of this title and for renewable applications from section 13471(c) of this title, including Department of Energy national laboratory participation in proposals submitted under subsection (c), and including transferring funds to the General Services Administration.

(Pub. L. 102–486, title XXII, § 2201, Oct. 24, 1992, 106 Stat. 3085.)

TERMINATION OF REPORTING REQUIREMENTS

For termination, effective May 15, 2000, of provisions in subsec. (b) of this section relating to the biennial resubmittal of the program plan to Congress, see section 3003 of Pub. L. 104–66, as amended, set out as a note under section 1113 of Title 31, Money and Finance, and the 1st item on page 86 of House Document No. 103–7.

§ 13502. National Advanced Manufacturing Technologies Program

(a) Program direction

The Secretary shall establish a 5-year National Advanced Manufacturing Technologies Program, in accordance with sections 13541 and 13542 of this title. Such program shall foster the commercialization of advanced manufacturing technologies to improve energy efficiency and productivity in manufacturing. At a minimum, the Program shall expedite the private sector deployment of advanced manufacturing technologies to improve productivity, quality, and control in manufacturing processes that can foster economic growth, energy efficiency, and competitiveness. The program[1] shall include field demonstrations of sufficient scale and number to prove technical and economic feasibility.

(b) Program plan

Within 180 days after October 24, 1992, the Secretary, in consultation with appropriate representatives of industry, institutions of higher education, Department of Energy national laboratories, and professional and technical societies, shall prepare and submit to the Congress a 5-year program plan to guide activities under this section. The Secretary shall biennially update and resubmit the program plan to Congress.

(c) Proposals

(1) Solicitation

Within 1 year after October 24, 1992, the Secretary shall solicit proposals for conducting activities consistent with the 5-year program plan. Such proposals may be submitted by one or more parties.

(2) Contents of proposals

Proposals submitted under this subsection shall include—

(A) an explanation of how the proposal will expedite the commercialization of advanced manufacturing technologies to improve energy efficiency in the building, industry, and transportation sectors;

(B) evidence of consideration of whether the unique capabilities of Department of Energy national laboratories warrants collaboration with such laboratories, and the extent of such collaboration proposed;

(C) a description of the extent to which the proposal includes collaboration with relevant industry or other groups or organizations; and

(D) evidence of the ability of the proposers to undertake and complete the proposed project.

(d) Authorization of appropriations

There are authorized to be appropriated to the Secretary for carrying out this section such sums as may be necessary, to be derived from sums authorized under section 13451(e) of this title, including Department of Energy national laboratory participation in proposals submitted under subsection (c).

(Pub. L. 102–486, title XXII, § 2202, Oct. 24, 1992, 106 Stat. 3086.)

TERMINATION OF REPORTING REQUIREMENTS

For termination, effective May 15, 2000, of provisions in subsec. (b) of this section relating to the biennial resubmittal of the program plan to Congress, see section 3003 of Pub. L. 104–66, as amended, set out as a note under section 1113 of Title 31, Money and Finance, and the 2nd item on page 86 of House Document No. 103–7.

§ 13503. Supporting research and technical analysis

(a) Basic energy sciences

(1) Program direction

The Secretary shall continue to support a vigorous program of basic energy sciences to provide basic research support for the development of energy technologies. Such program shall focus on the efficient production and use of energy, and the expansion of our knowledge of materials, chemistry, geology, and other related areas of advancing technology development.

(2) User facilities

(A) As part of the program referred to in paragraph (1), the Secretary shall carry out planning, construction, and operation of user facilities to provide special scientific and research capabilities, including technical expertise and support as appropriate, to serve the research needs of our Nation's universities, industry, private laboratories, Federal laboratories, and others. Research institutions or individuals from other nations shall be accommodated at such user facilities in cases where reciprocal accommodations are provided to United States research institutions and individuals or where the Secretary considers such accommodation to be in the national interest.

(B) The construction of the Advanced Photon Source at the Argonne National Laboratory is hereby authorized.

(C) The Secretary shall not change the user fee practice in effect as of October 1, 1991, with respect to user facilities unless the Secretary notifies Congress 90 days before the effective date of any change.

(D) The Secretary shall expedite the design for construction of the Advanced Neutron Source at the Oak Ridge National Laboratory, in order to provide critical research capabilities in support of our national research initiatives for advanced materials and bio-

[1] So in original. Probably should be capitalized.

technology, as well as a broad range of research. Such action shall be consistent with the Basic Energy Sciences Advisory Committee's Technical Evaluation of accelerator and reactor neutron source technologies. Within 90 days after October 24, 1992, the Secretary shall submit to the Congress a plan for such design, including a schedule for construction.

(3) Cost sharing

The Secretary shall not require cost sharing for research and development pursuant to this subsection, except—

(A) as otherwise provided for in cooperative research and development agreements or other agreements entered into under existing law;

(B) for fees for user facilities, as determined by the Secretary; or

(C) in the case of specific projects, where the Secretary determines that the benefits of such research and development accrue to a specific industry or group of industries, in which case cost sharing under section 13542 of this title shall apply.

(b) University and science education

(1) The Secretary shall support programs for improvements and upgrading of university research reactors and associated instrumentation and equipment. Within 1 year after October 24, 1992, the Secretary shall submit to the Congress a report on the condition and status of university research reactors, which includes a 5-year plan for upgrading and improving such facilities, instrumentation capabilities, and related equipment.

(2) The Secretary shall develop a method to evaluate the effectiveness of science and mathematics education programs provided by the Department of Energy and its laboratories, including specific evaluation criteria.

(3)(A)(i) The Director of the Office of Science shall operate an Experimental Program to Stimulate Competitive Research (in this paragraph referred to as ''EPSCoR'') as part of the Department of Energy's University and Science Education Programs.

(ii) The objectives of EPSCoR shall be—

(I) to enhance the competitiveness of the peer-review process within academic institutions in eligible States; and

(II) to increase the probability of long-term growth of competitive funding to investigators at institutions from eligible States.

(iii) In order to carry out the objectives stated in clause (ii), EPSCoR shall provide for activities which may include (but not be limited to) competitive research awards and graduate traineeships.

(iv) EPSCoR shall assist those States that—

(I) historically have received relatively little Federal research and development funding; and

(II) have demonstrated a commitment to develop their research bases and improve science and engineering research and education programs at their universities and colleges.

(B) For purposes of this paragraph, the term ''eligible States'' means States that received a Department-EPSCoR planning or traineeship grant in fiscal year 1991 or fiscal year 1992.

(C) No more than $5,000,000 of the funds appropriated to EPSCoR in any fiscal year, through fiscal year 1997, are authorized to be appropriated for graduate traineeships.

(c) Technology transfer

The Secretary shall support technology transfer activities conducted by the National Laboratories. Within 1 year after October 24, 1992, the Secretary shall submit to the Congress a report on the adequacy of funding for such activities, along with a proposal recommending ways to reduce the length of time required to consummate cooperative research and development agreements.

(d) Facilities support for multiprogram energy laboratories

(1) Facility policy

The Secretary shall develop and implement a least cost strategy for correcting facility problems, closing unneeded facilities, making facility modifications, and building new facilities at multiprogram energy laboratories.

(2) Facility plan

Within 1 year after October 24, 1992, the Secretary shall prepare and submit to the Congress a comprehensive plan for conducting future facility maintenance, making repairs, modifications, and new additions, and constructing new facilities at multiprogram energy laboratories. Such plan shall provide for facilities work in accordance with the following priorities, listed in descending order of priority:

(A) Providing for the safety and health of employees, visitors, and the general public with regard to correcting existing structural, mechanical, electrical, and environmental deficiencies.

(B) Providing for the repair and rehabilitation of existing facilities to keep them in use and prevent deterioration.

(C) Providing engineering design and construction services for those facilities which require modification or additions in order to meet the needs of new or expanded programs.

Such plan shall include plans for new facilities and facility modifications which will be required to meet the Department of Energy's changing missions of the twenty-first century, including schedules and estimates for implementation, and including a section outlining long-term funding requirements consistent with anticipated budgets and annual authorization of appropriations. Such plan shall address the coordination of modernization and consolidation of facilities in order to meet changing mission requirements, and shall provide for annual reports to Congress on accomplishments, conformance to schedules, commitments, and expenditures.

(e) Authorization of appropriations

There are authorized to be appropriated to the Secretary for Supporting Research and Technical Analysis, including Basic Energy Sciences, Energy Research Analysis, University and Science Education, Technology Transfer, Advisory and Oversight Program Direction, and Fa-

cilities Support for Multiprogram Energy Laboratories, $966,804,000 for fiscal year 1993 and such sums as may be necessary for fiscal year 1994.

(Pub. L. 102–486, title XXII, § 2203, Oct. 24, 1992, 106 Stat. 3087; Pub. L. 105–245, title III, § 309(b)(2)(F), Oct. 7, 1998, 112 Stat. 1853.)

AMENDMENTS

1998—Subsec. (b)(3)(A)(i). Pub. L. 105–245 substituted ''Office of Science'' for ''Office of Energy Research''.

§ 13504. Math and science education program

(a) Program

The Secretary shall enter into contracts with existing qualified entities to conduct science and mathematics education programs that supplement the Special Programs for Students from Disadvantaged Backgrounds carried out by the Secretary of Education under sections 1070d through 1070d–1d of title 20.[1]

(b) Purpose

(1) The purpose of the programs shall be to provide support to Federal, State, and private programs designed to promote the participation of low-income and first generation college students as defined in section 1070d of title 20[1] in post-secondary science and mathematics education.

(2) Support activities may include—

(A) the development of educational materials;

(B) the training of teachers and counselors;

(C) the establishment of student internships;

(D) the development of seminars on mathematics and science;

(E) tutoring in mathematics and science;

(F) academic counseling;

(G) the development of opportunities for research; and

(H) such other activities that may promote the participation of low-income and first generation college students in post-secondary science and mathematics education.

(c) Support

(1) In carrying out the purpose of this section, the entities may provide support under subsection (b)(2) to—

(A) low-income and first generation college students; and

(B) institutions of higher education, public and private agencies and organizations, and secondary and middle schools that principally benefit low-income students.

(2) The qualified entities shall, to the extent practicable, coordinate support activities under this section with the Secretary of Education and the Secretary.

(d) Cooperation with qualified entities

The Secretary shall cooperate with qualified entities and, to the extent practicable, make available to the entities such personnel, facilities, and other resources of the Department of Energy as may be necessary to carry out the duties of the entities.

(e) Report

Not later than October 1 of each year, the entities shall report to the Secretary, the Secretary of Education, and the Congress on—

(1) progress made to promote the participation of low-income and first generation college students in post-secondary science and mathematics education by—

(A) the qualified entities;

(B) other mathematics and science education programs of the Department of Energy; and

(C) the Special Programs for Students from Disadvantaged Backgrounds of the Department of Education; and

(2) recommendations for such additional actions as may be needed to promote the participation of low-income students in post-secondary science and mathematics education.

(f) Effect on existing programs

The programs in this section shall supplement and be developed in cooperation with the current mathematics and science education programs of the Department of Energy and the Department of Education but shall not supplant them.

(g) "Qualified entity" defined

For purposes of this section, the term ''qualified entity'' means a nonprofit corporation, association, or institution that has demonstrated special knowledge of, and experience with, the education of low-income and first generation college students and whose primary mission is the operation of national programs that focus on low-income students and provide training and other services to educators.

(h) Authorization of appropriations

There are authorized to be appropriated such sums as may be necessary, to be derived from section 13503(e) of this title and the Environmental Restoration and Waste Management program, to carry out the purposes of this section.

(Pub. L. 102–486, title XXII, § 2204, Oct. 24, 1992, 106 Stat. 3089.)

REFERENCES IN TEXT

Sections 1070d through 1070d–1d of title 20, referred to in subsec. (a), and section 1070d of title 20, referred to in subsec. (b)(1), were repealed by Pub. L. 102–325, title IV, § 402(a)(1), July 23, 1992, 106 Stat. 482.

§ 13505. Integration of research and development

Within 180 days after October 24, 1992, the Secretary, in consultation with appropriate representatives of industry, institutions of higher education, Department of Energy national laboratories, and professional and technical societies, shall prepare and submit to Congress a 5-year program plan for improving the integration of basic energy research programs with other energy programs within the Department of Energy. Such program plan shall include—

(1) an evaluation of current procedures and mechanisms used to achieve such integration;

(2) an assessment of the role that the Department of Energy national laboratories play in such integration;

(3) an identification and evaluation of models that could enhance such integration;

[1] See References in Text note below.