

(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.)

Editorial Notes

REFERENCES IN TEXT

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

Statutory Notes and Related Subsidiaries

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);
- (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).

(b) Joint ventures

(1) The Secretary shall—

- (A) conduct a competitive solicitation for proposals from private firms and investors for such joint ventures under subsection (a)(2); and
- (B) provide financial assistance to at least five such joint ventures.

(2) The purpose of the joint ventures shall be to design, test, and demonstrate changes to industrial processes that will result in improved energy efficiency and productivity. The joint ventures may also demonstrate other improvements of benefit to such industries so long as demonstration of energy efficiency improvements is the principal objective of the joint venture.

(3) In evaluating proposals for financial assistance and joint ventures under this section, the Secretary shall consider—

- (A) whether the activities conducted under this section improve the quality and energy efficiency of industries or industrial processes;
- (B) the regional distribution of the energy-intensive industries and industrial processes; and
- (C) whether the proposed joint venture project would be located in the region which has the energy-intensive industry and industrial processes that would benefit from the project.

(Pub. L. 102-486, title XXI, §2107, Oct. 24, 1992, 106 Stat. 3070.)

§ 13457. Energy efficient environmental program

(a) Program direction

The Secretary, in consultation with the Administrator of the Environmental Protection Agency, is authorized to continue to carry out a 5-year program to improve the energy efficiency and cost effectiveness of pollution prevention technologies and processes, including source reduction and waste minimization technologies and processes. The purposes of this section shall be to—

- (1) apply a systems approach to minimizing adverse environmental effects of industrial