

further align policy, business, and technology approaches in a manner that would enable all electric resources, including demand-side resources, to contribute to an efficient, reliable electricity network. In developing such protocols and standards—

(1) the Director shall seek input and cooperation from the Commission, OEDER and its Smart Grid Task Force, the Smart Grid Advisory Committee, other relevant Federal and State agencies; and

(2) the Director shall also solicit input and cooperation from private entities interested in such protocols and standards, including but not limited to the Gridwise Architecture Council, the International Electrical and Electronics Engineers, the National Electric Reliability Organization recognized by the Federal Energy Regulatory Commission, and National Electrical Manufacturer's Association.

**(b) Scope of framework**

The framework developed under subsection (a) shall be flexible, uniform and technology neutral, including but not limited to technologies for managing smart grid information, and designed—

(1) to accommodate traditional, centralized generation and transmission resources and consumer distributed resources, including distributed generation, renewable generation, energy storage, energy efficiency, and demand response and enabling devices and systems;

(2) to be flexible to incorporate—

(A) regional and organizational differences; and

(B) technological innovations;

(3) to consider the use of voluntary uniform standards for certain classes of mass-produced electric appliances and equipment for homes and businesses that enable customers, at their election and consistent with applicable State and Federal laws, and are manufactured with the ability to respond to electric grid emergencies and demand response signals by curtailment all, or a portion of, the electrical power consumed by the appliances or equipment in response to an emergency or demand response signal, including through—

(A) load reduction to reduce total electrical demand;

(B) adjustment of load to provide grid ancillary services; and

(C) in the event of a reliability crisis that threatens an outage, short-term load shedding to help preserve the stability of the grid; and

(4) such voluntary standards should incorporate appropriate manufacturer lead time.<sup>1</sup>

**(c) Timing of framework development**

The Institute shall begin work pursuant to this section within 60 days of December 19, 2007. The Institute shall provide and publish an initial report on progress toward recommended or consensus standards and protocols within 1 year after December 19, 2007, further reports at such times as developments warrant in the judgment

<sup>1</sup> So in original. Does not fit with subsec. (b) introductory provisions.

of the Institute, and a final report when the Institute determines that the work is completed or that a Federal role is no longer necessary.

**(d) Standards for interoperability in Federal jurisdiction**

At any time after the Institute's work has led to sufficient consensus in the Commission's judgment, the Commission shall institute a rulemaking proceeding to adopt such standards and protocols as may be necessary to insure smart-grid functionality and interoperability in interstate transmission of electric power, and regional and wholesale electricity markets.

**(e) Authorization**

There are authorized to be appropriated for the purposes of this section \$5,000,000 to the Institute to support the activities required by this subsection<sup>2</sup> for each of fiscal years 2008 through 2012.

(Pub. L. 110-140, title XIII, §1305, Dec. 19, 2007, 121 Stat. 1787.)

CODIFICATION

December 19, 2007, referred to in subsec. (c), was in the original "enactment" and was translated as meaning the date of enactment of Pub. L. 110-140, to reflect the probable intent of Congress.

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.

**§ 17386. Federal matching fund for smart grid investment costs**

**(a) Matching fund**

The Secretary shall establish a Smart Grid Investment Matching Grant Program to provide grants of up to one-half (50 percent) of qualifying Smart Grid investments.

**(b) Qualifying investments**

Qualifying Smart Grid investments may include any of the following made on or after December 19, 2007:

(1) In the case of appliances covered for purposes of establishing energy conservation standards under part B of title III of the Energy Policy and Conservation Act of 1975 (42 U.S.C. 6291 et seq.), the documented expenditures incurred by a manufacturer of such appliances associated with purchasing or designing, creating the ability to manufacture, and manufacturing and installing for one calendar year, internal devices that allow the appliance to engage in Smart Grid functions.

(2) In the case of specialized electricity-using equipment, including motors and drivers, installed in industrial or commercial applications, the documented expenditures incurred by its owner or its manufacturer of installing devices or modifying that equipment to engage in Smart Grid functions.

(3) In the case of transmission and distribution equipment fitted with monitoring and communications devices to enable smart grid functions, the documented expenditures incurred by the electric utility to purchase and

<sup>2</sup> So in original. Probably should be "section".

install such monitoring and communications devices.

(4) In the case of metering devices, sensors, control devices, and other devices integrated with and attached to an electric utility system or retail distributor or marketer of electricity that are capable of engaging in Smart Grid functions, the documented expenditures incurred by the electric utility, distributor, or marketer and its customers to purchase and install such devices.

(5) In the case of software that enables devices or computers to engage in Smart Grid functions, the documented purchase costs of the software.

(6) In the case of entities that operate or coordinate operations of regional electric grids, the documented expenditures for purchasing and installing such equipment that allows Smart Grid functions to operate and be combined or coordinated among multiple electric utilities and between that region and other regions.

(7) In the case of persons or entities other than electric utilities owning and operating a distributed electricity generator, the documented expenditures of enabling that generator to be monitored, controlled, or otherwise integrated into grid operations and electricity flows on the grid utilizing Smart Grid functions.

(8) In the case of electric or hybrid-electric vehicles, the documented expenses for devices that allow the vehicle to engage in Smart Grid functions (but not the costs of electricity storage for the vehicle).

(9) The documented expenditures related to purchasing and implementing Smart Grid functions in such other cases as the Secretary shall identify.

#### **(c) Investments not included**

Qualifying Smart Grid investments do not include any of the following:

(1) Investments or expenditures for Smart Grid technologies, devices, or equipment that utilize specific tax credits or deductions under the Internal Revenue Code, as amended.

(2) Expenditures for electricity generation, transmission, or distribution infrastructure or equipment not directly related to enabling Smart Grid functions.

(3) After the final date for State consideration of the Smart Grid Information Standard under section 2621(d)(17)<sup>1</sup> of title 16, an investment that is not in compliance with such standard.

(4) After the development and publication by the Institute of protocols and model standards for interoperability of smart grid devices and technologies, an investment that fails to incorporate any of such protocols or model standards.

(5) Expenditures for physical interconnection of generators or other devices to the grid except those that are directly related to enabling Smart Grid functions.

(6) Expenditures for ongoing salaries, benefits, or personnel costs not incurred in the ini-

tial installation, training, or start up of smart grid functions.

(7) Expenditures for travel, lodging, meals or other personal costs.

(8) Ongoing or routine operation, billing, customer relations, security, and maintenance expenditures.

(9) Such other expenditures that the Secretary determines not to be Qualifying Smart Grid Investments by reason of the lack of the ability to perform Smart Grid functions or lack of direct relationship to Smart Grid functions.

#### **(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;

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

(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.

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.

**CHAPTER 153—COMMUNITY SAFETY THROUGH RECIDIVISM PREVENTION**

Sec.

17501 to 17504. Transferred.

SUBCHAPTER I—NEW AND INNOVATIVE PROGRAMS TO IMPROVE OFFENDER REENTRY SERVICES

17511. Transferred.

SUBCHAPTER II—ENHANCED DRUG TREATMENT AND MENTORING GRANT PROGRAMS

PART A—DRUG TREATMENT

17521. Transferred.

PART B—MENTORING

17531 to 17534. Transferred.

PART C—ADMINISTRATION OF JUSTICE REFORMS

SUBPART 1—IMPROVING FEDERAL OFFENDER REENTRY

17541. Transferred.

SUBPART 2—REENTRY RESEARCH

17551 to 17555. Transferred.

**§ 17501. Transferred**

CODIFICATION

Section 17501 was editorially reclassified as section 60501 of Title 34, Crime Control and Law Enforcement.

**§ 17502. Transferred**

CODIFICATION

Section 17502 was editorially reclassified as section 60502 of Title 34, Crime Control and Law Enforcement.

**§ 17503. Transferred**

CODIFICATION

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**§ 17504. Transferred**

CODIFICATION

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SUBCHAPTER I—NEW AND INNOVATIVE PROGRAMS TO IMPROVE OFFENDER REENTRY SERVICES

**§ 17511. Transferred**

CODIFICATION

Section 17511 was editorially reclassified as section 60511 of Title 34, Crime Control and Law Enforcement.

SUBCHAPTER II—ENHANCED DRUG TREATMENT AND MENTORING GRANT PROGRAMS

PART A—DRUG TREATMENT

**§ 17521. Transferred**

CODIFICATION

Section 17521 was editorially reclassified as section 60521 of Title 34, Crime Control and Law Enforcement.

PART B—MENTORING

**§ 17531. Transferred**

CODIFICATION

Section 17531 was editorially reclassified as section 60531 of Title 34, Crime Control and Law Enforcement.