110TH CONGRESS } HOUSE OF REPRESENTATIVES { REPORT
1st Session SENATE 110–____

21ST CENTURY COMPETITIVENESS ACT, 2007

_____, 2007.—ORDERED TO BE PRINTED

_____, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany H. R. 2272]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 2272), to invest in innovation through research and development, and to improve the competitiveness of the United States, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the House recede from its disagreement to the amendment of the Senate and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the Senate amendment, insert the following:

SECTION 1. 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".

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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-re-

lated 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 organizations 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. 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 re-

search 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 sub-

mit 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 paragraph (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. 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. 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) REPORT.—Each Executive agency described in subsection (b) 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 describing whether a funding goal as described in subsection (b) has been established, and if such a goal has been established, the following:

(1) A description of such funding goal.

(2) Whether such funding goal is being met by the agency.

(3) A description of activities supported by amounts allocated in accordance with such funding goal.

(d) 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. 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. NASA'S CONTRIBUTION TO INNOVATION.

(a) PARTICIPATION IN INTERAGENCY ACTIVITIES.—The National Aeronautics and Space Administration shall be a full participant in any interagency effort to promote innovation and economic competitiveness through near-term and long-term basic scientific research and development and the promotion of science, technology, engineering, and mathematics education, consistent with the National Aeronautics and Space Administration's mission, including authorized activities.

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

(c) BALANCED SCIENCE PROGRAM AND ROBUST AUTHORIZATION LEVELS.—The balanced science program authorized by section 101(d) of the National Aeronautics and Space Administration Authorization Act of 2005 (42 U.S.C. 16611) shall be an element of the contribution by the National Aeronautics and Space Administration to such interagency programs.

(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.

(e) ANNUAL REPORT.—

(1) REQUIREMENT.—The Administrator shall submit to Congress and the President an annual report describing the activities conducted pursuant to this section, including a description of the goals and the objective metrics upon which funding decisions were made.

(2) CONTENT.—Each report submitted pursuant to paragraph (1) shall include, with regard to science, technology, engi-

neering, and mathematics education programs, at a minimum, the following:

(A) A description of each program.

(B) The amount spent on each program.

(C) The number of students or teachers served by each program.

(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.

(b) COOPERATION WITH OTHER AGENCIES ON AERONAUTICS ACTIVITIES.—The Administrator shall coordinate, as appropriate, the National Aeronautics and Space Administration's aeronautics activities with relevant programs in the Department of Transportation, the Department of Defense, the Department of Commerce, and the Department of Homeland Security, including the activities of the Joint Planning and Development Office established under section 709 of the Vision 100–Century of Aviation Reauthorization Act (Public Law 108–176; 117 Stat. 2582).

SEC. 2003. BASIC RESEARCH ENHANCEMENT.

(a) IN GENERAL.—The Administrator of the National Aeronautics and Space Administration, the Director of the National Science Foundation, the Secretary of Energy, the Secretary of Defense, and Secretary of Commerce shall, to the extent practicable, coordinate basic research activities related to physical sciences, technology, engineering, and mathematics.

(b) BASIC RESEARCH DEFINED.—In this section, the term "basic research" has the meaning given such term in Office of Management and Budget Circular No. A–11.

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 new em-

ployees 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. 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) 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 associated 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 manufac-

turers 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. 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 sub-

mit 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. OCEAN AND ATMOSPHERIC RESEARCH AND DEVELOPMENT PROGRAM.

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.

SEC. 4002. 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.

(b) 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 develop 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.

(c) 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).

SEC. 4003. 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 research 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. SHORT TITLE.

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

SEC. 5002. 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) 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 Director 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 minori-

ties 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. 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; and

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

(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; and

(C) $8,000,000 for fiscal year 2010.

SEC. 5005. 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; and

(I) computer science, as computer science relates to a science described in this subsection.

(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; and

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

(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. 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 policies 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 2010.

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. 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. 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; and

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

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. 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; and

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

SEC. 5012. 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 (m)(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 energy technologies.

(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 result in—

(i) reductions of imports of energy from foreign sources;

(ii) reductions of energy-related emissions, including greenhouse gases; and

(iii) improvement in the energy efficiency of all economic sectors; 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 energy technology projects by—

(A) identifying and promoting revolutionary advances in fundamental 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 energy research with possible technology applications;

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

(C) research and development of manufacturing processes for novel energy technologies; and

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

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

(f) PERSONNEL.—

(1) PROGRAM MANAGERS.—

(A) IN GENERAL.—The Director shall designate employees to serve as program managers for each of the programs

established pursuant to the responsibilities established for ARPA-E under subsection (e).

(B) RESPONSIBILITIES.—A program manager 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, with advice under subsection (j) as appropriate, 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) monitoring the progress of projects supported under the program; and

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

(C) TERM.—The term of a program manager shall be 3 years and may be renewed.

(2) 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; and

(ii) fix the compensation of such personnel at a rate to be determined by the Director.

(B) NUMBER.—The Director shall appoint not less than 70, and 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.

(g) 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 describing projects supported by ARPA-E during the previous fiscal year.

(2) STRATEGIC VISION ROADMAP.—Not later than October 1, 2008, and October 1, 2011, 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 3 fiscal years.

(h) COORDINATION AND NONDUPLICATION.—

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

(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).

(i) FEDERAL DEMONSTRATION OF TECHNOLOGIES.—The Secretary shall make information available to purchasing and procurement programs of Federal agencies regarding the potential to demonstrate technologies resulting from activities funded through ARPA-E.

(j) 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.

(k) ARPA-E EVALUATION.—

(1) IN GENERAL.—After ARPA-E has been in operation for 4 years, the Secretary shall offer 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 shall include—

(A) the recommendation of the National Academy of Sciences on whether ARPA-E should be continued or terminated; and

(B) a description of lessons learned from operation of ARPA-E.

(3) AVAILABILITY.—On completion of the evaluation, the evaluation shall be made available to Congress and the public.

(l) 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.

(m) 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 paragraphs (4) and (5), there are authorized to be appropriated to the Director for deposit in the Fund, without fiscal year limitation—

(A) $300,000,000 for fiscal year 2008; and

(B) such sums as are necessary for each of fiscal years 2009 and 2010.

(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) LIMITATION.—No amounts may be appropriated for ARPA-E for fiscal year 2008 unless the amount appropriated for the activities of the Office of Science of the Department for fiscal year 2008 exceeds the amount appropriated for the Office for fiscal year 2007, as adjusted for inflation in accordance with the Consumer Price Index published by the Bureau of Labor Statistics of the Department of Labor.

(5) 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 2.5 percent of the amount shall be used for technology transfer and outreach activities; 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. FINDINGS.

Congress makes the following findings:

(1) A well-educated population is essential to retaining America's competitiveness in the global economy.

(2) The United States needs to build on and expand the impact of existing programs by taking additional, well-coordinated steps to ensure that all students are able to obtain the knowledge the students need to obtain postsecondary education and participate successfully in the workforce or the Armed Forces.

(3) The next steps must be informed by independent information on the effectiveness of current programs in science, technology, engineering, mathematics, and critical foreign language education, and by identification of best practices that can be replicated.

(4) Teacher preparation and elementary school and secondary school programs and activities must be aligned with the requirements of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6301 et seq.) and the requirements of the Higher Education Act of 1965 (20 U.S.C. 1001 et seq.).

(5) The ever increasing knowledge and skill demands of the 21st century require that secondary school preparation and requirements be better aligned with the knowledge and skills needed to succeed in postsecondary education and the workforce, and States need better data systems to track educational achievement from prekindergarten through baccalaureate degrees.

SEC. 6002. DEFINITIONS.

(a) ESEA DEFINITIONS.—Unless otherwise specified in this title, the terms used in this title have the meanings given the terms in section 9101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7801).

(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

SEC. 6111. PURPOSE.

The purpose of this part is—

(1) to develop and implement programs to provide integrated courses of study in science, technology, engineering, mathematics, or critical foreign languages, and teacher education, that lead to a baccalaureate degree in science, technology, engineering, mathematics, or a critical foreign language, with concurrent teacher certification;

(2) to develop and implement 2- or 3-year part-time master's degree programs in science, technology, engineering, mathematics, or critical foreign language education for teachers in order to enhance the teachers' content knowledge and pedagogical skills; and

(3) to develop programs for professionals in science, technology, engineering, mathematics, or critical foreign language education that lead to a master's degree in teaching that results in teacher certification.

SEC. 6112. DEFINITIONS.

In this part:

(1) CHILDREN FROM LOW-INCOME FAMILIES.—The term "children from low-income families" means children described in section 1124(c)(1)(A) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6333(c)(1)(A)).

(2) ELIGIBLE RECIPIENT.—The term "eligible recipient" means an institution of higher education that receives grant funds under this part on behalf of a department of science, technology, engineering, mathematics, or a critical foreign language, or on behalf of a department or school with a competency-based degree program (in science, technology, engineering, mathematics, or a critical foreign language) that includes teacher certification, for use in carrying out activities assisted under this part.

(3) HIGH-NEED LOCAL EDUCATIONAL AGENCY.—The term "high-need local educational agency" means a local educational agency or educational service agency—

(A)(i) that serves not fewer than 10,000 children from low-income families;

(ii) for which not less than 20 percent of the children served by the agency are children from low-income families; or

(iii) with a total of less than 600 students in average daily attendance at the schools that are served by the agency and all of whose schools are designated with a school locale code of 41, 42, or 43, as determined by the Secretary; and

(B)(i) for which there is a high percentage of teachers providing instruction in academic subject areas or grade levels for which the teachers are not highly qualified; or

(ii) for which there is a high teacher turnover rate or a high percentage of teachers with emergency, provisional, or temporary certification or licensure.

(4) HIGHLY QUALIFIED.—The term "highly qualified" has the meaning given such term in section 9101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7801) and, with respect to special education teachers, in section 602 of the Individuals with Disabilities Education Act (20 U.S.C. 1401).

(5) PARTNERSHIP.—The term "partnership" means a partnership that—

(A) shall include—

(i) an eligible recipient;

(ii)(I)(aa) a department within the eligible recipient that provides a program of study in science, technology, engineering, mathematics, or a critical foreign language; and

(bb) a school, department, or program of education within the eligible recipient, or a 2-year institution of higher education that has a teacher preparation offering or a dual enrollment program with the eligible recipient; or

(II) a department or school within the eligible recipient with a competency-based degree program (in science, technology, engineering, mathematics, or a critical foreign language) that includes teacher certification; and

(iii) not less than 1 high-need local educational agency and a public school or a consortium of public schools served by the agency; and

(B) may include a nonprofit organization that has a demonstrated record of providing expertise or support to meet the purposes of this part.

(6) TEACHING SKILLS.—The term "teaching skills" means the ability to—

(A) increase student achievement and learning and increase a student's ability to apply knowledge;

(B) effectively convey and explain academic subject matter;

(C) employ strategies grounded in the disciplines of teaching and learning that—

(i) are based on scientifically valid research;

(ii) are specific to academic subject matter; and

(iii) focus on the identification of students' specific learning needs, particularly students with disabilities, students who are limited English proficient, students who are gifted and talented, and students with low literacy levels, and the tailoring of academic instruction to such needs;

(D) conduct ongoing assessment of student learning;

(E) effectively manage a classroom; and

(F) communicate and work with parents and guardians, and involve parents and guardians in their children's education.

SEC. 6113. PROGRAMS FOR BACCALAUREATE DEGREES IN SCIENCE, TECHNOLOGY, ENGINEERING, MATHEMATICS, OR CRITICAL FOREIGN LANGUAGES, WITH CONCURRENT TEACHER CERTIFICATION.

(a) PROGRAM AUTHORIZED.—From the amounts made available to carry out this section under section 6116(1) and not reserved under section 6115(d) for a fiscal year, the Secretary is authorized to award grants, on a competitive basis, to eligible recipients to enable partnerships served by the eligible recipients to develop and implement programs to provide courses of study in science, technology, engineering, mathematics, or critical foreign languages that—

(1) are integrated with teacher education; and

(2) lead to a baccalaureate degree in science, technology, engineering, mathematics, or a critical foreign language with concurrent teacher certification.

(b) APPLICATION.—Each eligible recipient desiring a grant under this section shall submit an application to the Secretary at such time and in such manner as the Secretary may require. Each application shall—

(1) describe the program for which assistance is sought;

(2) describe how a department of science, technology, engineering, mathematics, or a critical foreign language participating in the partnership will ensure significant collaboration with a teacher preparation program in the development of undergraduate degrees in science, technology, engineering, mathematics, or a critical foreign language, with concurrent teacher certification, including providing student teaching and other clinical classroom experiences or how a department or school participating in the partnership with a competency-based degree program has ensured, in the development of a baccalaureate degree program in science, technology, engineering, mathematics, or a critical foreign language, the provision of concurrent teacher certification, including providing student teaching and other clinical classroom experiences;

(3) describe the high-quality research, laboratory, or internship experiences, integrated with coursework, that will be provided under the program;

(4) describe how members of groups that are underrepresented in the teaching of science, technology, engineering, mathematics, or critical foreign languages will be encouraged to participate in the program;

(5) describe how program participants will be encouraged to teach in schools determined by the partnership to be most in need, and the assistance in finding employment in such schools that will be provided;

(6) describe the ongoing activities and services that will be provided to graduates of the program;

(7) describe how the activities of the partnership will be coordinated with any activities funded through other Federal grants, and how the partnership will continue the activities assisted under the program when the grant period ends;

(8) describe how the partnership will assess the content knowledge and teaching skills of the program participants; and

(9) provide any other information the Secretary may reasonably require.

(c) PRIORITY.—Priority shall be given to applications whose primary focus is on placing participants in high-need local educational agencies.

(d) AUTHORIZED ACTIVITIES.—

(1) IN GENERAL.—Each eligible recipient receiving a grant under this section shall use the grant funds to enable a partnership to develop and implement a program to provide courses of study in science, technology, engineering, mathematics, or a critical foreign language that—

(A) are integrated with teacher education programs that promote effective teaching skills; and

(B) lead to a baccalaureate degree in science, technology, engineering, mathematics, or a critical foreign language with concurrent teacher certification.

(2) PROGRAM REQUIREMENTS.—The program shall—

(A) provide high-quality research, laboratory, or internship experiences for program participants;

(B) provide student teaching or other clinical classroom experiences that—

(i) are integrated with coursework; and

(ii) lead to the participants' ability to demonstrate effective teaching skills;

(C) if implementing a program in which program participants are prepared to teach science, technology, engineering, mathematics, or critical foreign language courses, include strategies for improving student literacy;

(D) encourage the participation of individuals who are members of groups that are underrepresented in the teaching of science, technology, engineering, mathematics, or critical foreign languages;

(E) encourage participants to teach in schools determined by the partnership to be most in need, and actively assist the participants in finding employment in such schools;

(F) offer training in the use of and integration of educational technology;

(G) collect data regarding and evaluate, using measurable objectives and benchmarks, the extent to which the program succeeded in—

(i) increasing the percentage of highly qualified mathematics, science, or critical foreign language teachers, including increasing the percentage of such teachers teaching in those schools determined by the partnership to be most in need;

(ii) improving student academic achievement in mathematics, science, and where applicable, technology and engineering;

(iii) increasing the number of students in secondary schools enrolled in upper level mathematics, science, and, where available, technology and engineering courses; and

(iv) increasing the numbers of elementary school and secondary school students enrolled in and continuing in critical foreign language courses;

(H) collect data on the employment placement and retention of all graduates of the program, including information on how many graduates are teaching and in what kinds of schools;

(I) provide ongoing activities and services to graduates of the program who teach elementary school or secondary school, by—

(i) keeping the graduates informed of the latest developments in their respective academic fields; and

(ii) supporting the graduates of the program who are employed in schools in the local educational agency participating in the partnership during the initial years of teaching through—

(I) induction programs;

(II) promotion of effective teaching skills; and

(III) providing opportunities for regular professional development; and

(J) develop recommendations to improve the school, department, or program of education participating in the partnership.

(e) ANNUAL REPORT.—Each eligible recipient receiving a grant under this section shall collect and report to the Secretary annually such information as the Secretary may reasonably require, including—

(1) the number of participants in the program;

(2) information on the academic majors of participating students;

(3) the race, gender, income, and disability status of program participants;

(4) the placement of program participants as teachers in schools determined by the partnership to be most in need;

(5) the extent to which the program succeeded in meeting the objectives and benchmarks described in subsection (d)(2)(G); and

(6) the data collected under subparagraphs (G) and (H) of subsection (d)(2).

(f) TECHNICAL ASSISTANCE.—From the funds made available under section 6116(1), the Secretary may provide technical assistance to an eligible recipient developing a baccalaureate degree program with concurrent teacher certification, including technical assistance provided through a grant or contract awarded on a competitive basis to an institution of higher education or a technical assistance center.

(g) COMPLIANCE WITH FERPA.—Any activity under this section shall be carried out in compliance with 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).

(h) INDUCTION PROGRAM DEFINED.—In this section, the term "induction program" means a formalized program for new teachers during not less than the teachers' first 2 years of teaching that is designed to provide support for, and improve the professional performance and advance the retention in the teaching field of, beginning teachers. Such program shall promote effective teaching skills and shall include the following components:

(1) High-quality teacher mentoring.

(2) Periodic, structured time for collaboration with teachers in the same department or field, as well as time for information-sharing among teachers, principals, administrators, and participating faculty in the partner institution.

(3) The application of empirically based practice and scientifically valid research on instructional practices.

(4) Opportunities for new teachers to draw directly upon the expertise of teacher mentors, faculty, and researchers to support the integration of empirically based practice and scientifically valid research with practice.

(5) The development of skills in instructional and behavioral interventions derived from empirically based practice and, where applicable, scientifically valid research.

(6) Faculty who—

(A) model the integration of research and practice in the classroom; and

(B) assist new teachers with the effective use and integration of technology in the classroom.

(7) Interdisciplinary collaboration among exemplary teachers, faculty, researchers, and other staff who prepare new teachers on the learning process and the assessment of learning.

(8) Assistance with the understanding of data, particularly student achievement data, and the data's applicability in classroom instruction.

(9) Regular evaluation of the new teacher.

SEC. 6114. PROGRAMS FOR MASTER'S DEGREES IN SCIENCE, TECHNOLOGY, ENGINEERING, MATHEMATICS, OR CRITICAL FOREIGN LANGUAGE EDUCATION.

(a) PROGRAM AUTHORIZED.—From the amounts made available to carry out this section under section 6116(2) and not reserved under section 6115(d) for a fiscal year, the Secretary is authorized to award grants, on a competitive basis, to eligible recipients to enable the partnerships served by the eligible recipients to develop and implement—

(1) 2- or 3-year part-time master's degree programs in science, technology, engineering, mathematics, or critical foreign language education for teachers in order to enhance the teacher's content knowledge and teaching skills; or

(2) programs for professionals in science, technology, engineering, mathematics, or a critical foreign language that lead to a 1-year master's degree in teaching that results in teacher certification.

(b) APPLICATION.—Each eligible recipient desiring a grant under this section shall submit an application to the Secretary at such time and in such manner as the Secretary may require. Each application shall describe—

(1) how a department of science, technology, engineering, mathematics, or a critical foreign language will ensure significant collaboration with a school, department, or program of education in the development of the master's degree programs authorized under subsection (a), or how a department or school with a competency-based degree program has ensured, in the development of a master's degree program, the provision of rig-

orous studies in science, technology, engineering, mathematics, or a critical foreign language that enhance the teachers' content knowledge and teaching skills;

(2) the role of the local educational agency in the partnership in developing and administering the program and how feedback from the local educational agency, school, and participants will be used to improve the program;

(3) how the program will help increase the percentage of highly qualified mathematics, science, or critical foreign language teachers, including increasing the percentage of such teachers teaching in schools determined by the partnership to be most in need;

(4) how the program will—

(A) improve student academic achievement in mathematics, science, and, where applicable, technology and engineering and increase the number of students taking upper-level courses in such subjects; or

(B) increase the numbers of elementary school and secondary school students enrolled and continuing in critical foreign language courses;

(5) how the program will prepare participants to become more effective science, technology, engineering, mathematics, or critical foreign language teachers;

(6) how the program will prepare participants to assume leadership roles in their schools;

(7) how teachers (or science, technology, engineering, mathematics, or critical foreign language professionals) who are members of groups that are underrepresented in the teaching of science, technology, engineering, mathematics, or critical foreign languages and teachers from schools determined by the partnership to be most in need will be encouraged to apply for and participate in the program;

(8) the ongoing activities and services that will be provided to graduates of the program;

(9) how the partnership will continue the activities assisted under the grant when the grant period ends;

(10) how the partnership will assess, during the program, the content knowledge and teaching skills of the program participants; and

(11) methods to ensure applicants to the master's degree program for professionals in science, technology, engineering, mathematics, or a critical foreign language demonstrate advanced knowledge in the relevant subject.

(c) AUTHORIZED ACTIVITIES.—Each eligible recipient receiving a grant under this section shall use the grant funds to develop and implement a 2- or 3-year part-time master's degree program in science, technology, engineering, mathematics, or critical foreign language education for teachers in order to enhance the teachers' content knowledge and teaching skills, or programs for professionals in science, technology, engineering, mathematics, or a critical foreign language that lead to a 1-year master's degree in teaching that results in teacher certification. The program shall—

(1) promote effective teaching skills so that program participants become more effective science, technology, engineering, mathematics, or critical foreign language teachers;

(2) prepare teachers to assume leadership roles in their schools by participating in activities such as teacher mentoring, development of curricula that integrate state of the art applications of science, technology, engineering, mathematics, or critical foreign language into the classroom, working with school administrators in establishing in-service professional development of teachers, and assisting in evaluating data and assessments to improve student academic achievement;

(3) use high-quality research, laboratory, or internship experiences for program participants that are integrated with coursework;

(4) provide student teaching or clinical classroom experience;

(5) if implementing a program in which participants are prepared to teach science, technology, engineering, mathematics, or critical foreign language courses, provide strategies for improving student literacy;

(6) align the content knowledge in the master's degree program with challenging student academic achievement standards and challenging academic content standards established by the State in which the program is conducted;

(7) encourage the participation of—

(A) individuals who are members of groups that are underrepresented in the teaching of science, technology, engineering, mathematics, or critical foreign languages;

(B) members of the Armed Forces who are transitioning to civilian life; and

(C) teachers teaching in schools determined by the partnership to be most in need;

(8) offer tuition assistance, based on need, as appropriate;

(9) create opportunities for enhanced and ongoing professional development for teachers that improves the science, technology, engineering, mathematics, and critical foreign language content knowledge and teaching skills of such teachers; and

(10) evaluate and report on the impact of the program, in accordance with subsection (d).

(d) EVALUATION AND REPORT.—Each eligible recipient receiving a grant under this section shall evaluate, using measurable objectives and benchmarks, and provide an annual report to the Secretary regarding, the extent to which the program assisted under this section succeeded in the following:

(1) Increasing the number and percentage of science, technology, engineering, mathematics, or critical foreign language teachers who have a master's degree and meet 1 or more of the following requirements:

(A) Are teaching in schools determined by the partnership to be most in need, and taught in such schools prior to participation in the program.

(B) Are teaching in schools determined by the partnership to be most in need, and did not teach in such schools prior to participation in the program.

(C) Are members of a group underrepresented in the teaching of science, technology, engineering, mathematics, or a critical foreign language.

(2) Bringing professionals in science, technology, engineering, mathematics, or a critical foreign language into the field of teaching.

(3) Retaining teachers who participate in the program.

SEC. 6115. GENERAL PROVISIONS.

(a) DURATION OF GRANTS.—The Secretary shall award each grant under this part for a period of not more than 5 years.

(b) MATCHING REQUIREMENT.—Each eligible recipient that receives a grant under this part 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.

(c) SUPPLEMENT, NOT SUPPLANT.—Grant funds provided under this part shall be used to supplement, and not supplant, other Federal or State funds.

(d) EVALUATION.—From amounts made available for any fiscal year under section 6116, the Secretary shall reserve such sums as may be necessary—

(1) to provide for the conduct of an annual independent evaluation, by grant or by contract, of the activities assisted under this part, which shall include an assessment of the impact of the activities 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.

SEC. 6116. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated to carry out this section $276,200,000 for fiscal year 2008, and such sums as may be necessary for each of the 2 succeeding fiscal years, of which—

(1) $151,200,000 shall be available to carry out section 6113 for fiscal year 2008 and each succeeding fiscal year; and

(2) $125,000,000 shall be available to carry out section 6114 for fiscal year 2008 and each succeeding fiscal year.

PART II—ADVANCED PLACEMENT AND INTERNATIONAL BACCALAUREATE PROGRAMS

SEC. 6121. 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—

(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. 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" has the meaning given the term "low-income individual" in section 1707(3) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6537(3)).

(4) HIGH CONCENTRATION OF LOW-INCOME STUDENTS.—The term "high concentration of low-income students" has the meaning given the term in section 1707(2) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6537(2)).

(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. 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 the activities carried out under this section with the activities carried out under section 1705 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6535).

(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 200 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 100 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 se-

rious 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(h)(1)(C)(i) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311(h)(1)(C)(i)); 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 fiscal year 2008, and such sums as may be necessary for each of the 2 succeeding fiscal years.

PART III—PROMISING PRACTICES IN SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS TEACHING

SEC. 6131. PROMISING PRACTICES.

(a) PURPOSE.—The purpose of this section is to establish an expert panel to provide information on promising practices for strengthening teaching and learning in science, technology, engineering, and mathematics at the elementary school and secondary school levels. The panel shall build on prior Federal efforts, such as efforts by the National Mathematics Advisory Panel, and shall synthesize scientific evidence pertaining to the improvement of science, technology, engineering, and mathematics teaching and learning.

(b) NATIONAL PANEL ON PROMISING PRACTICES IN K-12 STEM TEACHING AND LEARNING.—

(1) IN GENERAL.—The Secretary shall enter into a contract with the Center for Education of the National Academy of Sciences to establish and convene, not later than 1 year after the date of enactment of this Act, an expert panel to—

(A) identify promising practices for improving teaching and student achievement in science, technology, engineering, and mathematics in kindergarten through grade 12; and

(B) examine and synthesize the scientific evidence pertaining to the improvement of science, technology, engineering, and mathematics teaching and learning.

(2) COMPOSITION OF NATIONAL PANEL.—The National Academy of Sciences shall ensure that the panel established under paragraph (1) represents scientists, engineers, mathematicians, technologists, computer and information technology experts, educators, principals, researchers with expertise in teaching and learning (including experts in cognitive science), and others with relevant expertise. The National Academy of Sciences shall ensure that the panel includes the following:

(A) Representation of teachers and principals directly involved in teaching science, technology, engineering, and mathematics in kindergarten through grade 12.

(B) Representation of teachers and principals from diverse demographic groups and geographic areas, including urban, suburban, and rural schools.

(C) Representation of teachers and principals from public and private schools.

(3) QUALIFICATION OF MEMBERS.—The members of the panel established under paragraph (1) shall be individuals who have expertise and experience relating to—

(A) existing science, technology, engineering, and mathematics education programs;

(B) developing and improving science, technology, engineering, and mathematics curricula content;

(C) improving the academic achievement of students who are below grade level in science, technology, engineering, and mathematics fields; and

(D) research on teaching or learning.

(c) AUTHORIZED ACTIVITIES OF NATIONAL PANEL.—The panel established under subsection (b) shall identify—

(1) promising practices in the effective teaching and learning of science, technology, engineering, and mathematics topics in kindergarten through grade 12;

(2) promising training and professional development techniques designed to help teachers increase their skills and expertise in improving student achievement in science, technology, engineering, and mathematics in kindergarten through grade 12;

(3) critical skills and skills progressions needed to enable students to acquire competence in science, technology, engineering, and mathematics and readiness for advanced secondary school and college level science, technology, engineering, and mathematics coursework;

(4) processes by which students with varying degrees of prior academic achievement and backgrounds learn effectively in the science, technology, engineering, and mathematics fields; and

(5) areas in which existing data about promising practices in science, technology, engineering, and mathematics education are insufficient.

(d) REPORT.—The panel established under subsection (b) shall prepare a written report for the Secretary that presents the findings of the panel pursuant to this section and includes recommendations, based on the findings of the panel, to strengthen science, technology, engineering, and mathematics teaching and learning in kindergarten through grade 12.

(e) DISSEMINATION.—The Secretary shall disseminate the report under subsection (d) to the public, State educational agencies, and local educational agencies, and shall make the information in such report available, in an easy to understand format, on the website of the Department.

(f) SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS PROMISING PRACTICES.—

(1) RELIABILITY AND MEASUREMENT.—The promising practices in the teaching of science, technology, engineering, and mathematics in elementary schools and secondary schools collected under this section shall be—

(A) reliable, valid, and grounded in scientifically valid research;

(B) inclusive of the critical skills and skill progressions needed for students to acquire competence in science, technology, engineering, and mathematics;

(C) reviewed regularly to assess effectiveness; and

(D) reviewed in the context of State academic assessments and student academic achievement standards.

(2) STUDENTS WITH DIVERSE LEARNING NEEDS.—In identifying promising practices under this section, the panel established under subsection (b) shall take into account the needs of students with diverse learning needs, particularly students with disabilities and students who are limited English proficient.

(g) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section $1,200,000 for fiscal year 2008.

Subtitle B—Mathematics

SEC. 6201. MATH NOW FOR ELEMENTARY SCHOOL AND MIDDLE SCHOOL STUDENTS PROGRAM.

(a) PURPOSE.—The purpose of this section is to enable all students to reach or exceed grade-level academic achievement standards and to prepare the students to enroll in and pass algebra courses by—

(1) improving instruction in mathematics for students in kindergarten through grade 9 through the implementation of mathematics programs and the support of comprehensive mathematics initiatives that are research-based and reflect a demonstrated record of effectiveness; and

(2) providing targeted help to low-income students who are struggling with mathematics and whose achievement is significantly below grade level.

(b) DEFINITION OF ELIGIBLE LOCAL EDUCATIONAL AGENCY.—In this section, the term "eligible local educational agency" means a high-need local educational agency (as defined in section 6112(3)) serving 1 or more schools—

(1) with significant numbers or percentages of students whose mathematics skills are below grade level;

(2) that are not making adequate yearly progress in mathematics under section 1111(b)(2) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311(b)(2)); or

(3) in which students are receiving instruction in mathematics from teachers who do not have mathematical content knowledge or expertise in the teaching of mathematics.

(c) PROGRAM AUTHORIZED.—

(1) IN GENERAL.—From the amounts appropriated under subsection (k) for any fiscal year, the Secretary is authorized to award grants, on a competitive basis, for a period of 3 years, to State educational agencies to enable the State educational agencies to award grants to eligible local educational agencies to carry out the activities described in subsection (e) for students in any of the grades kindergarten through grade 9.

(2) PRIORITY.—In awarding grants under this section, the Secretary shall give priority to applications for projects that will implement statewide strategies for improving mathematics

instruction and raising the mathematics achievement of students, particularly students in grades 4 through 8.

(d) STATE USES OF FUNDS.—

(1) IN GENERAL.—Each State educational agency that receives a grant under this section for a fiscal year—

(A) shall expend not more than a total of 10 percent of the grant funds to carry out the activities described in paragraphs (2) or (3) for the fiscal year; and

(B) shall use not less than 90 percent of the grant funds to award grants, on a competitive basis, to eligible local educational agencies to enable the eligible local educational agencies to carry out the activities described in subsection (e) for the fiscal year.

(2) MANDATORY USES OF FUNDS.—A State educational agency shall use the grant funds made available under paragraph (1)(A) to carry out each of the following activities:

(A) PLANNING AND ADMINISTRATION.—Planning and administration, including—

(i) evaluating applications from eligible local educational agencies using peer review teams described in subsection (f)(1)(D);

(ii) administering the distribution of grants to eligible local educational agencies; and

(iii) assessing and evaluating, on a regular basis, eligible local educational agency activities assisted under this section, with respect to whether the activities have been effective in increasing the number of students—

(I) making progress toward meeting grade-level mathematics achievement; and

(II) meeting or exceeding grade-level mathematics achievement.

(B) REPORTING.—Annually providing the Secretary with a report on the implementation of this section as described in subsection (i).

(3) PERMISSIVE USES OF FUNDS; TECHNICAL ASSISTANCE.—

(A) IN GENERAL.—A State educational agency may use the grant funds made available under paragraph (1)(A) for 1 or more of the following technical assistance activities that assist an eligible local educational agency, upon request by the eligible local educational agency, in accomplishing the tasks required to design and implement a project under this section, including assistance in—

(i) implementing mathematics programs or comprehensive mathematics initiatives that are research-based and reflect a demonstrated record of effectiveness;

(ii) evaluating and selecting diagnostic and classroom based instructional mathematics assessments; and

(iii) identifying eligible professional development providers to conduct the professional development activities described in subsection (e)(1)(B).

(B) GUIDANCE.—The technical assistance described in subparagraph (A) shall be guided by researchers with expertise in the pedagogy of mathematics, mathematicians, and mathematics educators from high-risk, high-achievement schools and eligible local educational agencies.

(e) LOCAL USES OF FUNDS.—

(1) MANDATORY USES OF FUNDS.—Each eligible local educational agency receiving a grant under this section shall use the grant funds to carry out each of the following activities for students in any of the grades kindergarten through grade 9:

(A) To implement mathematics programs or comprehensive mathematics initiatives—

(i) for students in the grades of a participating school as identified in the application submitted under subsection (f)(2)(B); and

(ii) that are research-based and reflect a demonstrated record of effectiveness.

(B) To provide professional development and instructional leadership activities for teachers and, if appropriate, for administrators and other school staff, on the implementation of comprehensive mathematics initiatives designed—

(i) to improve the achievement of students performing significantly below grade level;

(ii) to improve the mathematical content knowledge of the teachers, administrators, and other school staff;

(iii) to increase the use of effective instructional practices; and

(iv) to monitor student progress.

(C) To conduct continuous progress monitoring, which may include the adoption and use of assessments that—

(i) measure student progress and identify areas in which students need help in learning mathematics; and

(ii) reflect mathematics content that is consistent with State academic achievement standards in mathematics described in section 1111(b) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311(b)).

(2) PERMISSIVE USES OF FUNDS.—An eligible local educational agency may use grant funds under this section to—

(A) adopt and use mathematics instructional materials and assessments;

(B) implement classroom-based assessments, including diagnostic or formative assessments;

(C) provide remedial coursework and interventions for students, which may be provided before or after school;

(D) provide small groups with individualized instruction in mathematics;

(E) conduct activities designed to improve the content knowledge and expertise of teachers, such as the use of a mathematics coach, enrichment activities, and interdisciplinary methods of mathematics instruction; and

(F) collect and report performance data.

(f) APPLICATIONS.—

(1) STATE EDUCATIONAL AGENCY.—Each State educational agency desiring a grant under this section shall submit an application to the Secretary at such time and in such manner as the Secretary may require. Each application shall include—

(A) an assurance that the core mathematics instructional program, supplemental instructional materials, and intervention programs used by the eligible local educational agencies for the project, are research-based and reflect a demonstrated record of effectiveness and are aligned with State academic achievement standards;

(B) an assurance that eligible local educational agencies will meet the requirements described in paragraph (2);

(C) an assurance that local applications will be evaluated using a peer review process;

(D) a description of the qualifications of the peer review teams, which shall consist of—

(i) researchers with expertise in the pedagogy of mathematics;

(ii) mathematicians; and

(iii) mathematics educators serving high-risk, high-achievement schools and eligible local educational agencies; and

(E) an assurance that the State has a process to safeguard against conflicts of interest consistent with subsection (j)(2) and section 6204 for individuals providing technical assistance on behalf of the State educational agency or participating in the State peer review process under this subtitle.

(2) ELIGIBLE LOCAL EDUCATIONAL AGENCY.—Each eligible local educational agency desiring a grant under this section shall submit an application to the State educational agency at such time and in such manner as the State educational agency may require. Each application shall include—

(A) an assurance that the eligible local educational agency will provide assistance to 1 or more schools that are—

(i) served by the eligible local educational agency; and

(ii) described in section 6201(b);

(B) a description of the grades, and of the schools, that will be served;

(C) information, on an aggregate basis, on each school to be served by the project, including such demographic, socioeconomic, and mathematics achievement data as the State educational agency may request;

(D) a description of the core mathematics instructional program, supplemental instructional materials, and intervention programs or strategies that will be used for the project, including an assurance that the programs or strategies are research-based and reflect a demonstrated record of effectiveness and are aligned with State academic achievement standards;

(E) a description of the activities that will be carried out under the grant, including a description of the profes-

sional development that will be provided to teachers, and, if appropriate, administrators and other school staff, and a description of how the activities will support achievement of the purpose of this section;

(F) an assurance that the eligible local educational agency will report to the State educational agency all data on student academic achievement that is necessary for the State educational agency's report under subsection (i);

(G) a description of the eligible entity's plans for evaluating the impact of professional development and leadership activities in mathematics on the content knowledge and expertise of teachers, administrators, or other school staff; and

(H) any other information the State educational agency may reasonably require.

(g) PROHIBITIONS.—

(1) IN GENERAL.—In implementing this section, the Secretary shall not—

(A) endorse, approve, or sanction any mathematics curriculum designed for use in any school; or

(B) engage in oversight, technical assistance, or activities that will require the adoption of a specific mathematics program or instructional materials by a State, local educational agency, or school.

(2) RULE OF CONSTRUCTION.—Nothing in this subtitle shall be construed to authorize or permit the Department of Education, or a Department of Education contractor, to mandate, direct, control, or suggest the selection of a mathematics curriculum, supplemental instructional materials, or program of instruction by a State, local educational agency, or school.

(h) MATCHING REQUIREMENTS.—

(1) STATE EDUCATIONAL AGENCY.—A State educational agency that receives a grant under this section shall provide, from non-Federal sources, an amount equal to 50 percent of the amount of the grant, in cash or in kind, to carry out the activities supported by the grant, of which not more than 20 percent of such 50 percent may be provided by local educational agencies within the State.

(2) WAIVER.—The Secretary may waive all of or a portion of the matching requirement described in paragraph (1) for any fiscal year, if the Secretary determines that—

(A) the application of the matching requirement will result in serious hardship for the State educational agency; or

(B) providing a waiver best serves the purpose of the program assisted under this section.

(i) PROGRAM PERFORMANCE AND ACCOUNTABILITY.—

(1) INFORMATION.—Each State educational agency receiving a grant under this section shall collect and report to the Secretary annually such information on the results of the grant as the Secretary may reasonably require, including information on—

(A) mathematics achievement data that show the progress of students participating in projects under this sec-

tion (including, to the extent practicable, comparable data from students not participating in such projects), based primarily on the results of State, school district wide, or classroom-based, assessments, including—

(i) specific identification of those schools and eligible local educational agencies that report the largest gains in mathematics achievement; and

(ii) evidence on whether the State educational agency and eligible local educational agencies within the State have—

(I) significantly increased the number of students achieving at grade level or above in mathematics;

(II) significantly increased the percentages of students described in section 1111(b)(2)(C)(v)(II) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311(b)(2)(C)(v)(II)) who are achieving at grade level or above in mathematics;

(III) significantly increased the number of students making significant progress toward meeting grade-level mathematics achievement standards; and

(IV) successfully implemented this section;

(B) the percentage of students in the schools served by the eligible local educational agency who enroll in algebra courses and the percentage of such students who pass algebra courses; and

(C) the progress made in increasing the quality and accessibility of professional development and leadership activities in mathematics, especially activities resulting in greater content knowledge and expertise of teachers, administrators, and other school staff, except that the Secretary shall not require such information until after the third year of a grant awarded under this section.

(2) REPORTING AND DISAGGREGATION.—The information required under paragraph (1) shall be—

(A) reported in a manner that allows for a comparison of aggregated score differentials of student academic achievement before (to the extent feasible) and after implementation of the project assisted under this section; and

(B) disaggregated in the same manner as information is disaggregated under section 1111(h)(1)(C)(i) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311(h)(1)(C)(i)).

(3) PRIVACY PROTECTION.—The data in the report shall be reported in a manner that—

(A) protects the privacy of individuals; and

(B) complies with 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).

(j) EVALUATION AND TECHNICAL ASSISTANCE.—

(1) EVALUATION.—

(A) IN GENERAL.—The Secretary shall conduct an annual independent evaluation, by grant or by contract, of the program assisted under this section, which shall include an assessment of the impact of the program on student academic achievement and teacher performance, and may use funds available to carry out this section to conduct the evaluation.

(B) REPORT.—The Secretary shall annually submit, to the Committee on Education and Labor and the Committee on Appropriations of the House of Representatives, and to the Committee on Health, Education, Labor, and Pensions and the Committee on Appropriations of the Senate, a report on the results of the evaluation.

(C) LIMITATIONS.—

(i) IN GENERAL.—The Secretary shall ensure that the organization selected to carry out the independent evaluation under subparagraph (A) does not hold a contract or subcontract to implement any aspect of the program under this section.

(ii) SUBCONTRACTORS.—Any contract entered into under subparagraph (A) shall prohibit the organization conducting the evaluation from subcontracting with any entity that holds a contract or subcontract for any aspect of the implementation of this section.

(iii) WAIVER.—Subject to clause (iv), the Secretary may waive the application of clause (i) or (ii), or both, in accordance with the requirements under section 9.503 of title 48, Code of Federal Regulations, if the Secretary determines that their application in a particular situation would not be in the Federal Government's interest.

(iv) SPECIAL RULE REGARDING WAIVERS.—No organization or subcontractor under this paragraph shall receive a waiver that allows the organization or subcontractor to evaluate any aspect of the program under this section that the organization or subcontractor was involved in implementing.

(2) TECHNICAL ASSISTANCE.—

(A) IN GENERAL.—The Secretary may use funds made available under paragraph (3) to provide technical assistance to prospective applicants and to eligible local educational agencies receiving a grant under this section.

(B) CONFLICTS OF INTEREST.—If the Secretary carries out subparagraph (A) through any contracts, the Secretary, in consultation with the Office of the General Counsel of the Department, shall ensure that each contract requires the contractor to—

(i) screen for conflicts of interest when hiring individuals to carry out the responsibilities under the contract;

(ii) include the requirement of clause (i) in any subcontracts the contractor enters into under the contract; and

(iii) establish and follow a schedule for carrying out clause (i) and subparagraph (C) and reporting to the Secretary on the contractor's actions under those provisions.

(C) SCREENING PROCESS.—Subject to subparagraph (D), the screening process described in subparagraph (B)(i) shall—

(i) include, at a minimum, a review of—

(I) each individual performing duties under the contract or subcontract for connections to any State's program under this section;

(II) such individual's potential financial interests in, or other connection to, products, activities, or services that might be purchased by a State educational agency or local educational agency in the course of the agency's implementation of the program under this section; and

(III) such individual's connections to teaching methodologies that might require the use of specific products, activities, or services; and

(ii) ensure that individuals performing duties under the contract do not maintain significant financial interests in products, activities, or services supported under this section.

(D) WAIVER.—

(i) IN GENERAL.—The Secretary may, in consultation with the Office of the General Counsel of the Department, waive the requirements of subparagraph (C).

(ii) REPORT.—The Secretary shall—

(I) establish criteria for the waivers under clause (i); and

(II) report any waivers under clause (i), and the criteria under which such waivers are allowed, to the Committee on Education and Labor of the House of Representatives and the Committee on Health, Education, Labor, and Pensions of the Senate.

(E) INFORMATION DISSEMINATION.—

(i) IN GENERAL.—If the Secretary enters into contracts to provide technical assistance under subparagraph (A), and if a contractor enters into subcontracts for that purpose, each such contract and subcontract shall require the provider of technical assistance to clearly separate technical assistance provided under the contract or subcontract from information provided, or activities engaged in, as part of the normal operations of the contractor or subcontractor.

(ii) METHODS OF COMPLIANCE.—Efforts to comply with clause (i) may include the creation of separate webpages for the purpose of fulfilling a contract or subcontract entered into under subparagraph (A).

(3) RESERVATION OF FUNDS.—The Secretary may reserve not more than 2.5 percent of funds appropriated under subsection (k) for a fiscal year to carry out this subsection.

(k) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section $95,000,000 for fiscal year 2008, and such sums as may be necessary for each of the 2 succeeding fiscal years.

SEC. 6202. SUMMER TERM EDUCATION PROGRAMS.

(a) PURPOSE.—The purpose of this section is to create opportunities for summer learning by providing students with access to summer learning in mathematics, technology, and problem-solving to ensure that students do not experience learning losses over the summer and to remedy, reinforce, and accelerate the learning of mathematics and problem-solving.

(b) DEFINITIONS.—In this section:

(1) ELIGIBLE ENTITY.—The term "eligible entity" means an entity that—

(A) desires to participate in a summer learning grant program under this section by providing summer learning opportunities described in subsection (d)(4)(A)(ii) to eligible students; and

(B) is—

(i) a high-need local educational agency; or

(ii) a consortium consisting of a high-need local educational agency and 1 or more of the following entities:

(I) Another local educational agency.

(II) A community-based youth development organization with a demonstrated record of effectiveness in helping students learn.

(III) An institution of higher education.

(IV) An educational service agency.

(V) A for-profit educational provider, nonprofit organization, science center, museum, or summer enrichment camp, that has been approved by the State educational agency to provide the summer learning opportunity described in subsection (d)(4)(A)(ii).

(2) ELIGIBLE STUDENT.—The term "eligible student" means a student who—

(A) is eligible for a free lunch under the Richard B. Russell National School Lunch Act (42 U.S.C. 1751 et seq.); and

(B) is served by a local educational agency identified by the State educational agency in the application described in subsection (c)(2).

(3) HIGH-NEED LOCAL EDUCATIONAL AGENCY.—The term "high-need local educational agency" has the meaning given the term in section 6112.

(c) DEMONSTRATION GRANT PROGRAM.—

(1) PROGRAM AUTHORIZED.—

(A) IN GENERAL.—From the funds appropriated under subsection (f) for a fiscal year, the Secretary shall carry out a demonstration grant program in which the Secretary awards grants, on a competitive basis, to State educational agencies to enable the State educational agencies to pay the

Federal share of summer learning grants for eligible students.

(B) NUMBER OF GRANTS.—For each fiscal year, the Secretary shall award not more than 5 grants under this section.

(2) APPLICATION.—A State educational agency that desires to receive a grant under this section shall submit an application to the Secretary at such time, in such manner, and accompanied by such information as the Secretary may require. Such application shall identify the areas in the State where the summer learning grant program will be offered and the local educational agencies that serve such areas.

(3) AWARD BASIS.—

(A) SPECIAL CONSIDERATION.—In awarding grants under this section, the Secretary shall give special consideration to a State educational agency that agrees, to the extent possible, to enter into agreements with eligible entities that are consortia described in subsection (b)(1)(B)(ii) and that proposes to target services to children in grades kindergarten through grade 8.

(B) GEOGRAPHIC DISTRIBUTION.—In awarding grants under this section, the Secretary shall take into consideration an equitable geographic distribution of the grants.

(d) SUMMER LEARNING GRANTS.—

(1) USE OF GRANTS FOR SUMMER LEARNING GRANTS.—

(A) IN GENERAL.—Each State educational agency that receives a grant under subsection (c) for a fiscal year shall use the grant funds to provide summer learning grants for the fiscal year to eligible students in the State who desire to attend a summer learning opportunity offered by an eligible entity that enters into an agreement with the State educational agency under paragraph (4)(A).

(B) AMOUNT; FEDERAL AND NON-FEDERAL SHARES.—

(i) AMOUNT.—The amount of a summer learning grant provided under this section shall be—

(I) for each of the fiscal years 2008 through 2011, $1,600; and

(II) for fiscal year 2012, $1,800.

(ii) FEDERAL SHARE.—The Federal share of each summer learning grant shall be not more than 50 percent of the amount of the summer learning grant determined under clause (i).

(iii) NON-FEDERAL SHARE.—The non-Federal share of each summer learning grant shall be not less than 50 percent of the amount of the summer learning grant determined under clause (i), and shall be provided from non-Federal sources.

(2) DESIGNATION OF SUMMER SCHOLARS.—Eligible students who receive summer learning grants under this section shall be known as "summer scholars".

(3) SELECTION OF SUMMER LEARNING OPPORTUNITY.—

(A) DISSEMINATION OF INFORMATION.—A State educational agency that receives a grant under subsection (c) shall disseminate information about summer learning op-

portunities and summer learning grants to the families of eligible students in the State.

(B) APPLICATION.—The parents of an eligible student who are interested in having their child participate in a summer learning opportunity and receive a summer learning grant shall submit an application to the State educational agency that includes a ranked list of preferred summer learning opportunities.

(C) PROCESS.—A State educational agency that receives an application under subparagraph (B) shall—

(i) process such application;

(ii) determine whether the eligible student shall receive a summer learning grant;

(iii) coordinate the assignment of eligible students receiving summer learning grants with summer learning opportunities; and

(iv) if demand for a summer learning opportunity exceeds capacity, the State educational agency shall prioritize applications to low-achieving eligible students.

(D) FLEXIBILITY.—A State educational agency may assign a summer scholar to a summer learning opportunity program that is offered in an area served by a local educational agency that is not the local educational agency serving the area where such scholar resides.

(E) REQUIREMENT OF ACCEPTANCE.—An eligible entity shall accept, enroll, and provide the summer learning opportunity of such entity to, any summer scholar assigned to such summer learning opportunity by a State educational agency pursuant to this subsection.

(4) AGREEMENT WITH ELIGIBLE ENTITY.—

(A) IN GENERAL.—A State educational agency shall enter into an agreement with one or more eligible entities offering a summer learning opportunity, under which—

(i) the State educational agency shall agree to make payments to the eligible entity, in accordance with subparagraph (B), for a summer scholar; and

(ii) the eligible entity shall agree to provide the summer scholar with a summer learning opportunity that—

(I) provides a total of not less than the equivalent of 30 full days of instruction (or not less than the equivalent of 25 full days of instruction, if the equivalent of an additional 5 days is devoted to field trips or other enrichment opportunities) to the summer scholar;

(II) employs small-group, research-based educational programs, materials, curricula, and practices;

(III) provides a curriculum that—

(aa) emphasizes mathematics, technology, engineering, and problem-solving through experiential learning opportunities;

(bb) is primarily designed to increase the numeracy and problem-solving skills of the summer scholar; and

(cc) is aligned with State academic content standards and goals of the local educational agency serving the summer scholar;

(IV) measures student progress to determine the gains made by summer scholars in the summer learning opportunity, and disaggregates the results of such progress for summer scholars by race and ethnicity, economic status, limited English proficiency status, and disability status, in order to determine the opportunity's impact on each subgroup of summer scholars;

(V) collects daily attendance data on each summer scholar;

(VI) provides professional development opportunities for teachers to improve their practice in teaching numeracy, and in integrating problem-solving techniques into the curriculum; and

(VII) meets all applicable Federal, State, and local civil rights laws.

(B) AMOUNT OF PAYMENT.—

(i) IN GENERAL.—Except as provided in clause (ii), a State educational agency shall make a payment to an eligible entity for a summer scholar in the amount determined under paragraph (1)(B)(i).

(ii) ADJUSTMENT.—In the case in which a summer scholar does not attend the full summer learning opportunity, the State educational agency shall reduce the amount provided to the eligible entity pursuant to clause (i) by a percentage that is equal to the percentage of the summer learning opportunity not attended by such scholar.

(5) ADMINISTRATIVE COSTS.—A State educational agency or eligible entity receiving funding under this section may use not more than 5 percent of such funding for administrative costs associated with carrying out this section.

(e) EVALUATIONS; REPORT; WEBSITE.—

(1) EVALUATION AND ASSESSMENT.—For each year that an eligible entity enters into an agreement under subsection (d)(4), the eligible entity shall prepare and submit to the Secretary a report on the activities and outcomes of each summer learning opportunity that enrolled a summer scholar, including—

(A) information on the design of the summer learning opportunity;

(B) the alignment of the summer learning opportunity with State standards; and

(C) data from assessments of student mathematics and problem-solving skills for the summer scholars and on the attendance of the scholars, disaggregated by the subgroups described in subsection (d)(4)(A)(ii)(IV).

(2) REPORT.—For each year funds are appropriated under subsection (f) for this section, the Secretary shall prepare and

submit a report to the Committee on Health, Education, Labor, and Pensions of the Senate and the Committee on Education and Labor of the House of Representatives on the summer learning grant programs, including the effectiveness of the summer learning opportunities in improving student achievement and learning.

(3) SUMMER LEARNING GRANTS WEBSITE.—The Secretary shall make accessible, on the Department of Education website, information for parents and school personnel on successful programs and curricula, and best practices, for summer learning opportunities.

(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section such sums as may be necessary for fiscal year 2008 and each of the 2 succeeding fiscal years.

SEC. 6203. MATH SKILLS FOR SECONDARY SCHOOL STUDENTS.

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

(1) to provide assistance to State educational agencies and local educational agencies in implementing effective research-based mathematics programs for students in secondary schools, including students with disabilities and students with limited English proficiency;

(2) to improve instruction in mathematics for students in secondary school through the implementation of mathematics programs and the support of comprehensive mathematics initiatives that are based on the best available evidence of effectiveness;

(3) to provide targeted help to low-income students who are struggling with mathematics and whose achievement is significantly below grade level; and

(4) to provide in-service training for mathematics coaches who can assist secondary school teachers to utilize research-based mathematics instruction to develop and improve students' mathematical abilities and knowledge, and assist teachers in assessing and improving student academic achievement.

(b) DEFINITIONS.—In this section:

(1) ELIGIBLE LOCAL EDUCATIONAL AGENCY.—The term "eligible local educational agency" means a local educational agency that is eligible to receive funds, and that is receiving funds, under part A of title I of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311 et seq.).

(2) MATHEMATICS COACH.—The term "mathematics coach" means a certified or licensed teacher, with a demonstrated effectiveness in teaching mathematics to students with specialized needs in mathematics and improving student academic achievement in mathematics, a command of mathematical content knowledge, and the ability to work with classroom teachers to improve the teachers' instructional techniques to support mathematics improvement, who works on site at a school—

(A) to train teachers to better assess student learning in mathematics;

(B) to train teachers to assess students' mathematics skills and identify students who need remediation; and

(C) to provide or assess remedial mathematics instruction, including for—

(i) students in after-school and summer school programs;

(ii) students requiring additional instruction;

(iii) students with disabilities; and

(iv) students with limited English proficiency.

(c) PROGRAM AUTHORIZED.—

(1) IN GENERAL.—From funds appropriated under subsection (o) for a fiscal year, the Secretary shall establish a program, in accordance with the requirements of this section, that will provide grants on a competitive basis to State educational agencies to award grants and subgrants to eligible local educational agencies for the purpose of establishing mathematics programs to improve the overall mathematics performance of secondary school students in the State.

(2) LENGTH OF GRANT.—A grant to a State educational agency under this section shall be awarded for a period of 3 years.

(d) RESERVATION OF FUNDS BY THE SECRETARY.—From amounts appropriated under subsection (o) for a fiscal year, the Secretary may reserve—

(1) not more than 3 percent of such amounts to fund national activities in support of the programs assisted under this section, such as research and dissemination of best practices, except that the Secretary may not use the reserved funds to award grants directly to local educational agencies; and

(2) not more than ½ of 1 percent of such amounts for the Bureau of Indian Education of the Department of the Interior to carry out the services and activities described in subsection (k)(3) for Indian children.

(e) GRANT FORMULAS.—

(1) COMPETITIVE GRANTS TO STATE EDUCATIONAL AGENCIES.—From amounts appropriated under subsection (o) and not reserved under subsection (d), the Secretary shall award grants, on a competitive basis, to State educational agencies to enable the State educational agencies to provide subgrants to eligible local educational agencies to establish mathematics programs for the purpose of improving overall mathematics performance among students in secondary school in the State.

(2) MINIMUM GRANT.—The Secretary shall ensure that the minimum grant made to any State educational agency under this section shall be not less than $500,000.

(f) APPLICATIONS.—In order to receive a grant under this section, a State educational agency shall submit an application to the Secretary at such time, in such manner, and accompanied by such information as the Secretary may require. Each such application shall meet the following conditions:

(1) A State educational agency shall not include the application for assistance under this section in a consolidated application submitted under section 9302 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7842).

(2) The State educational agency's application shall include assurances that such application and any technical assistance

provided by the State will be guided by a peer review team, which shall consist of—

(A) researchers with expertise in the pedagogy of mathematics;

(B) mathematicians; and

(C) mathematics educators serving high-risk, high-achievement schools and eligible local educational agencies.

(3) The State educational agency shall include an assurance that the State has a process to safeguard against conflicts of interest consistent with subsection (m)(2) and section 6204 for individuals providing technical assistance on behalf of the State educational agency or participating in the State peer review process under this subtitle.

(4) The State educational agency will participate, if requested, in any evaluation of the State educational agency's program under this section.

(5) The State educational agency's application shall include a program plan that contains a description of the following:

(A) How the State educational agency will assist eligible local educational agencies in implementing subgrants, including providing ongoing professional development for mathematics coaches, teachers, paraprofessionals, and administrators.

(B) How the State educational agency will help eligible local educational agencies identify high-quality screening, diagnostic, and classroom-based instructional mathematics assessments.

(C) How the State educational agency will help eligible local educational agencies identify high-quality research-based mathematics materials and programs.

(D) How the State educational agency will help eligible local educational agencies identify appropriate and effective materials, programs, and assessments for students with disabilities and students with limited English proficiency.

(E) How the State educational agency will ensure that professional development funded under this section—

(i) is based on mathematics research;

(ii) will effectively improve instructional practices for mathematics for secondary school students;

(iii) will improve student academic achievement in mathematics; and

(iv) is coordinated with professional development activities funded through other programs, including section 2113 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6613).

(F) How funded activities will help teachers and other instructional staff to implement research-based components of mathematics instruction and improve student academic achievement.

(G) The subgrant process the State educational agency will use to ensure that eligible local educational agencies receiving subgrants implement programs and practices based on mathematics research.

(H) How the State educational agency will build on and promote coordination among mathematics programs in the State to increase overall effectiveness in improving mathematics instruction and student academic achievement, including for students with disabilities and students with limited English proficiency.

(I) How the State educational agency will regularly assess and evaluate the effectiveness of the eligible local educational agency activities funded under this section.

(g) STATE USE OF FUNDS.—Each State educational agency receiving a grant under this section shall—

(1) establish a peer review team comprised of researchers with expertise in the pedagogy of mathematics, mathematicians, and mathematics educators from high-risk, high-achievement schools, to provide guidance to eligible local educational agencies in selecting or developing and implementing appropriate, research-based mathematics programs for secondary school students;

(2) use 80 percent of the grant funds received under this section for a fiscal year to fund high-quality applications for subgrants to eligible local educational agencies having applications approved under subsection (k); and

(3) use 20 percent of the grant funds received under this section—

(A) to carry out State-level activities described in the application submitted under subsection (f);

(B) to provide—

(i) technical assistance to eligible local educational agencies; and

(ii) high-quality professional development to teachers and mathematics coaches in the State;

(C) to oversee and evaluate subgrant services and activities undertaken by the eligible local educational agencies as described in subsection (k)(3); and

(D) for administrative costs, of which not more than 5 percent of the grant funds may be used for planning, administration, and reporting.

(h) NOTICE TO ELIGIBLE LOCAL EDUCATIONAL AGENCIES.—Each State educational agency receiving a grant under this section shall provide notice to all eligible local educational agencies in the State about the availability of subgrants under this section.

(i) PROHIBITIONS.—

(1) IN GENERAL.—In implementing this section, the Secretary shall not—

(A) endorse, approve, or sanction any mathematics curriculum designed for use in any school; or

(B) engage in oversight, technical assistance, or activities that will require the adoption of a specific mathematics program or instructional materials by a State, local educational agency, or school.

(2) RULE OF CONSTRUCTION.—Nothing in this section shall be construed to authorize or permit the Secretary, Department of Education, or a Department of Education contractor, to mandate, direct, control, or suggest the selection of a mathematics

curriculum, supplemental instructional materials, or program of instruction by a State, local educational agency, or school.

(j) SUPPLEMENT NOT SUPPLANT.—Each State educational agency receiving a grant under this section shall use the grant funds to supplement, not supplant, State funding for activities authorized under this section or for other educational activities.

(k) SUBGRANTS TO ELIGIBLE LOCAL EDUCATIONAL AGENCIES.—

(1) APPLICATION.—

(A) IN GENERAL.—Each eligible local educational agency desiring a subgrant under this subsection shall submit an application to the State educational agency in the form and according to the schedule established by the State educational agency.

(B) CONTENTS.—In addition to any information required by the State educational agency, each application under subparagraph (A) shall demonstrate how the eligible local educational agency will carry out the following required activities:

(i) Development or selection and implementation of research-based mathematics assessments.

(ii) Development or selection and implementation of research-based mathematics programs, including programs for students with disabilities and students with limited English proficiency.

(iii) Selection of instructional materials based on mathematics research.

(iv) High-quality professional development for mathematics coaches and teachers based on mathematics research.

(v) Evaluation and assessment strategies.

(vi) Reporting.

(vii) Providing access to research-based mathematics materials.

(C) CONSORTIA.—Consistent with State law, an eligible local educational agency may apply to the State educational agency for a subgrant as a member of a consortium of local educational agencies if each member of the consortium is an eligible local educational agency.

(2) AWARD BASIS.—

(A) PRIORITY.—A State educational agency awarding subgrants under this subsection shall give priority to eligible local educational agencies that—

(i) are among the local educational agencies in the State with the lowest graduation rates, as described in section 1111(b)(2)(C)(vi) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311(b)(2)(C)(vi)); and

(ii) have the highest number or percentage of students who are counted under section 1124(c) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6333(c)).

(B) AMOUNT OF GRANTS.—Subgrants under this subsection shall be of sufficient size and scope to enable eligi-

ble local educational agencies to fully implement activities assisted under this subsection.

(3) LOCAL USE OF FUNDS.—Each eligible local educational agency receiving a subgrant under this subsection shall use the subgrant funds to carry out, at the secondary school level, the following services and activities:

(A) Hiring mathematics coaches and providing professional development for mathematics coaches—

(i) at a level to provide effective coaching to classroom teachers;

(ii) to work with classroom teachers to better assess student academic achievement in mathematics;

(iii) to work with classroom teachers to identify students with mathematics problems and, where appropriate, refer students to available programs for remediation and additional services;

(iv) to work with classroom teachers to diagnose and remediate mathematics difficulties of the lowest-performing students, so that those teachers can provide intensive, research-based instruction, including during after-school and summer sessions, geared toward ensuring that those students can access and be successful in rigorous academic coursework; and

(v) to assess and organize student data on mathematics and communicate that data to school administrators to inform school reform efforts.

(B) Reviewing, analyzing, developing, and, where possible, adapting curricula to make sure mathematics skills are taught within other core academic subjects.

(C) Providing mathematics professional development for all relevant teachers in secondary school, as necessary, that addresses both remedial and higher level mathematics skills for students in the applicable curriculum.

(D) Providing professional development for teachers, administrators, and paraprofessionals serving secondary schools to help the teachers, administrators, and paraprofessionals improve student academic achievement in mathematics.

(E) Procuring and implementing programs and instructional materials based on mathematics research, including software and other education technology related to mathematics instruction with demonstrated effectiveness in improving mathematics instruction and student academic achievement.

(F) Building on and promoting coordination among mathematics programs in the eligible local educational agency to increase overall effectiveness in—

(i) improving mathematics instruction; and

(ii) increasing student academic achievement, including for students with disabilities and students with limited English proficiency.

(G) Evaluating the effectiveness of the instructional strategies, teacher professional development programs, and

other interventions that are implemented under the subgrant.

(H) Measuring improvement in student academic achievement, including through progress monitoring or other assessments.

(4) SUPPLEMENT NOT SUPPLANT.—Each eligible local educational agency receiving a subgrant under this subsection shall use the subgrant funds to supplement, not supplant, the eligible local educational agency's funding for activities authorized under this section or for other educational activities.

(5) NEW SERVICES AND ACTIVITIES.—Subgrant funds provided under this subsection may be used only to provide services and activities authorized under this section that were not provided on the day before the date of enactment of this Act.

(6) EVALUATIONS.—Each eligible local educational agency receiving a grant under this subsection shall participate, as requested by the State educational agency or the Secretary, in reviews and evaluations of the programs of the eligible local educational agency and the effectiveness of such programs, and shall provide such reports as are requested by the State educational agency and the Secretary.

(l) MATCHING REQUIREMENTS.—

(1) STATE EDUCATIONAL AGENCY REQUIREMENTS.—A State educational agency that receives a grant under this section shall provide, from non-Federal sources, an amount equal to 50 percent of the amount of the grant, in cash or in-kind, to carry out the activities supported by the grant, of which not more than 20 percent of such 50 percent may be provided by local educational agencies within the State.

(2) WAIVER.—The Secretary may waive all or a portion of the matching requirements described in paragraph (1) for any fiscal year, if the Secretary determines that—

(A) the application of the matching requirement will result in serious hardship for the State educational agency; or

(B) providing a waiver best serves the purpose of the program assisted under this section.

(m) EVALUATION AND TECHNICAL ASSISTANCE.—

(1) EVALUATION.—

(A) IN GENERAL.—The Secretary shall conduct an annual independent evaluation, by grant or by contract, of the program assisted under this section, which shall include an assessment of the impact of the program on student academic achievement and teacher performance, and may use funds available to carry out this section to conduct the evaluation.

(B) REPORT.—The Secretary shall annually submit to the Committee on Education and Labor and the Committee on Appropriations of the House of Representatives, and to the Committee on Health, Education, Labor, and Pensions and the Committee on Appropriations of the Senate, a report on the results of the evaluation.

(C) LIMITATIONS.—

(i) IN GENERAL.—The Secretary shall ensure that the organization selected to carry out the independent evaluation under subparagraph (A) does not hold a contract or subcontract to implement any aspect of the program under this section.

(ii) SUBCONTRACTORS.—Any contract entered into under subparagraph (A) shall prohibit the organization conducting the evaluation from subcontracting with any entity that holds a contract or subcontract for any aspect of the implementation of this section.

(iii) WAIVER.—Subject to clause (iv), the Secretary may waive the application of clause (i) or (ii), or both, in accordance with the requirements under section 9.503 of title 48, Code of Federal Regulations, if the Secretary determines that their application in a particular situation would not be in the Federal Government's interest.

(iv) SPECIAL RULE REGARDING WAIVERS.—No organization or subcontractor under this paragraph shall receive a waiver that allows the organization or subcontractor to evaluate any aspect of the program under this section that the organization or subcontractor was involved in implementing.

(2) TECHNICAL ASSISTANCE.—

(A) IN GENERAL.—The Secretary may use funds made available under paragraph (3) to provide technical assistance to prospective applicants and to State educational agencies and eligible local educational agencies receiving grants or subgrants under this section.

(B) CONFLICTS OF INTEREST.—If the Secretary carries out subparagraph (A) through any contracts, the Secretary, in consultation with the Office of the General Counsel of the Department, shall ensure that each contract requires the contractor to—

(i) screen for conflicts of interest when hiring individuals to carry out the responsibilities under the contract;

(ii) include the requirement of clause (i) in any subcontracts the contractor enters into under the contract; and

(iii) establish and follow a schedule for carrying out clause (i) and subparagraph (C) and reporting to the Secretary on the contractor's actions under those provisions.

(C) SCREENING PROCESS.—Subject to subparagraph (D), the screening process described in subparagraph (B)(i) shall—

(i) include, at a minimum, a review of—

(I) each individual performing duties under the contract or subcontract for connections to any State's program under this section;

(II) such individual's potential financial interests in, or other connection to, products, activities, or services that might be purchased by a State

educational agency or local educational agency in the course of the agency's implementation of the program under this section; and

(III) such individual's connections to teaching methodologies that might require the use of specific products, activities, or services; and

(ii) ensure that individuals performing duties under the contract do not maintain significant financial interests in products, activities, or services supported under this section.

(D) WAIVER.—

(i) IN GENERAL.—The Secretary may, in consultation with the Office of the General Counsel of the Department, waive the requirements of subparagraph (C).

(ii) REPORT.—The Secretary shall—

(I) establish criteria for the waivers under clause (i); and

(II) report any waivers under clause (i), and the criteria under which such waivers are allowed, to the Committee on Education and Labor of the House of Representatives and the Committee on Health, Education, Labor, and Pensions of the Senate.

(E) INFORMATION DISSEMINATION.—

(i) IN GENERAL.—If the Secretary enters into contracts to provide technical assistance under subparagraph (A), and if a contractor enters into subcontracts for that purpose, each such contract and subcontract shall require the provider of technical assistance to clearly separate technical assistance provided under the contract or subcontract from information provided, or activities engaged in, as part of the normal operations of the contractor or subcontractor.

(ii) METHODS OF COMPLIANCE.—Efforts to comply with clause (i) may include the creation of separate webpages for the purpose of fulfilling a contract or subcontract entered into under subparagraph (A).

(3) RESERVATION OF FUNDS.—The Secretary may reserve not more than 2.5 percent of funds appropriated under subsection (o) for a fiscal year to carry out this subsection.

(n) PROGRAM PERFORMANCE AND ACCOUNTABILITY.—

(1) INFORMATION.—Each State educational agency receiving a grant under this section shall collect and report to the Secretary annually such information on the results of the grant as the Secretary may reasonably require, including information on—

(A) mathematics achievement data that show the progress of students participating in projects under this section (including, to the extent practicable, comparable data from students not participating in such projects), based primarily on the results of State, school districtwide, or classroom-based monitoring reports or assessments, including—

(i) specific identification of those schools and eligible local educational agencies that report the largest gains in mathematics achievement; and

(ii) evidence on whether the State educational agency and eligible local educational agencies within the State have—

(I) significantly increased the number of students achieving at the proficient or advanced level on the State student academic achievement standards in mathematics under section 1111(b)(1)(D)(ii) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311(b)(1)(D)(ii));

(II) significantly increased the percentages of students described in section 1111(b)(2)(C)(v)(II) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311(b)(2)(C)(v)(II)) who are achieving proficiency or advanced levels on such State academic content standards in mathematics;

(III) significantly increased the number of students making significant progress toward meeting such State academic content and achievement standards in mathematics; and

(IV) successfully implemented this section;

(B) the percentage of students in the schools served by the eligible local educational agency who enroll in advanced mathematics courses in grades 9 through 12, including the percentage of such students who pass such courses; and

(C) the progress made in increasing the quality and accessibility of professional development and leadership activities in mathematics, especially activities resulting in greater content knowledge and expertise of teachers, administrators, and other school staff, except that the Secretary shall not require such information until after the third year of a grant awarded under this section.

(2) REPORTING AND DISAGGREGATION.—The information required under paragraph (1) shall be—

(A) reported in a manner that allows for a comparison of aggregated score differentials of student academic achievement before (to the extent feasible) and after implementation of the project assisted under this section; and

(B) disaggregated in the same manner as information is disaggregated under section 1111(h)(1)(C)(i) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311(h)(1)(C)(i)).

(o) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section $95,000,000 for fiscal year 2008 and each of the 2 succeeding fiscal years.

SEC. 6204. PEER REVIEW OF STATE APPLICATIONS.

(a) PEER REVIEW OF STATE APPLICATIONS.—The Secretary shall establish peer review panels to review State educational agency applications submitted pursuant to sections 6201 and 6203 and shall

consider the recommendation of the peer review panels in deciding whether to approve the applications.

(b) SCREENING.—

(1) IN GENERAL.—The Secretary shall establish a process through which individuals on the peer review panels who review State applications under sections 6201 and 6203 (referred to in this section as "reviewers") are screened for potential conflicts of interest.

(2) SCREENING REQUIREMENTS.—The screening process described in paragraph (1) shall, subject to paragraph (3)—

(A) be reviewed and approved by the Office of the General Counsel of the Department;

(B) include, at a minimum, a review of each reviewer's—

(i) professional connection to any State's program under such sections, including a disclosure of any connection to publishers, entities, private individuals, or organizations related to such State's program;

(ii) potential financial interest in products, activities, or services that might be purchased by a State educational agency or local educational agency in the course of the agency's implementation of the programs under such sections; and

(iii) professional connections to teaching methodologies that might require the use of specific products, activities, or services; and

(C) ensure that reviewers do not maintain significant financial interests in products, activities, or services supported under such sections.

(3) WAIVER.—

(A) IN GENERAL.—The Secretary may, in consultation with the Office of the General Counsel of the Department, waive the requirements of paragraph (2)(C).

(B) REPORT OF WAIVERS.—The Secretary shall—

(i) establish criteria for the waivers permitted under subparagraph (A); and

(ii) report any waivers allowed under subparagraph (A), and the criteria under which such waivers are allowed, to the Committee on Education and Labor of the House of Representatives and the Committee on Health, Education, Labor, and Pensions of the Senate.

(c) GUIDANCE.—

(1) IN GENERAL.—The Secretary shall develop procedures for, and issue guidance regarding, how reviewers will review applications submitted under sections 6201 and 6203 and provide feedback to State educational agencies and recommendations to the Secretary. The Secretary shall also develop guidance for how the Secretary will review those recommendations and make final determinations of approval or disapproval of those applications.

(2) REQUIREMENTS.—Such procedures shall, at a minimum—

(A) create a transparent process through which review panels provide clear, consistent, and publicly available doc-

umentation and explanations in support of all recommendations, including the final reviews of the individual reviewers, except that a final review shall not reveal any personally identifiable information about the reviewer;

(B) ensure that a State educational agency has the opportunity for direct interaction with any review panel that reviewed the agency's application under section 6201 or 6203 when revising that application as a result of feedback from the panel, including the disclosure of the identities of the reviewers;

(C) require that any review panel and the Secretary clearly and consistently document that all required elements of an application under section 6201 or 6203 are included before the application is approved; and

(D) create a transparent process through which the Secretary clearly, consistently, and publicly documents decisions to approve or disapprove applications under such sections and the reasons for those decisions.

Subtitle C—Foreign Language Partnership Program

SEC. 6301. FINDINGS AND PURPOSE.

(a) FINDINGS.—Congress makes the following findings:

(1) The United States faces a shortage of skilled professionals with higher levels of proficiency in foreign languages and area knowledge critical to the Nation's security.

(2) Given the Nation's economic competitiveness interests, it is crucial that our Nation expand the number of Americans who are able to function effectively in the environments in which critical foreign languages are spoken.

(3) Students' ability to become proficient in foreign languages can be addressed by starting language learning at a younger age and expanding opportunities for continuous foreign language education from elementary school through postsecondary education.

(b) PURPOSE.—The purpose of this subtitle is to significantly increase—

(1) the opportunities to study critical foreign languages and the context in which the critical foreign languages are spoken; and

(2) the number of American students who achieve the highest level of proficiency in critical foreign languages.

SEC. 6302. DEFINITIONS.

In this subtitle:

(1) ELIGIBLE RECIPIENT.—The term "eligible recipient" means an entity mutually agreed upon by a partnership that shall receive grant funds under this subtitle on behalf of the partnership for use in carrying out the activities assisted under this subtitle.

(2) PARTNERSHIP.—The term "partnership" means a partnership that—

(A) shall include—

(i) an institution of higher education; and

(ii) 1 or more local educational agencies; and

(B) may include 1 or more entities that support the purposes of this subtitle.

(3) SUPERIOR LEVEL OF PROFICIENCY.—The term "superior level of proficiency" means level 3, the professional working level, as measured by the Federal Interagency Language Roundtable (ILR) or by other generally recognized measures of superior standards.

SEC. 6303. PROGRAM AUTHORIZED.

(a) PROGRAM AUTHORIZED.—

(1) IN GENERAL.—The Secretary is authorized to award grants to eligible recipients to enable partnerships served by the eligible recipients to establish articulated programs of study in critical foreign languages that will enable students to advance successfully from elementary school through postsecondary education and achieve higher levels of proficiency in a critical foreign language.

(2) DURATION.—A grant awarded under paragraph (1) shall be for a period of not more than 5 years, of which 2 years may be for planning and development. A grant may be renewed for not more than 2 additional 5-year periods, if the Secretary determines that the partnership's program is effective and the renewal will best serve the purposes of this subtitle.

(b) APPLICATIONS.—

(1) IN GENERAL.—Each eligible recipient 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 require.

(2) CONTENTS.—Each application shall—

(A) identify each local educational agency partner, including contact information and letters of commitment, and describe the responsibilities of each member of the partnership, including—

(i) how each of the partners will be involved in planning, developing, and implementing—

(I) program curriculum and materials; and

(II) teacher professional development;

(ii) what resources each of the partners will provide; and

(iii) how the partners will contribute to ensuring the continuity of student progress from elementary school through the postsecondary level;

(B) describe how an articulated curriculum for students will be developed and implemented, which may include the use and integration of technology into such curriculum;

(C) identify target proficiency levels for students at critical benchmarks (such as grades 4, 8, and 12), and describe how progress toward those proficiency levels will be assessed at the benchmarks, and how the program will use the results of the assessments to ensure continuous progress toward achieving a superior level of proficiency at the postsecondary level;

(D) describe how the partnership will—

(i) ensure that students from a program assisted under this subtitle who are beginning postsecondary education will be assessed and enabled to progress to a superior level of proficiency;

(ii) address the needs of students already at, or near, the superior level of proficiency, which may include diagnostic assessments for placement purposes, customized and individualized language learning opportunities, and experimental and interdisciplinary language learning; and

(iii) identify and describe how the partnership will work with institutions of higher education outside the partnership to provide participating students with multiple options for postsecondary education consistent with the purposes of this subtitle;

(E) describe how the partnership will support and continue the program after the grant has expired, including how the partnership will seek support from other sources, such as State and local governments, foundations, and the private sector; and

(F) describe what assessments will be used or, if assessments not available, how assessments will be developed.

(c) USES OF FUNDS.—Grant funds awarded under this subtitle—

(1) shall be used to plan, develop, and implement programs at the elementary school level through postsecondary education, consistent with the purpose of this subtitle, including—

(A) the development of curriculum and instructional materials; and

(B) recruitment of students; and

(2) may be used for—

(A) teacher recruitment (including recruitment from other professions and recruitment of native-language speakers in the community) and professional development directly related to the purposes of this subtitle at the elementary school through secondary school levels;

(B) development of appropriate assessments;

(C) opportunities for maximum language exposure for students in the program, such as the creation of immersion environments (such as language houses, language tables, immersion classrooms, and weekend and summer experiences) and special tutoring and academic support;

(D) dual language immersion programs;

(E) scholarships and study-abroad opportunities, related to the program, for postsecondary students and newly recruited teachers who have advanced levels of proficiency in a critical foreign language, except that not more than 20 percent of the grant funds provided to an eligible recipient under this section for a fiscal year may be used to carry out this subparagraph;

(F) activities to encourage community involvement to assist in meeting the purposes of this subtitle;

(G) summer institutes for students and teachers;

(H) bridge programs that allow dual enrollment for secondary school students in institutions of higher education;

(I) programs that expand the understanding and knowledge of historic, geographic, and contextual factors within countries with populations who speak critical foreign languages, if such programs are carried out in conjunction with language instruction;

(J) research on, and evaluation of, the teaching of critical foreign languages;

(K) data collection and analysis regarding the results of—

(i) various student recruitment strategies;

(ii) program design; and

(iii) curricular approaches;

(L) the impact of the strategies, program design, and curricular approaches described in subparagraph (K) on increasing—

(i) the number of students studying critical foreign languages; and

(ii) the proficiency of the students in the critical foreign languages; and

(M) distance learning projects for critical foreign language learning.

(d) MATCHING REQUIREMENT.—

(1) IN GENERAL.—An eligible recipient that receives a grant under this subtitle shall provide, toward the cost of carrying out the activities supported by the grant, from non-Federal sources, an amount equal to—

(A) 20 percent of the amount of the grant payment for the first fiscal year for which a grant payment is made;

(B) 30 percent of the amount of the grant payment for the second such fiscal year;

(C) 40 percent of the amount of the grant payment for the third such fiscal year; and

(D) 50 percent of the amount of the grant payment for each of the fourth and fifth such fiscal years.

(2) NON-FEDERAL SHARE.—The non-Federal share required under paragraph (1) may be provided in cash or in-kind.

(3) WAIVER.—The Secretary may waive all or part of the matching requirement of paragraph (1), for any fiscal year, if the Secretary determines that—

(A) the application of the matching requirement will result in serious hardship for the partnership; or

(B) the waiver will best serve the purposes of this subtitle.

(e) SUPPLEMENT NOT SUPPLANT.—Grant funds provided under this subtitle shall be used to supplement, not supplant, other Federal and non-Federal funds available to carry out the activities described in subsection (c).

(f) TECHNICAL ASSISTANCE.—The Secretary shall enter into a contract to establish a technical assistance center to provide technical assistance to partnerships developing critical foreign language programs assisted under this subtitle. The center shall—

(1) assist the partnerships in the development of critical foreign language instructional materials and assessments; and

(2) disseminate promising foreign language instructional practices.

(g) PROGRAM EVALUATION.—

(1) IN GENERAL.—The Secretary may reserve not more than 5 percent of the total amount appropriated for this subtitle for any fiscal year to annually evaluate the programs under this subtitle.

(2) REPORT.—The Secretary shall prepare and annually submit, 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, a report—

(A) on the results of any program evaluation conducted under this subsection; and

(B) that includes best practices on the teaching and learning of foreign languages based on the findings from the evaluation.

SEC. 6304. AUTHORIZATION OF APPROPRIATIONS.

For the purpose of carrying out this subtitle, there are authorized to be appropriated $28,000,000 for fiscal year 2008, and such sums as may be necessary for each of the 2 succeeding fiscal years.

Subtitle D—Alignment of Education Programs

SEC. 6401. 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 ad-

ministrators, 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 non-governmental 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) yearly test records of individual students with respect to assessments under section 1111(b) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311(b));

(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.

(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 fiscal year 2008 and such sums as may be necessary for fiscal year 2009.

Subtitle E—Mathematics and Science Partnership Bonus Grants

SEC. 6501. MATHEMATICS AND SCIENCE PARTNERSHIP BONUS GRANTS.

(a) IN GENERAL.—From amounts appropriated under section 6502, the Secretary shall award a grant—

(1) for each of the school years 2007–2008 through 2010–2011, to each of the 3 elementary schools, and each of the 3 secondary schools, each of which has a high concentration of low income students as defined in section 1707(2) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6537(2)), in each State whose students demonstrate the most improvement in mathematics, as measured by the improvement in the students' average score on the State's assessments in mathematics for the school year for which the grant is awarded, as compared to the school year preceding the school year for which the grant is awarded; and

(2) for each of the school years 2008–2009 through 2010–2011, to each of the 3 elementary schools, and each of the 3 secondary schools, each of which has a high concentration of low income students as defined in section 1707(2) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6537(2)), in each State whose students demonstrate the most improvement in science, as measured by the improvement in the students' av-

erage score on the State's assessments in science for the school year for which the grant is awarded, as compared to the school year preceding the school year for which the grant is awarded.

(b) GRANT AMOUNT.—The amount of each grant awarded under this section shall be $50,000.

SEC. 6502. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated to carry out this subtitle such sums as may be necessary for fiscal years 2008 and each of the 2 succeeding fiscal years.

TITLE VII—NATIONAL SCIENCE FOUNDATION

SEC. 7001. 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 9101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7801).

(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 9101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7801).

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. 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. 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. POSTDOCTORAL RESEARCH FELLOWS.

(a) MENTORING.—The Director shall require that all grant applications that include funding to support postdoctoral 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. 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. 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, and postdoctoral researchers participating in the proposed research project.

SEC. 7010. 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. 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 ineli-

gible 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. 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.

(c) REPORT TO CONGRESS.—Not later than 1 year after the date of enactment of this Act, and annually thereafter, the Director shall submit 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 that—

(1) lists the grants that have been extended in duration by the authority provided under this section; and

(2) provides any recommendations the Director may have regarding the extension of the authority provided under this section to programs other than those specified in subsection (a).

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. 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. 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. 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. 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. 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) 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 services 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 baccalaureate 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 post-secondary 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 participants 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, ½ 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 degree 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 fellowship 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 1/4 of the total amount for each year of service completed, plus 1/2 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 1/2, 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).".

(b) EVALUATION AND REPORT.—The Director shall establish metrics to evaluate the success of the programs established by the Foundation for encouraging individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b) to study and prepare for careers in science, technology, engineering, and mathematics, including programs that provide for mentoring for such individuals. The Director shall carry out evaluations based on the metrics developed and report to Congress annually on the findings and conclusions of the evaluations.

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. HISPANIC-SERVING INSTITUTIONS UNDERGRADUATE PROGRAM.

(a) IN GENERAL.—The Director is authorized to establish a new program to 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 science, technology, engineering, and mathematics 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. 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 2/3 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. 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 identi-

fied 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. 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 un-

intended 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. 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 Director, 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.

And the Senate agree to the same.

H.R. 2272

Managers on the part of the **SENATE**	*Managers on the part of the* **HOUSE**
Mr. BINGAMAN	
Mr. INOUYE	
Mr. KENNEDY	
Mr. LIEBERMAN	
Ms. MIKULSKI	
Mr. KERRY	
Mr. NELSON of Florida	
Mr. DOMENICI	

H.R. 2272—Continued

Managers on the part of the SENATE	*Managers on the part of the* HOUSE
Mr. STEVENS	
Mr. ENZI	
Mr. ALEXANDER	
Mr. ENSIGN	
Mr. COLEMAN	

H.R. 2272—Continued

Managers on the part of the SENATE	*Managers on the part of the* HOUSE
	From the Committee on Science and Technology, for consideration of the House bill and the Senate amendment, and modifications committed to conference:
	Mr. GORDON
	Mr. LIPINSKI
	Mr. BAIRD
	Mr. WU
	Mr. LAMPSON
	Mr. UDALL of Colorado
	Ms. GIFFORDS

H.R. 2272—Continued

Managers on the part of the **SENATE**	*Managers on the part of the* **HOUSE**
	Mr. MCNERNEY
	Mr. HALL of Texas
	Mr. SENSENBRENNER
	Mr. EHLERS
	Mrs. BIGGERT
	Mr. FEENEY
	Mr. GINGREY

H.R. 2272—Continued

Managers on the part of the SENATE	*Managers on the part of the* HOUSE
	From the Committee on Education and Labor, for consideration of Division C of the Senate amendment, and modifications committed to conference:
	George Miller Mr. GEORGE MILLER of California
	Rush Holt Mr. HOLT
	Mr. MCKEON

JOINT EXPLANATORY STATEMENT OF THE COMMITTEE OF CONFERENCE

The managers on the part of the House and the Senate at the conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 2272) to invest in innovation through research and development, and to improve the competitiveness of the United States, submit the following joint statement to the House and the Senate in explanation of the effect of the action agreed upon by the managers and recommended in the accompanying conference report:

Statement of Managers

Title I – Office of Science and Technology Policy; Government-wide Science

National Science and Technology Summit (sec. 1001)

The Senate amendment contained a provision (sec. 1101) that would require the President to convene a National Science and Technology Summit within 180 days of enactment to evaluate the health and direction of the nation's science, technology, engineering, and mathematics enterprises and to identify key research and technology challenges and recommendations for research and development investment over the next five years.

The House bill contained no similar provision.

The House recedes to subsections (a) and (b) and agrees to modified text for subsection (c).

Study on barriers to innovation (sec. 1002)

The Senate amendment contained a provision (sec. 1102) that requires the Director of the Office of Science and Technology Policy (OSTP) to enter into a contract with the National Academy of Sciences one year after enactment and four years after enactment to conduct a study to identify forms of risk that create barriers to innovation. The study is intended to review the long-term value of innovation to the business community and to identify means to mitigate risks presently associated with such innovation activities.

The House bill contained no similar provision.

The House recedes to the Senate provision with the removal of paragraphs (a)(13) and (a)(14).

National Technology and Innovation Medal (sec. 1003)

The Senate amendment contained a provision (sec. 1103) that amends Section 16 of the Stevenson-Wydler Technology Innovation Act of 1980 to rename the "National Technology Medal" as the "National Technology and Innovation Medal."

The House bill contained a provision (sec. 205) that establishes the Presidential Innovation Award to be presented periodically, on the basis of recommendations from the director of the Office of Science and Technology Policy, to citizens or permanent residents of the United States who develop unique scientific or engineering ideas judged to stimulate scientific and engineering advances in the national interest, to illustrate the linkage between science and engineering and national needs, and to provide an example to excite the interest of students in science or engineering professions.

The House recedes.

Semiannual Science, Technology, Engineering, and Mathematics Days (sec. 1004)

The Senate amendment contained a provision (sec. 1105) that expresses the Sense of Congress that OSTP should encourage all elementary and middle schools to observe a Science, Technology, Engineering, and Mathematics Day twice in every school year for

the purpose of facilitating the interaction between science, technology, engineering, and mathematics mentors and grade school students. This section also expresses a Sense of Congress that OSTP should encourage involvement of federal employees, the private sector, and institutions of higher learning in such days.

The House bill contained no similar provision.

The House recedes.

Study of service science (sec. 1005)

The Senate amendment contained a provision (sec. 1106) that would express a Sense of Congress that the Federal Government should better understand and respond strategically to the emerging management and learning discipline known as "service science." The provision would require the Director of OSTP, through the National Academy of Sciences, to conduct a study on how the Federal Government should best support service science through research, education, and training.

The House bill contained no similar provision.

The House recedes with an amendment to change the report requirement from 270 days to 1 year.

President's Council on Innovation and Competitiveness (sec. 1006)

The Senate amendment contained a provision (sec. 1201) that would require the President to establish a President's Council on Innovation and Competitiveness to develop a comprehensive agenda to promote innovation in the public and private sectors. The Council, which could be constituted by designating an existing body to perform its functions, would include the Secretaries of Commerce, Defense, Education, Health and Human Services, Homeland Security, Labor, and Treasury along with the heads of the National Aeronautics and Space Administration, the Securities and Exchange Commission, the National Science Foundation, the Office of the United States Trade Representative, the Office of Management and Budget, the Office of Science and Technology Policy, the Environmental Protection Agency, the Small Business Administration, and other relevant federal agencies involved in innovation. As the President's Council on Innovation and Competitiveness develops a comprehensive agenda for strengthening innovation and competitiveness it should consult with advisors from the private sector, labor, scientific organizations, academic organizations, and other nongovernmental organizations working in the area of science or technology.

The House bill contained no similar provision.

The House recedes.

National coordination of research infrastructure (sec. 1007)

The House bill contained a provision (sec. 206) that establishes a National Coordination Office for Research Infrastructure under the OSTP to identify and prioritize deficiencies in research facilities and instrumentation in academic institutions and national laboratories and to make recommendations for use of funding authorized. The Office is directed to report to Congress annually at the time of the Administration's budget proposal.

The Senate amendment contained no similar provision.

The Conferees agree to modified language that directs the Director of the OSTP to 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. The provision also requires the Director of OSTP to annually submit to Congress, in support of the President's budget, a report setting forth the deficiencies in research infrastructure, projects, and budget proposals of Federal research facilities for major instrumentation acquisitions that are included in the budget and an explanation of how the projects and instrumentation acquisitions relate to the identified deficiencies and priorities.

Sense of Congress on innovation acceleration research (sec. 1008)

The Senate amendment contained a provision (sec. 1202) that would require the President, through the head of each Federal research agency, to establish the "Innovation Acceleration Research Program" to support and promote innovation in the United States by requiring each department or agency that sponsors scientific research to set as a goal 8 percent of its annual research budget to be directed toward innovation acceleration research.

The House bill contained no similar provision.

The Conferees agree to a modified provision that expresses the Sense of Congress that each Federal research agency should strive to support and promote innovation through high-risk, high-reward basic research and set a goal of allocating an appropriate percentage of its annual basic research budget to funding high-risk, high-reward basic research projects.

Release of scientific research results (sec. 1009)

The Senate amendment contained a provision (sec. 1104) that would require the Director of OSTP, in consultation with the Director of the Office of Management and Budget (OMB) and the heads of all Federal civilian agencies that conduct scientific research, to develop and issue a set of principles for the communication of scientific information by government scientists, policy makers, and managers to the public within 90 days after the date of enactment.

The House bill contained no similar provision.

The House recedes with a clarifying amendment.

Title II – National Aeronautics and Space Administration

NASA's contribution to innovation (sec. 2001)

The House bill contained a provision (sec. 209) that expresses the Sense of the Congress that a balanced and robust program in science, aeronautics, exploration, and human space flight at NASA, as authorized in the NASA Authorization Act of 2005, contributes significantly to national innovation and competitiveness. It also directs the NASA Administrator to participate fully in interagency efforts to promote innovation and economic competitiveness through scientific research and development.

The Senate amendment contained a provision (sec. 1301) that directs that NASA be regarded as a full participant in interagency activities to promote competitiveness and innovation and to enhance science, technology, engineering, and mathematics education, provided that such efforts are consistent with NASA's mission, including authorized activities. It also identifies NASA's balanced science program as an essential part of NASA's contribution to innovation in and the economic competitiveness of the United States and that funding NASA at the levels authorized in the NASA Authorization Act of 2005 would enable NASA's programs to contribute to U.S. innovation and competitiveness.

The House recedes with modifications.

Aeronautics (sec.2002)

The Senate amendment contained a provision (sec. 1302) that would consolidate NASA's aeronautics research authorized under the NASA Authorization Act of 2005 into an Aeronautics Institute for Research within NASA. It would require the Institute to cooperate with relevant programs in the Department of Transportation, the Department of Defense, the Department of Commerce, and the Department of Homeland Security, including the Joint Planning and Development Office established under the VISION 100-Century of Aviation Reauthorization Act. The Aeronautics Institute would be allowed to accept assistance, staff, and funding from other federal departments and agencies.

The House bill contained no similar provision.

The Conferees agree to modified language that includes a Sense of Congress that NASA's aeronautics research and development program has been an important contributor to innovation and to the competitiveness of the United States, and that NASA should maintain its capabilities to advance the state of aeronautics. The provision also includes language that directs the Administrator to coordinate NASA's aeronautics activities with relevant departments and agencies.

Basic research enhancement (sec. 2003)

The Senate amendment contained a provision (sec. 1303) that establishes, within NASA, a Basic Research Executive council to oversee the distribution and management of programs and resources engaged in support of basic research activity including the most senior agency official representing the space science, earth science, life and microgravity sciences, and aeronautical research areas. The duties of the Council will be to set criteria for identification of basic research, set priority of research activity, review and evaluate research activity, make recommendations regarding needed adjustments in research activities, and provide annual reports to Congress on research activities.

The House bill contained no similar provision.

The Conferees agree to strike all but subsection (a) as amended.

Aging workforce issues program (sec. 2004)

The Senate amendment contained a provision (sec. 1304) that expresses the Sense of Congress that the NASA Administrator should implement a program to address aging workforce issues in aerospace that would document technical and management experiences of senior NASA employees before they leave the Administration, provide incentives for retirees to return to NASA to teach new NASA employees about their lessons and experiences, and provide for the development of an award to recognize and reward senior NASA employees for their contribution to knowledge sharing.

The House bill contained no similar provision.

The House recedes.

Sense of the Congress regarding NASA's undergraduate student research program (sec. 2005)

The Senate amendment contained no provision.

The House bill contained no provision.

The Conferees agree to include a provision to express 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 aeronautics scientists, technologists, engineers, and mathematicians, the Administrator should utilize NASA's existing Undergraduate Student Research Program to support basic research projects on subjects relevant to NASA.

Use of International Space Station National Laboratory to support math and science education and competitiveness (sec. 2006)

The Senate amendment contained no provision.

The House bill contained no provision.

The Conferees agree to include a provision to express 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. The provision also directs the Administrator to develop detailed plans for implementing one or more education projects that utilize the International Space Station and identifying and supporting research to be conducted aboard the International Space Station.

Fiscal Year 2008 basic science and research funding

The Senate amendment contained a provision (sec. 1306) that increases funding for basic science and research, including for the Explorer program, for fiscal year 2008 by $160 million by transferring such amount for such purpose from NASA accounts. The availability of these funds is made contingent upon unobligated balances being available to NASA.

The House bill contained no similar provision.

The Senate recedes.

Conforming amendments

The Senate amendment contained a provision (sec. 1305) that would amend Section 101(d) of the NASA Authorization Act of 2005 by adding that the assessment undertaken by NASA examines the number and content of science activities which may be considered as fundamental, or basic research, whether incorporated within specific missions or conducted independently of any specific mission. In addition, this section would require NASA to assess how NASA science activities can best be structured to ensure that basic and fundamental research can be effectively maintained and coordinated in response to national goals in competitiveness and innovation.

The House bill contained no similar provision.

The Senate recedes.

Title III – National Institute of Standards and Technology

Authorization of appropriations (sec. 3001)

The House bill contained provisions (sec. 411 and 412) that authorize appropriations for the next three fiscal years. Included in the House provisions were authorizations for Science and Technical Research and Services of $470.9 million for Laboratory Activities, $7.9 million for the Malcolm Baldrige National Quality Award Program, and $93.9 million for Construction and Maintenance in FY08; $497.8 million for Laboratory Activities, $8.1 million for the Malcolm Baldrige National Quality Award Program, and $86.4 million for Construction and Maintenance in FY09; and $537.6 million for Laboratory Activities, $8.3 million for the Malcolm Baldrige National Quality Award Program, and $49.7 million for Construction and Maintenance in FY10. In addition, the House provision authorizes for Industrial Technology Services: $223 million for FY08, of which $110 million is for the Technology Innovation Program (TIP) of which at least $45 million shall be for new awards, and $113 million is for the Manufacturing Extension Partnership (MEP) Program of which not more than $1 million is for the MEP competitive grant program; $263.5 million for FY09, of which $141.5 million is for the TIP of which at least $45 million shall be for new awards, and $122 million is for the MEP of which not more than $4 million is for the MEP competitive grant program; and $282.3 million for FY10, of which $150.5 million is for the TIP of which at least $45 million shall be for new awards, and $131.8 million is for the MEP of which not more than $4 million is for the MEP competitive grant program.

The Senate amendment contained a provision (sec. 1401) that authorized appropriations for the next four fiscal years. The Senate provision authorizes $703.6 million in FY08 of which $115 million is for the MEP; $774 million in FY09 of which $122 million is for the MEP; $851.4 million in FY10 of which $131.8 million is for the MEP; and $936.5 million in FY11 of which $142.3 million is for the MEP.

The Conferees agree to alternate language that authorizes NIST appropriations for three years and at sums for Science and Technical Research and Services of $502.1 million for Laboratory Activities and $150.9 million for Construction and Maintenance in FY08; $541.9 million for Laboratory Activities and $86.4 million for Construction and Maintenance in FY09; and $584.8 million for Laboratory Activities and $49.7 million for Construction and Maintenance in FY10. In addition, the Conferees authorize for Industrial Technology Services: $210 million for FY08, of which $100 million is for the Technology Innovation Program (TIP) of which at least $40 million shall be for new awards, and $110 million is for the Manufacturing Extension Partnership (MEP) Program of which not more than $1 million is for the MEP competitive grant program; $253.5 million for FY09, of which $131.5 million is for the TIP of which at least $40 million shall be for new awards, and $122 million is for the MEP of which not more than $4 million is for the MEP competitive grant program; and $272.3 million for FY10, of which $140.5 million is for the TIP of which at least $40 million shall be for new awards, and $131.8 million is for the MEP of which not more than $4 million is for the MEP competitive grant program.

Amendments to the Stevenson-Wydler Technology Innovation Act of 1980 (sec.3002)

The Senate amendment contained a provision (sec. 1402) that eliminates the Technology Administration and the Under Secretary of Commerce for Technology at the Department of Commerce, and makes conforming amendments.

The House bill contained no similar provision.

The Conferees agree to a modified provision that restructures the Technology Administration Authority and makes appropriate conforming amendments, including clarification that the Directors of the National Institute of Standards and Technology and the National Technical Information Service shall report directly to the Secretary of Commerce.

The Senate amendment contained a provision (sec. 1405) that re-establishes the Experimental Program to Stimulate Competitive Technology (EPSCoT), which was previously managed by the Technology Administration, at NIST. In making awards under this section the NIST Director is directed to ensure that the awards are made on a competitive basis. Special emphasis would be given to projects which would increase the participation of women, Native Americans (including Native Hawaiians and Alaska Natives) and other under-represented groups in science and technology. The program has a matching requirement of not less than 50 percent.

The House bill contains no similar provision.

The Conferees agree to a modified provision that transfers the responsibility of the EPSCoT to the Secretary of Commerce rather than the Director of the National Institute of Standards and Technology as in the original Senate provision.

Manufacturing Extension Partnership (sec. 3003)

The Senate amendment contained a provision (sec. 1407) that would amend paragraph 3 of section 25(c) of the National Institute of Standards and Technology Act to clarify that a MEP Center that receives Federal aid must pay for at least 50 percent of the costs incurred in operating the Center with funding from non-Federal sources for the first 3 years and an increasing percentage for the last three years in which the Center is receiving aid under the program. All non-Federal funding that a Center receives from private industry, universities, and State governments, may be included as a portion of the Center's 50 percent or greater funding obligation, if it is determined by the Center to be programmatically reasonable and allocable.

The House bill contained no similar provision.

The House recedes to a modified provision.

The House bill contained a provision (sec. 423(A)) that creates an independent and outside Advisory Board for the MEP to assess and provide advice on MEP programs, plans, policies, and performance.

The Senate amendment contained no similar provision.

The Senate recedes.

The House bill contained a provision (sec. 423(B)) that allows the MEP to accept funds from the private sector and other Federal departments and agencies. The provision specifies that these funds shall not be considered in the calculation of the Federal cost-share.

The Senate amendment contained a similar provision (sec. 1404 (b)) that allows the MEP to accept funds from the private sector and other Federal departments and agencies and stipulates that any private sector funding would not be considered a part of the Federal share in the calculation of the Federal cost-share. Funding accepted from other Federal departments or agencies may be considered in the calculation of the Federal cost share.

The Conferees agree to a modified provision that allows the MEP to accept funds from the private sector and other Federal departments and agencies. Any private sector funding would not be considered a part of the Federal share in the calculation of the Federal cost-share. When funds are accepted from other Federal departments or agencies, the provision specifies that the Director shall make the determination if funds from other Federal departments and agencies shall be considered a part of the Federal share in the calculation of the Federal cost share.

The Senate amendment contained a provision (sec. 1404(a)) that amends section 25(c)(5) of the National Institute of Standards and Technology Act (15 USC 278(c)(5)) by inserting a probationary program for MEP Centers that have not received a satisfactory rating. If a Center's performance has not improved in one year, the Director would be required to conduct a competition to select a new operator for the Center.

The House bill contained no similar provision.

The House recedes.

The House bill contained a provision (sec. 423(C)) that establishes a competitive grants program for MEP Centers or consortia of Centers. The grants are for Centers to conduct projects to solve new or emerging manufacturing problems. Awardees are not required to provide matching funds.

The Senate amendment contained no similar provision.

The Senate recedes.

Institute-wide planning report (sec. 3004)

The House bill contained a provision (sec. 421) that requires the Director of NIST to submit a 3-year programmatic planning document for NIST to Congress and submit yearly updates thereafter.

The Senate amendment contained no similar provision.

The Senate recedes.

Report by Visiting Committee (sec. 3005)

The House bill contained a provision (sec. 422) that changes the reporting requirement for the Visiting Committee on Advanced Technology to be due 30 days after the budget submission and to comment on the NIST Director's 3-year planning document.

The Senate amendment contained no similar provision.

The Senate recedes.

Meetings of Visiting Committee on Advanced Technology (sec. 3006)

The House bill contained a provision (sec. 428) that reduces the frequency of meetings for the Visiting Committee on Advanced Technology from quarterly to twice annually.

The Senate amendment contained no similar provision.

The Senate recedes.

Collaborative manufacturing research pilot grants (sec. 3007)

The House bill contained a provision (sec. 426) that establishes a collaborative manufacturing research pilot grant program for partnerships between at least one industry and one non-industry partner, with the purpose of fostering collaboration and conducting applied research on manufacturing. The award can be no more than one-third of the cost of the partnership, with no more than an additional one-third coming from other Federal sources. NIST will run one pilot competition and awards will be for three years.

The Senate amendment contained no similar provision

The Senate recedes.

Manufacturing Fellowship Program (sec. 3008)

The House bill contained a provision (sec. 427) that establishes a program of postdoctoral and senior research fellowships at NIST in manufacturing sciences.

The Senate amendment contained no similar provision.

The Senate recedes.

Procurement of temporary and intermittent services (sec. 3009)

The House bill contained a provision (sec. 449) that authorizes NIST to issue up to 200 personal services contracts per year to procure the temporary or intermittent services of scientific and technical experts and consultants. The authority expires in 2010.

The Senate amendment contained no similar provision.

The Senate recedes.

Malcolm Baldrige Awards (sec. 3010)

The House bill contained a provision (sec. 450) that raises to 18 the limit on the number of annual awards under the Malcolm Baldrige National Quality Award Program and removes category restrictions.

The Senate amendment contained no similar provision.

The Senate recedes.

Report on National Institute of Standards and Technology efforts to recruit and retain early career science and engineering researchers (sec. 3011)

The House bill contained a provision (sec. 208) that requires the Director of NIST to report on efforts to recruit and retain young scientists and engineers at the early stages of their careers.

The Senate amendment contained no similar provision.

The Senate recedes.

Technology Innovation Program (sec. 3012)

The House bill contained a provision (sec. 424) that repeals the existing Advanced Technology Program (ATP) statute and creates the Technology Innovation Program (TIP). The purpose of TIP is to assist businesses and universities to accelerate the development of high-risk technologies that will have broad-based economic impact. The TIP will make awards to either small- or medium-sized businesses or joint ventures. Awards made to single companies can be for no more than $3 million over three years. Awards made to joint ventures may not exceed $9 million over five years. (A joint venture includes either two separately owned for-profit companies with the lead being a small- or medium-sized business, or at least one small- or medium-sized business and one institution of higher education.) The Federal share of a project shall not exceed 50 percent. To participate in the TIP an eligible company must be majority owned by US citizens or owned by a parent company incorporated in another country provided that the company's participation is in US economic interests. The provision establishes minimum criteria for the selection of awards based upon scientific and technological merit, the project's potential for benefits that extend beyond direct return to the applicant, the applicant's ability to manage the award successfully and an explanation of why TIP support is necessary. In the case of joint ventures, language is included to ensure that intellectual property is to vest in any participant as agreed to by the joint venture participants. The provisions requires the TIP to continue funding awards made under the prior Advanced Technology Program, requires the Director to coordinate with other Federal agencies to ensure there is no duplication of efforts, and allows the TIP to accept funds from other Federal agencies. An Advisory board is established to provide independent advice on TIP operations and planning.

The Senate amendment contained no similar provision.

The Conferees agree to accept a modified version of the House provision. The modifications clarify that the focus of the program is to support, promote, and accelerate innovation in the United States through high-risk, high-reward research in areas of critical national need, and establish that large companies may not receive any TIP funding. The modified version also includes a list of award criteria requiring the applicant to: establish 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; provide evidence that the research will not be conducted within a reasonable time period without TIP assistance; demonstrate that reasonable efforts were made by the applicant to secure funding from alternative sources and that no other alternative funding sources were reasonably available; and demonstrate that other entities have not already developed, commercialized, marketed, distributed or sold similar technologies. In addition, the Director shall transmit to Congress an annual report on the program's activities. The TIP may accept funds from other Federal agencies, and these funds will be included as part of the Federal cost share of any TIP project. The section also provides a definition of "high-risk, high-reward research."

Technical amendments to the National Institute of Standards and Technology Act and other technical amendments (sec. 3013)

The House bill contained several provisions (sec. 425, 442, 443, 445, 446, 447, and 448) that make technical amendments to the NIST Act. These provisions: raise the limitation on the amount NIST can spend on research fellowships from 1 percent to 1.5 percent of the total appropriations; authorize NIST to enter into grants and cooperative agreements in addition to its current authority to enter into contracts and cooperative research and development agreements; authorize NIST to transfer up to 0.25 percent of its total appropriations, and any funds from other agencies given to NIST to produce Standard Reference Materials, into the Working Capital Fund; repeal an outdated statute requiring the NIST Director to establish a program to evaluate non-energy inventions; clarify in statute that the metric system used in the US is the modern system of metric measurement units; eliminate archaic, special-case language related to the definition of units of electrical and light measurement; and specify that standard time in the US is Coordinated Universal Time and fix technical problems in statute with the time zone definitions.

The Senate amendment contained a provision (sec. 1406) that makes technical amendments to the NIST Act as requested in previous years by the President. These provisions: eliminate the limitation on the amount NIST can spend on research fellowships; authorize NIST to enter in grants and cooperative agreements in addition to its current authority to enter in contracts and cooperative research and development agreements; authorize NIST to purchase memberships in scientific organizations and pay registration fees for NIST employees' attendance at conferences; clarify in statute that the metric system used in the US is the modern system of metric measurement units; eliminate archaic, special-case language related to the definition of units of electrical and light measurement; specify that standard time in the US is Coordinated Universal Time and fix technical problems in statute with the time zone definitions; and repeal an outdated statute requiring the NIST Director to establish a program to evaluate non-energy inventions.

The Senate recedes to sec 425 of the House bill.

The Conferees agree to include all House and Senate provisions, except the Working Capital Fund Transfers (sec. 443 of the House bill) and the authorization for NIST to purchase memberships in scientific organizations and pay registration fees for NIST employees' attendance at conferences (sec. 1406(b)(2) of the Senate amendment).

Retention of depreciation surcharge (sec. 3014)

The House bill contained a provision (sec. 444) that allows NIST to retain the building use and depreciation surcharge fees that are charged by the General Services Administration.

The Senate amendment contained no similar provision.

The Senate recedes.

Post-doctoral fellows (sec. 3015)

The House bill contained a provision (sec. 441) that raises the cap on the number of post-doctoral fellows that NIST can accept each year from 60 to 120.

The Senate amendment contained no similar provision.

The Senate recedes.

Innovation acceleration

The Senate amendment contained a provision (sec. 1403) that establishes an Innovation Acceleration grants program at NIST to be known as the "Standards and Technology Acceleration Research Program." The purpose of the program is to support and promote innovation in the United States through high-risk, high-reward research. No less than 8 percent of the funds available to NIST are for this program, and they shall be taken from the funds available to NIST for Laboratory Activities. At least 80 percent of the funds available to the program shall be used to award competitive, merit-reviewed grants, cooperative agreements or contracts to public or private entities, including businesses and universities. The Director is required to ensure that any resulting intellectual property from awards under the program shall vest in a United States entity that can commercialize the technology in a timely manner. Each funded project would be required to have a least one small- or medium-sized business and would receive priority when educational institutions are involved. The Director is required to solicit proposals annually to address areas of national need for high-risk, high-reward research. "High-risk, high-reward research" is defined as research that: 1) has the potential for yielding results with far-ranging or wide-ranging implications, 2) addresses critical national needs related to measurement standards and technology, and 3) is too novel or too interdisciplinary to fare well in the traditional peer-review process.

The House bill contained no similar provision.

The Senate recedes.

Manufacturing research database

The House bill contained a provision (sec. 429) that requires NIST to establish a manufacturing research database to enable private sector individuals and Federal officials to access a broad range of information on manufacturing research supported by Federal funding. NIST may charge a nominal fee for use of the database. This section authorizes $2 million for these activities.

The Senate amendment contained no similar provision.

The House recedes.

Title IV – Ocean and Atmospheric Programs

Ocean and atmospheric research and development program (sec. 4001)

The Senate amendment contained a provision (sec. 1501) that directs the Administrator of NOAA, in consultation with the NASA and the NSF, to establish a coordinated program of ocean, coastal, Great Lakes, and atmospheric research, in collaboration with academic and nongovernmental entities, that is focused on the development of advanced technologies and analytic methods to promote U.S. leadership in ocean and atmospheric science and competitiveness in the uses of such knowledge.

The House bill contains no similar provision.

The House recedes.

NOAA ocean and atmospheric science education programs (sec. 4002)

The Senate amendment contained a provision (sec. 1502) that directs the Administrator of NOAA to develop, conduct, and coordinate education activities, built upon existing NOAA programs, to increase public awareness of ocean, coastal, Great Lakes, and atmospheric science and stewardship. The Administrator of NOAA is also directed to develop a science education plan for the next twenty years and evaluate and update the education plan every five years thereafter.

The House bill contains no similar provision.

The House recedes.

NOAA's contribution to innovation (sec. 4003)

The Senate amendment contained a provision (sec. 1503) that directs that NOAA is to be a full participant in interagency efforts to promote innovation and economic competitiveness, consistent with the agency mission.

The House contains no similar provision.

The House recedes.

Title V – Department of Energy

Mathematics, science and engineering education at the Department of Energy (sec. 5003)

The Senate amendment (section 2003) contained a provision that would amend the Department of Energy Science Education Enhancement Act (42 U.S.C. 7381a) to establish a Director of Mathematics, Science and Engineering Education, reporting to the Undersecretary of Science. The Director would be responsible for coordinating Mathematics, Science and Engineering Education across the Department of Energy; preparing unified budgets; and acting as the interagency liaison for this area. The Secretary is directed to establish a separate fund to which 0.3 percent of funds made available to the Department for research, development, demonstration and commercial application activities for each fiscal year are made available to carry out activities authorized in this Act.

The House bill contained no similar provision.

The House recedes to the Senate with an amendment requiring along with the Department's annual budget proposal a description of how funds were spent from this fund in the prior fiscal year and a proposal for how they will be spent in the fiscal year of the budget proposal.

Pilot program of grants to specialty schools for mathematics and science (sec. 5003, chpt. 1)

The Senate amendment contained a provision to establish a competitive grant program to assist States in establishing or expanding public, statewide specialty schools that provide comprehensive mathematics, science, engineering and technology education. The provision authorized scientific and engineering staff of the National Laboratories to assist in teaching courses in statewide specialty schools in mathematics and science education, and to use National Laboratory scientific equipment in the teaching of courses. The Federal share of the costs of establishing or expanding public statewide specialty schools for mathematics and science would not exceed 50 percent. The Senate amendment provided $140 million over 4 years for these schools.

The House bill contained no similar provision.

The House recedes with an amendment authorizing a 3-year pilot program; setting a cap on the award amount and duration for each State; reducing the Federal share; clarifying the required uses of funds; and reducing the total authorization to $66.5 million over fiscal years 2008 through 2010.

The conferees intend for all 50 states to be eligible to participate in the pilot program, and that schools serve students residing in the State where the school is located and offer a high quality comprehensive math, science, engineering and technology curriculum designed to improve academic achievement in those areas. The conferees intend for the specialty schools to integrate parental involvement into curricula.

Experiential-based learning opportunities (sec. 5003, chpt. 2)

The Senate amendment contained a provision to establish summer internships, including internships at the National Laboratories, for middle and high school students to

promote experiential, hands-on learning in math and science. The Senate amendment provided $60 million over 4 years for these internships.

The House bill contained no similar provision.

The House recedes with an amendment to reduce the total authorization to $22.5 million over fiscal years 2008 through 2010.

The conferees do not intend for this provision to override any policies of the Department as they pertain to liability concerns with hosting minors onsite at the National Laboratories.

National Laboratories Centers of Excellence in Science, Technology, Engineering and Mathematics Education (sec. 5003, chpt. 3)

The Senate amendment contained a provision to establish a program at each of the National Laboratories to support a Center of Excellence in Mathematics and Science at one high need public secondary school located in the region of the National Laboratory.

The House bill contained no similar provision.

The House recedes with an amendment providing the National Laboratories flexibility to designate more than 1 high-need school in the region as a Center of Excellence; clarifying the eligibility requirement for partnerships with institutions of higher education; and permitting nonprofit entities to participate in the partnerships.

The conferees intend for the institutions of higher education and any nonprofit partners in this program to have long-standing expertise in teacher training, including pre-service preparation and postgraduate professional development of teachers and other school personnel. In addition, the conferees intend that the schools and students throughout the region benefit from the Centers of Excellence through the distribution of best practices and teacher training at the Centers.

Summer institutes (sec. 5003, chpt. 4)

The Senate amendment contained a provision to establish programs of summer institutes, at both the National Laboratories and at eligible partner institutions, including universities and certain nonprofits, to strengthen the teaching skills of K-12 math and science teachers. The provision gave priority to the establishment of summer institutes that provide training to teachers from a wide range of high need school districts. The Senate amendment provided $190 million over 4 years for these institutes.

The House bill contained no similar provision.

The House recedes with an amendment clarifying the definitions of "eligible partner" and "summer institute"; establishing selection criteria for eligible partners; clarifying the assistance provided by the National Laboratories to the eligible partners; specifying the required and allowable uses of funds under this program; and reducing the total authorization to $60 million over fiscal years 2008 through 2010.

The conferees intend for this provision to create two programs. The first program would provide funds to the National Laboratories to establish or expand existing summer institutes on-site. The conferees encourage the National Laboratories to leverage the federal contribution by continuing to solicit state and local government support along with that of the private sector for these summer institutes. The second program would allow National Laboratory resources, including staff and equipment, to be used to assist eligible partner institutions seeking to establish or expand their own summer institutes. Provision of such assistance may require travel and other expenditures by the National

Laboratories. However, the conferees do not intend for any of the funds authorized under this program to be made available directly to eligible partners but that funds shall be made available through the National Laboratories to the eligible partner for the costs associated with hosting an institute provided that the Department of Energy shall ensure adequate oversight of such funds. It is the intent of the conferees that the National Laboratory seek partnerships in which the National Laboratory contributes unique expertise and resources. Under the definition of eligible partners the conferees intend for the institution of higher education that provides training for teachers and principals to have strong and longstanding expertise in teacher training, including pre-service preparation and postgraduate professional development for teachers and other school personnel.

Nuclear Science Talent Expansion Program for Institutions of Higher Education (Sec. 5004) and Hydrocarbon Systems Science Talent Expansion Program For Institutions of Higher Education (sec. 5005)

The Senate bill contained a provision, Section 2003, Chapter 5 that would create a program of grants to institutions of higher education to create or expand research and education programs in nuclear science. The Senate provision placed the authority for this program under the newly created Director of Mathematics, Science and Engineering Education, a position reporting to the Undersecretary for Science. The Senate bill provided $139.5 million over 4 years for these grants.

The House bill contained no similar provision.

The House recedes with an amendment removing this program from the authority of the newly created Director and elevating it to the level of the Secretary; giving the Secretary more flexibility in determining the duration of grants; creating an additional program for hydrocarbon systems sciences; and reducing the overall authorizations for the program.

The conferees believe that the Office of Science and the Office of Nuclear Energy have distinct roles in supporting nuclear science research and education. Accordingly, the conferees do not intend the new program created in this provision to be a replacement for the existing University Nuclear Science and Engineering Support program authorized in Sec. 954 of the Energy Policy Act of 2005 (EPACT). In particular, the conferees believe that the Office of Nuclear Energy has the responsibility to support university research and training reactors and associated infrastructure, as described in subsection (d) of Sec. 954. In addition, while nuclear sciences has been defined broadly in Sec. 5004 to include a range of fields with varying degrees of relevance to the nuclear energy mission of the Department, it is the intent of the conferees that the Office of Nuclear Energy maintain its primary responsibility for supporting research and human infrastructure development in areas identified by the Secretary as critical to the near term nuclear energy mission. Such support may be in the form of fellowships or research grants as authorized in Sec. 954 of EPACT, or in the form of institutional grants authorized under this Act. The conferees believe that the Office of Science should participate in the new program only in support of basic sciences, which may include fields like separations chemistry that are relevant to the long-term nuclear energy research plan. The conferees encourage the Secretary to allocate responsibilities under this provision accordingly.

The conferees intend for the program of grants to institutions of higher education to create or expand research and education programs in hydrocarbon systems science

authorized in Section 5005 to begin to address the decline in resources dedicated to hydrocarbons systems science education at institutions of higher education and bolster the number of graduates with degrees in hydrocarbon systems science. The conferees believe that increasing hydrocarbon systems science programs at institutions of higher education will rebuild the science and engineering capabilities of the nation in this critical energy sector. Programs to educate and create graduates of hydrocarbon systems science are needed to replace forecasted workforce shortages in this area due to retirements of aging hydrocarbon systems science professionals. The conferees seek to address this workforce challenge in the nation's energy industry.

Early career grants (sec. 5006)

The House bill contained a provision (section 203) to award grants to scientists and engineers at the early stage of their careers in academia or in nonprofit, non-degree granting research organizations to conduct research in fields relevant to the mission of the Department, giving priority to grants expanding energy production and use through coal-to-liquids technology and advanced nuclear reprocessing. The grants provide 5 years of research funding support at a minimum of $80 thousand per year per award and are based upon merit.

The Senate amendment contained a similar provision (section 2004) to award early career grants of not more than $100 thousand annually for up to 5 years to scientists and engineers within 10 years of completing their doctorate, particularly at National Laboratories or other federally funded research and development centers.

The Senate recedes to the House provision with an amendment expanding eligibility for early career awards to include scientists at the National Laboratories; requiring an award ceiling of $125 thousand per year; [and striking the priority given to coal-to-liquids technology and advanced nuclear reprocessing.]

Office of Science authorization (sec. 5007)

The Senate amendment contained a provision (section 2006) that amended section 971(b) of the Energy Policy Act (42 U.S.C. 16311(B)) by lowering the authorization for the Office of Science in fiscal year 2009 from $5.2 billion to $4.8 billion and extending the authorization out to fiscal year 2010 to $4.945 billion and fiscal year 2011 to $5.265 billion consistent with the President's American Competitiveness Initiative.

The House bill contained no similar provision.

The House recedes to the Senate with an amendment that retains the authorization levels for the Office of Science found in the Energy Policy Act of 2005 and adds an additional year of authorization in Fiscal Year 2010, increasing it to $5.814 billion.

Discovery science institutes (sec. 5008)

The Senate amendment contained a provision (section 2007) to select, based upon merit, 3 multidisciplinary institutes centered at National Laboratories to apply fundamental science and engineering discoveries to technological innovations related to missions of the Department and the global competitiveness of the United States. The institutes would partner with institutions of higher education to train engineering students and work with private industry, state and local governments and financing entities, such

as venture capital funds, to transition innovative technologies from the institutes to the private sector.

The House bill contained no similar provision.

The House recedes with an amendment striking the partnership with state and local governments as well as financing entities and limiting the funding of any one institute to three years in duration.

Protecting America's Competitive Edge Fellowships (sec. 5009)

The Senate amendment contained a provision (section 2008) that would award competitive, merit-based, portable fellowships not exceeding 5 years in duration to students pursuing a Ph.D. at an institution of higher education in a field relevant to the mission of the Department. Selection criteria included that the applicants be in the upper 10 percent of their class. Funding was authorized based on a fellowship of $40 thousand - $50 thousand per year, including a stipend, tuition and incidentals. The enumerated authorizations were to fund in fiscal year 2008 200 fellowships, increasing in fiscal year 2011 to 700 fellowships. A limit on a fee for a third party administrator was placed on the program to approximately 10 percent of the fellowship program.

The House bill contained no similar provision.

The House recedes with an amendment limiting the duration of the fellowship to 3 years within a 5 year period; eliminating the criterion that applicants be in the upper 10 percent of their class; removing the cap on administrative fees; and reducing the total authorization for the program such that the number of fellowships available is approximately 160 in fiscal year 2008 (assuming the same fellowship amount as above), increasing to approximately 430 in fiscal year 2010.

Sense of Congress regarding certain recommendations and reviews (sec. 5010)

The Senate amendment contained a provision (section 2009) requiring the Secretary of Energy to implement the recommendations of Government Accountability Report number 04-639 and annually conduct compliance reviews of at least 2 recipients of Department grants in order to comply with Title IX of the Education Amendments of 1972.

The House bill contained no similar provision.

The House recedes with an amendment expressing a Sense of Congress that the Department comply with the recommendations of GAO report 04-639 and annually conduct reviews in accordance with Title IX of at least 2 grant recipients.

Distinguished scientist program (sec. 5011)

The Senate amendment contained a provision (section 2011) to establish a program to support the joint appointment of distinguished scientists by institutions of higher education and National Laboratories. The provision authorized $30 million in fiscal year 2008 to support 30 appointments, increasing to $100 million in fiscal year 2010 and 2011 to support 100 appointments at $1 million each, with a requirement for a $1 million cost-match by the institution of higher education.

The House bill contained no similar provision.

The House recedes with an amendment reducing the total authorization level to $65 million over fiscal years 2008 through 2010

It is the intent of the conferees that the amounts authorized for each of fiscal years 2008 through 2010 support appointments at approximately $1 million with an equal or greater cost-match by the institution of higher education.

Advanced Research Projects Agency – Energy (sec. 5012)

The Senate amendment contained a provision (section 2005) that establishes an Advanced Research Projects Authority – Energy, enabling the Secretary acting through a Director to fund projects to overcome long-term and high-risk technological barriers to the development of energy technologies. Authorization of the authority was established based on such sum as necessary to carry out this section for Fiscal Years 2008 through 2011. An authorization for ARPA-E was previously contained in Senate bill S. 2197 in the 109th Congress at $250 million annually for Fiscal Years 2008 through 2011.

The House bill contained no such provision.

The House recedes with an amendment that establishes an Advanced Research Projects Agency – Energy, or ARPA-E, whose purpose is to fund collaborative research and development to overcome long-term or high-risk technological barriers in energy technologies that industry by itself will not undertake because of technical and financial uncertainty. ARPA-E is to be headed by a Director nominated by the President and confirmed by the Senate. The conferees expect the President to appoint an acting Director who shall have the full authority allowed to the Director under this Act, to serve from the time ARPA-E is established until the Senate acts to confirm a Director. Similar to the Defense Advanced Research Projects Agency the Director is to establish and monitor project milestones, initiate research projects quickly, and just as quickly terminate or restructure projects if such milestones are not achieved. The Director is to utilize the existing authorities granted to the Department of Energy by Congress to fund projects. Projects should be conducted through teams that utilize the talent, resources and facilities found in the nation's universities, National Laboratories and the private sector. In the case of awards to consortia that include one or more of the National Laboratories, the conferees intend that the unique, taxpayer-funded resources and facilities of the National Laboratories be used to complement the abilities of companies, nonprofits, institutions of higher learning, or other participants in the consortia. The Director is given hiring authority to hire 70 to 120 scientific, engineering personnel to act as program managers without regard to civil service laws to quickly offer competitive salaries rivaling those of industry. Use of this hiring authority is limited to a 3 year appointment which may be extended. This ensures that technical program managers pass through ARPA-E with the intent of executing technically challenging projects during their tenure, while circulating new talent and ideas through ARPA-E. A fund is established in the United States Treasury without fiscal year limitation, for ARPA-E, to be included as a separate line item in the annual budget request to the Congress. . Likewise, with this separate fund it is the intent that ARPA-E should be a semi-autonomous agency outside the Department of Energy bureaucracy, able to react quickly to the most challenging energy problems in the 21st century to reduce foreign imports of energy, develop revolutionary energy efficient and low-emitting technologies, and ensure the United States leads the world in energy technology competitiveness. The conferees intend that funding for ARPA-E be provided through the same appropriations process and

subcommittee consideration used for other semi-autonomous agencies of the Department at the time of enactment of this Act. It is the strong intent of the conferees that ARPA-E should not be established at the expense of on-going programs at the Department of Energy. In particular, the conferees intend that ARPA-E be funded to the full extent practicable provided that the Office of Science, the National Nuclear Security Agency (NNSA), and laboratory directed research and development (LDRD) at the National Laboratories maintain the funding levels they would have received in the absence of ARPA-E. In this regard, the provision contains language specifying that no funds for ARPA-E shall be appropriated unless the appropriation for the Office of Science increases by inflation over Fiscal Year 2007. Authorization of appropriations for ARPA-E is established in FY2008 at $300 million and such sums thereafter for fiscal years 2009 and 2010.

Provisions deleted

High-Risk, High Reward Research.

The Senate amendment contained a provision (section 2010) that required the Secretary of Energy and the Director of the United States Geological Survey to establish a grant program to conduct high-risk, high-reward research.

The House bill contained no similar provision.

The Senate recedes to the House.

Final Statement of Managers for Title VI – Education

Findings of Congress (sec. 6001)

The Senate amendment included findings regarding the importance of improving education to ensure that the nation remains competitive in the global economy.

The House bill had no similar provision.

The House recedes.

Definitions (sec. 6002)

The Senate amendment provided that, unless otherwise specified, all terms used in the division have the same meanings given in section 9101 of the Elementary and Secondary Education Act. It also defined critical foreign languages and the Secretary.

The House bill had no similar provision.

The House recedes.

Subtitle A – Teacher Assistance

Part I – Teachers for a Competitive Tomorrow

Purpose (sec. 6111)

The Senate amendment stated that the purposes of this Part were: to develop and implement programs to provide integrated courses of study in mathematics, science, engineering, or critical foreign languages, and teacher education that lead to a baccalaureate degree with concurrent teacher certification; to develop and implement master's degree programs that enhance science, mathematics, technology, or critical foreign language teachers' content knowledge and pedagogical skills; and to develop master's degree programs in education for professionals in science, mathematics or critical foreign language fields to become teachers.

The House bill had no similar provision.

The House recedes with an amendment to clarify that technology and engineering fields should be supported by the programs in this Part.

Definitions (sec. 6112)

The Senate amendment defined Children from Low-income Families, Eligible Recipient, High-Need Local Educational Agencies, Highly Qualified, Partnership, and Teaching Skills.

The House bill had no similar provision.

The House recedes with an amendment to clarify the definition of teaching skills.

Programs for baccalaureate degrees in science, technology, engineering, mathematics, or critical foreign languages, with concurrent teacher certification (sec. 6113)

The Senate amendment authorized competitive grants that enable partnerships to develop and implement programs to provide courses of study in mathematics, science, engineering, or critical foreign language in ways that are integrated with teacher education and that lead to a baccalaureate degree with concurrent teacher certification.

The House bill had no similar provision.

The House recedes with an amendment to collect data on the retention of program graduates, placing a priority on applications with a focus on placing participants in high need local educational agencies clarifying that technology programs

also should be supported and to include a rule of construction maintaining compliance with section 444 of the General Education Provisions Act (20 U.S.C. 1232g).

Programs for master's degrees in science, technology, engineering, mathematics, or critical foreign language (sec. 6114)

The Senate amendment authorized competitive grants for partnerships to develop and implement 2- or 3-year part-time master's degree programs in mathematics, science, technology, or critical foreign language education for current teachers to improve their content knowledge and pedagogical skills, and programs for professionals in mathematics, science, engineering, or critical foreign languages that lead to 1-year master's degree in teaching that results in teacher certification. The partnerships consist of institutions of higher education, departments of mathematics, engineering, science or critical foreign languages, teacher preparation programs and high-need local educational agencies and their schools.

The House bill had no similar provision.

The House recedes with an amendment that technology and engineering fields should be supported by both programs.

General provisions (sec. 6115)

The Senate amendment includes provisions requiring the programs under sections 6113 and 6114 to provide grants for five years, require applicants to provide matching funds and ensure that grants supplement existing state and federal funding. The Secretary is also required to evaluate the programs and provide an annual report to Congress.

The House bill had no similar provision.

The House recedes with an amendment to change House Committee on Education and the Workforce to House Committee on Education and Labor.

Authorization of appropriations (sec. 6116)

The Senate amendment authorized $210,000,000 for fiscal year 2008, and such sums as may be necessary for each of the 3 succeeding fiscal years, of which 57.1 percent will be available to carry out section 3113 for fiscal year 2008 and each succeeding fiscal year; and 42.9 percent will be available to carry out section 3114 for fiscal year 2008 and each succeeding fiscal year.

The House bill had no similar provision.

The House recedes with an amendment changing the amounts authorize to $276 million for fiscal year 2008 and such sums for the two succeeding years, with $151,200,000 for section 6113 and $125,000,000 for section 6114.

Part II –Advanced Placement and International Baccalaureate Programs

Purpose (sec. 6121)

The Senate amendment stated that the purpose of the section was to increase the number of students taking Advanced Placement (AP) and International Baccalaureate (IB) classes and to increase the number of students passing AP and IB tests, and to

increase the number of qualified AP and IB teachers serving in high-need schools teaching mathematics, science, and critical foreign languages.

The House bill had no similar provision.

The House recedes.

Definitions (sec. 6122)

The Senate amendment defined Advanced Placement or International Baccalaureate courses as courses of college-level instruction provided to middle or secondary school students, terminating in an examination administered by the College Board or the International Baccalaureate Organization, or 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.

The House had no similar provision.

The House recedes with an amendment to update the definition to include the additional program that may be allowed and to strike the reference to middle school students from the definition because such students are included in the definition of "secondary school" students used in this bill..

Advanced Placement and International Baccalaureate Programs (sec. 6123)

The Senate amendment authorized competitive grants to expand access to AP and IB and pre-AP and pre-IB classes and to increase the number of qualified AP and IB teachers in high-need schools. The Senate amendment outlined allowable uses of funds, terms of grants and application requirements. It also authorized appropriations of $58,000,000 for fiscal year 2008 and such sums as may be necessary for each of the three succeeding fiscal years.

The House had no similar provision.

The House recedes with an amendment to change the reference to the House Committee on Education and the Workforce to the House Committee on Education and Labor and to increase the authorized appropriation to $65,000,000 for 2008 and such sums for each of the next 2 succeeding fiscal years. The amendment also places a priority on grant applications that increase the number of students in high need schools who participate in and pass IB and AP courses.

Part III—Promising Practices in Mathematics, Science, Technology, and Engineering Teaching

Promising practices (sec. 6131)

The Senate amendment authorized the Secretary of Education to contract with the National Academy of Sciences to convene a national panel within a year after the enactment of this Act to identify promising practices in the teaching of science, technology, engineering and mathematics in elementary and secondary education. Scientists, practitioners, teachers, principals, and representatives from entities with expertise in education, mathematics, and science would participate in the panel.

The House bill had no similar provision.

The House recedes with an amendment clarifying the provision, including that promising practices identified under this program should be grounded in scientifically

valid research as that term is defined in the Higher Education Act of 1965. The House amendment also authorizes appropriations of $1,200,000 for fiscal year 2008.

Subtitle B – Mathematics

Math Now for elementary school and middle school students program (sec. 6201)

The Senate amendment authorized a grant program to improve instruction in elementary and middle school mathematics and provided targeted help for students struggling with mathematics to reach or exceed grade-level academic achievement standards. Grants would be awarded to implement mathematics instructional materials and interventions, provide professional development activities, and monitor the progress of students in mathematics. State educational agencies would be awarded grants on a competitive basis to enable them to award grants to eligible local educational agencies. Priority would be given to applications for projects that would implement statewide strategies for improving mathematics instruction and raising the mathematics achievement of students, particularly those in grades 4 through 8. The provision requires a match, but the Secretary is given the authority to waive all or part of it in cases of serious hardship. The section authorized $146,700,000 for fiscal year 2008, and such sums as may be necessary for each of the three succeeding fiscal years.

The House bill had no similar provision.

The House recedes with an amendment to decrease the duration of the grants from five years to three years and to authorize $95,000,000 in fiscal year 2008 and such sums in the succeeding two, not three, years. The amendment also requires the Secretary of Education to establish a screening process to ensure that those providing technical assistance to states and school districts under this program do not have financial interests in the products, activities or services that grant recipients might purchase with grant funding.

Summer Term Education Programs (sec. 6202)

The Senate amendment authorized the Secretary of Education to provide grants to support summer learning opportunities for low income students in the fields of mathematics, technology, and problem-solving to mitigate learning losses experienced over the summer. The Senate bill authorized such sums as may be necessary for fiscal years 2008 through 2012.

The House bill had no similar provision.

The House recedes with an amendment to authorize such sums as may be necessary to carry out the program for 2008 and each of the succeeding two succeeding fiscal years.

Math Skills for Secondary School Students (sec. 6203)

The Senate amendment authorized the Secretary of Education to provide grants supporting the following activities: (1) assistance to State and local education agencies in implementing research-based mathematics programs for students in secondary schools; (2) improving the instruction of mathematics programs based on best practices; (3) providing targeted help to low-income students who are struggling with mathematics;

and (4) providing in-service training to instructors to improve the teaching of mathematics to students.

The House bill had no similar provision.

The House recedes with an amendment to decrease the duration of the grants from a period of four years to a period of three years and to authorize $95,000,000 for fiscal year 2008 and such sums for the succeeding two, not three, fiscal years. The amendment also requires the Secretary of Education to establish a screening process that would ensure that those providing technical assistance to states and school districts under this program do not have financial interests in the products, activities or services that recipients could purchase with grant funding.

Peer review of state applications (sec. 6204)

The Senate amendment banned conflict of interests for those reviewing grant applications for the Math Now program (sec. 3201).

The House bill had no similar provisions.

The House recedes with an amendment adding a section prohibiting conflicts of interest and establishing a screening process for identifying such conflicts under the Math Now and Math Skills programs. The amendment requires the Secretary of Education to establish peer review panels to review State applications and further requires that the Secretary and the Office of General Counsel establish a process for screening reviewers to prevent conflicts arising from professional connections to teaching methodologies, connections to state programs, or financial interests. The amendment requires that the review process be transparent and that reviewer's reports be available to the public but not reveal any personally identifiable information about the reviewer. However, State educational agencies shall have the opportunity for direct interaction with the review panel including the disclosure of the identities of the reviewers.

Subtitle C—Foreign Language Partnership Program

Findings and purpose (sec. 6301)

The Senate amendment included findings regarding the shortage of skilled professionals with higher levels of proficiency in foreign language and the need to provide language instruction at younger ages, starting in elementary school and carrying through to postsecondary education. The Senate amendment stated that the purpose of the subtitle was to significantly increase both the opportunities to study critical foreign languages programs and the number of students who obtain the highest levels of foreign language proficiency.

The House bill had no similar provision.

The House recedes.

Definitions (sec. 6302)

The Senate amendment contained definitions for eligible recipient and superior level of proficiency.

The House bill had no similar provision.

The House recedes with an amendment to revise the definition of the term 'eligible entity' to mean an entity mutually agreed upon by a partnership that shall receive grant funds under this subtitle on behalf of the partnership for use in carrying out the activities assisted under this title.

Program authorized (sec. 6303)

The Senate amendment authorizes a competitive grant program to enable institutions of higher education and local educational agencies working in partnership to establish articulated programs of study in critical foreign languages so that students from elementary school through postsecondary education can advance their knowledge successfully and achieve higher levels of proficiency in a critical foreign language.

The House bill had no similar provision.

The House recedes with an amendment to change the reference to the House Committee on Education and the Workforce to the House Committee on Education and Labor. The amendment also requires that the evaluation required by the Senate bill identify best practices on teaching and learning of foreign languages. The amendment also clarifies that 2 of the 5 years of the grant duration may be used for planning and development.

Authorization of appropriations (sec. 6304)

The Senate amendment authorizes $22,000,000 for fiscal year 2008 and such sums as may be necessary for each of the three succeeding fiscal years.

The House bill had no similar provision.

The House recedes with an amendment to authorize $28,000,000 for fiscal year 2008 and such sums as may be necessary for each of the succeeding two, not three, fiscal years.

Subtitle D—Alignment of Education Programs

Alignment of secondary school graduation requirements with the demands of 21st century postsecondary endeavors and support for P-16 education data systems (sec. 6401)

The Senate amendment authorized the Secretary of Education to award competitive grants to States to promote better alignment of elementary and secondary education with the knowledge and skills needed to succeed in academic credit-bearing coursework in institutions of higher education, in the 21st century workforce and in the

Armed Forces. The Senate amendment also authorized competitive grants to support the establishment or improvement of statewide P-16 educational longitudinal data systems to assist States in improving the rigor and quality of content knowledge requirements and assessments, ensure that students are prepared to succeed in postsecondary endeavors, and enable States to have valid and reliable information to inform education policy and practice. The Senate amendment authorized $100,000,000 for fiscal year 2008, and such sums as may be necessary for fiscal year 2009.

The House bill had no similar provision.

The House recedes with an amendment to add the requirement that access to personally identifiable information be limited by the provisions of the General Education Provisions Act (20 USC 1232g) and to authorize $120,000,000 for fiscal year 2008 and such sums as may be necessary for fiscal year 2009.

Subtitle E—Mathematics and Science Partnership Bonus Grants

Mathematics and science partnership bonus grants (sec. 6501)

The Senate amendment directed the Secretary of Education to award grants of $50,000 to three elementary and three secondary schools, each of which has a high concentration of low income students, in each State whose students demonstrate the largest improvement in mathematics and science.

The House bill had no similar provision.

The House recedes.

Authorization of appropriations (sec. 6502)

The Senate amendment authorized such sums as may be necessary for fiscal years 2008-2011 to carry out the activities under Title V.

The House bill had no similar provision.

The House recedes with an amendment to authorize such sums as may be necessary for fiscal year 2008 and each of the two succeeding fiscal years.

Title VII – National Science Foundation

Definitions (sec. 7001)

The House bill contained a provision (sec. 302) that defined a number of terms used in this Title.

The Senate amendment contained no similar provision.

The Senate recedes with the addition of a definition for the term basic research.

Total amount and length of NSF authorization (sec. 7002)

The House bill contained a provision authorizing total appropriations for NSF as follows: $6.5 billion for FY 2008, $6.98 billion for FY 2009, and $7.49 billion for FY 2010 (sec. 303).

The Senate amendment contained a provision authorizing total appropriations as follows: $6.73 billion for FY 2008, $7.74 billion for FY 2009, $8.9 billion for FY 2010, and $10.2 billion for FY 2011 (sec. 4001).

The Conference substitute provides $6.6 billion for FY 2008, $7.33 billion for FY 2009, and $8.13 billion for FY 2010, which would place NSF on a path to achieve budget doubling in approximately 7 years (sec. 7002).

The conferees intend that the rate of budget increase for the education activities supported by NSF keep pace with the rate of increase for the research activities for FY 2009 and beyond.

Research and Related Activities (R&RA) Authorization (sec. 7002)

The House bill contained a provision authorizing appropriations for Research and Related Activities (R&RA) as follows: $5.08 billion for FY 2008, of which $115 million is provided for Major Research Instrumentation (MRI); $5.46 billion for FY 2009, of which $123.1 million is provided for MRI; and $5.86 billion for FY 2010, of which $131.7 million is provided for MRI (sec. 303). In addition, the provision required NSF to increase funding for Research Experiences for Undergraduates (REU) in proportion to appropriations received for R&RA (sec. 303(g)); and required NSF to allocate at least 3.5 percent of appropriations received for R&RA for the CAREER program (sec. 202).

The Senate amendment contained no provision for authorizing the overall R&RA budget. However, it contained authorization amounts for specified programs: for the Professional Science Master's program, it provided $15 million for FY 2008, $18 million for FY 2009, and $20 million for each of FY 2010 and FY 2011 (sec. 4004); for the EPSCoR program, it provided $125 million for FY 2008 and provided for increases above that amount in proportion to overall appropriations increases in each year thereafter (sec. 4008); and for communications technology research, it provided $45 million for FY 2008, $50 million for FY 2009, $55 million for FY 2010, and $60 million for FY 2011 (sec. 4011).

The Senate recedes on sections 303(g) and 202 with an amendment to authorize specific amounts for REU and CAREER. The Conference substitute (sec. 7002) provides the following authorizations of appropriations for R&RA:

- $5.156 billion for FY 2008, of which $115 million is provided for Major Research Instrumentation (MRI), $165.4 million for early-career (CAREER)

grants, $61.6 million for Research Experiences for Undergraduates (REU), $120.0 million for Experimental Program to Stimulate Competitive Research (EPSCoR), $47.3 million for the R&RA share of the Integrated Graduate Education and Research Traineeship (IGERT) program, $9.0 million for the R&RA share of the Graduate Research Fellowship (GRF) program, and $10.0 million for the Professional Science Masters (PSM) program.

- $5.742 billion for FY 2009, of which $123.1 million is provided for MRI, $183.6 million for CAREER grants, $68.4 million for REU, $133.2 million for EPSCoR, $52.5 million for the R&RA share of IGERT, $10.0 million for the R&RA share of GRF, and $12.0 million for PSM.
- $6.401 billion for FY 2010, of which $131.7 million is provided for MRI, $203.8 million for CAREER grants, $75.9 million for REU, $147.8 million for EPSCoR, $58.3 million for the R&RA share of IGERT, $11.1 million for the R&RA share of GRF, and $15.0 million for PSM.

	FY08	FY09	FY10
R&RA	**5156**	**5742**	**6401**
MRI	115	123.1	131.7
CAREER	165.4	183.6	203.8
REU	61.6	68.4	75.9
EPSCoR	120.0	133.2	147.8
IGERT	47.3	52.5	58.3
GRF	9.0	10.0	11.1
PSM	10.0	12.0	15.0

Summary of R&RA authorizations, in millions of dollars

Education and Human Resources (EHR) Authorization (sec. 7002)

The House bill contained a provision authorizing appropriations for Education and Human Resources (EHR) as follows (sec 303):

- $873 million for FY08, of which $94 million was provided for Math and Science Partnerships (MSP), $70 million for the Noyce Scholarship Program (Noyce), $44 million for the STEM Talent Expansion Program (STEP), and $51.6 million for the Advanced Technological Education (ATE) program.
- $934 million for FY09, of which $100.6 million was provided for MSP, $101 million for Noyce, $55 million for STEP, and $55.2 million for ATE.
- $1.003 billion for FY10, of which $107.6 million was provided for MSP, $133 million for Noyce, $60 million for STEP, and $59.1 million for ATE.

In addition, the House bill required NSF to increase funding for undergraduate education programs in proportion to appropriations received for the entire Foundation (sec. 303(e)); and required NSF to support activities to create informal educational materials relevant to global warming (sec 303 (h)).

The Senate amendment contained a provision authorizing $1050 million for EHR for FY08, with the rate of increase for the three subsequent years equal to the rate of increase for the entire Foundation (sec 4002). It also authorized specific amounts for the following programs:

- For STEP, provided $40 million for FY08; $45 million for FY09, $50 million for FY10, and $55 million for FY11 (sec 4005);
- For Noyce, provided $117 million for FY08, $130 million for FY09, $148 million for FY10, and $200 million for FY11 (sec 4012);
- For the Teacher Institutes for the 21st Century, provided $84 million for FY08, $94 million for FY09, $106 million for FY10, and $140 million for FY11 (sec. 4014)

The House recedes to the Senate on sections 303(e) and (h). The Conference substitute provides (sec. 7002):

- $896.0 million for FY 2008, of which $100.0 million is provided for MSP, $89.8 million for Noyce, $40.0 million for STEP, $52.0 million for ATE, $27.1 million for the EHR share of the Integrated Graduate Education and Research Traineeship (IGERT) program, and $96.6 million for the EHR share of the Graduate Research Fellowship (GRF) program.
- $995.0 million for FY 2009, of which $111.0 million is provided for MSP, $115.0 million for Noyce, $50.0 million for STEP, $57.7 million for ATE, $30.1 million for the EHR share of the IGERT, and $107.2 million for the EHR share of GRF.
- $1.104 billion for FY 2010, of which $123.2 million is provided for MSP, $140.5 million for Noyce, $55.0 million for STEP, $64.0 million for ATE, $33.4 million for the EHR share of the IGERT, and $119.0 million for the EHR share of GRF.

The conferees intend that a significant proportion of the appropriation for the Math and Science Partnerships be used to support the Teacher Training Institutes for the 21st Century (sec 7029).

	FY08	FY09	FY10
EHR	**896.0**	**995.0**	**1104.0**
MSP	100.0	111.0	123.2
Noyce	89.8	115.0	140.5
STEP	40.0	50.0	55.0
ATE	52.0	57.7	64.0
IGERT	27.1	30.1	33.4
GRF	96.6	107.2	119.0

Summary of EHR authorizations, in millions of dollars

Other Programs Authorizations (sec. 7002)

The House bill (sec. 303) contained a provision authorizing appropriations for other accounts as follows:

- For FY 2008, $245.0 million for Major Research Equipment and Facilities Construction (MREFC), $285.6 million for the Agency Operations & Award Management (AOAM), $4.05 million for the National Science Board (NSB), and $12.35 million for the Office of the Inspector General (IG).
- For FY 2009, $262.0 million for MREFC, $309.8 million for the AOAM, $4.12 million for NSB, and $12.72 million for the IG.
- For FY 2010, $280.0 million for MREFC, $329.5 million for the AOAM, $4.25 million for NSB, and $13.1 million for the IG.

The Senate amendment contained no similar provision.

The Conference Substitute provides (sec. 7002):

- For FY 2008, $245.0 million for MREFC, $286.6 million for AOAM, $4.05 million for NSB, and $12.35 million for the IG.
- For FY 2009, $262.0 million for MREFC, $309.8 million for the AOAM, $4.19 million for NSB, and $12.75 million for the IG.
- For FY 2010, $280.0 million for MREFC, $329.5 million for the AOAM, $4.34 million for NSB, and $13.21 million for the IG.

	FY08	FY09	FY10
MREFC	**245.0**	**262.0**	**280.0**
AOAM	**285.6**	**309.8**	**329.5**
NSB	**4.05**	**4.19**	**4.34**
IG	**12.35**	**12.75**	**13.21**

Summary of NSF authorizations other than R&RA or EHR, in millions of dollars

Reaffirmation of the merit-review process of the National Science Foundation (sec. 7003)

The House bill contained no provision.

The Senate amendment contained a provision clarifying that the Act does not change NSF's merit-review system or peer review process (sec. 4007).

The House recedes.

Sense of the Congress regarding the mathematics and science partnership programs of the Department of Education and the National Science Foundation (sec. 7004)

The House bill contained a provision expressing a sense of the Congress that the Math and Science Partnerships programs at NSF and the Department of Education are complementary and not duplicative and that the two agencies should have ongoing collaboration to ensure the two programs continue to work in concert (sec. 319).

The Senate amendment contained a provision expressing a sense of the Senate with language identical to the House provision (sec. 4013).

The Senate recedes.

Curricula (sec. 7005)

The House bill contained a provision clarifying that nothing in the Act limits the authority of state or local governments to determine curricula (sec. 124).

The Senate amendment contained no similar provision.

The Senate recedes.

Centers for research on learning and education improvement (sec. 7006)

The House bill contained a provision requiring NSF to continue funding Centers for Research on Learning and Education Improvement (sec. 304).

Senate amendment contained no similar provision.

The Senate recedes.

Interdisciplinary research (sec. 7007)

The House bill contained a provision requiring the National Science Board to evaluate NSF's role and effectiveness in supporting interdisciplinary research and to report to Congress on its findings (sec. 305).

The Senate amendment contained no similar provision.

The Senate recedes.

Postdoctoral research fellows (sec. 7008)

The House bill contained a provision requiring all research proposals that support postdoctoral researchers to include a description of the mentoring activities that will be provided and to require that this aspect of the proposal be evaluated under NSF's "broader impacts" criterion (sec. 308). It also required that the grant annual and final reports describe the mentoring activities that were provided

The Senate amendment contained no similar provision.

The Senate recedes.

Responsible conduct of research (sec. 7009)

The House bill contained a provision requiring institutions funded by NSF to provide training in the responsible conduct of research to students participating in research projects (sec. 309).

The Senate amendment contained no similar provision.

The Senate recedes.

The conferees recognize that what constitutes "appropriate training" may not be the same for undergraduate students as for graduate students or postdocs. The conferees prefer to give NSF maximum flexibility in determining the full range of activities that would constitute appropriate training; however, the conferees do expect NSF to promptly develop and provide written guidelines and/or templates for universities to follow so that compliance can be verified by all parties. The conferees intend for NSF, when developing guidelines, to consider the financial impact that these measures will have on institutions and seek to minimize such impacts accordingly.

Reporting of research results (sec. 7010)

The House bill contained a provision requiring NSF to make available to the public in electronic form final project reports and citations to NSF-funded research (sec. 310).

The Senate amendment contained no similar provision.

The Senate recedes.

The conferees intend for NSF to provide to the public a readily accessible summary of the outcomes of NSF-sponsored research projects. In addition to citations to journal publications, the conferees intend for NSF to make available research project summaries, not including any proprietary or otherwise sensitive information.

Sharing research results (sec. 7011)

The House bill contained a provision making investigators who fail to comply with existing NSF policy on sharing of research results ineligible for future NSF awards until they come into compliance (sec. 311).

The Senate amendment contained no similar provision.

The Senate recedes.

In deciding if and when to reinstate eligibility, the conferees urge the Director to weigh heavily whether the research results being requested were withheld deliberately and were critical to a policy decision being made at the time of the denied request.

Funding for successful science, technology, engineering, and mathematics education programs (sec. 7012)

The House bill contained a provision authorizing NSF to exempt from re-competition and renew for up to 3 years, with the possibility of a second extension of 3 years, grants that are for teacher professional development or that have the primary purpose of increasing diversity in STEM fields. Such grant extensions are to be based on the success of the project in meeting the objectives of the initial grant proposal (sec. 312).

The Senate amendment contained no similar provision.

The Senate recedes with an amendment to allow only one extension of a grant under this exemption for a total of 3 years beyond the initial period of support.

Cost sharing (sec. 7013)

The House bill contained a provision requiring the National Science Board to evaluate and report to Congress on the impact of its ruling to eliminate all cost-sharing for NSF's awards as it affects programs that involve industry partnerships and historically have required industry cost sharing (sec. 313).

The Senate amendment contained no similar provision.

The Senate recedes.

Additional reports (sec. 7014)

The House bill contained a provision requiring the National Science Board to report to Congress on options for supporting the cost of detailed design for major research facilities construction projects; requiring NSF to include plans for polar research facilities in its annual facilities report; requiring NSF to report on education programs carried out through the research directorates' programs; requiring NSF to report on the success rates and distribution of awards by type of institution under the Research in Undergraduate Institutions program; and requiring NSF to provide an annual plan for all its STEM education activities (sec. 315).

The Senate amendment contained no similar provision.

The Senate recedes.

Administrative amendments (sec. 7015)

The House bill contained a provision changing from annual to triannual the Inspector General's audit requirement for assessing the compliance of the National

Science Board with the Government in Sunshine Act; authorizing the NSB to employ individuals in rotator positions; and authorizing up to 3 Waterman awards in any year (sec. 316).

The Senate amendment contained no similar provision.

The Senate recedes.

National Science Board reports (sec. 7016)

The House bill contained a provision requiring certain NSB reports to be submitted directly to Congress (sec. 317).

The Senate amendment contained no similar provision.

The Senate recedes.

Program Fraud Civil Remedies Act of 1986 amendment (sec. 7017)

The Senate amendment contained no provision.

The House bill contained no provision.

The Conferees agree to include a provision amending the Program Fraud and Civil Remedies Act (PFCRA) to include NSF. This provision will authorize the agency to recover funds and assess penalties under PFCRA's provisions.

Meeting critical national science needs (sec. 7018)

The House bill contained no similar provision.

The Senate amendment contained a provision requiring NSF to give priority in making research awards to proposals that assist in meeting critical national needs by advancing physical or natural science, technology, engineering, mathematics, or national competitiveness or innovation and specifying that the provision does not inhibit NSF's support for other areas of research that are within the agency's mandate or change the core mission of NSF (sec. 4006).

The House recedes with an amendment to add social sciences to the list of priority areas for making research awards and to add safety and security as areas of critical national needs.

The conferees cite the National Academies "Rising Above the Gathering Storm Report" on which this Act is based in calling attention to the unique contribution of research in the social sciences, which have "increased understanding of the nature of competent performance and the principles of knowledge organization that underlie people's abilities to solve problems in a wide variety of fields, including mathematics and science." The conferees further agree with the statement in the report that "special investment in physical sciences, engineering, mathematics and information sciences does not mean that there should be a disinvestment in such important fields as the life sciences or the social sciences." It is the intent of the conferees to ensure support for research in areas that will address the critical national needs identified in the "Gathering Storm" report. The conferees do not intend the language contained in subsections (a) and (b) of this provision to in any way devalue the contributions of other fields or to signal any desire on the part of the conferees to disinvest in any field currently supported by the Foundation, as is made clear in subsection (c).

Research on innovation and inventiveness (sec. 7019)

The House bill contained a provision authorizing NSF to support research on the process of innovation and the teaching of inventiveness as part of its research programs on science policy and the science of learning (sec. 207).

The Senate amendment contained no similar provision.

The Senate recedes.

Cyberinfrastructure (sec. 7020)

The House bill contained no similar provision.

The Senate amendment contained a provision requiring NSF to develop a plan that describes the status of broadband access for scientific research purposes for institutions in EPSCoR-eligible jurisdictions (sec. 4010).

The House recedes with amendment to expand the report to include all rural areas and minority-serving institutions.

Pilot program of grants for new investigators (sec. 7021)

The House bill contained a provision establishing a pilot program of one-year seed grants for new investigators whose research proposals are rated "excellent" or "very good" but who are nevertheless not funded, specifying that grants are to support the eligible individuals in generating additional data and performing additional analysis to enable them to submit strengthened proposals to NSF. The provision also required the National Science Board to evaluate the program and report to Congress within 3 years with any recommendations regarding the pilot program (sec. 306).

The Senate amendment contained no similar provision.

The Senate recedes with an amendment authorizing such seed grants only for new investigators whose initial, unsuccessful proposals are rated "excellent" and requiring the Board's report to Congress to state explicitly whether the pilot program should be continued or terminated.

Broader impacts merit review criterion (sec. 7022)

The House bill contained a provision requiring NSF, in applying its "broader impacts" criterion in evaluating research proposals, to give special consideration to proposals involving partnerships with industry and to encourage proposals that involve partnerships with industry, including cost-sharing by industrial partners (sec. 307).

The Senate amendment contained no similar provision.

The Senate recedes with an amendment specifying that NSF must consider as appropriate, among other types of possible activities for meeting its broader impacts criterion, proposals involving partnerships with industry and deleting language in the House bill on encouraging proposals involving industry partnerships.

The conferees affirm that the primary mission of NSF is to support discovery research, research that asks questions about how the world works before any particular problem or application has been identified. In specifying that research proposals involving partnerships with industry should be considered as appropriate for meeting the requirements of the "broader impacts" proposal review criterion, the conferees do not intend to de-value other appropriate activities, such as promoting learning or broadening

participation in STEM fields. The conferees simply point out that industry interest and involvement in proposed basic research projects is one indication of the potential value of the research and may arise in areas important to innovation and technological competitiveness, such as nanotechnology or information technology.

Donations (sec. 7023)

The House bill contained a provision authorizing NSF to accept private funds for specific prize competitions (sec. 314).

The Senate amendment contained no similar provision.

The Senate recedes with amendment to ensure that prizes are for "basic research".

High-performance computing and networking (sec. 7024)

The House bill contained a provision amending the High-Performance Computing Act of 1991 to clarify the program's goals and content; to require a regularly updated plan for the development and deployment of high-end computing systems; and to reestablish a dedicated external advisory committee for the interagency program and specify its responsibilities (sec 501 and 502).

The Senate amendment contained a provision authorizing a communications research grant program; establishing a board within the NSF to oversee the research program; authorizing university-based research centers; and authorizing appropriations for the program (sec 4011).

The conference agreement accepts the House amendments to the 1991 Act with minor language changes. The Senate provision is replaced with a requirement for the interagency program carried out under the 1991 Act to support communications research in areas designated by section 4011 and to report to Congress annually on the funding allocated to these areas. NSF is directed to increase funding for these research areas in proportion to appropriations received for its research and related activities account. The House recedes on the centers program, and the Senate recedes on creation of the new board.

Science, technology, engineering, and mathematics talent expansion program (sec. 7025)

The House bill contained a provision amending the NSF STEM Talent Expansion Program (STEP) to create centers for improvement of undergraduate education in STEM fields, specifying that centers may support activities to help train faculty and graduate students to be more effective teachers and to develop more effective educational materials and methods targeted for undergraduate instruction (sec. 125).

The Senate amendment contained a provision amending the STEP Program to establish outreach programs for middle and high school students and teachers to expand their exposure to engineering and technology; provide summer internships for STEM undergraduate students; facilitate hiring of STEM faculty; and provide programs that bridge the transition to college for students from underrepresented groups (sec. 4005).

The conference agreement amends the STEP Program to establish a grant program to create up to 5 centers for the improvement of undergraduate STEM education.

It also amends the current program to make the changes included in the Senate amendment, except the provision regarding hiring of faculty.

Laboratory science pilot program (sec. 7026)

The House bill contained a provision establishing a "Partnerships for Access to Laboratory Science" (PALS) program at NSF to determine how best to integrate laboratory experiences with STEM classroom instruction in secondary schools. The provision specified that the pilot program should support teacher training, development of instructional programs, and acquisition and maintenance of equipment. The provision required a 50 percent cost-share from non-Federal sources (sec. 128).

The Senate amendment contained a provision establishing a program that is similar to that in the House bill, except that it included a sunset provision that would terminate the program after FY2011 and required a 70 percent cost-share from non-Federal sources (sec. 4015).

The Senate recedes with an amendment requiring a 60 percent cost-share from non-Federal sources and including a provision to sunset the program after FY 2010.

Study on laboratory equipment donations for schools (sec. 7027)

The House bill contained a provision directing NSF to report to Congress on the extent to which institutions of higher education are donating used laboratory equipment to schools (sec. 129).

The Senate amendment contained no similar provision.

The Senate recedes with an amendment to extend the study on donations of equipment to include other private sector entities.

Mathematics and Science Education Partnerships amendments (sec. 7028)

The House bill contained a provision amending the Math and Science Partnerships program (sec. 121), authorizing the development of master's degree programs for in-service teachers, after school and summer programs, mentoring programs for teachers and students involved in STEM college-preparatory courses, and development of curriculum tools for teaching innovation. The provision also amended the program by setting award size limits and requiring the identification and reporting of model projects ready for wider replication. An additional provision required NSF to develop a master's degree program for in-service teachers through the Math and Science Partnerships program (sec. 123).

The Senate amendment contained no similar provision.

The Senate recedes with an amendment striking the authorization for the master's degree program for teachers, the limits on award size, and the requirement for identification and reporting of model programs. The House recedes on the section 123 provision.

The conferees strongly support the creation of master's degree programs for in-service teachers to improve content knowledge in science, technology, engineering and mathematics and include a provision to fund such programs in section 6114 of this bill.

National Science Foundation teacher institutes for the 21st Century (sec. 7029)

The House bill contained a provision directing NSF to establish a grant program to support teacher institutes and authorizing grantees under the Teacher Institutes for the 21st Century program to carry out summer teacher institutes (sec. 122).

The Senate amendment contained a provision authorizing the Teacher Institutes for the 21st Century program at NSF to provide professional development for math and science teachers in high-need schools (sec. 4014).

The House recedes with an amendment to specify what comprise "high-need subjects" and to clarify how priorities are established for the institutes.

Robert Noyce Teacher Scholarship program (sec. 7030)

The House bill contained a provision stating as a policy objective the education of 10,000 highly qualified K-12 science, technology, engineering and mathematics (STEM) teachers each year (sec. 113). The bill also amended and expanded the NSF Noyce Teacher Scholarship Program as follows (sec. 114): required collaboration between science and education faculty to establish STEM teacher education programs, required early classroom experiences for teachers in training, increased scholarships and stipends to at least $10,000 per year, and allowed for up to 3 years of scholarship support, beginning with the sophomore year. Further, it replaced the requirement for Noyce Scholars to serve their teaching obligation in high-need schools with an incentive for teaching in such schools; changed from 4 to 5 the number of years within which Noyce Scholars must graduate with certification to teach; and created a new partnership program for attracting STEM professionals to teaching careers and provides for salary supplements for such individuals, from non-Federal sources through the partnership, during the period of their teaching obligation.

The Senate amendment contained a provision amending and expanding the NSF Noyce Teacher Scholarship Program in a way similar to the House bill, except: it established NSF Teaching Fellowships for attracting accomplished STEM professionals to teaching and NSF Master Teaching Fellowships for creating master teachers from among current exemplary STEM teachers having master's degrees (in each case providing salary supplements for the teaching obligation period); required a 50 percent cost share from non-Federal funds for all types of Noyce awards; required that teaching obligations be served in high-need schools; and limited scholarships to 2 years (sec. 4012).

The conference agreement amends and expands the Noyce program: requires collaboration between science and education faculty to establish STEM teacher education programs, requires early classroom experiences for teachers in training, increases scholarships and stipends to at least $10,000 per year, and allows for up to 3 years of scholarship support, beginning with the junior year. In addition it retains the requirement for Noyce Scholars to serve their teaching obligation in high-need schools; changes from 4 to 5 the number of years within which Noyce Scholars must graduate with certification to teach; and creates a new partnership program for attracting STEM professionals to teaching careers (NSF Teaching Fellows) and for preparing master teachers (NSF Master Teaching Fellows). The agreement specifies that annual scholarship, stipend, and fellowship awards may be granted on a pro-rated basis to students in school part time and that scholarship and stipend recipients' service obligation

is based on the number of full annual scholarships or stipends received, regardless of the number of years over which such amounts are pro-rated. For the two fellowship programs, the agreement requires 50 percent cost sharing from non-federal sources and the provision for salary supplements for fellows during the period of their teaching obligation. The House recedes on the section 113 provision.

The agreement also clarifies the process for repayment in the event that scholarship, stipend, or fellowship recipients fail to maintain good status in the program or fail to meet their service requirements. The conferees intend that the Director consult with the Secretary of Education in developing policies regarding the effective enforcement of the service requirement under this section. The conferees note that the changes made in the system of repayment collection are intended to clarify such system but do not presume the creation of an entirely new system of repayment collection.

The conferees anticipate that the Noyce program will grow to become a major source of effective STEM teachers, which is the reason for the large increases in authorizations of appropriations provided for the program. The conferees have required that teachers educated through the Noyce program carry out their teaching obligations in high-need schools because survey results have documented that such schools have the highest percentages of poorly qualified STEM teachers on their faculties. This requirement is appropriate during the period of initial growth of the Noyce program but the conferees intend for this national program to benefit all students. As the scale of the program grows and the numbers of teachers educated under the program increases substantially, the conferees expect this policy to be reviewed in 2 years and when the program is next reauthorized to ensure that all children have equal access to high-quality teachers with strong subject matter knowledge.

The conferees note that eligibility for awards under the Noyce program includes 2-year colleges and that such institutions are specifically included among the institutions that may form partnerships for carrying out the NSF Teaching Fellowship and NSF Master Teaching Fellowship programs. The conferees urge NSF, in soliciting applications for awards under the Noyce program, to encourage participation by 2-year institutions.

Encouraging participation (sec. 7031)

The House bill contained had no similar provision.

The Senate amendment contained a provision establishing at 2-year colleges a mentoring program to increase the participation of women in STEM fields, including recruiting and training of mentors.

The House recedes with an amendment to place the program within the existing NSF Advanced Technological Education program.

National Academy of Sciences report on diversity in science, technology, engineering and mathematics fields (sec. 7032)

The House bill contained a provision requiring NSF to contract with the National Academy of Sciences (NAS) for a report on barriers to and strategies for increasing the participation of underrepresented minorities in STEM fields (sec. 318).

The Senate amendment contained a provision with a similar requirement as part of a study that the Office of Science and Technology Policy is required to conduct through the NAS (sec. 1102).

The Senate recedes.

Hispanic-serving institutions undergraduate program (sec. 7033)

The House bill contained a provision establishing a program to improve STEM undergraduate education at Hispanic-serving institutions through activities that may include improved courses and curriculum, faculty development, and support for research experiences for undergraduates (sec. 320).

The Senate amendment contained no similar provision.

The Senate recedes.

Professional science master's degree programs (sec. 7034)

The House bill contained no similar provision.

The Senate amendment contained a provision requiring NSF to award grants to facilitate the creation or improvement of Professional Science Master's degree programs at institutions of higher education (sec. 4004).

The House recedes with an amendment that clarifies that such programs may include linkages in the program between institutions of higher education and industry and requires such programs to describe how they will produce individuals for the workforce in high need fields. The conferees intend that the term "high need fields" take into account needs on a state, regional and national basis.

Sense of Congress on communications training for scientists (sec. 7035)

The House bill contained a provision requiring NSF to provide supplements, on a competitive, merit-reviewed basis, to holders of IGERT grants to train graduate students in the communication of the substance and importance of their research to non-scientist audiences and to report to Congress on how the funds are used (sec. 321).

The Senate amendment contained no similar provision.

The Senate recedes with an amendment to transform the provision to a Sense of Congress statement that such communications training should be part of the activities carried out using IGERT grants. The report to Congress on how IGERT grants are used for communications training is retained.

Major research instrumentation (sec. 7036)

The House bill contained a provision setting a minimum and maximum award amounts for major research instrumentation (MRI) grants, specifying that MRI funds may be used for operations and maintenance, and requiring cost-sharing by grantees (sec. 303(d)).

The Senate amendment contained no similar provision.
The Senate recedes.

Limit on proposals (sec. 7037)

The House bill contained a provision requiring the Director allow submission of a full proposal for each pre-proposal that is determined to have merit and requiring a review and assessment of Foundation policies regarding the imposition of limitations on the numbers of proposals that may be submitted by an institution of higher education.
The Senate amendment contained no similar provision.
The Senate recedes.

Title VIII - General Provisions

Collection of Data Relating to Trade in Services (Section 8001)

The Senate amendment contained a provision (section 5001) that established a five year program within the Bureau of Economic Analysis to collect and study data relating to export and import services.

The House bill contained no similar provision.

The House recedes to the Senate with an amendment that would have the Secretary of Commerce acting through the Director of the Bureau of Economic Analysis to prepare a report to Congress, no later than January 31, 2008 on the feasibility, cost and potential benefits of a program to collect and study data relating to the export and import of services.

Sense of the Senate Regarding Small Business Growth and Capital Markets (section 8002)

The Senate amendment contained a sense of the Senate (section 5002) that Securities and Exchange Commission and the Public Company Accounting Oversight Board should promulgate final rules implementing section 404 of the Sarbanes Oxley Act of 2002 (15 U.S.C. 7262).

The House bill contained no similar provision.

The House recedes to the Senate provision.

Government Accountability Office Review of Activities, Grants and Programs (section 8003)

The Senate amendment contained a provision (section 5003) that required no later than 3 years after date of enactment that the Comptroller General of the United States examine each interim report submitted to the Congress under the Act and assess or

evaluate the effectiveness of the new or expanded activities under the Act and include recommendations to improve the effectiveness of activities under the Act including termination.

The House bill contained no similar provision.

The House recedes to the Senate with an amendment that selects a representative sample of new or expanded activities required to be carried out under the Act and includes such recommendations as the Comptroller General determines appropriate to ensure effectiveness of, or improvements to the programs and activities, including termination.

Sense of the Senate Regarding Anti-Competitive Tax Policy (section 8004)

The Senate amendment contained a provision (section 5004) that notwithstanding any other provision of law, would prohibit federal funds to any organization or entity that advocates against tax competition or United States tax competitiveness. The amendment notes that advocating for effective tax information or advocating for effective tax transfer, and advocating for income tax treaties is not considered to be advocating against tax competition of the United States tax competitiveness.

The House had no similar provision.

The House recedes to the Senate with an amendment that it is a sense of the Senate that Federal funds should not be provided to any organization or entity that advocates against United States tax policy that is internationally competitive.

Study of the Provision of Online Degree Programs (section 8005)

The Senate amendment contained a provision (section 5005) that would require the Secretary of Commerce to enter into a contract with the National Academy of Sciences to conduct a feasibility study on creating a national, free online degree program that would enable all individuals described under section 484(a)(5) of the Higher Education Act of 1965 (20 U.S.C. 1091(a)(5)) who wish to pursue a degree in a field of strategic importance to the United States and where expertise is in demand such as mathematics, science and foreign languages.

The House bill contained no similar provision.

The House recedes to the Senate with an amendment that 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, Secretary of Commerce and Congress on the mechanisms and support needed for an institution of higher education 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 and mathematics or foreign language without using Federal funds including funds provided under title IV of the Higher Education Act of 1965 (20 U.S.C. 1070).

Sense of the Senate Regarding Deemed Exports (section 8006)

The Senate amendment contained a sense of the Senate that the Deemed Export Advisory Committee of the Department of Commerce develop recommendations for improving current controls on deemed exports and that the President and the Congress should consider the recommendations of the Committee in developing and implementing export control policies.

The House bill contained no similar provision.

The House recedes to the Senate provision.

Accountability and Transparency of Activities Authorized by this Act (section 8008)

The Senate amendment contained a provision (section 1504) that would have required the Inspector General of the Department of Commerce to conduct routine independent, publicly available reviews of activities carried out with grants and other financial assistance made available by the Administrator of the National Oceanic and Atmospheric Administration, NOAA. The provision would have prohibited NOAA funds under a grant or contract to be used by the person who receives the grant or contract, including any subcontractor, for a banquet or conference, other than a conference relating to the training or a routine meeting with officer or employees of the Administration to discuss and ongoing project. The provision would also require that each person who receives funds from the NOAA Administrator through a grant or contract shall submit to the Administrator a certification stating that none of such funds will be made available through a subcontract in any other manner to another person who has a financial interest or other conflict with the person who received such finds from the Administrator.

The House bill contains no similar provision.

The House recedes with an amendment specifying that, 360 days after enactment of the Act, a grant or contract funded by amounts authorized under the Act may not be used to defray the costs of a banquet or conference not directly and programmatically related to the purpose for which the grant or contract was awarded where 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. The amendment also requires that 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 Director, 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 previously disclosed and approved in the process of entering into a contract or awarding a grant. The amendment does not apply to sections 6201 and 6203 which contain separate conflict of interest provisions.

H.R. 2272

Managers on the part of the SENATE	*Managers on the part of the* HOUSE
Mr. BINGAMAN	
Mr. INOUYE	
Mr. KENNEDY	
Mr. LIEBERMAN	
Ms. MIKULSKI	
Mr. KERRY	
Mr. NELSON of Florida	
Mr. DOMENICI	

H.R. 2272—Continued

Managers on the part of the SENATE	*Managers on the part of the* HOUSE
Mr. STEVENS	
Mr. ENZI	
Mr. ALEXANDER	
Mr. ENSIGN	
Mr. COLEMAN	

H.R. 2272—Continued

Managers on the part of the SENATE	*Managers on the part of the* HOUSE
	From the Committee on Science and Technology, for consideration of the House bill and the Senate amendment, and modifications committed to conference:
	Mr. GORDON
	Mr. LIPINSKI
	Mr. BAIRD
	Mr. WU
	Mr. LAMPSON
	Mr. UDALL of Colorado
	Ms. GIFFORDS

H.R. 2272—Continued

Managers on the part of the SENATE	*Managers on the part of the* HOUSE
	Mr. MCNERNEY
	Mr. HALL of Texas
	Mr. SENSENBRENNER
	Mr. EHLERS
	Mrs. BIGGERT
	Mr. FEENEY
	Mr. GINGREY

H.R. 2272—Continued

Managers on the part of the SENATE	*Managers on the part of the* HOUSE
	From the Committee on Education and Labor, for consideration of Division C of the Senate amendment, and modifications committed to conference:
	George Miller Mr. GEORGE MILLER of California
	Rush Holt Mr. HOLT
	Mr. MCKEON