

to part A (§6291 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.

Section 2621(d)(17) of title 16, referred to in subsec. (c)(3), was redesignated section 2621(d)(19) by Pub. L. 111-5, div. A, title IV, § 408(a), Feb. 17, 2009, 123 Stat. 146.

#### AMENDMENTS

2009—Subsec. (a). Pub. L. 111-5, § 405(5), substituted “grants of up to one-half (50 percent)” for “reimbursement of one-fifth (20 percent)”.

Subsec. (b)(9). Pub. L. 111-5, § 405(6), struck out last sentence which read as follows: “In making such grants, the Secretary shall seek to reward innovation and early adaptation, even if success is not complete, rather than deployment of proven and commercially viable technologies.”

Subsec. (c)(1). Pub. L. 111-5, § 405(7), substituted “utilize” for “are eligible for”.

Subsec. (e). Pub. L. 111-5, § 405(8), amended subsec. (e) generally. Prior to amendment, text related to establishment of procedures by which applicants who have made qualifying Smart Grid investments can seek and obtain reimbursement of one-fifth of documented expenditures.

#### EFFECTIVE DATE

Section effective on the date that is 1 day after Dec. 19, 2007, see section 1601 of Pub. L. 110-140, set out as a note under section 1824 of Title 2, The Congress.

### § 17387. Integrated energy systems

#### (a) In general

Not later than 180 days after December 27, 2020, the Secretary shall establish a research, development, and demonstration program to develop cost-effective integrated energy systems, including—

(1) development of computer modeling to design different configurations of integrated energy systems and to optimize system operation;

(2) research on system integration needed to plan, design, build, and operate integrated energy systems, including interconnection requirements with the electric grid;

(3) development of integrated energy systems for various applications, including—

(A) thermal energy generation and storage for buildings and manufacturing;

(B) electricity storage coupled with energy generation;

(C) desalination;

(D) production of liquid and gaseous fuels; and

(E) production of chemicals such as ammonia and ethylene;

(4) development of testing facilities for integrated energy systems; and

(5) research on incorporation of various technologies for integrated energy systems, including nuclear energy, renewable energy, storage, and carbon capture, utilization, and sequestration technologies.

#### (b) Strategic plan

##### (1) In general

Not later than 1 year after December 27, 2020, the Secretary shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of

the Senate a strategic plan that identifies opportunities, challenges, and standards needed for the development and commercial application of integrated energy systems. The strategic plan shall include—

(A) analysis of the potential benefits of development of integrated electric systems on the electric grid;

(B) analysis of the potential contributions of integrated energy systems to different grid architecture scenarios;

(C) research and development goals for various integrated energy systems, including those identified in subsection (a);

(D) assessment of policy and market barriers to the adoption of integrated energy systems;

(E) analysis of the technical and economic feasibility of adoption of different integrated energy systems; and

(F) a 10-year roadmap to guide the program established under subsection (a).

#### (2) Updates

Not less than once every 3 years for the duration of this research program, the Secretary shall submit an updated version of the strategic plan to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate.

#### (c) Program implementation

In carrying out the research, development, demonstration, and commercial application aims of subsection (a), the Secretary shall—

(1) implement the recommendations set forth in the strategic plan in subsection (b);

(2) coordinate across all relevant program offices at the Department, including—

(A) the Office of Energy Efficiency and Renewable Energy;

(B) the Office of Nuclear Energy; and

(C) the Office of Fossil Energy;

(3) leverage existing programs and resources of the Department; and

(4) prioritize activities that accelerate the development of integrated electricity generation, storage, and distribution systems with net zero greenhouse gas emissions.

#### (d) Integrated energy system defined

The term “integrated energy system” means a system composed of 2 or more co-located or jointly operated sub-systems of energy generation, energy storage, or other energy technologies.

(Pub. L. 110-140, title XIII, § 1310, as added Pub. L. 116-260, div. Z, title VIII, § 8003, Dec. 27, 2020, 134 Stat. 2581.)

### § 17388. Advisory committee

#### (a) In general

Not later than 180 days after December 27, 2020, the Secretary shall designate an existing advisory committee to advise the Secretary on the authorization of research, development, and demonstration projects under sections 17384 and 17384a of this title.

#### (b) Responsibility

The Secretary shall annually solicit from the advisory committee—