

into a user facility that is more readily accessible to academic and industrial researchers;

(5) consider the establishment of a fast neutron source as a user facility;

(6) consider the establishment of new hot cells and the configuration of hot cells most likely to advance research, development, demonstration, and commercial application in nuclear science and engineering, especially in the context of the condition and availability of these facilities elsewhere in the National Laboratories; and

(7) include a timeline and a proposed budget for the completion of deferred maintenance on plant and equipment.

(d) Transmittal to Congress

Not later than 1 year after August 8, 2005, the Secretary shall transmit the plan under subsection (c) to Congress.

(Pub. L. 109–58, title IX, §955, Aug. 8, 2005, 119 Stat. 887.)

§ 16276. Security of nuclear facilities

The Secretary, acting through the Director of the Office of Nuclear Energy, Science and Technology, shall conduct a research and development program on cost-effective technologies for increasing—

(1) the safety of nuclear facilities from natural phenomena; and

(2) the security of nuclear facilities from deliberate attacks.

(Pub. L. 109–58, title IX, §956, Aug. 8, 2005, 119 Stat. 888.)

§ 16277. Alternatives to industrial radioactive sources

(a) Survey

(1) In general

Not later than August 1, 2006, the Secretary shall submit to Congress the results of a survey of industrial applications of large radioactive sources.

(2) Administration

The survey shall—

(A) consider well-logging sources as one class of industrial sources;

(B) include information on current domestic and international Department, Department of Defense, State Department, and commercial programs to manage and dispose of radioactive sources; and

(C) analyze available disposal options for currently deployed or future sources and, if deficiencies are noted for either deployed or future sources, recommend legislative options that Congress may consider to remedy identified deficiencies.

(b) Plan

(1) In general

In conjunction with the survey conducted under subsection (a), the Secretary shall establish a research and development program to develop alternatives to sources described in subsection (a) that reduce safety, environmental, or proliferation risks to either workers using the sources or the public.

(2) Accelerators

Miniaturized particle accelerators for well-logging or other industrial applications and portable accelerators for production of short-lived radioactive materials at an industrial site shall be considered as part of the research and development efforts.

(3) Report

Not later than August 1, 2006, the Secretary shall submit to Congress a report describing the details of the program plan.

(Pub. L. 109–58, title IX, §957, Aug. 8, 2005, 119 Stat. 888.)

PART F—FOSSIL ENERGY

§ 16291. Fossil energy

(a) In general

The Secretary shall carry out research, development, demonstration, and commercial application programs in fossil energy, including activities under this part, with the goal of improving the efficiency, effectiveness, and environmental performance of fossil energy production, upgrading, conversion, and consumption. Such programs take into consideration the following objectives:

(1) Increasing the energy conversion efficiency of all forms of fossil energy through improved technologies.

(2) Decreasing the cost of all fossil energy production, generation, and delivery.

(3) Promoting diversity of energy supply.

(4) Decreasing the dependence of the United States on foreign energy supplies.

(5) Improving United States energy security.

(6) Decreasing the environmental impact of energy-related activities.

(7) Increasing the export of fossil energy-related equipment, technology, and services from the United States.

(b) Authorization of appropriations

There are authorized to be appropriated to the Secretary to carry out fossil energy research, development, demonstration, and commercial application activities, including activities authorized under this part—

(1) \$611,000,000 for fiscal year 2007;

(2) \$626,000,000 for fiscal year 2008; and

(3) \$641,000,000 for fiscal year 2009.

(c) Allocations

From amounts authorized under subsection (a), the following sums are authorized:

(1) For activities under section 16292 of this title—

(A) \$367,000,000 for fiscal year 2007;

(B) \$376,000,000 for fiscal year 2008; and

(C) \$394,000,000 for fiscal year 2009.

(2) For activities under section 16294 of this title—

(A) \$20,000,000 for fiscal year 2007;

(B) \$25,000,000 for fiscal year 2008; and

(C) \$30,000,000 for fiscal year 2009.

(3) For activities under section 16296 of this title—

(A) \$1,500,000 for fiscal year 2007; and

(B) \$450,000 for each of fiscal years 2008 and 2009.

(4) For the Office of Arctic Energy under section 7144d of this title \$25,000,000 for each of fiscal years 2007 through 2009.

(d) Extended authorization

There are authorized to be appropriated to the Secretary for the Office of Arctic Energy established under section 7144d of this title \$25,000,000 for each of fiscal years 2010 through 2012.

(e) Limitations

(1) Uses

None of the funds authorized under this section may be used for Fossil Energy Environmental Restoration or Import/Export Authorization.

(2) Institutions of higher education

Of the funds authorized under subsection (c)(2), not less than 20 percent of the funds appropriated for each fiscal year shall be dedicated to research and development carried out at institutions of higher education.

(Pub. L. 109–58, title IX, §961, Aug. 8, 2005, 119 Stat. 889.)

REFERENCES IN TEXT

This part, referred to in subssecs. (a) and (b), was in the original “this subtitle”, meaning subtitle F (§§961–968) of title IX of Pub. L. 109–58, Aug. 8, 2005, 119 Stat. 889, which enacted this part and provisions set out as notes under section 2001 of Title 30, Mineral Lands and Mining, and amended provisions set out as a note under section 1902 of Title 30. For complete classification of subtitle F to the Code, see Tables.

§ 16292. Coal and related technologies program

(a) In general

In addition to the programs authorized under subchapter IV, the Secretary shall conduct a program of technology research, development, demonstration, and commercial application for coal and power systems, including programs to facilitate production and generation of coal-based power through—

- (1) innovations for existing plants (including mercury removal);
- (2) gasification systems;
- (3) advanced combustion systems;
- (4) turbines for synthesis gas derived from coal;
- (5) carbon capture and sequestration research and development;
- (6) coal-derived chemicals and transportation fuels;
- (7) liquid fuels derived from low rank coal water slurry;
- (8) solid fuels and feedstocks;
- (9) advanced coal-related research;
- (10) advanced separation technologies; and
- (11) fuel cells for the operation of synthesis gas derived from coal.

(b) Cost and performance goals

(1) In general

In carrying out programs authorized by this section, during each of calendar years 2008, 2010, 2012, and 2016, and during each fiscal year beginning after September 30, 2021, the Secretary shall identify cost and performance goals for coal-based technologies that would

permit the continued cost-competitive use of coal for the production of electricity, chemical feedstocks, and transportation fuels.

(2) Administration

In establishing the cost and performance goals, the Secretary shall—

(A) consider activities and studies undertaken as of August 8, 2005, by industry in cooperation with the Department in support of the identification of the goals;

(B) consult with interested entities, including—

- (i) coal producers;
- (ii) industries using coal;
- (iii) organizations that promote coal and advanced coal technologies;
- (iv) environmental organizations;
- (v) organizations representing workers; and
- (vi) organizations representing consumers;

(C) not later than 120 days after August 8, 2005, publish in the Federal Register proposed draft cost and performance goals for public comments; and

(D) not later than 180 days after August 8, 2005, and every 4 years thereafter, submit to Congress a report describing the final cost and performance goals for the technologies that includes—

- (i) a list of technical milestones; and
- (ii) an explanation of how programs authorized in this section will not duplicate the activities authorized under the Clean Coal Power Initiative authorized under subchapter IV.

(c) Powder River Basin and Fort Union lignite coal mercury removal

(1) In general

In addition to the programs authorized by subsection (a), the Secretary shall establish a program to test and develop technologies to control and remove mercury emissions from subbituminous coal mined in the Powder River Basin, and Fort Union lignite coals, that are used for the generation of electricity.

(2) Efficacy of mercury removal technology

In carrying out the program under paragraph (1), the Secretary shall examine the efficacy of mercury removal technologies on coals described in that paragraph that are blended with other types of coal.

(d) Fuel cells

(1) In general

The Secretary shall conduct a program of research, development, demonstration, and commercial application on fuel cells for low-cost, high-efficiency, fuel-flexible, modular power systems.

(2) Demonstrations

The demonstrations referred to in paragraph (1) shall include solid oxide fuel cell technology for commercial, residential, and transportation applications, and distributed generation systems, using improved manufacturing production and processes.

(Pub. L. 109–58, title IX, §962, Aug. 8, 2005, 119 Stat. 890.)