

**(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 (b)(1), were repealed by Pub.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;

(4) an identification and evaluation of new programs, mechanisms, and related policy options that could improve the integrating process, including—

(A) set aside funding for matching or leveraging basic and applied programs;

(B) more formal linkages; and

(C) program coordination;

(5) recommendations for expanded research and development and new technology areas; and

(6) budget estimates for activities under this section.

(Pub. L. 102-486, title XXII, §2205, Oct. 24, 1992, 106 Stat. 3091.)

**§ 13506. Definitions**

For purposes of this subchapter—

(1) the term “advanced manufacturing technology” means processes, equipment, techniques, practices, and capabilities that are applied for the purpose of—

(A) improving the productivity, quality, or energy efficiency of the design, development, testing, or manufacture of a product; or

(B) expanding the technical capability to design, develop, test, or manufacture a product that is fundamentally different in character from existing products and that will result in improved energy efficiency;

(2) the term “advanced materials” means materials that are processed, synthesized, fabricated, and manufactured to develop high performance properties that exceed the corresponding properties of conventional materials for structural, electronic, magnetic, or photonic applications, or for joining, welding, bonding, or packaging components into complex assemblies, including—

(A) advanced monolithic materials such as metals, ceramics, and polymers;

(B) advanced composite materials such as metal matrix (including intermetallics), polymer matrix, ceramic matrix, continuous fiber ceramic composite, and carbon matrix composites; and

(C) advanced electronic, magnetic, and photonic materials, including superconducting, semiconductor, electrooptic, magneto-optic, thin-film, and special purpose coating materials used in technologies for energy efficiency, renewable energy, or electric power applications; and

(3) the term “United States” means the 50 States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the United States Virgin Islands, Guam, the Northern Mariana Islands, and any other territory or possession of the United States.

(Pub. L. 102-486, title XXII, §2206, Oct. 24, 1992, 106 Stat. 3091.)

## SUBCHAPTER XI—POLICY AND ADMINISTRATIVE PROVISIONS

**§ 13521. Policy on major construction projects****(a) Report and management plan**

The Secretary shall submit to the Congress a report and management plan for any major con-

struction project involving \$100,000,000 or more, prior to the expenditure of those funds.

**(b) Congressional review**

Expenditure of funds for a project described in subsection (a) of this section may be made after a period of 30 calendar days (not including any day on which either House of Congress is not in session because of adjournment of more than 3 calendar days prior to a day certain) has passed after receipt of the report and management plan by Congress.

(Pub. L. 102-486, title XXIII, §2301, Oct. 24, 1992, 106 Stat. 3092.)

**§ 13522. Energy Research, Development, Demonstration, and Commercial Application Advisory Board**

**(a) Establishment**

The Secretary shall establish an Energy Research, Development, Demonstration, and Commercial Application Advisory Board (hereafter in this section referred to as the "Advisory Board").

**(b) Responsibilities**

The Advisory Board shall provide impartial technical advice to the Secretary to assist in the development of energy research, development, demonstration, and commercial application plans and reports under sections 5905 and 5914<sup>1</sup> of this title, under section 7321 of this title, and as otherwise provided in subchapters VIII through XI of this chapter. The Advisory Board shall also periodically review such plans and reports and their implementation in relation to the goals stated in section 13401 of this title, and report the results of such review to the Secretary and the Congress. Such report shall be included as part of the report required under section 5914<sup>1</sup> of this title.

**(c) Use of existing advisory board**

The Secretary may use an existing advisory board to carry out the responsibilities described in subsection (b) of this section.

(Pub. L. 102-486, title XXIII, §2302, Oct. 24, 1992, 106 Stat. 3092.)

REFERENCES IN TEXT

Subchapters VIII through XI of this chapter, referred to in subsec. (b), was in the original "titles XX through XXIII of this Act", meaning titles XX through XXIII of Pub. L. 102-486, Oct. 24, 1992, 106 Stat. 3057-3092, which enacted subchapters VIII through XI of this chapter and amended sections 5103, 5107, 5108, 5110, 5307, 5905, 12003, 12004, and 12006 of this title.

Section 5914 of this title, referred to in subsec. (b), was omitted from the Code.

TERMINATION OF ADVISORY BOARDS

Advisory boards established after Jan. 5, 1973, to terminate not later than the expiration of the 2-year period beginning on the date of their establishment, unless, in the case of a board established by the President or an officer of the Federal Government, such board is renewed by appropriate action prior to the expiration of such 2-year period, or in the case of a board established by Congress, its duration is otherwise provided by law. See sections 3(2) and 14 of Pub. L. 92-463, Oct.

6, 1972, 86 Stat. 776, set out in the Appendix to Title 5, Government Organization and Employees.

**§ 13523. Management plan**

**(a) Plan preparation**

The Secretary, in consultation with the Advisory Board established under section 13522 of this title, shall prepare a management plan for the conduct of research, development, demonstration, and commercial application of energy technologies that is consistent with the goals stated in section 13401 of this title.

**(b) Contents of plan**

The management plan under subsection (a) of this section shall provide for—

- (1) investigation of promising energy and energy efficiency resource technologies that have been identified as potentially significant future contributors to national energy security;
- (2) development of energy and energy efficiency resource technologies that have the potential to reduce energy supply vulnerability, and to minimize adverse impacts on the environment, the global climate, and the economy; and
- (3) creation of opportunities for export of energy and energy efficiency resource technologies from the United States that can enhance the Nation's competitiveness.

**(c) Energy technology inventory and status report**

As part of the management plan, the Secretary, with the advice of the Advisory Board established under section 13522 of this title, shall develop an inventory and status report of technologies to enhance energy supply and to improve the efficiency of energy end uses. The inventory and status report shall include fossil, renewable, nuclear, and energy conservation technologies which have not yet achieved the status of fully reliable and cost-competitive commercial availability, but which the Secretary projects may become available with additional research, development, and demonstration. The inventory and status report shall provide, for each technology—

- (1) an assessment of its—
  - (A) degree of technological maturity; and
  - (B) principal research, development, and demonstration issues, including—
    - (i) the barriers posed by capital, operating, and maintenance costs;
    - (ii) technical performance; and
    - (iii) potential environmental impacts;
- (2) the projected time frame for commercial availability, specifying at a minimum whether the technology will be commercially available in the near-term, mid-term, or long-term, whether there are too many uncertainties to project availability, or whether it is unlikely that the technology will ever be commercial; and
- (3) a projection of the future cost-competitiveness of the technology in comparison with alternative technologies to provide the same energy service.

**(d) Public comment**

The Secretary shall publish the proposed management plan for a written public comment pe-

<sup>1</sup> See References in Text note below.