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[1] 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.

[1] See References in Text note below.

(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