

**(b) Integrating energy and water research**

The Secretary shall integrate the following considerations into energy RD&D programs and projects of the Department by—

- (1) advancing RD&D for energy and energy efficiency technologies and practices that meet the objectives of—
  - (A) minimizing freshwater withdrawal and consumption;
  - (B) increasing water use efficiency; and
  - (C) utilizing nontraditional water sources;
- (2) considering the effects climate variability may have on water supplies and quality for energy generation and fuel production; and
- (3) improving understanding of the energy-water nexus (as defined in subsection (a)(1)).

**(c) Additional activities**

The Secretary may provide for such additional RD&D activities as appropriate to integrate the considerations described in subsection (b) into the RD&D activities of the Department.

(Pub. L. 116-260, div. Z, title I, §1010, Dec. 27, 2020, 134 Stat. 2438.)

## CODIFICATION

Section was enacted as part of the Energy Act of 2020, and not as part of the Energy Policy Act of 2005 which comprises this chapter.

## PART A—ENERGY EFFICIENCY

**§ 16191. Energy efficiency****(a) In general****(1) Objectives**

The Secretary shall conduct programs of energy efficiency research, development, demonstration, and commercial application, including activities described in this part. Such programs shall take into consideration the following objectives:

- (A) Increasing the energy efficiency of vehicles, buildings, and industrial processes.
- (B) Reducing the demand of the United States for energy, especially energy from foreign sources.
- (C) Reducing the cost of energy and making the economy more efficient and competitive.
- (D) Improving the energy security of the United States.
- (E) Reducing the environmental impact of energy-related activities.

**(2) Programs**

Programs under this part shall include research, development, demonstration, and commercial application of—

- (A) advanced, cost-effective technologies to improve the energy efficiency and environmental performance of vehicles, including—
  - (i) hybrid and electric propulsion systems;
  - (ii) plug-in hybrid systems;
  - (iii) advanced combustion engines;
  - (iv) weight and drag reduction technologies;
  - (v) whole-vehicle design optimization; and

(vi) advanced drive trains;

(B) cost-effective technologies, for new construction and retrofit, to improve the energy efficiency and environmental performance of buildings, using a whole-buildings approach, including onsite renewable energy generation;

(C) advanced technologies to improve the energy efficiency, environmental performance, and process efficiency of energy-intensive and waste-intensive industries;

(D) advanced control devices to improve the energy efficiency of electric motors, including those used in industrial processes, heating, ventilation, and cooling; and

(E) technologies to improve the energy efficiency of appliances and mechanical systems for buildings in cold climates, including combined heat and power units and increased use of renewable resources, including fuel.

**(b) Authorization of appropriations**

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

- (1) \$783,000,000 for fiscal year 2007;
- (2) \$865,000,000 for fiscal year 2008; and
- (3) \$952,000,000 for fiscal year 2009.

**(c) Allocations**

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

- (1) For activities under section 16192 of this title, \$50,000,000 for each of fiscal years 2007 through 2009.
- (2) For activities under section 16195 of this title, \$7,000,000 for each of fiscal years 2007 through 2009.
- (3) For activities under subsection (a)(2)(A)—
  - (A) \$200,000,000 for fiscal year 2007;
  - (B) \$270,000,000 for fiscal year 2008; and
  - (C) \$310,000,000 for fiscal year 2009.
- (4) For activities under subsection (a)(2)(D), \$2,000,000 for each of fiscal years 2007 and 2008.

**(d) Extended authorization**

There are authorized to be appropriated to the Secretary to carry out section 16192 of this title \$50,000,000 for each of fiscal years 2010 through 2013.

**(e) Limitations**

None of the funds authorized to be appropriated under this section may be used for—

- (1) the issuance or implementation of energy efficiency regulations;
- (2) the weatherization program established under part A of title IV of the Energy Conservation and Production Act (42 U.S.C. 6861 et seq.);
- (3) a State energy conservation plan established under part D of title III of the Energy Policy and Conservation Act (42 U.S.C. 6321 et seq.); or
- (4) a Federal energy management measure carried out under part 3 of title V of the National Energy Conservation Policy Act (42 U.S.C. 8251 et seq.).

(Pub. L. 109–58, title IX, §911, Aug. 8, 2005, 119 Stat. 857; Pub. L. 110–140, title III, §315(a), Dec. 19, 2007, 121 Stat. 1571.)

#### REFERENCES IN TEXT

The Energy Conservation and Production Act, referred to in subsec. (e)(2), is Pub. L. 94–385, Aug. 14, 1976, 90 Stat. 1125, as amended. Part A of title IV of the Act is classified generally to part A (§6861 et seq.) of subchapter III of chapter 81 of this title. For complete classification of this Act to the Code, see Short Title note set out under section 6801 of this title and Tables.

The Energy Policy and Conservation Act, referred to in subsec. (e)(3), is Pub. L. 94–163, Dec. 22, 1975, 89 Stat. 871, as amended. Part D of title III of the Act is classified generally to part B (§6321 et seq.) of subchapter III of chapter 77 of this title. For complete classification of this Act to the Code, see Short Title note set out under section 6201 of this title and Tables.

The National Energy Conservation Policy Act, referred to in subsec. (e)(4), is Pub. L. 95–619, Nov. 9, 1978, 92 Stat. 3206, as amended. Part 3 of title V of the Act is classified generally to part B (§8251 et seq.) of subchapter III of chapter 91 of this title. For complete classification of this Act to the Code, see Short Title note set out under section 8201 of this title and Tables.

#### AMENDMENTS

2007—Subsec. (a)(2)(E). Pub. L. 110–140 added subpar. (E).

#### EFFECTIVE DATE OF 2007 AMENDMENT

Amendment by Pub. L. 110–140 effective on the date that is 1 day after Dec. 19, 2007, see section 1601 of Pub. L. 110–140, set out as an Effective Date note under section 1824 of Title 2, The Congress.

### § 16192. Next Generation Lighting Initiative

#### (a) Definitions

In this section:

##### (1) Advanced solid-state lighting

The term “advanced solid-state lighting” means a semiconducting device package and delivery system that produces white light using externally applied voltage.

##### (2) Industry Alliance

The term “Industry Alliance” means an entity selected by the Secretary under subsection (d).

##### (3) Initiative

The term “Initiative” means the Next Generation Lighting Initiative carried out under this section.

##### (4) Research

The term “research” includes research on the technologies, materials, and manufacturing processes required for white light emitting diodes.

##### (5) White light emitting diode

The term “white light emitting diode” means a semiconducting package, using either organic or inorganic materials, that produces white light using externally applied voltage.

#### (b) Initiative

The Secretary shall carry out a Next Generation Lighting Initiative in accordance with this section to support research, development, demonstration, and commercial application activities related to advanced solid-state lighting

technologies based on white light emitting diodes.

#### (c) Objectives

The objectives of the Initiative shall be to develop advanced solid-state organic and inorganic lighting technologies based on white light emitting diodes that, compared to incandescent and fluorescent lighting technologies, are longer lasting, are more energy-efficient and cost-competitive, and have less environmental impact.

#### (d) Industry Alliance

Not later than 90 days after August 8, 2005, the Secretary shall competitively select an Industry Alliance to represent participants who are private, for-profit firms, open to large and small businesses, that, as a group, are broadly representative of United States solid-state lighting research, development, infrastructure, and manufacturing expertise as a whole.

#### (e) Research

##### (1) Grants

The Secretary shall carry out the research activities of the Initiative through competitively awarded grants to—

- (A) researchers, including Industry Alliance participants;
- (B) small businesses;
- (C) National Laboratories; and
- (D) institutions of higher education.

##### (2) Industry alliance

The Secretary shall annually solicit from the Industry Alliance—

- (A) comments to identify solid-state lighting technology needs;
- (B) an assessment of the progress of the research activities of the Initiative; and
- (C) assistance in annually updating solid-state lighting technology roadmaps.

##### (3) Availability to public

The information and roadmaps under paragraph (2) shall be available to the public.

#### (f) Development, demonstration, and commercial application

##### (1) In general

The Secretary shall carry out a development, demonstration, and commercial application program for the Initiative through competitively selected awards.

##### (2) Preference

In making the awards, the Secretary may give preference to participants in the Industry Alliance.

#### (g) Cost sharing

In carrying out this section, the Secretary shall require cost sharing in accordance with section 16352 of this title.

#### (h) Intellectual property

The Secretary may require (in accordance with section 202(a)(ii) of title 35, section 2182 of this title, and section 5908 of this title) that for any new invention developed under subsection (e)—

- (1) that the Industry Alliance participants who are active participants in research, devel-