—

(A) not more than 50 percent of the amount shall be used to carry out subsection (e)(3)(D);

(B) at least 5 percent of the amount shall be used for technology transfer and outreach activities, consistent with the goal described in subsection (c)(2)(C) and within the responsibilities of program directors described in subsection (g)(2)(B)(vii); and

(C) no funds may be used for construction of new buildings or facilities during the 5-year period beginning on the date of enactment of this Act.

TITLE VI—EDUCATION

SEC. 6001. [20 U.S.C. 9802] DEFINITIONS.

(a)[4] ESEA DEFINITIONS.—Unless otherwise specified in this title, the terms used in this title have the meanings given the terms in section 8101 of the Elementary and Secondary Education Act of 1965.

(b) OTHER DEFINITIONS.—In this title:

(1) CRITICAL FOREIGN LANGUAGE.—The term "critical foreign language" means a foreign language that the Secretary determines, in consultation with the heads of such Federal departments and agencies as the Secretary determines appropriate, is critical to the national security and economic competitiveness of the United States.

(2) INSTITUTION OF HIGHER EDUCATION.—The term "institution of higher education" has the meaning given the term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

(3) SECRETARY.—The term "Secretary" means the Secretary of Education.

(4) SCIENTIFICALLY VALID RESEARCH.—The term "scientifically valid research" includes applied research, basic research, and field-initiated research in which the rationale, design, and interpretation are soundly developed in accordance with accepted principles of scientific research.

Subtitle A—Teacher Assistance

PART I—TEACHERS FOR A COMPETITIVE TOMORROW

[Sections 6111-6116 were repealed by section 205(b) of Public Law 114-329.]

PART II—ADVANCED PLACEMENT AND INTERNATIONAL BACCALAUREATE PROGRAMS

SEC. 6121. [20 U.S.C. 9831] PURPOSE.

It is the purpose of this part—

(1) to raise academic achievement through Advanced Placement and International Baccalaureate programs by increasing, by 70,000, over a 4-year period beginning in 2008, the number of teachers serving high-need schools who are qualified to teach Advanced Placement or International Baccalaureate courses in mathematics, science, and critical foreign languages;

(2) to increase, to 700,000 per year, the number of students attending high-need schools who—

[4] Section 9215(i)(1) of Public Law 114–95 made an amendment to section 6002(a) of Public Law 110-69. However, this amendment was executed to section 6001(a) to reflect the probable intent of Congress due to the renumbering of section 6002 as section 6001 by section 1002(b)(1) of Public Law 111–358.

(A) take and score a 3, 4, or 5 on an Advanced Placement examination in mathematics, science, or a critical foreign language administered by the College Board; or

(B) achieve a passing score on an examination administered by the International Baccalaureate Organization in such a subject;

(3) to increase the availability of, and enrollment in, Advanced Placement or International Baccalaureate courses in mathematics, science, and critical foreign languages, and pre-Advanced Placement or pre-International Baccalaureate courses in such subjects, in high-need schools; and

(4) to support statewide efforts to increase the availability of, and enrollment in, Advanced Placement or International Baccalaureate courses in mathematics, science, and critical foreign languages, and pre-Advanced Placement or pre-International Baccalaureate courses in such subjects, in high-need schools.

SEC. 6122. [20 U.S.C. 9832] DEFINITIONS.

In this part:

(1) ADVANCED PLACEMENT OR INTERNATIONAL BACCALAUREATE COURSE.—The term "Advanced Placement or International Baccalaureate course" means—

(A) a course of college-level instruction provided to secondary school students, terminating in an examination administered by the College Board or the International Baccalaureate Organization, or another such examination approved by the Secretary; or

(B) another highly rigorous, evidence-based, postsecondary preparatory program terminating in an examination administered by another nationally recognized educational organization that has a demonstrated record of effectiveness in assessing secondary school students, or another such examination approved by the Secretary.

(2) ELIGIBLE ENTITY.—The term "eligible entity" means—

(A) a State educational agency;

(B) a local educational agency; or

(C) a partnership consisting of—

(i) a national, regional, or statewide nonprofit organization, with expertise and experience in providing Advanced Placement or International Baccalaureate services; and

(ii) a State educational agency or local educational agency.

(3) LOW-INCOME STUDENT.—The term "low-income student" means an individual who is determined by a State educational agency or local educational agency to be a child ages 5 through 19, from a low-income family, on the basis of data used by the Secretary to determine allocations under section 1124 of the Elementary and Secondary Education Act of 1965, data on children eligible for free or reduced-price lunches under the Richard B. Russell National School Lunch Act, data on children in families receiving assistance under part A of title IV of the Social Security Act, or data on children eligible to receive medical

assistance under the Medicaid program under title XIX of the Social Security Act, or through an alternate method that combines or extrapolates from those data.

(4) HIGH CONCENTRATION OF LOW-INCOME STUDENTS.—The term "high concentration of low-income students", used with respect to a school, means a school that serves a student population 40 percent or more of who are low-income students.

(5) HIGH-NEED LOCAL EDUCATIONAL AGENCY.—The term "high-need local educational agency" means a local educational agency or educational service agency described in 6112(3)(A).

(6) HIGH-NEED SCHOOL.—The term "high-need school" means a secondary school—

(A) with a pervasive need for Advanced Placement or International Baccalaureate courses in mathematics, science, or critical foreign languages, or for additional Advanced Placement or International Baccalaureate courses in such a subject; and

(B)(i) with a high concentration of low-income students; or

(ii) designated with a school locale code of 41, 42, or 43, as determined by the Secretary.

SEC. 6123. [20 U.S.C. 9833] ADVANCED PLACEMENT AND INTERNATIONAL BACCALAUREATE PROGRAMS.

(a) PROGRAM AUTHORIZED.—From the amounts appropriated under subsection (l), the Secretary is authorized to award grants, on a competitive basis, to eligible entities to enable the eligible entities to carry out the authorized activities described in subsection (g).

(b) DURATION OF GRANTS.—The Secretary may award grants under this section for a period of not more than 5 years.

(c) COORDINATION.—The Secretary shall coordinate any activities carried out under section 4104 or 4107 of the Elementary and Secondary Education Act of 1965 that provide students access to accelerated learning programs that provide—

(1) postsecondary level courses accepted for credit at institutions of higher education, including dual or concurrent enrollment programs, and early college high schools; or

(2) postsecondary level instruction and examinations that are accepted for credit at institutions of higher education, including Advanced Placement and International Baccalaureate programs.

(d) PRIORITY.—In awarding grants under this section, the Secretary shall give priority to eligible entities that are part of a statewide strategy for increasing—

(1) the availability of Advanced Placement or International Baccalaureate courses in mathematics, science, and critical foreign languages, and pre-Advanced Placement or pre-International Baccalaureate courses in such subjects, in high-need schools; and

(2) the number of students who participate in Advanced Placement or International Baccalaureate courses in mathematics, science, and critical foreign language in high-need schools, and take and score a 3, 4, or 5 on an Advanced Placement examination in such a subject, or pass an examination

administered by the International Baccalaureate Organization in such a subject in such schools.

(e) EQUITABLE DISTRIBUTION.—The Secretary, to the extent practicable, shall—

(1) ensure an equitable geographic distribution of grants under this section among the States; and

(2) promote an increase in participation in Advanced Placement or International Baccalaureate mathematics, science, and critical foreign language courses and examinations in all States.

(f) APPLICATION.—

(1) IN GENERAL.—Each eligible entity desiring a grant under this section shall submit an application to the Secretary at such time, in such manner, and containing such information as the Secretary may reasonably require.

(2) CONTENTS.—The application shall, at a minimum, include a description of—

(A) the goals and objectives for the project, including—

(i) increasing the number of teachers serving high-need schools who are qualified to teach Advanced Placement or International Baccalaureate courses in mathematics, science, or critical foreign languages;

(ii) increasing the number of qualified teachers serving high-need schools who are teaching Advanced Placement or International Baccalaureate courses in mathematics, science, or critical foreign languages to students in the high-need schools;

(iii) increasing the number of Advanced Placement or International Baccalaureate courses in mathematics, science, and critical foreign languages that are available to students attending high-need schools; and

(iv) increasing the number of students attending a high-need school, particularly low-income students, who enroll in and pass—

(I) Advanced Placement or International Baccalaureate courses in mathematics, science, or critical foreign languages; and

(II) pre-Advanced Placement or pre-International Baccalaureate courses in such a subject (where provided in accordance with subparagraph (B));

(B) how the eligible entity will ensure that students have access to courses, including pre-Advanced Placement and pre-International Baccalaureate courses, that will prepare the students to enroll and succeed in Advanced Placement or International Baccalaureate courses in mathematics, science, or critical foreign languages;

(C) how the eligible entity will provide professional development for teachers assisted under this section;

(D) how the eligible entity will ensure that teachers serving high-need schools are qualified to teach Advanced Placement or International Baccalaureate courses in mathematics, science, or critical foreign languages;

(E) how the eligible entity will provide for the involvement of business and community organizations and other entities, including institutions of higher education, in the activities to be assisted; and

(F) how the eligible entity will use funds received under this section, including how the eligible entity will evaluate the success of its project.

(g) AUTHORIZED ACTIVITIES.—

(1) IN GENERAL.—Each eligible entity that receives a grant under this section shall use the grant funds to carry out activities designed to increase—

(A) the number of qualified teachers serving high-need schools who are teaching Advanced Placement or International Baccalaureate courses in mathematics, science, or critical foreign languages; and

(B) the number of students attending high-need schools who enroll in, and pass, the examinations for such Advanced Placement or International Baccalaureate courses.

(2) PERMISSIVE ACTIVITIES.—The activities described in paragraph (1) may include—

(A) teacher professional development, in order to expand the pool of teachers in the participating State, local educational agency, or high-need school who are qualified to teach Advanced Placement or International Baccalaureate courses in mathematics, science, or critical foreign languages;

(B) pre-Advanced Placement or pre-International Baccalaureate course development and professional development;

(C) coordination and articulation between grade levels to prepare students to enroll and succeed in Advanced Placement or International Baccalaureate courses in mathematics, science, or critical foreign languages;

(D) purchase of instructional materials;

(E) activities to increase the availability of, and participation in, online Advanced Placement or International Baccalaureate courses in mathematics, science, and critical foreign languages;

(F) reimbursing low-income students attending high-need schools for part or all of the cost of Advanced Placement or International Baccalaureate examination fees;

(G) carrying out subsection (j), relating to collecting and reporting data;

(H) in the case of a State educational agency that receives a grant under this section, awarding subgrants to local educational agencies to enable the local educational agencies to carry out authorized activities described in subparagraphs (A) through (G); and

(I) providing salary increments or bonuses to teachers serving high-need schools who—

(i) become qualified to teach, and teach, Advanced Placement or International Baccalaureate courses in mathematics, science, or a critical foreign language; or

(ii) increase the number of low-income students, who take Advanced Placement or International Baccalaureate examinations in mathematics, science, or a critical foreign language with the goal of successfully passing such examinations.

(h) MATCHING REQUIREMENT.—

(1) IN GENERAL.—Subject to paragraph (2), each eligible entity that receives a grant under this section shall provide, toward the cost of the activities assisted under the grant, from non-Federal sources, an amount equal to 100 percent of the amount of the grant, except that an eligible entity that is a high-need local educational agency shall provide an amount equal to not more than 50 percent of the amount of the grant.

(2) WAIVER.—The Secretary may waive all or part of the matching requirement described in paragraph (1) for any fiscal year for an eligible entity described in subparagraph (A) or (B) of section 6122(2), if the Secretary determines that applying the matching requirement to such eligible entity would result in serious hardship or an inability to carry out the authorized activities described in subsection (g).

(i) SUPPLEMENT NOT SUPPLANT.—Grant funds provided under this section shall be used to supplement, not supplant, other Federal and non-Federal funds available to carry out the activities described in subsection (g).

(j) COLLECTING AND REPORTING REQUIREMENTS.—

(1) REPORT.—Each eligible entity receiving a grant under this section shall collect and report to the Secretary annually such data on the results of the grant as the Secretary may reasonably require, including data regarding—

(A) the number of students enrolling in Advanced Placement or International Baccalaureate courses in mathematics, science, or a critical foreign language, and pre-Advanced Placement or pre-International Baccalaureate courses in such a subject, by the grade the student is enrolled in, and the distribution of grades those students receive;

(B) the number of students taking Advanced Placement or International Baccalaureate examinations in mathematics, science, or a critical foreign language, and the distribution of scores on those examinations by the grade the student is enrolled in at the time of the examination;

(C) the number of teachers receiving training in teaching Advanced Placement or International Baccalaureate courses in mathematics, science, or a critical foreign language who will be teaching such courses in the next school year;

(D) the number of teachers becoming qualified to teach Advanced Placement or International Baccalaureate courses in mathematics, science, or a critical foreign language; and

(E) the number of qualified teachers who are teaching Advanced Placement or International Baccalaureate

courses in mathematics, science, or critical foreign languages to students in a high-need school.

(2) REPORTING OF DATA.—Each eligible entity receiving a grant under this section shall report data required under paragraph (1)—

(A) disaggregated by subject area;

(B) in the case of student data, disaggregated in the same manner as information is disaggregated under section 1111(b)(2)(B)(xi) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311(b)(2)(B)(xi)); and

(C) to the extent feasible, in a manner that allows comparison of conditions before, during, and after the project.

(k) EVALUATION AND REPORT.—From the amount made available for any fiscal year under subsection (l), the Secretary shall reserve such sums as may be necessary—

(1) to conduct an annual independent evaluation, by grant or by contract, of the program carried out under this section, which shall include an assessment of the impact of the program on student academic achievement; and

(2) to prepare and submit an annual report on the results of the evaluation described in paragraph (1) to the Committee on Health, Education, Labor, and Pensions of the Senate, the Committee on Education and Labor of the House of Representatives, and the Committees on Appropriations of the Senate and House of Representatives.

(l) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section $75,000,000 for each of fiscal years 2011 through 2013.

Subtitle B—Alignment of Education Programs

SEC. 6201. [20 U.S.C. 9871] ALIGNMENT OF SECONDARY SCHOOL GRADUATION REQUIREMENTS WITH THE DEMANDS OF 21ST CENTURY POSTSECONDARY ENDEAVORS AND SUPPORT FOR P-16 EDUCATION DATA SYSTEMS.

(a) PURPOSE.—It is the purpose of this section—

(1) to promote more accountability with respect to preparation for higher education, the 21st century workforce, and the Armed Forces, by aligning—

(A) student knowledge, student skills, State academic content standards and assessments, and curricula, in elementary and secondary education, especially with respect to mathematics, science, reading, and, where applicable, engineering and technology; with

(B) the demands of higher education, the 21st century workforce, and the Armed Forces;

(2) to support the establishment or improvement of statewide P-16 education data systems that—

(A) assist States in improving the rigor and quality of State academic content standards and assessments;

(B) ensure students are prepared to succeed in—

(i) academic credit-bearing coursework in higher education without the need for remediation;

(ii) the 21st century workforce; or

(iii) the Armed Forces; and

(3) enable States to have valid and reliable information to inform education policy and practice.

(b) DEFINITIONS.—In this section:

(1) P-16 EDUCATION.—The term "P-16 education" means the educational system from preschool through the conferring of a baccalaureate degree.

(2) STATEWIDE PARTNERSHIP.—The term "statewide partnership" means a partnership that—

(A) shall include—

(i) the Governor of the State or the designee of the Governor;

(ii) the heads of the State systems for public higher education, or, if such a position does not exist, not less than 1 representative of a public degree-granting institution of higher education;

(iii) a representative of the agencies in the State that administer Federal or State-funded early childhood education programs;

(iv) not less than 1 representative of a public community college;

(v) not less than 1 representative of a technical school;

(vi) not less than 1 representative of a public secondary school;

(vii) the chief State school officer;

(viii) the chief executive officer of the State higher education coordinating board;

(ix) not less than 1 public elementary school teacher employed in the State;

(x) not less than 1 early childhood educator in the State;

(xi) not less than 1 public secondary school teacher employed in the State;

(xii) not less than 1 representative of the business community in the State; and

(xiii) not less than 1 member of the Armed Forces; and

(B) may include other individuals or representatives of other organizations, such as a school administrator, a faculty member at an institution of higher education, a member of a civic or community organization, a representative from a private institution of higher education, a dean or similar representative of a school of education at an institution of higher education or a similar teacher certification or licensure program, or the State official responsible for economic development.

(c) GRANTS AUTHORIZED.—The Secretary is authorized to award grants, on a competitive basis, to States to enable each such State to work with a statewide partnership—

(1) to promote better alignment of content knowledge requirements for secondary school graduation with the knowledge and skills needed to succeed in postsecondary education, the 21st century workforce, or the Armed Forces; or

(2) to establish or improve a statewide P-16 education data system.

(d) PERIOD OF GRANTS; NON-RENEWABILITY.—

(1) GRANT PERIOD.—The Secretary shall award a grant under this section for a period of not more than 3 years.

(2) NON-RENEWABILITY.—The Secretary shall not award a State more than 1 grant under this section.

(e) AUTHORIZED ACTIVITIES.—

(1) GRANTS FOR P-16 ALIGNMENT.—Each State receiving a grant under subsection (c)(1)—

(A) shall use the grant funds for—

(i) identifying and describing the content knowledge and skills students who enter institutions of higher education, the workforce, and the Armed Forces need to have in order to succeed without any remediation based on detailed requirements obtained from institutions of higher education, employers, and the Armed Forces;

(ii) identifying and making changes that need to be made to a State's secondary school graduation requirements, academic content standards, academic achievement standards, and assessments preceding graduation from secondary school in order to align the requirements, standards, and assessments with the knowledge and skills necessary for success in academic credit-bearing coursework in postsecondary education, in the 21st century workforce, and in the Armed Forces without the need for remediation;

(iii) convening stakeholders within the State and creating a forum for identifying and deliberating on education issues that—

(I) involve preschool through grade 12 education, postsecondary education, the 21st century workforce, and the Armed Forces; and

(II) transcend any single system of education's ability to address; and

(iv) implementing activities designed to ensure the enrollment of all elementary school and secondary school students in rigorous coursework, which may include—

(I) specifying the courses and performance levels necessary for acceptance into institutions of higher education; and

(II) developing or providing guidance to local educational agencies within the State on the adoption of curricula and assessments aligned with State academic content standards, which assessments may be used as measures of student academic achievement in secondary school as well as for entrance or placement at institutions of higher

education, including through collaboration with institutions of higher education in, or State educational agencies serving, other States; and

(B) may use the grant funds for—

(i) developing and making available specific opportunities for extensive professional development for teachers, paraprofessionals, principals, and school administrators, including collection and dissemination of effective teaching practices to improve instruction and instructional support mechanisms;

(ii) identifying changes in State academic content standards, academic achievement standards, and assessments for students in grades preceding secondary school in order to ensure such standards and assessments are appropriately aligned and adequately reflect the content needed to prepare students to enter secondary school;

(iii) developing a plan to provide remediation and additional learning opportunities for students who are performing below grade level to ensure that all students will have the opportunity to meet secondary school graduation requirements;

(iv) identifying and addressing teacher certification needs; or

(v) incorporating 21st century learning skills into the State plan, which skills shall include critical thinking, problem solving, communication, collaboration, global awareness, and business and financial literacy.

(2) GRANTS FOR STATEWIDE P-16 EDUCATION DATA SYSTEMS.—

(A) ESTABLISHMENT OF SYSTEM.—Each State that receives a grant under subsection (c)(2) shall establish a statewide P-16 education longitudinal data system that—

(i) provides each student, upon enrollment in a public elementary school or secondary school in the State, with a unique identifier, such as a bar code, that—

(I) does not permit a student to be individually identified by users of the system; and

(II) is retained throughout the student's enrollment in P-16 education in the State; and

(ii) meets the requirements of subparagraphs (B) through (E).

(B) IMPROVEMENT OF EXISTING SYSTEM.—Each State that receives a grant under subsection (c)(2) for the improvement of a statewide P-16 education data system may employ, coordinate, or revise an existing statewide data system to establish a statewide longitudinal P-16 education data system that meets the requirements of subparagraph (A), if the statewide longitudinal P-16 education data system produces valid and reliable data.

(C) PRIVACY AND ACCESS TO DATA.—

(i) IN GENERAL.—Each State that receives a grant under subsection (c)(2) shall implement measures to—

(I) ensure that the statewide P-16 education data system meets the requirements of section 444 of the General Education Provisions Act (20 U.S.C. 1232g) (commonly known as the Family Educational Rights and Privacy Act of 1974);

(II) limit the use of information in the statewide P-16 education data system by institutions of higher education and State or local educational agencies or institutions to the activities set forth in paragraph (1) or State law regarding education, consistent with the purposes of this subtitle;

(III) prohibit the disclosure of personally identifiable information except as permitted under section 444 of the General Education Provisions Act and any additional limitations set forth in State law;

(IV) keep an accurate accounting of the date, nature, and purpose of each disclosure of personally identifiable information in the statewide P-16 education data system, a description of the information disclosed, and the name and address of the person, agency, institution, or entity to whom the disclosure is made, which accounting shall be made available on request to parents of any student whose information has been disclosed;

(V) notwithstanding section 444 of the General Education Provisions Act, require any nongovernmental party obtaining personally identifiable information to sign a data use agreement prior to disclosure that—

(aa) prohibits the party from further disclosing the information;

(bb) prohibits the party from using the information for any purpose other than the purpose specified in the agreement; and

(cc) requires the party to destroy the information when the purpose for which the disclosure was made is accomplished;

(VI) maintain adequate security measures to ensure the confidentiality and integrity of the statewide P-16 education data system, such as protecting a student record from identification by a unique identifier;

(VII) where rights are provided to parents under this clause, provide those rights to the student instead of the parent if the student has reached the age of 18 or is enrolled in a postsecondary educational institution; and

(VIII) ensure adequate enforcement of the requirements of this clause.

(ii) USE OF UNIQUE IDENTIFIERS.—

(I) GOVERNMENTAL USE OF UNIQUE IDENTIFIERS.—It shall be unlawful for any Federal, State, or local governmental agency to use the unique identifiers employed in the statewide P-16 education data systems for any purpose other than as authorized by Federal or State law regarding education, or to deny any individual any right, benefit, or privilege provided by law because of such individual's refusal to disclose the individual's unique identifier.

(II) REGULATIONS.—Not later than 180 days after the date of enactment of this Act, the Secretary shall promulgate regulations governing the use by governmental and non-governmental entities of the unique identifiers employed in statewide P-16 education data systems, including, where necessary, regulations requiring States desiring grants for statewide P-16 education data systems under this section to implement specified measures, with the goal of safeguarding individual privacy to the maximum extent practicable consistent with the uses of the information authorized in this Act or other Federal or State law regarding education.

(D) REQUIRED ELEMENTS OF A STATEWIDE P-16 EDUCATION DATA SYSTEM.—The State shall ensure that the statewide P-16 education data system includes the following elements:

(i) PRESCHOOL THROUGH GRADE 12 EDUCATION AND POSTSECONDARY EDUCATION.—With respect to preschool through grade 12 education and postsecondary education—

(I) a unique statewide student identifier that does not permit a student to be individually identified by users of the system;

(II) student-level enrollment, demographic, and program participation information;

(III) student-level information about the points at which students exit, transfer in, transfer out, drop out, or complete P-16 education programs;

(IV) the capacity to communicate with higher education data systems; and

(V) a State data audit system assessing data quality, validity, and reliability.

(ii) PRESCHOOL THROUGH GRADE 12 EDUCATION.—With respect to preschool through grade 12 education—

(I)[5] yearly test records of individual students with respect to assessments under section

[5] Section 9215(i)(4) of Public Law 114–95 provides for an amendment to section 6401(e)(2)(D)(ii)(I) of Public Law 110–69 by striking "yearly test records of individual students with respect to assessments under section 1111(b) of the Elementary and Secondary Education

Continued

1111(b)(2) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311(b)(2));

(II) information on students not tested by grade and subject;

(III) a teacher identifier system with the ability to match teachers to students;

(IV) student-level transcript information, including information on courses completed and grades earned; and

(V) student-level college readiness test scores.

(iii) POSTSECONDARY EDUCATION.—With respect to postsecondary education, data that provide—

(I) information regarding the extent to which students transition successfully from secondary school to postsecondary education, including whether students enroll in remedial coursework; and

(II) other information determined necessary to address alignment and adequate preparation for success in postsecondary education.

(E) FUNCTIONS OF THE STATEWIDE P-16 EDUCATION DATA SYSTEM.—In implementing the statewide P-16 education data system, the State shall—

(i) identify factors that correlate to students' ability to successfully engage in and complete postsecondary-level general education coursework without the need for prior developmental coursework;

(ii) identify factors to increase the percentage of low-income and minority students who are academically prepared to enter and successfully complete postsecondary-level general education coursework; and

(iii) use the data in the system to otherwise inform education policy and practice in order to better align State academic content standards, and curricula, with the demands of postsecondary education, the 21st century workforce, and the Armed Forces.

(f) APPLICATION.—

(1) IN GENERAL.—Each State desiring a grant under this section shall submit an application to the Secretary at such time, in such manner, and containing such information as the Secretary may reasonably require.

(2) APPLICATION CONTENTS.—Each application submitted under this section shall specify whether the State application is for the conduct of P-16 education alignment activities, or the establishment or improvement of a statewide P-16 education data system. The application shall include, at a minimum, the following:

(A) A description of the activities and programs to be carried out with the grant funds and a comprehensive plan for carrying out the activities.

Act of 1965 (20 U.S.C. 6311(b))" and inserting "yearly test records of individual students with respect to assessments under section 1111(b)(2) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311(b)(2))". Such amendment was carried out to section 6201 (as redesignated by section 1002(b)(3) of Public Law 111–358) to reflect the probable intent of Congress.

(B) A description of how the concerns and interests of the larger education community, including parents, students, teachers, teacher educators, principals, and preschool administrators will be represented in carrying out the authorized activities described in subsection (e).

(C) In the case of a State applying for funding for P-16 education alignment, a description of how the State will provide assistance to local educational agencies in implementing rigorous State academic content standards, substantive curricula, remediation, and acceleration opportunities for students, as well as other changes determined necessary by the State.

(D) In the case of a State applying for funding to establish or improve a statewide P-16 education data system—

(i) a description of the privacy protection and enforcement measures that the State has implemented or will implement pursuant to subsection (e)(2)(C), and assurances that these measures will be in place prior to the establishment or improvement of the statewide P-16 education data system; and

(ii) an assurance that the State will continue to fund the statewide P-16 education data system after the end of the grant period.

(g) SUPPLEMENT NOT SUPPLANT.—Grant funds provided under this section shall be used to supplement, not supplant, other Federal, State, and local funds available to carry out the authorized activities described in subsection (e).

(h) MATCHING REQUIREMENT.—Each State that receives a grant under this section shall provide, from non-Federal sources, an amount equal to 100 percent of the amount of the grant, in cash or in kind, to carry out the activities supported by the grant.

(i) RULE OF CONSTRUCTION.—

(1) NO RAW DATA REQUIREMENT.—Nothing in this section shall be construed to require States to provide raw data to the Secretary.

(2) PRIVATE OR HOME SCHOOLS.—Nothing in this section shall be construed to affect any private school that does not receive funds or services under this Act or any home school, whether or not the home school is treated as a home school or a private school under State law, including imposing new requirements for students educated through a home school seeking admission to institutions of higher education.

(j) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section $120,000,000 for each of fiscal years 2011 and 2012.

TITLE VII—NATIONAL SCIENCE FOUNDATION

SEC. 7001. [42 U.S.C. 1862o nt] DEFINITIONS.

In this title:

(1) BASIC RESEARCH.—The term "basic research" has the meaning given such term in the Office of Management and Budget circular No. A-11.

(2) BOARD.—The term "Board" means the National Science Board established under section 2 of the National Science Foundation Act of 1950 (42 U.S.C. 1861).

(3) DIRECTOR.—The term "Director" means the Director of the Foundation.

(4) ELEMENTARY SCHOOL.—The term "elementary school" has the meaning given such term in section 8101 of the Elementary and Secondary Education Act of 1965.

(5) FOUNDATION.—The term "Foundation" means the National Science Foundation.

(6) INSTITUTION OF HIGHER EDUCATION.—The term "institution of higher education" has the meaning given such term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

(7) SECONDARY SCHOOL.—The term "secondary school" has the meaning given such term in section 8101 of the Elementary and Secondary Education Act of 1965.

SEC. 7002. AUTHORIZATION OF APPROPRIATIONS.

(a) FISCAL YEAR 2008.—

(1) IN GENERAL.—There are authorized to be appropriated to the Foundation $6,600,000,000 for fiscal year 2008.

(2) SPECIFIC ALLOCATIONS.—Of the amount authorized under paragraph (1)—

(A) $5,156,000,000 shall be made available for research and related activities, of which—

(i) $115,000,000 shall be made available for the Major Research Instrumentation program;

(ii) $165,400,000 shall be made available for the Faculty Early Career Development (CAREER) Program;

(iii) $61,600,000 shall be made available for the Research Experiences for Undergraduates program;

(iv) $120,000,000 shall be made available for the Experimental Program to Stimulate Competitive Research;

(v) $47,300,000 shall be made available for the Integrative Graduate Education and Research Traineeship program;

(vi) $9,000,000 shall be made available for the Graduate Research Fellowship program; and

(vii) $10,000,000 shall be made available for the professional science master's degree program under section 7034;

(B) $896,000,000 shall be made available for education and human resources, of which—

(i) $100,000,000 shall be for Mathematics and Science Education Partnerships established under section 9 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n);

(ii) $89,800,000 shall be for the Robert Noyce Scholarship Program established under section 10 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n-1);

(iii) $40,000,000 shall be for the Science, Mathematics, Engineering, and Technology Talent Expansion Program established under section 8(7) of the National Science Foundation Authorization Act of 2002 (Public Law 107-368);

(iv) $52,000,000 shall be for the Advanced Technological Education program established by section 3(a) of the Scientific and Advanced-Technology Act of 1992 (Public Law 102-476);

(v) $27,100,000 shall be made available for the Integrative Graduate Education and Research Traineeship program; and

(vi) $96,600,000 shall be made available for the Graduate Research Fellowship program;

(C) $245,000,000 shall be made available for major research equipment and facilities construction;

(D) $285,600,000 shall be made available for agency operations and award management;

(E) $4,050,000 shall be made available for the Office of the National Science Board; and

(F) $12,350,000 shall be made available for the Office of Inspector General.

(b) FISCAL YEAR 2009.—

(1) IN GENERAL.—There are authorized to be appropriated to the Foundation $7,326,000,000 for fiscal year 2009.

(2) SPECIFIC ALLOCATIONS.—Of the amount authorized under paragraph (1)—

(A) $5,742,300,000 shall be made available for research and related activities, of which—

(i) $123,100,000 shall be made available for the Major Research Instrumentation program;

(ii) $183,600,000 shall be made available for the Faculty Early Career Development (CAREER) Program;

(iii) $68,400,000 shall be made available for the Research Experiences for Undergraduates program;

(iv) $133,200,000 shall be made available for the Experimental Program to Stimulate Competitive Research;

(v) $52,500,000 shall be made available for the Integrative Graduate Education and Research Traineeship program;

(vi) $10,000,000 shall be made available for the Graduate Research Fellowship program; and

(vii) $12,000,000 shall be made available for the professional science master's degree program under section 7034;

(B) $995,000,000 shall be made available for education and human resources, of which—

(i) $111,000,000 shall be for Mathematics and Science Education Partnerships established under section 9 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n);

(ii) $115,000,000 shall be for the Robert Noyce Scholarship Program established under section 10 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n-1);

(iii) $50,000,000 shall be for the Science, Mathematics, Engineering, and Technology Talent Expansion Program established under section 8(7) of the National Science Foundation Authorization Act of 2002 (Public Law 107-368);

(iv) $57,700,000 shall be for the Advanced Technological Education program as established by section 3(a) of the Scientific and Advanced-Technology Act of 1992 (Public Law 102-476);

(v) $30,100,000 shall be made available for the Integrative Graduate Education and Research Traineeship program; and

(vi) $107,200,000 shall be made available for the Graduate Research Fellowship program;

(C) $262,000,000 shall be made available for major research equipment and facilities construction;

(D) $309,760,000 shall be made available for agency operations and award management;

(E) $4,190,000 shall be made available for the Office of the National Science Board; and

(F) $12,750,000 shall be made available for the Office of Inspector General.

(c) FISCAL YEAR 2010.—

(1) IN GENERAL.—There are authorized to be appropriated to the Foundation $8,132,000,000 for fiscal year 2010.

(2) SPECIFIC ALLOCATIONS.—Of the amount authorized under paragraph (1)—

(A) $6,401,000,000 shall be made available for research and related activities, of which—

(i) $131,700,000 shall be made available for the Major Research Instrumentation program;

(ii) $203,800,000 shall be made available for the Faculty Early Career Development (CAREER) Program;

(iii) $75,900,000 shall be made available for the Research Experiences for Undergraduates program;

(iv) $147,800,000 shall be made available for the Experimental Program to Stimulate Competitive Research;

(v) $58,300,000 shall be made available for the Integrative Graduate Education and Research Traineeship program;

(vi) $11,100,000 shall be made available for the Graduate Research Fellowship program; and

(vii) $15,000,000 shall be made available for the professional science master's degree program under section 7034;

(B) $1,104,000,000 shall be made available for education and human resources, of which—

(i) $123,200,000 shall be for Mathematics and Science Education Partnerships established under section 9 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n);

(ii) $140,500,000 shall be for the Robert Noyce Scholarship Program established under section 10 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n-1);

(iii) $55,000,000 shall be for the Science, Mathematics, Engineering, and Technology Talent Expansion Program established under section 8(7) of the National Science Foundation Authorization Act of 2002 (Public Law 107-368);

(iv) $64,000,000 shall be for the Advanced Technological Education program as established by section 3(a) of the Scientific and Advanced-Technology Act of 1992 (Public Law 102-476);

(v) $33,400,000 shall be made available for the Integrative Graduate Education and Research Traineeship program; and

(vi) $119,000,000 shall be made available for the Graduate Research Fellowship program;

(C) $280,000,000 shall be made available for major research equipment and facilities construction;

(D) $329,450,000 shall be made available for agency operations and award management;

(E) $4,340,000 shall be made available for the Office of the National Science Board; and

(F) $13,210,000 shall be made available for the Office of Inspector General.

SEC. 7003. [42 U.S.C. 1862o nt] REAFFIRMATION OF THE MERIT-REVIEW PROCESS OF THE NATIONAL SCIENCE FOUNDATION.

Nothing in this title or title I, or the amendments made by this title or title I, shall be interpreted to require or recommend that the Foundation—

(1) alter or modify its merit-review system or peer-review process; or

(2) exclude the awarding of any proposal by means of the merit-review or peer-review process.

SEC. 7004. SENSE OF THE CONGRESS REGARDING THE MATHEMATICS AND SCIENCE PARTNERSHIP PROGRAMS OF THE DEPARTMENT OF EDUCATION AND THE NATIONAL SCIENCE FOUNDATION.

It is the sense of the Congress that—

(1) although the mathematics and science education partnership program at the Foundation and the mathematics and science partnership program at the Department of Education practically share the same name, the 2 programs are intended to be complementary, not duplicative;

(2) the Foundation partnership programs are innovative, model reform initiatives that move promising ideas in education from research into practice to improve teacher quality, develop challenging curricula, and increase student achievement in mathematics and science, and Congress intends that the Foundation peer-reviewed partnership programs found to be effective should be put into wider practice by dissemination through the Department of Education partnership programs; and

(3) the Director and the Secretary of Education should have ongoing collaboration to ensure that the 2 components of this priority effort for mathematics and science education continue to work in concert for the benefit of States and local practitioners nationwide.

SEC. 7005. [42 U.S.C. 1862o nt] CURRICULA.

Nothing in this title, or the amendments made by this title, shall be construed to limit the authority of State governments or local school boards to determine the curricula of their students.

SEC. 7006. CENTERS FOR RESEARCH ON LEARNING AND EDUCATION IMPROVEMENT.

(a) FUNDING FOR CENTERS.—The Director shall continue to carry out the program of Centers for Research on Learning and Education Improvement as established in section 11 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n-2).

(b) ELIGIBILITY FOR CENTERS.—Section 11 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n-2) is amended—

(1) in subsection (a)(1), by inserting "or eligible nonprofit organizations" after "institutions of higher education";

(2) in subsection (b)(1), by inserting "or an eligible nonprofit organization" after "institution of higher education"; and

(3) in subsection (b)(1), by striking "of such institutions" and inserting "thereof".

SEC. 7007. INTERDISCIPLINARY RESEARCH.

(a) IN GENERAL.—The Board shall evaluate the role of the Foundation in supporting interdisciplinary research, including through the Major Research Instrumentation program, the effectiveness of the Foundation's efforts in providing information to the scientific community about opportunities for funding of interdisciplinary research proposals, and the process through which interdisciplinary proposals are selected for support. The Board shall also evaluate the effectiveness of the Foundation's efforts to engage undergraduate students in research experiences in interdisciplinary settings, including through the Research in Undergraduate Institutions program and the Research Experiences for Undergraduates program.

(b) REPORT.—Not later than 1 year after the date of enactment of this Act, the Board shall provide the results of its evaluation under subsection (a), including a recommendation for the proportion of the Foundation's research and related activities funding that should be allocated for interdisciplinary research, to the Committee on Science and Technology of the House of Representatives

and the Committee on Commerce, Science, and Transportation and the Committee on Health, Education, Labor, and Pensions of the Senate.

SEC. 7008. [42 U.S.C. 1862o] POSTDOCTORAL RESEARCH FELLOWS.

(a) MENTORING.—The Director shall require that all grant applications that include funding to support postdoctoral and graduate student researchers include a description of the mentoring activities that will be provided for such individuals, and shall ensure that this part of the application is evaluated under the Foundation's broader impacts merit review criterion. The requirement may be satisfied by providing such individuals with access to mentors, including individuals not listed on the award. Mentoring activities may include career counseling, training in preparing grant applications, guidance on ways to improve teaching skills, and training in research ethics.

(b) REPORTS.—The Director shall require that annual reports and the final report for research grants that include funding to support postdoctoral researchers include a description of the mentoring activities provided to such researchers.

SEC. 7009. [42 U.S.C. 1862o-1] RESPONSIBLE CONDUCT OF RESEARCH.

The Director shall require that each institution that applies for financial assistance from the Foundation for science and engineering research or education describe in its grant proposal a plan to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduate students, graduate students, postdoctoral researchers, faculty, and other senior personnel participating in the proposed research project, including—

(1) mentor training and mentorship;

(2) training to raise awareness of potential research security threats; and

(3) Federal export control, disclosure, and reporting requirements.

SEC. 7010. [42 U.S.C. 1862o-2] REPORTING OF RESEARCH RESULTS.

The Director shall ensure that all final project reports and citations of published research documents resulting from research funded, in whole or in part, by the Foundation, are made available to the public in a timely manner and in electronic form through the Foundation's Web site.

SEC. 7011. [42 U.S.C. 1862o-3] SHARING RESEARCH RESULTS

An investigator supported under a Foundation award, whom the Director determines has failed to comply with the provisions of section 734 of the Foundation Grant Policy Manual, shall be ineligible for a future award under any Foundation supported program or activity. The Director may restore the eligibility of such an investigator on the basis of the investigator's subsequent compliance with the provisions of section 734 of the Foundation Grant Policy Manual and with such other terms and conditions as the Director may impose.

SEC. 7012. [42 U.S.C. 1862o-4] FUNDING FOR SUCCESSFUL SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS EDUCATION PROGRAMS.

(a) EVALUATION OF PROGRAMS.—The Director shall, on an annual basis, evaluate all of the Foundation's grants that are scheduled to expire within 1 year and—

(1) that have the primary purpose of meeting the objectives of the Science and Engineering Equal Opportunity Act (42 U.S.C. 1885 et seq.); or

(2) that have the primary purpose of providing teacher professional development.

(b) CONTINUATION OF FUNDING.—For grants that are identified under subsection (a) and that are determined by the Director to be successful in meeting the objectives of the initial grant solicitation, the Director may extend the duration of those grants for not more than 3 additional years beyond their scheduled expiration without the requirement for a recompetition.

SEC. 7013. COST SHARING.

(a) IN GENERAL.—The Board shall evaluate the impact of its policy to eliminate cost sharing for research grants and cooperative agreements for existing programs that were developed around industry partnerships and historically required industry cost sharing, such as the Engineering Research Centers and Industry/University Cooperative Research Centers. The Board shall also consider the impact that the cost sharing policy has on initiating new programs for which industry interest and participation are sought.

(b) REPORT.—Not later than 6 months after the date of enactment of this Act, the Board shall report to the Committee on Science and Technology and the Committee on Appropriations of the House of Representatives, and the Committee on Commerce, Science, and Transportation, the Committee on Health, Education, Labor, and Pensions, and the Committee on Appropriations of the Senate, on the results of the evaluation under subsection (a).

SEC. 7014. ADDITIONAL REPORTS.

(a) REPORT ON FUNDING FOR MAJOR FACILITIES.—

(1) PRECONSTRUCTION FUNDING.—The Board shall evaluate the appropriateness of the requirement that funding for detailed design work and other preconstruction activities for major research equipment and facilities come exclusively from the sponsoring research division rather than being available, at least in part, from the Major Research Equipment and Facilities Construction account.

(2) MAINTENANCE AND OPERATION COSTS.—The Board shall evaluate the appropriateness of the Foundation's policies for allocation of costs for, and oversight of, maintenance and operation of major research equipment and facilities.

(3) REPORT.—Not later than 6 months after the date of enactment of this Act, the Board shall report on the results of the evaluations under paragraphs (1) and (2) and on any recommendations for modifying the current policies related to allocation of funding for major research equipment and facilities to the Committee on Science and Technology and the Committee on Appropriations of the House of Representatives, and to the Committee on Commerce, Science, and Transportation,

the Committee on Health, Education, Labor, and Pensions, and the Committee on Appropriations of the Senate.

(b) INCLUSION OF POLAR FACILITIES UPGRADES IN MAJOR RESEARCH EQUIPMENT AND FACILITIES CONSTRUCTION PLAN.—Section 201(a)(2)(D) of the National Science Foundation Authorization Act of 1998 (42 U.S.C. 1862l(a)(2)(D)) is amended by inserting "and for major upgrades of facilities in support of Antarctic research programs" after "facilities construction account".

(c) REPORT ON EDUCATION PROGRAMS WITHIN THE RESEARCH DIRECTORATES.—Not later than 6 months after the date of enactment of this Act, the Director shall transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation and the Committee on Health, Education, Labor, and Pensions of the Senate a report cataloging all elementary school and secondary school, informal, and undergraduate educational programs and activities supported through appropriations for Research and Related Activities. The report shall display the programs and activities by directorate, along with estimated funding levels for the fiscal years 2006, 2007, and 2008, and shall provide a description of the goals of each program and activity. The report shall also describe how the programs and activities relate to or are coordinated with the programs supported by the Education and Human Resources Directorate.

(d) REPORT ON RESEARCH IN UNDERGRADUATE INSTITUTIONS PROGRAM.—The Director shall transmit to Congress, as part of the President's fiscal year 2011 budget submission under section 1105 of title 31, United States Code, a report listing the funding success rates and distribution of awards for the Research in Undergraduate Institutions program, by type of institution based on the highest academic degree conferred by the institution, for fiscal years 2008, 2009, and 2010.

(e) ANNUAL PLAN FOR ALLOCATION OF EDUCATION AND HUMAN RESOURCES FUNDING.—

(1) IN GENERAL.—Not later than 60 days after the date of enactment of legislation providing for the annual appropriation of funds for the Foundation, the Director shall submit to the Committee on Science and Technology and the Committee on Appropriations of the House of Representatives, and to the Committee on Commerce, Science, and Transportation, the Committee on Health, Education, Labor, and Pensions, and the Committee on Appropriations of the Senate, a plan for the allocation of education and human resources funds authorized by this title for the corresponding fiscal year, including any funds from within the research and related activities account used to support activities that have the primary purpose of improving education or broadening participation.

(2) SPECIFIC REQUIREMENTS.—The plan shall include a description of how the allocation of funding—

(A) will affect the average size and duration of education and human resources grants supported by the Foundation;

(B) will affect trends in research support for the effective instruction of science, technology, engineering, and mathematics;

(C) will affect the kindergarten through grade 20 pipeline for the study of science, technology, engineering, and mathematics; and

(D) will encourage the interest of individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b) in science, technology, engineering, and mathematics, and help prepare such individuals to pursue postsecondary studies in these fields.

SEC. 7015. ADMINISTRATIVE AMENDMENTS.

(a) TRIANNUAL AUDIT OF THE OFFICE OF THE NATIONAL SCIENCE BOARD.—Section 15(a) of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n-5) is amended—

(1) in paragraph (3), by striking "an annual audit" and inserting "an audit every three years";

(2) in paragraph (4), by striking "each year" and inserting "every third year"; and

(3) by inserting after paragraph (4) the following:

"(5) MATERIALS RELATING TO CLOSED PORTIONS OF MEETINGS.—To facilitate the audit required under paragraph (3) of this subsection, the Office of the National Science Board shall maintain the General Counsel's certificate, the presiding officer's statement, and a transcript or recording of any closed meeting, for at least 3 years after such meeting.".

(b) LIMITED TERM PERSONNEL FOR THE NATIONAL SCIENCE BOARD.—Subsection (g) of section 4 of the National Science Foundation Act of 1950 (42 U.S.C. 1863(g)) is amended to read as follows:

"(g) The Board may, with the concurrence of a majority of its members, permit the appointment of a staff consisting of not more than 5 professional staff members, technical and professional personnel on leave of absence from academic, industrial, or research institutions for a limited term, and such operations and support staff members as may be necessary. Such staff shall be appointed by the Chairman and assigned at the direction of the Board. The professional members and limited term technical and professional personnel of such staff may be appointed without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and the provisions of chapter 51 of such title relating to classification, and shall be compensated at a rate not exceeding the maximum rate payable under section 5376 of such title, as may be necessary to provide for the performance of such duties as may be prescribed by the Board in connection with the exercise of its powers and functions under this Act. Section 14(a)(3) shall apply to each limited term appointment of technical and professional personnel under this subsection. Each appointment under this subsection shall be subject to the same security requirements as those required for personnel of the Foundation appointed under section 14(a).".

(c) INCREASE IN NUMBER OF WATERMAN AWARDS TO THREE.—Section 6(c) of the National Science Foundation Authorization Act, 1976 (42 U.S.C. 1881a) is amended to read as follows:

"(c) Not more than three awards may be made under this section in any one fiscal year.".

SEC. 7016. NATIONAL SCIENCE BOARD REPORTS.

Paragraphs (1) and (2) of section 4(j) of the National Science Foundation Act of 1950 (42 U.S.C. 1863(j)(1) and (2)) are amended by striking ", for submission to" and "for submission to", respectively, and inserting "and".

SEC. 7017. PROGRAM FRAUD CIVIL REMEDIES ACT OF 1986 AMENDMENT.

Section 3801(a)(1) of title 31, United States Code (commonly known as the "Program Fraud Civil Remedies Act of 1986") is amended—

(1) in subparagraph (C), by striking "and" after the semicolon;

(2) in subparagraph (D), by inserting "and" after the semicolon; and

(3) by adding at the end the following:

"(E) the National Science Foundation.".

SEC. 7018. [42 U.S.C. 1862o-5] MEETING CRITICAL NATIONAL SCIENCE NEEDS.

(a) IN GENERAL.—In addition to any other criteria, the Director shall include consideration of the degree to which awards and research activities that otherwise qualify for support by the Foundation may assist in meeting critical national needs in innovation, competitiveness, safety and security, the physical and natural sciences, technology, engineering, social sciences, and mathematics.

(b) PRIORITY TREATMENT.—The Director shall give priority in the selection of awards and the allocation of Foundation resources to proposed research activities, and grants funded under the Foundation's Research and Related Activities Account, that can be expected to make contributions in physical or natural science, technology, engineering, social sciences, or mathematics, or that enhance competitiveness, innovation, or safety and security in the United States.

(c) LIMITATION.—Nothing in this section shall be construed to restrict or bias the grant selection process against funding other areas of research deemed by the Foundation to be consistent with its mandate nor to change the core mission of the Foundation.

SEC. 7019. [42 U.S.C. 1862o-6] RESEARCH ON INNOVATION AND INVENTIVENESS.

In carrying out its research programs on science policy and on the science of learning, the Foundation may support research on the process of innovation and the teaching of inventiveness.

SEC. 7020. [42 U.S.C. 1862o-7] CYBERINFRASTRUCTURE.

In order to continue and expand efforts to ensure that research institutions throughout the Nation can fully participate in research programs of the Foundation and collaborate with colleagues throughout the Nation, the Director, not later than 180 days after

the date of enactment of this Act, shall develop and publish a plan that—

(1) describes the current status of broadband access for scientific research purposes at institutions in EPSCoR-eligible States, at institutions in rural areas, and at minority serving institutions; and

(2) outlines actions that can be taken to ensure that such connections are available to enable participation in those Foundation programs that rely heavily on high-speed networking and collaborations across institutions and regions.

SEC. 7021. [42 U.S.C. 1862o-8] PILOT PROGRAM OF GRANTS FOR NEW INVESTIGATORS.

(a) IN GENERAL.—The Director shall carry out a pilot program to award 1-year grants to individuals to assist them in improving research proposals that were previously submitted to the Foundation but not selected for funding.

(b) ELIGIBILITY.—To be eligible to receive a grant under this section, an individual—

(1) may not have previously received funding as the principal investigator of a research grant from the Foundation; and

(2) shall have submitted a proposal to the Foundation, which may include a proposal submitted to the Research in Undergraduate Institutions program, that was rated excellent under the Foundation's competitive merit review process.

(c) SELECTION PROCESS.—The Director shall make awards under this section based on the advice of the program officers of the Foundation.

(d) USE OF FUNDS.—Grants awarded under this section shall be used to enable an individual to resubmit an updated research proposal for review by the Foundation through the agency's competitive merit review process. Uses of funds made available under this section may include the generation of new data and the performance of additional analysis.

(e) PROGRAM ADMINISTRATION.—The Director shall carry out this section through the Small Grants for Exploratory Research program.

(f) NATIONAL SCIENCE BOARD REVIEW.—The Board shall conduct a review and assessment of the pilot program under this section, including the number of new investigators funded, the distribution of awards by type of institution of higher education, and the success rate upon resubmittal of proposals by new investigators funded through such pilot program. Not later than 3 years after the date of enactment of this Act, the Board shall summarize its findings and any recommendations regarding changes to, the termination of, or the continuation of the pilot program in a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation and the Committee on Health, Education, Labor, and Pensions of the Senate.

SEC. 7022. [42 U.S.C. 1862o-1] BROADER IMPACTS MERIT REVIEW CRITERION.

(a) IN GENERAL.—Among the types of activities that the Foundation shall consider as appropriate for meeting the requirements

of its broader impacts criterion for the evaluation of research proposals are partnerships between academic researchers and industrial scientists and engineers that address research areas identified as having high importance for future national economic competitiveness, such as nanotechnology.

(b) REPORT ON BROADER IMPACTS CRITERION.—Not later than 1 year after the date of enactment of this Act, the Director shall transmit to Congress a report on the impact of the broader impacts grant criterion used by the Foundation. The report shall—

(1) identify the criteria that each division and directorate of the Foundation uses to evaluate the broader impacts aspects of research proposals;

(2) provide a breakdown of the types of activities by division that awardees have proposed to carry out to meet the broader impacts criterion;

(3) provide any evaluations performed by the Foundation to assess the degree to which the broader impacts aspects of research proposals were carried out and how effective they have been at meeting the goals described in the research proposals;

(4) describe what national goals, such as improving undergraduate science, technology, engineering, and mathematics education, improving kindergarten through grade 12 science and mathematics education, promoting university-industry collaboration, and broadening participation of underrepresented groups, the broader impacts criterion is best suited to promote; and

(5) describe what steps the Foundation is taking and should take to use the broader impacts criterion to improve undergraduate science, technology, engineering, and mathematics education.

SEC. 7023. DONATIONS.

Section 11(f) of the National Science Foundation Act of 1950 (42 U.S.C. 1870(f)) is amended by inserting before the semicolon ", except that funds may be donated for specific prize competitions for 'basic research' as defined in the Office of Management and Budget Circular No. A-11".

SEC. 7024. HIGH-PERFORMANCE COMPUTING AND NETWORKING.

(a) HIGH-PERFORMANCE COMPUTING ACT OF 1991.—

(1) AMENDMENTS.—Title I of the High-Performance Computing Act of 1991 (15 U.S.C. 5511 et seq.) is amended—

(A) in the title heading, by striking "**AND THE NATIONAL RESEARCH AND EDUCATION NETWORK**" and inserting "**RESEARCH AND DEVELOPMENT**";

(B) in section 101(a) (15 U.S.C. 5511(a))—

(i) by striking subparagraphs (A) and (B) of paragraph (1) and inserting the following:

"(A) provide for long-term basic and applied research on high-performance computing, including networking;

"(B) provide for research and development on, and demonstration of, technologies to advance the capacity and capabilities of high-performance computing and networking systems, and related software;

"(C) provide for sustained access by the research community throughout the United States to high-performance computing and networking systems that are among the most advanced in the world in terms of performance in solving scientific and engineering problems, including provision for technical support for users of such systems;

"(D) provide for widely dispersed efforts to increase software availability, productivity, capability, security, portability, and reliability;

"(E) provide for high-performance networks, including experimental testbed networks, to enable research and development on, and demonstration of, advanced applications enabled by such networks;

"(F) provide for computational science and engineering research on mathematical modeling and algorithms for applications in all fields of science and engineering;

"(G) provide for the technical support of, and research and development on, high-performance computing systems and software required to address Grand Challenges;

"(H) provide for educating and training additional undergraduate and graduate students in software engineering, computer science, computer and network security, applied mathematics, library and information science, and computational science; and

"(I) provide for improving the security of computing and networking systems, including Federal systems, including providing for research required to establish security standards and practices for these systems.";

(ii) by striking paragraph (2) and redesignating paragraphs (3) and (4) as paragraphs (2) and (3), respectively;

(iii) in paragraph (2), as redesignated by clause (ii)—

(I) by striking subparagraph (B);

(II) by redesignating subparagraphs (A) and (C) as subparagraphs (D) and (F), respectively;

(III) by inserting before subparagraph (D), as redesignated by subclause (II), the following:

"(A) establish the goals and priorities for Federal high-performance computing research, development, networking, and other activities;

"(B) establish Program Component Areas that implement the goals established under subparagraph (A), and identify the Grand Challenges that the Program should address;

"(C) provide for interagency coordination of Federal high-performance computing research, development, networking, and other activities undertaken pursuant to the Program;"; and

(IV) by inserting after subparagraph (D), as redesignated by subclause (II) of this clause, the following:

"(E) develop and maintain a research, development, and deployment roadmap covering all States and regions

for the provision of high-performance computing and networking systems under paragraph (1)(C); and"; and

(iv) in paragraph (3), as so redesignated by clause (ii) of this subparagraph—

(I) by striking "paragraph (3)(A)" and inserting "paragraph (2)(D)";

(II) by amending subparagraph (A) to read as follows:

"(A) provide a detailed description of the Program Component Areas, including a description of any changes in the definition of or activities under the Program Component Areas from the preceding report, and the reasons for such changes, and a description of Grand Challenges addressed under the Program;";

(III) in subparagraph (C), by striking "specific activities" and all that follows through "the Network" and inserting "each Program Component Area";

(IV) in subparagraph (D), by inserting ", and for each Program Component Area," after "participating in the Program";

(V) in subparagraph (D), by striking "applies;" and inserting "applies; and";

(VI) by striking subparagraph (E) and redesignating subparagraph (F) as subparagraph (E); and

(VII) in subparagraph (E), as redesignated by subclause (VI), by inserting "and the extent to which the Program incorporates the recommendations of the advisory committee established under subsection (b)" after "for the Program";

(C) by striking subsection (b) of section 101 (15 U.S.C. 5511) and inserting the following:

"(b) ADVISORY COMMITTEE.—(1) The President shall establish an advisory committee on high-performance computing, consisting of geographically dispersed non-Federal members, including representatives of the research, education, and library communities, network and related software providers, and industry representatives in the Program Component Areas, who are specially qualified to provide the Director with advice and information on high-performance computing. The recommendations of the advisory committee shall be considered in reviewing and revising the Program. The advisory committee shall provide the Director with an independent assessment of—

"(A) progress made in implementing the Program;

"(B) the need to revise the Program;

"(C) the balance between the components of the Program, including funding levels for the Program Component Areas;

"(D) whether the research and development undertaken pursuant to the Program is helping to maintain United States leadership in high-performance computing, networking technology, and related software; and

"(E) other issues identified by the Director.

"(2) In addition to the duties outlined in paragraph (1), the advisory committee shall conduct periodic evaluations of the funding, management, coordination, implementation, and activities of the Program. The advisory committee shall report not less frequently than once every 2 fiscal years to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on its findings and recommendations. The first report shall be due within 1 year after the date of enactment of the America COMPETES Act.

"(3) Section 14 of the Federal Advisory Committee Act shall not apply to the advisory committee established under this subsection."; and

(D) in section 101(c) (15 U.S.C. 5511(c))—

(i) in paragraph (1)(A), by striking "Program or" and inserting "Program Component Areas or"; and

(ii) in paragraph (2), by striking "subsection (a)(3)(A)" and inserting "subsection (a)(2)(D)".

(2) DEFINITIONS.—Section 4 of the High-Performance Computing Act of 1991 (15 U.S.C. 5503) is amended—

(A) in paragraph (2), by inserting "and multidisciplinary teams of researchers" after "high-performance computing resources";

(B) in paragraph (3)—

(i) by striking "scientific workstations,";

(ii) by striking "(including vector supercomputers and large scale parallel systems)";

(iii) by striking "and applications" and inserting "applications"; and

(iv) by inserting ", and the management of large data sets" after "systems software";

(C) in paragraph (4), by striking "packet switched";

(D) by striking "and" at the end of paragraph (5);

(E) by striking the period at the end of paragraph (6) and inserting "; and"; and

(F) by adding at the end the following:

"(7) 'Program Component Areas' means the major subject areas under which related individual projects and activities carried out under the Program are grouped.".

(3) CONFORMING AMENDMENT.—Section 1(26) of the Act entitled "An Act to prevent the elimination of certain reports", approved November 28, 2001 (31 U.S.C. 3113 note) is amended—

(A) by striking "101(a)(3)" and inserting "101(a)(2)"; and

(B) by striking "(15 U.S.C. 5511(a)(3))" and inserting "(15 U.S.C. 5511(a)(2))".

(b) [42 U.S.C. 1862o-10] ADVANCED INFORMATION AND COMMUNICATIONS TECHNOLOGY RESEARCH.—

(1) IN GENERAL.—As part of the Program described in title I of the High-Performance Computing Act of 1991 (15 U.S.C. 5511 et seq.), the Foundation shall support basic research related to advanced information and communications technologies that will contribute to enhancing or facilitating the availability and affordability of advanced communications serv-

ices for all people of the United States. Areas of research to be supported may include research on—

(A) affordable broadband access, including wireless technologies;

(B) network security and reliability;

(C) communications interoperability;

(D) networking protocols and architectures, including resilience to outages or attacks;

(E) trusted software;

(F) privacy;

(G) nanoelectronics for communications applications;

(H) low-power communications electronics;

(I) implementation of equitable access to national advanced fiber optic research and educational networks in noncontiguous States; and

(J) such other related areas as the Director finds appropriate.

(2) CENTERS.—The Director shall award multiyear grants, subject to the availability of appropriations and on a merit-reviewed competitive basis, to institutions of higher education, nonprofit research institutions affiliated with institutions of higher education, or consortia of either type of institution to establish multidisciplinary Centers for Communications Research. The purpose of the Centers shall be to generate innovative approaches to problems in information and communications technology research, including the research areas described in paragraph (1). Institutions of higher education, nonprofit research institutions affiliated with institutions of higher education, or consortia receiving such grants may partner with 1 or more government laboratories, for-profit entities, or other institutions of higher education or nonprofit research institutions.

(3) FUNDING ALLOCATION.—The Director shall increase funding for the basic research activities described in paragraph (1), which shall include support for the Centers described in paragraph (2), in proportion to the increase in the total amount appropriated to the Foundation for research and related activities for the fiscal years 2008 through 2010.

(4) REPORT TO CONGRESS.—The Director shall transmit to Congress, as part of the President's annual budget submission under section 1105 of title 31, United States Code, a report on the amounts allocated for support of research under this subsection for the fiscal year during which such report is submitted and the levels proposed for the fiscal year with respect to which the budget submission applies.

SEC. 7025. SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS TALENT EXPANSION PROGRAM.

(a) AMENDMENTS.—Section 8(7) of the National Science Foundation Authorization Act of 2002 is amended—

(1) in subparagraph (A), by striking "competitive, merit-based" and all that follows through "in recent years." and inserting" competitive, merit-based multiyear grants for eligible applicants to improve undergraduate education in science, technology, engineering, and mathematics through—

"(i) the creation of programs to increase the number of students studying toward and completing associate's or bachelor's degrees in science, technology, engineering, and mathematics, particularly in fields that have faced declining enrollment in recent years; and

"(ii) the creation of not more than 5 centers (in this paragraph referred to as 'Centers') to increase the number of students completing undergraduate courses in science, technology, engineering, and mathematics, including the number of nonmajors, and to improve student academic achievement in those courses, by developing—

"(I) undergraduate educational material, including curricula and courses of study;

"(II) teaching methods for undergraduate courses; and

"(III) methods to improve the professional development of professors and teaching assistants who teach undergraduate courses.

Grants made under clause (ii) shall be awarded jointly through the Education and Human Resources Directorate and at least 1 research directorate of the Foundation.";

(2) by amending subparagraph (B) to read as follows:

"(B) In selecting projects under subparagraph (A)(i), the Director shall strive to increase the number of students studying toward and completing associate's or bachelor's degrees, concentrations, or certificates in science, technology, engineering, or mathematics by giving priority to programs that heavily recruit individuals who are—

"(i) individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b); or

"(ii) graduates of a public secondary school that—

"(I) is among the highest 25 percent of schools served by the local educational agency that serves the school, in terms of the percentage of students from families with incomes below the poverty line, as defined in section 673(2) of the Community Services Block Grant Act (42 U.S.C. 9902(2)), applicable to a family of the size involved; or

"(II) is designated with a school locale code of 41, 42, or 43, as determined by the Secretary of Education.";

(3) by striking subparagraph (C) and inserting the following:

"(C)(i) The types of projects the Foundation may support under subparagraph (A)(i) include those programs that—

"(I) promote high quality—

"(aa) interdisciplinary teaching;

"(bb) undergraduate-conducted research;

"(cc) mentor relationships for students, especially underrepresented minority and female science, technology, engineering, and mathematics students;

"(dd) bridge programs that enable students at community colleges to matriculate directly into bacca-

laureate science, technology, engineering, or mathematics programs;

"(ee) internships carried out in partnership with industry;

"(ff) innovative uses of digital technologies, particularly at institutions of higher education that serve high numbers or percentages of economically disadvantaged students; and

"(gg) bridge programs that enable underrepresented minority and female secondary school students to obtain extra science, technology, engineering, and mathematics instruction prior to entering an institution of higher education;

"(II) finance summer internships for science, technology, engineering, and mathematics undergraduate students; and

"(III) conduct outreach programs that provide secondary school students and their science, technology, engineering, and mathematics teachers opportunities to increase the students' and teachers' exposure to engineering and technology.

"(ii) The types of activities the Foundation may support under subparagraph (A)(ii) include—

"(I) creating model curricula and laboratory programs;

"(II) developing and demonstrating research-based instructional methods and technologies;

"(III) developing methods to train graduate students and faculty to be more effective teachers of undergraduates;

"(IV) conducting programs to disseminate curricula, instructional methods, or training methods to faculty at the grantee institutions and at other institutions;

"(V) conducting assessments of the effectiveness of the Center at accomplishing the goals described in subparagraph (A)(ii); and

"(VI) conducting any other activities the Director determines will accomplish the goals described in subparagraph (A)(ii).";

(4) in subparagraph (D)(i), by striking "under this paragraph" and inserting "under subparagraph (A)(i)";

(5) in subparagraph (D)(ii), by striking "under this paragraph" and inserting "under subparagraph (A)(i)";

(6) after subparagraph (D)(iii), by adding at the end the following:

"(iv) A grant under subparagraph (A)(ii) shall be awarded for up to 5 years.";

(7) in subparagraph (E), by striking "under this paragraph" both places it appears and inserting "under subparagraph (A)(i)";

(8) by redesignating subparagraph (F) as subparagraph (J); and

(9) by inserting after subparagraph (E) the following:

"(F) Grants awarded under subparagraph (A)(ii) shall be carried out by a department or departments of science, technology, engineering, or mathematics at institutions of higher education (or a consortia thereof), which may partner with the department, college, or school of education at the institution. Applications for awards under subparagraph (A)(ii) shall be submitted to the Director at such time, in such manner, and containing such information as the Director may require. At a minimum, the application shall include—

"(i) a description of the activities to be carried out by the Center;

"(ii) a plan for disseminating programs related to the activities carried out by the Center to faculty at the grantee institution and at other institutions;

"(iii) an estimate of the number of faculty, graduate students (if any), and undergraduate students who will be affected by the activities carried out by the Center; and

"(iv) a plan for assessing the effectiveness of the Center at accomplishing the goals described in subparagraph (A)(ii).

"(G) In evaluating the applications submitted under subparagraph (F), the Director shall consider, at a minimum—

"(i) the ability of the applicant to effectively carry out the proposed activities, including the dissemination activities described in subparagraph (C)(ii)(IV); and

"(ii) the extent to which the faculty, staff, and administrators of the applicant institution are committed to improving undergraduate science, technology, engineering, and mathematics education.

"(H) In awarding grants under subparagraph (A)(ii), the Director shall ensure that a wide variety of science, technology, engineering, and mathematics fields and types of institutions of higher education, including 2-year colleges and minority-serving institutions, are covered, and that—

"(i) at least 1 Center is housed at a Doctoral/Research University as defined by the Carnegie Foundation for the Advancement of Teaching; and

"(ii) at least 1 Center is focused on improving undergraduate education in an interdisciplinary area.

"(I) The Director shall convene an annual meeting of the awardees under this paragraph to foster collaboration and to disseminate the results of the Centers and the other activities funded under this paragraph.".

(b) REPORT ON DATA COLLECTION.—Not later than 180 days after the date of enactment of this Act, the Director shall transmit to Congress a report on how the Director is determining whether current grant recipients in the Science, Technology, Engineering, and Mathematics Talent Expansion Program are making satisfactory progress as required by section 8(7)(D)(ii) of the National Science Foundation Authorization Act of 2002 and what funding actions have been taken as a result of the Director's determinations.

SEC. 7026. LABORATORY SCIENCE PILOT PROGRAM.

(a) FINDINGS.—Congress finds the following:

(1) To remain competitive in science and technology in the global economy, the United States must increase the number of students graduating from high school prepared to pursue postsecondary education in science, technology, engineering, and mathematics.

(2) There is broad agreement in the scientific community that learning science requires direct involvement by students in scientific inquiry and that laboratory experience is so integral to the nature of science that it must be included in every science program for every science student.

(3) In America's Lab Report, the National Research Council concluded that the current quality of laboratory experiences is poor for most students and that educators and researchers do not agree on how to define high school science laboratories or on their purpose, hampering the accumulation of research on how to improve laboratories.

(4) The National Research Council found that schools with higher concentrations of non-Asian minorities and schools with higher concentrations of poor students are less likely to have adequate laboratory facilities than other schools.

(5) The Government Accountability Office reported that 49.1 percent of schools where the minority student population is greater than 50.5 percent reported not meeting functional requirements for laboratory science well or at all.

(6) 40 percent of those college students who left the science fields reported some problems related to high school science preparation, including lack of laboratory experience and no introduction to theoretical or to analytical modes of thought.

(7) It is in the national interest for the Federal Government to invest in research and demonstration projects to improve the teaching of laboratory science in the Nation's high schools.

(b) GRANT PROGRAM.—Section 8(8) of the National Science Foundation Authorization Act of 2002 is amended—

(1) by redesignating subparagraphs (A) through (F) as clauses (i) through (vi), respectively;

(2) by inserting "(A)" before "A program of competitive"; and

(3) by adding at the end the following:

"(B) In accordance with subparagraph (A)(v), the Director shall establish a research pilot program designated as 'Partnerships for Access to Laboratory Science' to award grants to partnerships to improve laboratories and provide instrumentation as part of a comprehensive program to enhance the quality of science, technology, engineering, and mathematics instruction at the secondary school level. Grants under this subparagraph may be used for—

"(i) professional development and training for teachers aligned with activities supported under section 2123 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6623);

"(ii) purchase, rental, or leasing of equipment, instrumentation, and other scientific educational materials;

"(iii) development of instructional programs designed to integrate the laboratory experience with classroom instruction and to be consistent with State mathematics and science and, to the extent applicable, technology and engineering, academic achievement standards;

"(iv) training in laboratory safety for school personnel;

"(v) design and implementation of hands-on laboratory experiences to encourage the interest of individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b) in science, technology, engineering, and mathematics and help prepare such individuals to pursue postsecondary studies in these fields; and

"(vi) assessment of the activities funded under this subparagraph.

"(C) Grants may be made under subparagraph (B) only to a partnership—

"(i) for a project that includes significant teacher preparation and professional development components; or

"(ii) that establishes that appropriate teacher preparation and professional development is being addressed, or has been addressed, through other means.

"(D) Grants awarded under subparagraph (B) shall be to a partnership that—

"(i) includes a 2-year or 4-year degree granting institution of higher education;

"(ii) includes a high need local educational agency (as defined in section 201 of the Higher Education Act of 1965);

"(iii) includes a business or eligible nonprofit organization; and

"(iv) may include a State educational agency, other public agency, National Laboratory, or community-based organization.

"(E) The Federal share of the cost of activities carried out using amounts from a grant under subparagraph (B) shall not exceed 40 percent.

"(F) The Director shall require grant recipients under subparagraph (B) to submit a report to the Director on the results of the project supported by the grant.".

(c) REPORT.—The Director shall evaluate the effectiveness of activities carried out under the research pilot projects funded by the grant program established pursuant to the amendment made by subsection (b) in improving student achievement in science, technology, engineering, and mathematics. A report documenting the results of that evaluation shall be submitted to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation and the

Committee on Health, Education, Labor, and Pensions of the Senate not later than 5 years after the date of enactment of this Act. The report shall identify best practices and materials developed and demonstrated by grant awardees.

(d) SUNSET.—The provisions of this section shall cease to have force or effect on the last day of fiscal year 2010.

(e) AUTHORIZATION OF APPROPRIATIONS.—From the amounts authorized under subsections (a)(2)(B), (b)(2)(B), and (c)(2)(B) of section 7002, there are authorized to be appropriated to carry out this section and the amendments made by this section $5,000,000 for fiscal year 2008, and such sums as may be necessary for each of the 2 succeeding fiscal years.

SEC. 7027. STUDY ON LABORATORY EQUIPMENT DONATIONS FOR SCHOOLS.

Not later than 2 years after the date of enactment of this Act, the Director shall transmit a report to Congress examining the extent to which institutions of higher education and entities in the private sector are donating used laboratory equipment to elementary schools and secondary schools. The Director, in consultation with the Secretary of Education, shall survey institutions of higher education and entities in the private sector to determine—

(1) how often, how much, and what type of equipment is donated;

(2) what criteria or guidelines the institutions and entities are using to determine what types of equipment can be donated, what condition the equipment should be in, and which schools receive the equipment;

(3) whether the institutions and entities provide any support to, or follow-up with the schools; and

(4) how appropriate donations can be encouraged.

SEC. 7028. MATHEMATICS AND SCIENCE EDUCATION PARTNERSHIPS AMENDMENTS.

Section 9 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n) is amended—

(1) in subsection (a)(2)(A), by striking "a State educational agency" and inserting "the department, college, or program of education at an institution of higher education, a State educational agency,";

(2) by striking subparagraph (B) of subsection (a)(3) and inserting the following:

"(B) offering professional development programs, including—

"(i) teacher institutes for the 21st century, as described in paragraph (10); and

"(ii) academic year institutes or workshops that—

"(I) are designed to strengthen the capabilities of mathematics and science teachers; and

"(II) may include professional development activities to prepare mathematics and science teachers to teach challenging mathematics, science, and technology college-preparatory courses;";

(3) in subsection (a)(3)(C)—

(A) by inserting "and laboratory experiences" after "technology"; and

(B) by inserting "and laboratory" after "provide technical";

(4) in subsection (a)(3)(I), by inserting "including the use of induction programs, as defined in section 6113(h) of the America COMPETES Act, for teachers in their first 2 years of teaching," after "and science,";

(5) by striking subparagraph (K) of section (a)(3) and inserting the following:

"(K) developing science, technology, engineering, and mathematics educational programs and materials and conducting science, technology, engineering, and mathematics enrichment programs for students, including after-school programs and summer programs, with an emphasis on including and serving students described in subsection (b)(2)(G);";

(6) in subsection (a), by adding at the end the following:

"(8) MENTORS FOR TEACHERS AND STUDENTS OF CHALLENGING COURSES.—Partnerships carrying out activities to prepare mathematics and science teachers to teach challenging mathematics, science, and technology college-preparatory courses in accordance with paragraph (3)(B) shall encourage companies employing scientists, technologists, engineers, or mathematicians to provide mentors to teachers and students and provide for the coordination of such mentoring activities.

"(9) INNOVATION.—Activities carried out in accordance with paragraph (3)(H) may include the development and dissemination of curriculum tools that will help foster inventiveness and innovation.";

(7) in subsection (b)(2)—

(A) by redesignating subparagraphs (E) and (F) as subparagraphs (F) and (G), respectively; and

(B) by inserting after subparagraph (D) the following:

"(E) the extent to which the evaluation described in paragraph (1)(E) will be independent and based on objective measures;";

(8) by striking paragraph (2) of subsection (c) and inserting the following:

"(2) REPORT ON EVALUATIONS.—Not later than 4 years after the date of enactment of the America COMPETES Act, the Director shall transmit a report summarizing the evaluations required under subsection (b)(1)(E) of grants received under this program and describing any changes to the program recommended as a result of these evaluations to the Committee on Science and Technology and the Committee on Education and Labor of the House of Representatives and to the Committee on Commerce, Science, and Transportation and the Committee on Health, Education, Labor, and Pensions of the Senate. Such report shall be made widely available to the public."; and

(9) by adding at the end the following:

"(d) DEFINITIONS.—In this section—

"(1) the term 'mathematics and science teacher' means a science, technology, engineering, or mathematics teacher at the elementary school or secondary school level; and

"(2) the term 'science', in the context of elementary and secondary education, includes technology and pre-engineering.".

SEC. 7029. NATIONAL SCIENCE FOUNDATION TEACHER INSTITUTES FOR THE 21ST CENTURY.

Section 9(a) of the National Science Foundation Authorization Act of 2002 (as amended by section 7028) (42 U.S.C. 1862n(a)) is further amended by adding at the end the following:

"(10) TEACHER INSTITUTES FOR THE 21ST CENTURY.—

"(A) IN GENERAL.—Teacher institutes for the 21st century carried out in accordance with paragraph (3)(B) shall—

"(i) be carried out in conjunction with a school served by the local educational agency in the partnership;

"(ii) be science, technology, engineering, and mathematics focused institutes that provide professional development to elementary school and secondary school teachers;

"(iii) serve teachers who—

"(I) are considered highly qualified (as defined in section 9101 of the Elementary and Secondary Education Act of 1965);

"(II) teach high-need subjects in science, technology, engineering, or mathematics; and

"(III) teach in high-need schools (as described in section 1114(a)(1) of the Elementary and Secondary Education Act of 1965);

"(iv) focus on the priorities developed by the Director in consultation with a broad group of relevant educational organizations;

"(v) be content-based and build on school year curricula that are experiment-oriented, content-based, and grounded in current research;

"(vi) ensure that the pedagogy component is designed around specific strategies that are relevant to teaching the subject and content on which teachers are being trained, which may include training teachers in the essential components of reading instruction for adolescents in order to improve student reading skills within the subject areas of science, technology, engineering, and mathematics;

"(vii) be a multiyear program that is conducted for a period of not less than 2 weeks per year;

"(viii) provide for direct interaction between participants in and faculty of the teacher institute;

"(ix) have a component that includes the use of the Internet;

"(x) provide for followup training in the classroom during the academic year for a period of not less than 3 days, which may or may not be consecutive, for par-

ticipants in the teacher institute, except that for teachers in rural local educational agencies, the followup training may be provided through the Internet;

"(xi) provide teachers participating in the teacher institute with travel expense reimbursement and classroom materials related to the teacher institute, and may include providing stipends as necessary; and

"(xii) establish a mechanism to provide supplemental support during the academic year for teacher institute participants to apply the knowledge and skills gained at the teacher institute.

"(B) OPTIONAL MEMBERS OF THE PARTNERSHIP.—In addition to the partnership requirement under paragraph (2), an institution of higher education or eligible nonprofit organization (or consortium) desiring a grant for a teacher institute for the 21st century may also partner with a teacher organization, museum, or educational partnership organization.".

SEC. 7030. ROBERT NOYCE TEACHER SCHOLARSHIP PROGRAM.

Section 10 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n-1) is amended to read as follows:

"SEC. 10. ROBERT NOYCE TEACHER SCHOLARSHIP PROGRAM

"(a) SCHOLARSHIP PROGRAM.—

"(1) IN GENERAL.—The Director shall carry out a program to award grants to eligible entities to recruit and train mathematics and science teachers and to provide scholarships and stipends to individuals participating in the program. Such program shall be known as the 'Robert Noyce Teacher Scholarship Program'.

"(2) MERIT REVIEW.—Grants shall be provided under this section on a competitive, merit-reviewed basis.

"(3) USE OF GRANTS.—A grant provided under this section shall be used by the eligible entity—

"(A) to develop and implement a program to recruit and prepare undergraduate students majoring in science, technology, engineering, and mathematics at the eligible entity (and participating institutions of higher education of the consortium, if applicable) to become qualified as mathematics and science teachers, through—

"(i) administering scholarships in accordance with subsection (c);

"(ii) offering academic courses and early clinical teaching experiences designed to prepare students participating in the program to teach in elementary schools and secondary schools, including such preparation as is necessary to meet requirements for teacher certification or licensing;

"(iii) offering programs to students participating in the program, both before and after the students receive their baccalaureate degree, to enable the students to become better mathematics and science teachers, to fulfill the service requirements of this section,

and to exchange ideas with others in the students' fields; and

"(iv) providing summer internships for freshman and sophomore students participating in the program; or

"(B) to develop and implement a program to recruit and prepare science, technology, engineering, or mathematics professionals to become qualified as mathematics and science teachers, through—

"(i) administering stipends in accordance with subsection (d);

"(ii) offering academic courses and clinical teaching experiences designed to prepare stipend recipients to teach in elementary schools and secondary schools served by a high need local educational agency, including such preparation as is necessary to meet requirements for teacher certification or licensing; and

"(iii) offering programs to stipend recipients, both during and after matriculation in the program for which the stipend is received, to enable recipients to become better mathematics and science teachers, to fulfill the service requirements of this section, and to exchange ideas with others in the students' fields.

"(4) ELIGIBILITY REQUIREMENT.—

"(A) IN GENERAL.—To be eligible to receive a grant under this section, an eligible entity shall ensure that specific faculty members and staff from the science, technology, engineering, and mathematics departments and specific education faculty of the eligible entity (and participating institutions of higher education of the consortium, if applicable) are designated to carry out the development and implementation of the program.

"(B) INCLUSION OF MASTER TEACHERS.—An eligible entity (and participating institutions of higher education of the consortium, if applicable) receiving a grant under this section may also include master teachers in the development of the pedagogical content of the program and in the supervision of students participating in the program in their clinical teaching experiences.

"(C) ACTIVE PARTICIPANTS.—No eligible entity (or participating institution of higher education of the consortium, if applicable) shall be eligible for a grant under this section unless faculty from the science, technology, engineering, and mathematics departments of the eligible entity (and participating institutions of higher education of the consortium, if applicable) are active participants in the program.

"(5) AWARDS.—In awarding grants under this section, the Director shall ensure that the eligible entities (and participating institutions of higher education of the consortia, if applicable) represent a variety of types of institutions of higher education. In support of this goal, the Director shall broadly disseminate information about when and how to apply for grants under this section, including by conducting outreach to—

"(A) historically Black colleges and universities that are part B institutions, as defined in section 322(2) of the Higher Education Act of 1965 (20 U.S.C. 1061(2)); and

"(B) minority institutions, as defined in section 365(3) of the Higher Education Act of 1965 (20 U.S.C. 1067k(3)).

"(6) SUPPLEMENT NOT SUPPLANT.—Grant funds provided under this section shall be used to supplement, and not supplant, other Federal or State funds available for the type of activities supported by the grant.

"(b) SELECTION PROCESS.—

"(1) APPLICATION.—An eligible entity seeking funding under this section shall submit an application to the Director at such time, in such manner, and containing such information as the Director may require. The application shall include, at a minimum—

"(A) in the case of an applicant that is submitting an application on behalf of a consortium of institutions of higher education, a description of the participating institutions of higher education and the roles and responsibilities of each such institution;

"(B) a description of the program that the applicant intends to operate, including the number of scholarships and summer internships or the size and number of stipends the applicant intends to award, the type of activities proposed for the recruitment of students to the program, and the selection process that will be used in awarding the scholarships or stipends;

"(C) evidence that the applicant has the capability to administer the program in accordance with the provisions of this section, which may include a description of any existing programs at the applicant eligible entity (and participating institutions of higher education of the consortium, if applicable) that are targeted to the education of mathematics and science teachers and the number of teachers graduated annually from such programs;

"(D) a description of the academic courses and clinical teaching experiences required under subparagraphs (A)(ii) and (B)(ii) of subsection (a)(3), as applicable, including—

"(i) a description of the undergraduate program that will enable a student to graduate within 5 years with a major in science, technology, engineering, or mathematics and to obtain teacher certification or licensing;

"(ii) a description of the clinical teaching experiences proposed; and

"(iii) evidence of agreements between the applicant and the schools or local educational agencies that are identified as the locations at which clinical teaching experiences will occur;

"(E) a description of the programs required under subparagraphs (A)(iii) and (B)(iii) of subsection (a)(3), including activities to assist new teachers in fulfilling the teachers' service requirements under this section;

"(F) an identification of the applicant eligible entity's science, technology, engineering, and mathematics faculty and its education faculty (and such faculty of participating institutions of higher education of the consortium, if applicable) who will carry out the development and implementation of the program as required under subsection (a)(4); and

"(G) a description of the process the applicant will use to fulfill the requirements of subsection (f).

"(2) REVIEW OF APPLICATIONS.—In evaluating the applications submitted under paragraph (1), the Director shall consider, at a minimum—

"(A) the ability of the applicant (and the participating institutions of higher education of the consortium, if applicable) to effectively carry out the program;

"(B) the extent to which the applicant's science, technology, engineering, and mathematics faculty and its education faculty (and such faculty of participating institutions of higher education of the consortium, if applicable) have worked or will work collaboratively to design new or revised curricula that recognize the specialized pedagogy required to teach science, technology, engineering, and mathematics effectively in elementary schools and secondary schools;

"(C) the extent to which the applicant (and the participating institutions of higher education of the consortium, if applicable) is committed to making the program a central organizational focus;

"(D) the degree to which the proposed programming will enable scholarship or stipend recipients to become successful mathematics and science teachers;

"(E) the number and academic qualifications of the students who will be served by the program; and

"(F) the ability of the applicant (and the participating institutions of higher education of the consortium, if applicable) to recruit students who would otherwise not pursue a career in teaching in elementary schools or secondary schools and students who are individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b).

"(c) SCHOLARSHIP REQUIREMENTS.—

"(1) IN GENERAL.—Scholarships under this section shall be available only to students who—

"(A) are majoring in science, technology, engineering, or mathematics; and

"(B) have attained at least junior status in a baccalaureate degree program.

"(2) SELECTION.—Individuals shall be selected to receive scholarships primarily on the basis of academic merit, with consideration given to financial need and to the goal of promoting the participation of individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b).

"(3) AMOUNT.—The Director shall establish for each year the amount to be awarded for scholarships under this section for that year, which shall be not less than $10,000 per year, except that no individual shall receive for any year more than the cost of attendance at that individual's institution. Full-time students may receive annual scholarships through the completion of a baccalaureate degree program, not to exceed a maximum of 3 years. Part-time students may receive scholarships that are prorated according to such students' enrollment status, not to exceed 6 years of scholarship support.

"(4) SERVICE OBLIGATION.—If an individual receives a scholarship under this section, such individual shall be required to complete, within 8 years after graduation from the baccalaureate degree program for which the scholarship was awarded, 2 years of service as a mathematics or science teacher for each full scholarship award received, with a maximum service requirement of 6 years. Service required under this paragraph shall be performed in a high need local educational agency.

"(d) STIPENDS.—

"(1) IN GENERAL.—Stipends under this section shall be available only to science, technology, engineering, or mathematics professionals who, while receiving the stipend, are enrolled in a program established under subsection (a)(3)(B).

"(2) SELECTION.—Individuals shall be selected to receive stipends under this section primarily on the basis of academic merit and professional achievement, with consideration given to financial need and to the goal of promoting the participation of individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b).

"(3) AMOUNT AND DURATION.—Stipends under this section shall be not less than $10,000 per year, except that no individual shall receive for any year more than the cost of attendance at such individual's institution. Individuals may receive a maximum of 1 year of stipend support, except that if an individual is enrolled in a part-time program, such amount shall be prorated according to the length of the program.

"(4) SERVICE OBLIGATION.—If an individual receives a stipend under this section, such individual shall be required to complete, within 4 years after graduation from the program for which the stipend was awarded, 2 years of service as a mathematics or science teacher. Service required under this paragraph shall be performed in a high need local educational agency.

"(e) CONDITIONS OF SUPPORT.—As a condition of acceptance of a scholarship or stipend under this section, a recipient of a scholarship or stipend shall enter into an agreement with the eligible entity—

"(1) accepting the terms of the scholarship or stipend pursuant to subsection (c) or subsection (d);

"(2) agreeing to provide the eligible entity with annual certification of employment and up-to-date contact information

and to participate in surveys conducted by the eligible entity as part of an ongoing assessment program; and

"(3) establishing that if the service obligation required under this section is not completed, all or a portion of the scholarship or stipend received under this section shall be repaid in accordance with subsection (g).

"(f) COLLECTION FOR NONCOMPLIANCE.—

"(1) MONITORING COMPLIANCE.—An eligible entity receiving a grant under this section shall, as a condition of participating in the program, enter into an agreement with the Director to monitor the compliance of scholarship or stipend recipients with their respective service requirements.

"(2) COLLECTION OF REPAYMENT.—

"(A) IN GENERAL.—In the event that a scholarship or stipend recipient is required to repay the scholarship or stipend under subsection (g), the eligible entity shall—

"(i) be responsible for determining the repayment amounts and for notifying the recipient and the Director of the amount owed; and

"(ii) collect such repayment amount within a period of time as determined under the agreement described in paragraph (1), or the repayment amount shall be treated as a loan in accordance with subparagraph (C).

"(B) RETURNED TO TREASURY.—Except as provided in subparagraph (C), any such repayment shall be returned to the Treasury of the United States.

"(C) RETAIN PERCENTAGE.—An eligible entity may retain a percentage of any repayment the eligible entity collects to defray administrative costs associated with the collection. The Director shall establish a single, fixed percentage that will apply to all eligible entities.

"(g) FAILURE TO COMPLETE SERVICE OBLIGATION.—

"(1) GENERAL RULE.—If an individual who has received a scholarship or stipend under this section—

"(A) fails to maintain an acceptable level of academic standing in the educational institution in which the individual is enrolled, as determined by the Director;

"(B) is dismissed from such educational institution for disciplinary reasons;

"(C) withdraws from the program for which the award was made before the completion of such program;

"(D) declares that the individual does not intend to fulfill the service obligation under this section; or

"(E) fails to fulfill the service obligation of the individual under this section,

such individual shall be liable to the United States as provided in paragraph (2).

"(2) AMOUNT OF REPAYMENT.—

"(A) LESS THAN ONE YEAR OF SERVICE.—If a circumstance described in paragraph (1) occurs before the completion of 1 year of a service obligation under this section, the total amount of awards received by the individual under this section shall be repaid or such amount shall be

treated as a loan to be repaid in accordance with subparagraph (C).

"(B) MORE THAN ONE YEAR OF SERVICE.—If a circumstance described in subparagraph (D) or (E) of paragraph (1) occurs after the completion of 1 year of a service obligation under this section—

"(i) for a scholarship recipient, the total amount of scholarship awards received by the individual under this section, reduced by the ratio of the number of years of service completed divided by the number of years of service required, shall be repaid or such amount shall be treated as a loan to be repaid in accordance with subparagraph (C); and

"(ii) for a stipend recipient, one-half of the total amount of stipends received by the individual under this section shall be repaid or such amount shall be treated as a loan to be repaid in accordance with subparagraph (C).

"(C) REPAYMENTS.—The loans described under subparagraphs (A) and (B) shall be payable to the Federal Government, consistent with the provisions of part B or D of title IV of the Higher Education Act of 1965, and shall be subject to repayment in accordance with terms and conditions specified by the Director (in consultation with the Secretary of Education) in regulations promulgated to carry out this paragraph.

"(3) EXCEPTIONS.—The Director may provide for the partial or total waiver or suspension of any service or payment obligation by an individual under this section whenever compliance by the individual with the obligation is impossible or would involve extreme hardship to the individual, or if enforcement of such obligation with respect to the individual would be unconscionable.

"(h) DATA COLLECTION.—An eligible entity receiving a grant under this section shall supply to the Director any relevant statistical and demographic data on scholarship and stipend recipients the Director may request, including information on employment required under this section.

"(i) DEFINITIONS.—In this section—

"(1) the term 'cost of attendance' has the meaning given such term in section 472 of the Higher Education Act of 1965 (20 U.S.C. 1087ll);

"(2) the term 'eligible entity' means—

"(A) an institution of higher education; or

"(B) an institution of higher education that receives grant funds on behalf of a consortium of institutions of higher education;

"(3) the term 'fellowship' means an award to an individual under section 10A;

"(4) the term 'high need local educational agency' has the meaning given such term in section 201 of the Higher Education Act of 1965 (20 U.S.C. 1021);

"(5) the term 'mathematics and science teacher' means a science, technology, engineering, or mathematics teacher at the elementary school or secondary school level;

"(6) the term 'scholarship' means an award under subsection (c);

"(7) the term 'science, technology, engineering, or mathematics professional' means a person who holds a baccalaureate, master's, or doctoral degree in science, technology, engineering, or mathematics, and is working in or had a career in such field or a related area; and

"(8) the term 'stipend' means an award under subsection (d).

"(j) MATHEMATICS AND SCIENCE SCHOLARSHIP GIFT FUND.—In accordance with section 11(f) of the National Science Foundation Act of 1950 (42 U.S.C. 1870(f)), the Director is authorized to accept donations from the private sector to supplement but not supplant scholarships, stipends, internships, or fellowships associated with programs under this section or section 10A.

"(k) ASSESSMENT OF TEACHER SERVICE AND RETENTION.—Not later than 4 years after the date of enactment of the America COMPETES Act, the Director shall transmit to the Committee on Health, Education, Labor, and Pensions of the Senate and the Committee on Science and Technology of the House of Representatives a report on the effectiveness of the programs carried out under this section and section 10A. The report shall include the proportion of individuals receiving scholarships, stipends, or fellowships under the program who—

"(1) fulfill the individuals' service obligation required under this section or section 10A;

"(2) remain in the teaching profession beyond the individuals' service obligation; and

"(3) remain in the teaching profession in a high need local educational agency beyond the individuals' service obligation.

"(l) EVALUATION.—Not less than 2 years after the date of enactment of the America COMPETES Act, the Director, in consultation with the Secretary of Education, shall conduct an evaluation to determine whether the scholarships, stipends, and fellowships authorized under this section and section 10A have been effective in increasing the numbers of high-quality mathematics and science teachers teaching in high need local educational agencies and whether there continue to exist significant shortages of such teachers in high need local educational agencies.

"SEC. 10A. NATIONAL SCIENCE FOUNDATION TEACHING FELLOWSHIPS AND MASTER TEACHING FELLOWSHIPS

"(a) IN GENERAL.—

"(1) GRANTS.—

"(A) IN GENERAL.—As part of the Robert Noyce Teacher Scholarship Program established under section 10, the Director shall establish a separate program to award grants to eligible entities to enable such entities to administer fellowships in accordance with this section.

"(B) DEFINITIONS.—The terms used in this section have the meanings given the terms in section 10.

"(2) FELLOWSHIPS.—Fellowships under this section shall be available only to—

"(A) science, technology, engineering, or mathematics professionals, who shall be referred to as 'National Science Foundation Teaching Fellows' and who, in the first year of the fellowship, are enrolled in a master's degree program leading to teacher certification or licensing; and

"(B) mathematics and science teachers, who shall be referred to as 'National Science Foundation Master Teaching Fellows' and who possess a master's degree in their field.

"(b) ELIGIBILITY.—In order to be eligible to receive a grant under this section, an eligible entity shall enter into a partnership that shall include—

"(1) a department within an institution of higher education participating in the partnership that provides an advanced program of study in mathematics and science;

"(2)(A) a school or department within an institution of higher education participating in the partnership that provides a teacher preparation program; or

"(B) a 2-year institution of higher education that has a teacher preparation offering or a dual enrollment program with an institution of higher education participating in the partnership;

"(3) not less than 1 high need local educational agency and a public school or a consortium of public schools served by the agency; and

"(4) 1 or more nonprofit organizations that have a demonstrated record of capacity to provide expertise or support to meet the purposes of this section.

"(c) USE OF GRANTS.—Grants awarded under this section shall be used by the eligible entity (and participating institutions of higher education of the consortium, if applicable) to develop and implement a program for National Science Foundation Teaching Fellows or National Science Foundation Master Teaching Fellows, through—

"(1) administering fellowships in accordance with this section, including providing the teaching fellowship salary supplements described in subsection (f);

"(2) in the case of National Science Foundation Teaching Fellowships—

"(A) offering academic courses and clinical teaching experiences leading to a master's degree and designed to prepare individuals to teach in elementary schools and secondary schools, including such preparation as is necessary to meet the requirements for certification or licensing; and

"(B) offering programs both during and after matriculation in the program for which the fellowship is received to enable fellows to become highly effective mathematics and science teachers, including mentoring, training, induction, and professional development activities, to fulfill the service requirements of this section, including the requirements of subsection (e), and to exchange ideas with others in their fields; and

"(3) in the case of National Science Foundation Master Teaching Fellowships—

"(A) offering academic courses and leadership training to prepare individuals to become master teachers in elementary schools and secondary schools; and

"(B) offering programs both during and after matriculation in the program for which the fellowship is received to enable fellows to become highly effective mathematics and science teachers, including mentoring, training, induction, and professional development activities, to fulfill the service requirements of this section, including the requirements of subsection (e), and to exchange ideas with others in their fields.

"(d) SELECTION PROCESS.—

"(1) MERIT REVIEW.—Grants shall be awarded under this section on a competitive, merit-reviewed basis.

"(2) APPLICATIONS.—An eligible entity desiring a grant under this section shall submit an application to the Director at such time, in such manner, and containing such information as the Director may require. The application shall include, at a minimum—

"(A) in the case of an applicant that is submitting an application on behalf of a consortium of institutions of higher education, a description of the participating institutions of higher education and the roles and responsibilities of each such institution;

"(B) a description of the program that the applicant intends to operate, including the number of fellowships the applicant intends to award, the type of activities proposed for the recruitment of students to the program, and the amount of the teaching fellowship salary supplements to be provided in accordance with subsection (f);

"(C) evidence that the applicant has the capability to administer the program in accordance with the provisions of this section, which may include a description of any existing programs at the applicant eligible entity (and participating institutions of higher education of the consortium, if applicable) that are targeted to the education of mathematics and science teachers and the number of teachers graduated annually from such programs;

"(D) in the case of National Science Foundation Teaching Fellowships, a description of—

"(i) the selection process that will be used in awarding fellowships, including a description of the rigorous measures to be used, including the rigorous, nationally recognized assessments to be used, in order to determine whether individuals applying for fellowships have advanced content knowledge of science, technology, engineering, or mathematics;

"(ii) the academic courses and clinical teaching experiences described in subsection (c)(2)(A), including—

"(I) a description of an educational program that will enable a student to obtain a master's de-

gree and teacher certification or licensing within 1 year; and

"(II) evidence of agreements between the applicant and the schools or local educational agencies that are identified as the locations at which clinical teaching experiences will occur;

"(iii) a description of the programs described in subsection (c)(2)(B), including activities to assist individuals in fulfilling their service requirements under this section;

"(E) evidence that the eligible entity will provide the teaching supplements required under subsection (f); and

"(F) a description of the process the applicant will use to fulfill the requirements of section 10(f).

"(3) CRITERIA.—In evaluating the applications submitted under paragraph (2), the Director shall consider, at a minimum—

"(A) the ability of the applicant (and participating institutions of higher education of the consortium, if applicable) to effectively carry out the program and to meet the requirements of subsection (f);

"(B) the extent to which the mathematics, science, or engineering faculty and the education faculty at the eligible entity (and participating institutions of higher education of the consortium, if applicable) have worked or will work collaboratively to design new or revised curricula that recognizes the specialized pedagogy required to teach science, technology, engineering, and mathematics effectively in elementary schools and secondary schools;

"(C) the extent to which the applicant (and participating institutions of higher education of the consortium, if applicable) is committed to making the program a central organizational focus;

"(D) the degree to which the proposed programming will enable participants to become highly effective mathematics and science teachers and prepare such participants to assume leadership roles in their schools, in addition to their regular classroom duties, including serving as mentor or master teachers, developing curriculum, and assisting in the development and implementation of professional development activities;

"(E) the number and quality of the individuals that will be served by the program; and

"(F) in the case of the National Science Foundation Teaching Fellowship, the ability of the applicant (and participating institutions of higher education of the consortium, if applicable) to recruit individuals who would otherwise not pursue a career in teaching and individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1855a or 1855b).

"(4) SELECTION OF FELLOWS.—

"(A) IN GENERAL.—Individuals shall be selected to receive fellowships under this section primarily on the basis of—

"(i) professional achievement;

"(ii) academic merit;

"(iii) content knowledge of science, technology, engineering, or mathematics, as demonstrated by their performance on an assessment in accordance with paragraph (2)(D)(i); and

"(iv) in the case of National Science Foundation Master Teaching Fellows, demonstrated success in improving student academic achievement in science, technology, engineering, or mathematics.

"(B) PROMOTING PARTICIPATION OF CERTAIN INDIVIDUALS.—Among individuals demonstrating equivalent qualifications, consideration may be given to the goal of promoting the participation of individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b).

"(e) DUTIES OF NATIONAL SCIENCE FOUNDATION TEACHING FELLOWS AND MASTER TEACHING FELLOWS.—A National Science Foundation Teaching Fellow or a National Science Foundation Master Teaching Fellow, while fulfilling the service obligation under subsection (g) and in addition to regular classroom activities, shall take on a leadership role within the school or local educational agency in which the fellow is employed, as defined by the partnership according to such fellow's expertise, including serving as a mentor or master teacher, developing curricula, and assisting in the development and implementation of professional development activities.

"(f) TEACHING FELLOWSHIP SALARY SUPPLEMENTS.—

"(1) IN GENERAL.—An eligible entity receiving a grant under this section shall provide salary supplements to individuals who participate in the program under this section during the period of their service obligation under subsection (g). A local educational agency through which the service obligation is fulfilled shall agree not to reduce the base salary normally paid to an individual solely because such individual receives a salary supplement under this subsection.

"(2) AMOUNT AND DURATION.—

"(A) AMOUNT.—Salary supplements provided under paragraph (1) shall be not less than $10,000 per year, except that, in the case of a National Science Foundation Teaching Fellow, while enrolled in the master's degree program as described in subsection (c)(2)(A), such fellow shall receive not more than the cost of attendance at such fellow's institution.

"(B) SUPPORT WHILE ENROLLED IN MASTER'S DEGREE PROGRAM.—A National Science Foundation Teaching Fellow may receive a maximum of 1 year of fellowship support while enrolled in a master's degree program as described in subsection (c)(2)(A), except that if such fellow is enrolled in a part-time program, such amount shall be prorated according to the length of the program.

"(C) DURATION OF SUPPORT.—An eligible entity receiving a grant under this section shall provide teaching fel-

lowship salary supplements through the period of the fellow's service obligation under subsection (g).

"(g) SERVICE OBLIGATION.—An individual awarded a fellowship under this section shall serve as a mathematics or science teacher in an elementary school or secondary school served by a high need local educational agency for—

"(1) in the case of a National Science Foundation Teaching Fellow, 4 years, to be fulfilled within 6 years of completing the master's program described in subsection (c)(2)(A); and

"(2) in the case of a National Science Foundation Master Teaching Fellow, 5 years, to be fulfilled within 7 years of the start of participation in the program under subsection (c)(3).

"(h) MATCHING REQUIREMENT.—

"(1) IN GENERAL.—An eligible entity receiving a grant under this section shall provide, from non-Federal sources, an amount equal to 50 percent of the amount of the grant (which may be provided in cash or in-kind) to carry out the activities supported by the grant.

"(2) WAIVER.—The Director may waive all or part of the matching requirement described in paragraph (1) for any fiscal year for an eligible entity receiving a grant under this section, if the Director determines that applying the matching requirement would result in serious hardship or inability to carry out the authorized activities described in this section.

"(i) CONDITIONS OF SUPPORT; COLLECTION FOR NONCOMPLIANCE; FAILURE TO COMPLETE SERVICE OBLIGATION; DATA COLLECTION.—

"(1) IN GENERAL.—Except as provided in paragraph (2), subsections (e), (f), (g), and (h) of section 10 shall apply to eligible entities and recipients of fellowships under this section, as applicable, in the same manner as such subsections apply to eligible entities and recipients of scholarships and stipends under section 10, as applicable.

"(2) AMOUNT OF REPAYMENT.—If a circumstance described in subparagraph (D) or (E) of section 10(g)(1) occurs after the completion of 1 year of a service obligation under this section—

"(A) for a National Science Foundation Teaching Fellow, the total amount of fellowship award received by the individual under this section while enrolled in the master's degree program, reduced by one-fourth of the total amount for each year of service completed, plus one-half of the total teaching fellowship salary supplements received by such individual under this section, shall be repaid or such amount shall be treated as a loan to be repaid in accordance with section 10(g)(1)(C); and

"(B) for a National Science Foundation Master Teaching Fellow, the total amount of teaching fellowship salary supplements received by the individual under this section, reduced by one-half, shall be repaid or such amount shall be treated as a loan to be repaid in accordance with section 10(g)(1)(C).".

SEC. 7031. ENCOURAGING PARTICIPATION.

(a) COMMUNITY COLLEGE PROGRAM.—Section 3 of the Scientific and Advanced-Technology Act of 1992 (42 U.S.C. 1862i) is amended—

(1) in subsection (a)(3)—

(A) in subparagraph (A), by striking "and" after the semicolon;

(B) in subparagraph (B), by striking the semicolon and inserting "; and"; and

(C) by adding at the end the following:

"(C) encourage participation of individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b);"; and

(2) in subsection (c), by adding at the end the following:

"(3) MENTOR TRAINING GRANTS.—The Director shall—

"(A) establish a program to encourage and make grants available to institutions of higher education that award associate degrees to recruit and train individuals from the fields of science, technology, engineering, and mathematics to mentor students who are described in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b) in order to assist those students in identifying, qualifying for, and entering higher-paying technical jobs in those fields; and

"(B) make grants available to associate-degree-granting colleges to carry out the program identified in subsection (A).".

[Subsection (b) of section 7031 of Public Law 110-69 was repealed by section 204(a)(3)(B) of Public Law 114-329.]

SEC. 7032. NATIONAL ACADEMY OF SCIENCES REPORT ON DIVERSITY IN SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS FIELDS.

(a) IN GENERAL.—The Director shall enter into an arrangement with the National Academy of Sciences for a report, to be transmitted to the Congress not later than 1 year after the date of enactment of this Act, about barriers to increasing the number of underrepresented minorities in science, technology, engineering, and mathematics fields and to identify strategies for bringing more underrepresented minorities into the science, technology, engineering, and mathematics workforce.

(b) SPECIFIC REQUIREMENTS.—The Director shall ensure that the report described in subsection (a) addresses—

(1) social and institutional factors that shape the decisions of minority students to commit to education and careers in the science, technology, engineering, and mathematics fields;

(2) specific barriers preventing greater minority student participation in the science, technology, engineering, and mathematics fields;

(3) primary focus points for policy intervention to increase the recruitment and retention of underrepresented minorities in the future workforce of the United States;

(4) programs already underway to increase diversity in the science, technology, engineering, and mathematics fields, and their level of effectiveness;

(5) factors that make such programs effective, and how to expand and improve upon existing programs;

(6) the role of minority-serving institutions in the diversification of the workforce of the United States in these fields and how that role can be supported and strengthened; and

(7) how the public and private sectors can better assist minority students in their efforts to join the workforce of the United States in these fields.

SEC. 7033. [42 U.S.C. 1862o-12] HISPANIC-SERVING INSTITUTIONS UNDERGRADUATE PROGRAM.

(a) IN GENERAL.—The Director shall award grants on a competitive, merit-reviewed basis to Hispanic-serving institutions (as defined in section 502 of the Higher Education Act of 1965 (20 U.S.C. 1101a)) to enhance the quality of undergraduate STEM education at such institutions and to increase the retention and graduation rates of students pursuing associate's or baccalaureate degrees in science, technology, engineering, and mathematics.

(b) PROGRAM COMPONENTS.—Grants awarded under this section shall support—

(1) activities to improve courses and curriculum in science, technology, engineering, and mathematics;

(2) faculty development;

(3) stipends for undergraduate students participating in research; and

(4) other activities consistent with subsection (a), as determined by the Director.

(c) INSTRUMENTATION.—Funding for instrumentation is an allowed use of grants awarded under this section.

SEC. 7034. [42 U.S.C. 1862o-13] PROFESSIONAL SCIENCE MASTER'S DEGREE PROGRAMS.

(a) CLEARINGHOUSE.—

(1) DEVELOPMENT.—The Director shall establish a clearinghouse, in collaboration with 4-year institutions of higher education (including applicable graduate schools and academic departments), and industries and Federal agencies that employ science-trained personnel, to share program elements used in successful professional science master's degree programs and other advanced degree programs related to science, technology, engineering, and mathematics.

(2) AVAILABILITY.—The Director shall make the clearinghouse of program elements developed under paragraph (1) available to institutions of higher education that are developing professional science master's degree programs.

(b) PROGRAMS.—

(1) PROGRAMS AUTHORIZED.—The Director shall award grants to 4-year institutions of higher education to facilitate the institutions' creation or improvement of professional science master's degree programs that may include linkages between institutions of higher education and industries that employ science-trained personnel, with an emphasis on practical training and preparation for the workforce in high-need fields.

(2) APPLICATION.—A 4-year institution of higher education desiring a grant under this section shall submit an application to the Director at such time, in such manner, and accompanied by such information as the Director may require. The application shall include—

(A) a description of the professional science master's degree program that the institution of higher education will implement;

(B) a description of how the professional science master's degree program at the institution of higher education will produce individuals for the workforce in high-need fields;

(C) the amount of funding from non-Federal sources, including from private industries, that the institution of higher education shall use to support the professional science master's degree program; and

(D) an assurance that the institution of higher education shall encourage students in the professional science master's degree program to apply for all forms of Federal assistance available to such students, including applicable graduate fellowships and student financial assistance under titles IV and VII of the Higher Education Act of 1965 (20 U.S.C. 1070 et seq., 1133 et seq.).

(3) PREFERENCES.—The Director shall give preference in making awards to 4-year institutions of higher education seeking Federal funding to create or improve professional science master's degree programs, to those applicants—

(A) located in States with low percentages of citizens with graduate or professional degrees, as determined by the Bureau of the Census, that demonstrate success in meeting the unique needs of the corporate, non-profit, and government communities in the State, as evidenced by providing internships for professional science master's degree students or similar partnership arrangements; or

(B) that secure more than two-thirds of the funding for such professional science master's degree programs from sources other than the Federal Government.

(4) NUMBER OF GRANTS; TIME PERIOD OF GRANTS.—

(A) NUMBER OF GRANTS.—Subject to the availability of appropriated funds, the Director shall award grants under paragraph (1) to a maximum of 200 4-year institutions of higher education.

(B) TIME PERIOD OF GRANTS.—Grants awarded under this section shall be for one 3-year term. Grants may be renewed only once for a maximum of 2 additional years.

(5) EVALUATION AND REPORTS.—

(A) DEVELOPMENT OF PERFORMANCE BENCHMARKS.—Prior to the start of the grant program, the Director, in collaboration with 4-year institutions of higher education (including applicable graduate schools and academic departments), and industries and Federal agencies that employ science-trained personnel, shall develop performance benchmarks to evaluate the pilot programs assisted by grants under this section.

(B) EVALUATION.—For each year of the grant period, the Director, in consultation with 4-year institutions of higher education (including applicable graduate schools and academic departments), and industries and Federal agencies that employ science-trained personnel, shall complete an evaluation of each program assisted by grants under this section. Any program that fails to satisfy the performance benchmarks developed under subparagraph (A) shall not be eligible for further funding.

(C) REPORT.—Not later than 180 days after the completion of an evaluation described in subparagraph (B), the Director shall submit a report to Congress that includes—

(i) the results of the evaluation; and

(ii) recommendations for administrative and legislative action that could optimize the effectiveness of the pilot programs, as the Director determines to be appropriate.

SEC. 7035. SENSE OF CONGRESS ON COMMUNICATIONS TRAINING FOR SCIENTISTS.

(a) SENSE OF CONGRESS.—It is the sense of Congress that institutions of higher education receiving awards under the Integrative Graduate Education and Research Traineeship program of the Foundation should, among the activities supported under these awards, train graduate students in the communication of the substance and importance of their research to nonscientist audiences.

(b) REPORT TO CONGRESS.—Not later than 3 years after the date of enactment of this Act, the Director shall transmit a report to the Committee on Science and Technology of the House of Representatives and to the Committee on Commerce, Science, and Transportation and the Committee on Health, Education, Labor, and Pensions of the Senate, describing the training programs described in subsection (a) provided to graduate students who participated in the Integrative Graduate Education and Research Traineeship program. The report shall include data on the number of graduate students trained and a description of the types of activities funded.

SEC. 7036. [42 U.S.C. 1862o-14] MAJOR RESEARCH INSTRUMENTATION.

(a) AWARD AMOUNT.—The minimum amount of an award under the Major Research Instrumentation program shall be $100,000. The maximum amount of an award under the program shall be $4,000,000 except if the total amount appropriated for the program for a fiscal year exceeds $125,000,000, in which case the maximum amount of an award shall be $6,000,000.

(b) USE OF FUNDS.—In addition to the acquisition of instrumentation and equipment, funds made available by awards under the Major Research Instrumentation program may be used to support the operations and maintenance of such instrumentation and equipment.

(c) COST SHARING.—

(1) IN GENERAL.—An institution of higher education receiving an award under the Major Research Instrumentation program shall provide at least 30 percent of the cost from private or non-Federal sources.

(2) EXCEPTIONS.—Institutions of higher education that are not Ph.D.-granting institutions are exempt from the cost sharing requirement in paragraph (1), and the Director may reduce or waive the cost sharing requirement for—

(A) institutions—

(i) that are not ranked among the top 100 institutions receiving Federal research and development funding, as documented by the statistical data published by the Foundation; and

(ii) for which the proposed project will make a substantial improvement in the institution's capabilities to conduct leading edge research, to provide research experiences for undergraduate students using leading edge facilities, and to broaden the participation in science and engineering research by individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b); and

(B) consortia of institutions of higher education that include at least one institution that is not a Ph.D.-granting institution.

SEC. 7037. [42 U.S.C. 1862o-15] LIMIT ON PROPOSALS.

(a) POLICY.—For programs supported by the Foundation that require as part of the selection process for awards the submission of preproposals and that also limit the number of preproposals that may be submitted by an institution, the Director shall allow the subsequent submission of a full proposal based on each preproposal that is determined to have merit following the Foundation's merit review process.

(b) REVIEW AND ASSESSMENT OF POLICIES.—The Board shall review and assess the effects on institutions of higher education of the policies of the Foundation regarding the imposition of limitations on the number of proposals that may be submitted by a single institution for programs supported by the Foundation. The Board shall determine whether current policies are well justified and appropriate for the types of programs that limit the number of proposal submissions. Not later than 1 year after the date of enactment of this Act, the Board shall summarize the Board's findings and any recommendations regarding changes to the current policy on the restriction of proposal submissions in a report to the Committee on Science and Technology of the House of Representatives and to the Committee on Commerce, Science, and Transportation and the Committee on Health, Education, Labor, and Pensions of the Senate.

TITLE VIII—GENERAL PROVISIONS

SEC. 8001. COLLECTION OF DATA RELATING TO TRADE IN SERVICES.

(a) REPORT.—Not later than January 31, 2008, the Secretary of Commerce, acting through the Director of the Bureau of Economic Analysis, shall report to Congress on the feasibility, annual cost, and potential benefits of a program to collect and study data relating to export and import of services.

(b) PROGRAM.—The proposed program to be studied under subsection (a) shall include requirements that the Secretary annually—

(1) provide data collection and analysis relating to export and import of services;

(2) collect and analyze data for service imports and exports in not less than 40 service industry categories, on a State-by-State basis;

(3) collect data on, and analyze, the employment effects of exports and imports on the service industry; and

(4) integrate ongoing and planned data collection and analysis initiatives in research and development and innovation.

SEC. 8002. SENSE OF THE SENATE REGARDING SMALL BUSINESS GROWTH AND CAPITAL MARKETS.

(a) FINDINGS.—Congress finds that—

(1) the United States has the most fair, most transparent, and most efficient capital markets in the world, in part due to its strong securities statutory and regulatory scheme;

(2) it is of paramount importance for the continued growth of the economy of the Nation, that our capital markets retain their leading position in the world;

(3) small businesses are vital participants in United States capital markets, and play a critical role in future economic growth and high-wage job creation;

(4) section 404 of the Sarbanes-Oxley Act of 2002 has greatly enhanced the quality of corporate governance and financial reporting for public companies and increased investor confidence;

(5) the Securities and Exchange Commission (referred to in this section as the "Commission") and the Public Company Accounting Oversight Board (referred to in this section as the "PCAOB") have both determined that the current auditing standard implementing section 404 of the Sarbanes-Oxley Act of 2002 has imposed unnecessary and unintended cost burdens on small and mid-sized public companies;

(6) the Commission and the PCAOB are now near completion of a 2-year process intended to revise the auditing standard in order to provide more efficient and effective regulation; and

(7) the Chairman of the Commission recently has said, with respect to section 404 of the Sarbanes-Oxley Act of 2002, that, "We don't need to change the law, we need to change the way the law is implemented. It is the implementation of the law that has caused the excessive burden, not the law itself. That's an important distinction. I don't believe these important investor protections, which are even now only a few years old, should be opened up for amendment, or that they need to be.".

(b) SENSE OF THE SENATE.—It is the sense of the Senate that the Commission and the PCAOB should complete promulgation of the final rules implementing section 404 of the Sarbanes-Oxley Act of 2002 (15 U.S.C. 7262).

SEC. 8003. GOVERNMENT ACCOUNTABILITY OFFICE REVIEW OF ACTIVITIES, GRANTS, AND PROGRAMS.

Not later than 3 years after the date of enactment of this Act, the Comptroller General of the United States shall submit a report to Congress that—

(1) assesses and evaluates the effectiveness of a representative sample of the new or expanded programs and activities (including programs and activities carried out under grants) required to be carried out under this Act; and

(2) includes such recommendations as the Comptroller General determines are appropriate to ensure effectiveness of, or improvements to, the programs and activities, including termination of programs or activities.

SEC. 8004. SENSE OF THE SENATE REGARDING ANTI-COMPETITIVE TAX POLICY.

It is the sense of the Senate that Federal funds should not be provided to any organization or entity that advocates against a United States tax policy that is internationally competitive.

SEC. 8005. STUDY OF THE PROVISION OF ONLINE DEGREE PROGRAMS.

(a) IN GENERAL.—Not later than 90 days after the date of enactment of this Act, the Secretary of Education shall enter into an arrangement with the National Academy of Sciences to conduct a study and provide a report to the Secretary, the Secretary of Commerce, and Congress. The study shall consider the mechanisms and supports needed for an institution of higher education (as defined in section 7001) or nonprofit organization to develop and maintain a program to provide free access to online educational content as part of a degree program, especially in science, technology, engineering, mathematics, or foreign languages, without using Federal funds, including funds provided under title IV of the Higher Education Act of 1965 (20 U.S.C. 1070 et seq.) The study shall consider whether such a program could be developed and managed by such institution of higher education or nonprofit organization and sustained through private funding. The study shall examine how such program can—

(1) build on existing online programs, including making use of existing online courses;

(2) modify or expand traditional course content for online educational content;

(3) develop original course content for online courses and degree programs;

(4) provide necessary laboratory experience for science, technology, and engineering courses;

(5) be accepted for full credit by other institutions of higher education; and

(6) provide credentials that would be recognized by employers, enabling program participants to attain employment.

(b) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section such sums as may be necessary for fiscal year 2008.

SEC. 8006. SENSE OF THE SENATE REGARDING DEEMED EXPORTS.

It is the sense of the Senate that—

(1) the policies of the United States Government relating to deemed exports should safeguard the national security of the United States and protect fundamental research;

(2) the Department of Commerce has established the Deemed Export Advisory Committee to develop recommendations for improving current controls on deemed exports; and

(3) the President and Congress should consider the recommendations of the Deemed Export Advisory Committee in the development and implementation of export control policies.

SEC. 8007. SENSE OF THE SENATE REGARDING CAPITAL MARKETS.

It is the sense of the Senate that—

(1) Congress, the President, regulators, industry leaders, and other stakeholders should take the necessary steps to reclaim the preeminent position of the United States in the global financial services marketplace;

(2) the Federal and State financial regulatory agencies should, to the maximum extent possible—

(A) coordinate activities on significant policy matters, so as not to impose regulations that may have adverse unintended consequences on innovativeness with respect to financial products, instruments, and services, or that impose regulatory costs that are disproportionate to their benefits; and

(B) at the same time, ensure that the regulatory framework overseeing the United States capital markets continues to promote and protect the interests of investors in those markets; and

(3) given the complexity of the financial services marketplace, Congress should exercise vigorous oversight over Federal regulatory and statutory requirements affecting the financial services industry and consumers, with the goal of eliminating excessive regulation and problematic implementation of existing laws and regulations, while ensuring that necessary investor protections are not compromised.

SEC. 8008. [20 U.S.C. 9801 nt] ACCOUNTABILITY AND TRANSPARENCY OF ACTIVITIES AUTHORIZED BY THIS ACT.

(a) PROHIBITED USE OF FUNDS.—A grant or contract funded by amounts authorized by this Act may not be used for the purpose of defraying the costs of a banquet or conference that is not directly and programmatically related to the purpose for which the grant or contract was awarded. A directly and programmatically related banquet or conference includes a banquet or conference held in connection with planning, training, assessment, review, or other routine purposes related to a project funded by the grant or contract. Records of the total costs related to, and justifications for, all banquets and conferences shall be reported to the appropriate Department, Administration, or Foundation. Not later than 60 days after receipt of such records, the appropriate Department, Administration, or Foundation shall make the records available to the public.

(b) CONFLICT OF INTEREST STATEMENT.—Any person awarded a grant or contract funded by amounts authorized by this Act shall submit a statement to the Secretary of Commerce, the Secretary of Energy, the Secretary of Education, the Administrator, or the Di-

rector, as appropriate, certifying that no funds derived from the grant or contract will be made available through a subcontract or in any other manner to another person who has a financial interest or other conflict of interest in the person awarded the grant or contract, unless such conflict is previously disclosed and approved in the process of entering into a contract or awarding a grant. Not later than 60 days after receipt of the certification, the appropriate Secretary, Administrator, or Director shall make all documents received that relate to the certification available to the public.

(c) APPLICATION TO FEDERAL GRANTS AND CONTRACTS.—Subsections (a) and (b) shall take effect 360 days after the date of enactment of this Act.

(d) EXCEPTION.—Subsections (a) and (b) shall not apply to grants or contracts authorized under sections 6201 and 6203.