

(d) Smart grid functions

The term “smart grid functions” means any of the following:

- (1) The ability to develop, store, send and receive digital information concerning electricity use, costs, prices, time of use, nature of use, storage, or other information relevant to device, grid, or utility operations, to or from or by means of the electric utility system, through one or a combination of devices and technologies.
- (2) The ability to develop, store, send and receive digital information concerning electricity use, costs, prices, time of use, nature of use, storage, or other information relevant to device, grid, or utility operations to or from a computer or other control device.
- (3) The ability to measure or monitor electricity use as a function of time of day, power quality characteristics such as voltage level, current, cycles per second, or source or type of generation and to store, synthesize or report that information by digital means.
- (4) The ability to sense and localize disruptions or changes in power flows on the grid and communicate such information instantaneously and automatically for purposes of enabling automatic protective responses to sustain reliability and security of grid operations.
- (5) The ability to detect, prevent, communicate with regard to, respond to, or recover from system security threats, including cybersecurity threats and terrorism, using digital information, media, and devices.
- (6) The ability of any appliance or machine to respond to such signals, measurements, or communications automatically or in a manner programmed by its owner or operator without independent human intervention.
- (7) The ability to use digital information to operate functionalities on the electric utility grid that were previously electro-mechanical or manual.
- (8) The ability to use digital controls to manage and modify electricity demand, enable congestion management, assist in voltage control, provide operating reserves, and provide frequency regulation.
- (9) Such other functions as the Secretary may identify as being necessary or useful to the operation of a Smart Grid.

(e) Procedures and rules

- (1) The Secretary shall, within 60 days after February 17, 2009, by means of a notice of intent and subsequent solicitation of grant proposals—
 - (A) establish procedures by which applicants can obtain grants of not more than one-half of their documented costs;
 - (B) require as a condition of receiving funding under this subsection that demonstration projects utilize open protocols and standards (including Internet-based protocols and standards) if available and appropriate;
 - (C) establish procedures to ensure that there is no duplication or multiple payment for the same investment or costs, that the grant goes to the party making the actual expenditures for the qualifying Smart Grid investments, and that the grants made have a significant

effect in encouraging and facilitating the development of a smart grid;

- (D) establish procedures to ensure there will be public records of grants made, recipients, and qualifying Smart Grid investments which have received grants; and
- (E) establish procedures to provide advance payment of moneys up to the full amount of the grant award.

(2) The Secretary shall have discretion and exercise reasonable judgment to deny grants for investments that do not qualify.

(f) Authorization of appropriations

There are authorized to be appropriated to the Secretary such sums as are necessary for the administration of this section and the grants to be made pursuant to this section for fiscal years 2008 through 2012.

(Pub. L. 110-140, title XIII, §1306, Dec. 19, 2007, 121 Stat. 1789; Pub. L. 111-5, div. A, title IV, §405(5)-(8), Feb. 17, 2009, 123 Stat. 144.)

REFERENCES IN TEXT

The Energy Policy and Conservation Act, referred to in subsec. (b)(1), is Pub. L. 94-163, Dec. 22, 1975, 89 Stat. 871. Part B of title III of the Act is classified generally 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.

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