

tric 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 nonelectric 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.)

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, as amended, 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 Repealed.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.

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) of this section.

(b) Program goal

The goal of the program established under subsection (a) of this section shall be to accelerate the ability of United States diesel manufac-

turers 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 2106¹ 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) of this section 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.

(e) Authorization of appropriations

There are authorized to be appropriated to the Secretary for carrying out this part, including all building, industry, and utility sectors energy conservation research and development, and inventions and innovation under energy conservation technical and financial assistance, \$178,250,000 for fiscal year 1993 and \$275,000,000 for fiscal year 1994.

(Pub. L. 102-486, title XXI, §2101, Oct. 24, 1992, 106 Stat. 3067.)

REFERENCES IN TEXT

Section 2106, referred to in subsec. (a), means section 2106 of Pub. L. 102-486, which amended sections 5103,

¹ See References in Text note below.

5107, 5108, 5110, and 5307 of Title 15, Commerce and Trade.

The Steel and Aluminum Energy Conservation and Technology Competitiveness Act of 1988, referred to in subsec. (a), is Pub. L. 100-680, Nov. 17, 1988, 102 Stat. 4073, as amended, which is classified generally to chapter 77 (§ 5101 et seq.) of Title 15. For complete classification of this Act to the Code, see Short Title note set out under section 5101 of Title 15 and Tables.

The Department of Energy Metal Casting Competitiveness Research Act of 1990, referred to in subsec. (a), is Pub. L. 101-425, Oct. 15, 1990, 104 Stat. 915, as amended, which is classified generally to chapter 79 (§ 5301 et seq.) of Title 15. For complete classification of this Act to the Code, see Short Title note set out under section 5301 of Title 15 and Tables.

This part, referred to in subsecs. (c) and (e), was in the original “this subtitle” meaning subtitle A of title XXI of Pub. L. 102-486, Oct. 24, 1992, 106 Stat. 3067, which enacted this part and amended sections 5103, 5107, 5108, 5110, and 5307 of Title 15.

DISTRICT HEATING AND COOLING PROGRAMS

Pub. L. 102-486, title I, §172, Oct. 24, 1992, 106 Stat. 2865, as amended by Pub. L. 109-58, title II, §206(b), Aug. 8, 2005, 119 Stat. 655, provided that:

“(a) IN GENERAL.—The Secretary, in consultation with appropriate industry organizations, shall conduct a study to—

“(1) assess existing district heating and cooling technologies to determine cost-effectiveness, technical performance, energy efficiency, and environmental impacts as compared to alternative methods for heating and cooling buildings;

“(2) estimate the economic value of benefits that may result from implementation of district heating and cooling systems but that are not currently recognized, such as reduced emissions of air pollutants, local economic development, and energy security;

“(3) evaluate the cost-effectiveness, including the economic value referred to in paragraph (2), of cogenerated district heating and cooling technologies compared to other alternatives for generating or conserving electricity;

“(4) assess and make recommendations for reducing institutional and other constraints on the implementation of district heating and cooling systems; and

“(5) evaluate the use of renewable energy systems (as such term is defined in section 415(c) of the Energy Conservation and Production Act (42 U.S.C. 6865(c))) in residential buildings.

“(b) REPORT.—Not later than 2 years after the date of the enactment of the Energy Policy Act of 2005 [Aug. 8, 2005], the Secretary shall transmit to the Congress a report containing the findings, conclusions and recommendations, if any, of the Secretary for carrying out Federal, State, and local programs as a result of the study conducted under subsection (a).”

STUDY AND REPORT ON VIBRATION REDUCTION TECHNOLOGIES

Pub. L. 102-486, title I, §173, Oct. 24, 1992, 106 Stat. 2865, as amended by Pub. L. 105-362, title IV, §401(c), Nov. 10, 1998, 112 Stat. 3282, provided that:

“(a) IN GENERAL.—The Secretary shall, in consultation with the appropriate industry representatives, conduct a study to assess the cost-effectiveness, technical performance, energy efficiency, and environmental impacts of active noise and vibration cancellation technologies that use fast adapting algorithms.

“(b) PROCEDURE.—In carrying out such study, the Secretary shall—

“(1) estimate the potential for conserving energy and the economic and environmental benefits that may result from implementing active noise and vibration abatement technologies in demand side management; and

“(2) evaluate the cost-effectiveness of active noise and vibration cancellation technologies as compared

to other alternatives for reducing noise and vibration.

“(c) DEMONSTRATION.—The Secretary may, based on the findings and conclusions of the study carried out under this section, conduct at least one project designed to demonstrate the commercial application of active noise and vibration cancellation technologies using fast adapting algorithms in products or equipment with a significant potential for increased energy efficiency.”

§ 13452. Natural gas and electric heating and cooling technologies

(a) Program direction

(1) The Secretary shall conduct a 5-year program, in accordance with sections 13541 and 13542 of this title, on energy efficient natural gas and electric heating and cooling technologies for residential and commercial buildings.

(2) The natural gas heating and cooling program shall include activities on—

(A) thermally activated heat pumps, including absorption heat pumps and engine-driven heat pumps; and

(B) other advanced natural gas technologies, including fuel cells for residential and commercial applications.

(3) The electric heating and cooling program shall focus on—

(A) advanced heat pumps;

(B) thermal storage; and

(C) advanced electric HVAC (heating, ventilating, and air conditioning) and refrigeration systems that utilize replacements for chlorofluorocarbons.

(b) Proposals

Within 180 days after October 24, 1992, the Secretary shall solicit proposals for conducting activities under this section.

(Pub. L. 102-486, title XXI, § 2102, Oct. 24, 1992, 106 Stat. 3068.)

§ 13453. Pulp and paper

(a) Program direction

The Secretary shall conduct a 5-year program, in accordance with sections 13541 and 13542 of this title, on advanced pulp and paper technologies. Such program shall include activities on energy generation technologies, boilers, combustion processes, pulping processes (excluding de-inking), chemical recovery, causticizing, source reduction processes, and other related technologies that can improve the energy efficiency of, and reduce the adverse environmental impacts of, pulp and papermaking operations. This section does not authorize projects involving the combustion of waste paper, other than gasification.

(b) Proposals

Within 180 days after October 24, 1992, the Secretary shall solicit proposals for conducting activities under this section.

(Pub. L. 102-486, title XXI, § 2103, Oct. 24, 1992, 106 Stat. 3069.)

§ 13454. Advanced buildings for 2005

(a) Program direction

The Secretary shall initiate a 5-year program, in accordance with sections 13541 and 13542 of

this title, to increase building energy efficiency, while maintaining affordability, by the year 2005. Such program shall include activities on—

(1) building design, design methods, and construction techniques;

(2) building materials, including recycled materials, and components;

(3) on-site energy supply conversion systems such as photovoltaics;

(4) automated energy management systems;

(5) methods of evaluating performance; and

(6) insulation products manufactured with nonozone depleting materials.

(b) Proposals

(1) Solicitation

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

(2) Contents of proposals

Proposals submitted under this subsection shall include and be judged upon—

(A) evidence of knowledge of current building practices in the United States and in other countries;

(B) an explanation of how the proposal will encourage the commercialization of the technologies resulting from activities in subsection (a) of this section;

(C) evidence of consideration of collaboration with Department of Energy national laboratories;

(D) evidence of collaboration with relevant industry or other groups or organizations; and

(E) a demonstration of the ability of the proposers to undertake and complete the project proposed.

(Pub. L. 102-486, title XXI, § 2104, Oct. 24, 1992, 106 Stat. 3069.)

§ 13455. Electric drives

(a) Program

The Secretary shall conduct a 5-year program, in accordance with sections 13541 and 13542 of this title, to increase the efficiency of electric drive technologies, including adjustable speed drives, high speed motors, and high efficiency motors.

(b) Proposals

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

(Pub. L. 102-486, title XXI, § 2105, Oct. 24, 1992, 106 Stat. 3070.)

§ 13456. Improving efficiency in energy-intensive industries

(a) Secretarial action

The Secretary, in accordance with sections 13541 and 13542 of this title, shall—

(1) pursue a research, development, demonstration and commercial application program intended to improve energy efficiency and productivity in energy-intensive industries and industrial processes; and

(2) undertake joint ventures to encourage the commercialization of technologies developed under paragraph (1).