

**(i) Consultation**

The Secretary shall consult with the Administrator of the Environmental Protection Agency and the Secretary of Transportation in carrying out this section.

**(j) Fuel cells for transportation**

(1) The Secretary shall develop and implement a comprehensive program of research, development, and demonstration of fuel cells and related systems for transportation applications through the establishment of one or more cooperative programs among industry, government, and research institutions to develop and demonstrate the use of fuel cells as the primary power source for private and mass transit vehicles and other mobile applications.

(2) Research, development, and demonstration activities under this subsection shall be designed to incorporate one or more of the following priorities:

(A) The potential for near-term to mid-term commercialization.

(B) The ability of the systems to use a variety of renewable and nonfossil fuels.

(C) Emission reduction and energy conservation potential.

(D) The potential to utilize fuel cells and fuel cell systems developed under Department of Defense and National Aeronautics and Space Administration programs.

(E) The potential to take maximum practical advantage of advances made in electric motor vehicle research, stationary source fuel cell research, and other research activities authorized by this subchapter.

(3)(A) Research, development, and demonstration projects selected by the Secretary under this subsection shall apply to—

- (i) passenger vehicles;
- (ii) vans and utility vehicles;
- (iii) light rail systems and locomotives;
- (iv) trucks, including long-haul trucks, dump trucks, and garbage trucks;
- (v) passenger buses;
- (vi) non-chlorofluorocarbon mobile refrigeration systems;
- (vii) marine vessels, including recreational marine engines; or
- (viii) mobile engines and power generation, including recreational generators, and industrial and construction equipment.

(B) The Secretary shall establish programs to undertake research, development, and demonstration activities for the applications listed in clauses (i) through (viii) of subparagraph (A) in each of fiscal years 1993, 1994, 1995, and 1996, based on the priorities established in paragraph (2), so that by the end of the period, research, development, and demonstration activities are under way for the applications under each such clause. The initiatives authorized and implemented pursuant to this subsection shall be in addition to any other fuel cell programs authorized in existing law.

**(k) Definitions**

For purposes of this section—

(1) the term “advanced battery technology” means electrochemical storage devices and

systems, including fuel cells, and associated technology necessary to charge, discharge, recharge, or regenerate such devices, for use as a source of power for an electric motor vehicle and any other associated equipment;

(2) the term “associated equipment” means equipment necessary for the regeneration, refueling, or recharging of batteries or other forms of electric energy used to power an electric motor vehicle and, in the case of electric-hybrid vehicles, such term includes nonpetroleum-related equipment necessary for, and solely related to, the demonstration of such vehicles;

(3) the term “electric motor vehicle” means a motor vehicle primarily powered by an electric motor that draws current from rechargeable storage batteries, fuel cells, photovoltaic arrays, or other sources of electric current and may include an electric-hybrid vehicle; and

(4) the term “electric-hybrid vehicle” means vehicle primarily powered by an electric motor that draws current from rechargeable storage batteries, fuel cells, or other sources of electric current and also relies on a non-electric source of power that also operates on or is capable of operating on a nonelectrical source of power.

(Pub. L. 102-486, title XX, § 2025, Oct. 24, 1992, 106 Stat. 3063; Pub. L. 105-362, title IV, § 402(a), Nov. 10, 1998, 112 Stat. 3283.)

**Editorial Notes**

## REFERENCES IN TEXT

The Federal Nonnuclear Energy Research and Development Act of 1974, referred to in subsec. (a), is Pub. L. 93-577, Dec. 31, 1974, 88 Stat. 1878, which is classified generally to chapter 74 (§5901 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 5901 of this title and Tables.

## AMENDMENTS

1998—Subsec. (b)(1). Pub. L. 105-362, § 402(a)(1), substituted “biennially” for “annually” in second sentence.

Subsec. (b)(4). Pub. L. 105-362, § 402(a)(2), substituted “Biennial updates” for “Annual updates” in second sentence.

**§ 13436. Repealed. Pub. L. 104-271, title I, § 103(b)(2), Oct. 9, 1996, 110 Stat. 3306**

Section, Pub. L. 102-486, title XX, § 2026, Oct. 24, 1992, 106 Stat. 3066; Pub. L. 104-271, title I, § 103(b)(1), Oct. 9, 1996, 110 Stat. 3306, related to a 5-year program on renewable hydrogen energy systems.

**Statutory Notes and Related Subsidiaries**

## EFFECTIVE DATE OF REPEAL

Pub. L. 104-271, title I, § 103(b)(2), Oct. 9, 1996, 110 Stat. 3306, provided that the repeal made by section 103(b)(2) is effective Oct. 1, 1998.

**§ 13437. Advanced diesel emissions program****(a) Program direction**

The Secretary shall initiate a 5-year program, in accordance with sections 13541 and 13542 of this title, on diesel engine combustion and engine systems, related advanced materials, and fuels and lubricants to reduce emissions oxides

of nitrogen and particulates. Activities conducted under this program shall supplement activities of a similar nature at the Department of Energy. Such program shall include field demonstrations of sufficient scale and number in operating environments to prove technical and economic viability to meet the goal stated in subsection (b).

**(b) Program goal**

The goal of the program established under subsection (a) shall be to accelerate the ability of United States diesel manufacturers to meet current and future oxides of nitrogen and particulate emissions requirements.

**(c) Program plan**

Within 180 days after October 24, 1992, the Secretary, in consultation with appropriate representatives of industry, institutions of higher education, Federal agencies, including national laboratories, and professional and technical societies, shall prepare and submit to the Congress a 5-year program plan to guide the activities under this section. Such plan shall be included as part of the plan required by section 13431(b) of this title.

**(d) Solicitation of proposals**

Within 1 year after October 24, 1992, the Secretary shall solicit proposals for conducting activities consistent with the 5-year program plan. (Pub. L. 102-486, title XX, §2027, Oct. 24, 1992, 106 Stat. 3066.)

**§ 13438. Telecommuting study**

**(a) Study**

The Secretary, in consultation with the Secretary of Transportation, shall conduct a study of the potential costs and benefits to the energy and transportation sectors of telecommuting. The study shall include—

- (1) an estimation of the amount and type of reduction of commuting by form of transportation type and numbers of commuters;
- (2) an estimation of the potential number of lives saved;
- (3) an estimation of the reduction in environmental pollution, in consultation with the Environmental Protection Agency;
- (4) an estimation of the amount and type of reduction of energy use and savings by form of transportation type; and
- (5) an estimation of the social impact of widespread use of telecommuting.

**(b) Report to Congress**

This study shall be completed no more than one hundred and eighty days after October 24, 1992. A report, summarizing the results of the study, shall be transmitted to the United States House of Representatives and the Committee on Energy and Natural Resources of the United States Senate no more than sixty days after completion of this study.

(Pub. L. 102-486, title XX, §2028, Oct. 24, 1992, 106 Stat. 3067.)

SUBCHAPTER IX—ENERGY AND ENVIRONMENT

PART A—IMPROVED ENERGY EFFICIENCY

**§ 13451. General improved energy efficiency**

**(a) Program direction**

The Secretary shall conduct a 5-year program, in accordance with sections 13541 and 13542 of this title, on cost effective technologies to improve energy efficiency and increase the use of renewable energy in the buildings, industrial, and utility sectors. Such program shall include a broad range of technological approaches, and shall include field demonstrations of sufficient scale and number to prove technical and economic viability to meet the goals stated in section 13401 of this title. Such program shall include the activities required under sections 13452, 13453, 13454, 13455, 13456, and 13457 of this title and section 2106<sup>1</sup> and ongoing activities of a similar nature at the Department of Energy. Such program shall also include the activities conducted pursuant to the Steel and Aluminum Energy Conservation and Technology Competitiveness Act of 1988 (Public Law 100-680) [15 U.S.C. 5101 et seq.] and the Department of Energy Metal Casting Competitiveness Research Act of 1990 (Public Law 101-425) [15 U.S.C. 5301 et seq.].

**(b) Program goals**

The goals of the program established under subsection (a) shall include—

- (1) in the buildings sector—
  - (A) to accelerate the development of technologies that will increase energy efficiency;
  - (B) to increase the use of renewable energy; and
  - (C) to reduce environmental impacts;
- (2) in the industrial sector—
  - (A) to accelerate the development of technologies that will increase energy efficiency in order to improve productivity;
  - (B) to increase the use of renewable energy; and
  - (C) to reduce environmental impacts; and
- (3) in the utility sector—
  - (A) to accelerate the development of technologies that will increase energy efficiency; and
  - (B) to increase the use of integrated resource planning.

**(c) Program plan**

Within 180 days after October 24, 1992, the Secretary shall prepare and submit to the Congress a 5-year program plan to guide activities under this part. In preparing the program plan, the Secretary shall consult with appropriate representatives of industry, utilities, institutions of higher education, Federal agencies, including national laboratories, and professional and technical societies.

**(d) Proposals**

Within 1 year after October 24, 1992, the Secretary shall solicit proposals for conducting activities under this section.

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