

(1) the burning of municipal solid waste shall not be treated as using biomass energy; and

(2) geothermal energy shall not include energy produced from a dry steam geothermal reservoir which has—

(A) no mobile liquid in its natural state;

(B) steam quality of 95 percent water; and

(C) an enthalpy for the total produced fluid greater than or equal to 1200 Btu/lb (British thermal units per pound).

**(c) Eligibility window**

Payments may be made under this section only for electricity generated from a qualified renewable energy facility first used before October 1, 2016.

**(d) Payment period**

A qualified renewable energy facility may receive payments under this section for a 10-fiscal year period. Such period shall begin with the fiscal year in which electricity generated from the facility is first eligible for such payments, or in which the Secretary determines that all necessary Federal and State authorizations have been obtained to begin construction of the facility.

**(e) Amount of payment**

**(1) In general**

Incentive payments made by the Secretary under this section to the owner or operator of any qualified renewable energy facility shall be based on the number of kilowatt hours of electricity generated by the facility through the use of solar, wind, biomass, landfill gas, livestock methane, ocean (including tidal, wave, current, and thermal), or geothermal energy during the payment period referred to in subsection (d). For any facility, the amount of such payment shall be 1.5 cents per kilowatt hour, adjusted as provided in paragraph (2).

**(2) Adjustments**

The amount of the payment made to any person under this subsection as provided in paragraph (1) shall be adjusted for inflation for each fiscal year beginning after calendar year 1993 in the same manner as provided in the provisions of section 29(d)(2)(B) of title 26,<sup>1</sup> except that in applying such provisions the calendar year 1993 shall be substituted for calendar year 1979.

**(f) Sunset**

No payment may be made under this section to any facility after September 30, 2026, and no payment may be made under this section to any facility after a payment has been made with respect to such facility for a 10-fiscal year period.

**(g) Authorization of appropriations**

There are authorized to be appropriated such sums as are necessary to carry out this section for each of fiscal years 2006 through 2026, to remain available until expended.

(Pub. L. 102-486, title XII, §1212, Oct. 24, 1992, 106 Stat. 2969; Pub. L. 109-58, title II, §202, Aug. 8, 2005, 119 Stat. 651.)

REFERENCES IN TEXT

Section 29 of title 26, referred to in subsec. (e)(2), was renumbered section 45K of title 26 by Pub. L. 109-58, title XIII, §1322(a)(1), Aug. 8, 2005, 119 Stat. 1011.

AMENDMENTS

2005—Subsec. (a). Pub. L. 109-58, §202(a), designated first, second, and third sentences as pars. (1) to (3), respectively, in par. (3) struck out “and which satisfies such other requirements as the Secretary deems necessary” after “receive such payment”, struck out at end “Such application shall be in such form, and shall be submitted at such time, as the Secretary shall establish.”, and added par. (4).

Subsec. (b). Pub. L. 109-58, §202(b), in introductory provisions, substituted “a not-for-profit electric cooperative, a public utility described in section 115 of title 26, a State, Commonwealth, territory, or possession of the United States, or the District of Columbia, or a political subdivision thereof, an Indian tribal government or subdivision thereof, or a Native Corporation (as defined in section 1602 of title 43),” for “a State or any political subdivision of a State (or an agency, authority, or instrumentality of a State or a political subdivision), by any corporation or association which is wholly owned, directly or indirectly, by one or more of the foregoing, or by a nonprofit electrical cooperative” and inserted “landfill gas, livestock methane, ocean (including tidal, wave, current, and thermal),” after “wind, biomass.”

Subsec. (c). Pub. L. 109-58, §202(c), substituted “before October 1, 2016” for “during the 10-fiscal year period beginning with the first full fiscal year occurring after October 24, 1992”.

Subsec. (d). Pub. L. 109-58, §202(d), inserted “, or in which the Secretary determines that all necessary Federal and State authorizations have been obtained to begin construction of the facility” after “eligible for such payments”.

Subsec. (e)(1). Pub. L. 109-58, §202(e), inserted “landfill gas, livestock methane, ocean (including tidal, wave, current, and thermal),” after “wind, biomass.”

Subsec. (f). Pub. L. 109-58, §202(f), substituted “September 30, 2026” for “the expiration of the 20-fiscal year period beginning with the first full fiscal year occurring after October 24, 1992”.

Subsec. (g). Pub. L. 109-58, §202(g), added subsec. (g) and struck out heading and text of former subsec. (g). Text read as follows: “There are authorized to be appropriated to the Secretary for fiscal years 1993, 1994, and 1995 such sums as may be necessary to carry out the purposes of this section.”

SUBCHAPTER VI—COAL

PART A—RESEARCH, DEVELOPMENT, DEMONSTRATION, AND COMMERCIAL APPLICATION

**§ 13331. Coal research, development, demonstration, and commercial application programs**

**(a) Establishment**

The Secretary shall, in accordance with section<sup>1</sup> 13541 and 13542 of this title, conduct programs for research, development, demonstration, and commercial application on coal-based technologies. Such research, development, demonstration, and commercial application programs shall include the programs established under this part, and shall have the goals and objectives of—

(1) ensuring a reliable electricity supply;

(2) complying with applicable environmental requirements;

(3) achieving the control of sulfur oxides, oxides of nitrogen, air toxics, solid and liquid

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

<sup>1</sup> So in original. Probably should be “sections”.

wastes, greenhouse gases, or other emissions resulting from coal use or conversion at levels of proficiency greater than or equal to applicable currently available commercial technology;

(4) achieving the cost competitive conversion of coal into energy forms usable in the transportation sector;

(5) demonstrating the conversion of coal to synthetic gaseous, liquid, and solid fuels;

(6) demonstrating, in cooperation with other Federal and State agencies, the use of coal-derived fuels in mobile equipment, with opportunities for industrial cost sharing participation;

(7) ensuring the timely commercial application of cost-effective technologies or energy production processes or systems utilizing coal which achieve—

(A) greater efficiency in the conversion of coal to useful energy when compared to currently available commercial technology for the use of coal; and

(B) the control of emissions from the utilization of coal; and

(8) ensuring the availability for commercial use of such technologies by the year 2010.

**(b) Demonstration and commercial application programs**

(1) In selecting either a demonstration project or a commercial application project for financial assistance under this part, the Secretary shall seek to ensure that, relative to otherwise comparable commercially available technologies or products, the selected project will meet one or more of the following criteria:

(A) It will reduce environmental emissions to an extent greater than required by applicable provisions of law.

(B) It will increase the overall efficiency of the utilization of coal, including energy conversion efficiency and, where applicable, production of products derived from coal.

(C) It will be a more cost-effective technological alternative, based on life cycle capital and operating costs per unit of energy produced and, where applicable, costs per unit of product produced.

Priority in selection shall be given to those projects which, in the judgment of the Secretary, best meet one or more of these criteria.

(2) In administering demonstration and commercial application programs authorized by this part, the Secretary shall establish accounting and project management controls that will be adequate to control costs.

(3)(A) Not later than 180 days after October 24, 1992, the Secretary shall establish procedures and criteria for the recoupment of the Federal share of each cost shared demonstration and commercial application project authorized pursuant to this part. Such recoupment shall occur within a reasonable period of time following the date of completion of such project, but not later than 20 years following such date, taking into account the effect of recoupment on—

(i) the commercial competitiveness of the entity carrying out the project;

(ii) the profitability of the project; and

(iii) the commercial viability of the coal-based technology utilized.

(B) The Secretary may at any time waive or defer all or some portion of the recoupment requirement as necessary for the commercial viability of the project.

(4) Projects selected by the Secretary under this part for demonstration or commercial application of a technology shall, in the judgment of the Secretary, be capable of enhancing the state of the art for such technology.

**(c) Report**

Within 240 days after October 24, 1992, the Secretary shall transmit to the Committee on Energy and Commerce and the Committee on Science, Space, and Technology of the House of Representatives and to the Committee on Energy and Natural Resources of the Senate a report which shall include each of the following:

(1) A detailed description of ongoing research, development, demonstration, and commercial application activities regarding coal-based technologies undertaken by the Department of Energy, other Federal or State government departments or agencies and, to the extent such information is publicly available, other public or private organizations in the United States and other countries.

(2) A listing and analysis of current Federal and State government regulatory and financial incentives that could further the goals of the programs established under this part.

(3) Recommendations regarding the manner in which any ongoing coal-based demonstration and commercial application program might be modified and extended in order to ensure the timely demonstrations of advanced coal-based technologies so as to ensure that the goals established under this section are achieved and that such demonstrated technologies are available for commercial use by the year 2010.

(4) Recommendations, if any, regarding the manner in which the cost sharing demonstrations conducted pursuant to the Clean Coal Program established by Public Law 98-473 might be modified and extended in order to ensure the timely demonstration of advanced coal-based technologies.

(5) A detailed plan for conducting the research, development, demonstration, and commercial application programs to achieve the goals and objectives of subsection (a) of this section, which plan shall include a description of—

(A) the program elements and management structure to be utilized;

(B) the technical milestones to be achieved with respect to each of the advanced coal-based technologies included in the plan; and

(C) the dates at which further deadlines for additional cost sharing demonstrations shall be established.

**(d) Status reports**

Within one year after transmittal of the report described in subsection (c), and every 2 years thereafter for a period of 6 years, the Secretary shall transmit to the Congress a report that provides a detailed description of the status

of development of the advanced coal-based technologies and the research, development, demonstration, and commercial application activities undertaken to carry out the programs required by this part.

**(e) Consultation**

In carrying out research, development, demonstration, and commercial application activities under this part, the Secretary shall consult with the National Coal Council and other representatives of the public and private sectors as the Secretary considers appropriate.

(Pub. L. 102-486, title XIII, § 1301, Oct. 24, 1992, 106 Stat. 2970.)

REFERENCES IN TEXT

Public Law 98-473, referred to in subsec. (c)(4), is Pub. L. 98-473, Oct. 12, 1984, 98 Stat. 1837, as amended. For complete classification of this Act to the Code, see Tables.

CHANGE OF NAME

Committee on Energy and Commerce of House of Representatives treated as referring to Committee on Commerce of House of Representatives by section 1(a) of Pub. L. 104-14, set out as a note preceding section 21 of Title 2, The Congress. Committee on Commerce of House of Representatives changed to Committee on Energy and Commerce of House of Representatives, and jurisdiction over matters relating to securities and exchanges and insurance generally transferred to Committee on Financial Services of House of Representatives by House Resolution No. 5, One Hundred Seventh Congress, Jan. 3, 2001.

**§ 13332. Coal-fired diesel engines**

The Secretary shall conduct a program of research, development, demonstration, and commercial application for utilizing coal-derived liquid or gaseous fuels, including ultra-clean coal-water slurries, in diesel engines. The program shall address—

- (1) required engine retrofit technology;
- (2) coal-fuel production technology;
- (3) emission control requirements;
- (4) the testing of low-Btu highly reactive fuels;
- (5) fuel delivery and storage systems requirements; and
- (6) other infrastructure required to support commercial deployment.

(Pub. L. 102-486, title XIII, § 1302, Oct. 24, 1992, 106 Stat. 2972.)

**§ 13333. Clean coal, waste-to-energy**

The Secretary shall establish a program of research, development, demonstration, and commercial application with respect to the use of solid waste combined with coal as a fuel source for clean coal combustion technologies. The program shall address—

- (1) the feasibility of cofiring coal and used vehicle tires in fluidized bed combustion units;
- (2) the combined gasification of coal and municipal sludge using integrated gasification combined cycle technology;
- (3) the creation of fuel pellets combining coal and material reclaimed from solid waste;
- (4) the feasibility of cofiring, in fluidized bed combustion units, waste methane from coal mines, including ventilation air, together with coal or coal wastes; and

(5) other sources of waste and coal mixtures in other applications that the Secretary considers appropriate.

(Pub. L. 102-486, title XIII, § 1303, Oct. 24, 1992, 106 Stat. 2972.)

**§ 13334. Nonfuel use of coal**

**(a) Program**

The Secretary shall prepare a plan for and carry out a program of research, development, demonstration, and commercial application with respect to technologies for the nonfuel use of coal, including—

- (1) production of coke and other carbon products derived from coal;
- (2) production of coal-derived, carbon-based chemical intermediates that are precursors of value-added chemicals and polymers;
- (3) production of chemicals from coal-derived synthesis gas;
- (4) coal treatment processes, including methodologies such as solvent-extraction techniques that produce low ash, low sulfur, coal-based chemical feedstocks; and
- (5) waste utilization, including recovery, processing, and marketing of products derived from sulfur, carbon dioxide, nitrogen, and ash from coal.

**(b) Plan contents**

The plan described in subsection (a) shall address and evaluate—

- (1) the known and potential processes for using coal in the creation of products in the chemical, utility, fuel, and carbon-based materials industries;
- (2) the costs, benefits, and economic feasibility of using coal products in the chemical and materials industries, including value-added chemicals, carbon-based products, coke, and waste derived from coal;
- (3) the economics of coproduction of products from coal in conjunction with the production of electric power, thermal energy, and fuel;
- (4) the economics of the refining of coal and coal byproducts to produce nonfuel products;
- (5) the economics of coal utilization in comparison with other feedstocks that might be used for the same purposes;
- (6) the steps that can be taken by the public and private sectors to bring about commercialization of technologies developed under the program recommended; and
- (7) the past development, current status, and future potential of coal products and processes associated with nonfuel uses of coal.

(Pub. L. 102-486, title XIII, § 1304, Oct. 24, 1992, 106 Stat. 2973.)

**§ 13335. Coal refinery program**

**(a) Program**

The Secretary shall conduct a program of research, development, demonstration, and commercial application for coal refining technologies.

**(b) Objectives**

The program shall include technologies for refining high sulfur coals, low sulfur coals, sub-bi-