(6) using such additional methods as are determined by the Commercial Director to be appropriate to conduct public outreach;

(7) surveying existing research and studies relating to high-performance green buildings; and

(8) coordinating activities of common interest.

(Pub. L. 110–140, title IV, § 423, Dec. 19, 2007, 121 Stat. 1606.)

Statutory Notes and Related Subsidiaries

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.

§ 17084. Separate spaces with high-performance energy efficiency measures

(a) Definitions

In this section:

(1) High-performance energy efficiency measure

The term ''high-performance energy efficiency measure'' means a technology, product, or practice that will result in substantial operational cost savings by reducing energy consumption and utility costs.

(2) Separate spaces

The term ''separate spaces'' means areas within a commercial building that are leased or otherwise occupied by a tenant or other occupant for a period of time pursuant to the terms of a written agreement.

(b) Study

(1) In general

Not later than 1 year after April 30, 2015, the Secretary, acting through the Assistant Secretary of Energy Efficiency and Renewable Energy, shall complete a study on the feasibility of—

(A) significantly improving energy efficiency in commercial buildings through the design and construction, by owners and tenants, of separate spaces with high-performance energy efficiency measures; and

(B) encouraging owners and tenants to implement high-performance energy efficiency measures in separate spaces.

(2) Scope

The study shall, at a minimum, include—

(A) descriptions of—

(i) high-performance energy efficiency measures that should be considered as part of the initial design and construction of separate spaces;

(ii) processes that owners, tenants, architects, and engineers may replicate when designing and constructing separate spaces with high-performance energy efficiency measures;

(iii) policies and best practices to achieve reductions in energy intensities for lighting, plug loads, heating, cooling, cooking, laundry, and other systems to satisfy the needs of the commercial building tenant;

(iv) return on investment and payback analyses of the incremental cost and projected energy savings of the proposed set of high-performance energy efficiency measures, including consideration of available incentives;

(v) models and simulation methods that predict the quantity of energy used by separate spaces with high-performance energy efficiency measures and that compare that predicted quantity to the quantity of energy used by separate spaces without high-performance energy efficiency measures but that otherwise comply with applicable building code requirements;

(vi) measurement and verification platforms demonstrating actual energy use of high-performance energy efficiency measures installed in separate spaces, and whether such measures generate the savings intended in the initial design and construction of the separate spaces;

(vii) best practices that encourage an integrated approach to designing and constructing separate spaces to perform at optimum energy efficiency in conjunction with the central systems of a commercial building; and

(viii) any impact on employment resulting from the design and construction of separate spaces with high-performance energy efficiency measures; and

(B) case studies reporting economic and energy savings returns in the design and construction of separate spaces with high-performance energy efficiency measures.

(3) Public participation

Not later than 90 days after April 30, 2015, the Secretary shall publish a notice in the Federal Register requesting public comments regarding effective methods, measures, and practices for the design and construction of separate spaces with high-performance energy efficiency measures.

(4) Publication

The Secretary shall publish the study on the website of the Department of Energy.

(Pub. L. 110–140, title IV, § 424, as added Pub. L. 114–11, title I, § 103(a), Apr. 30, 2015, 129 Stat. 183.)

§ 17085. Tenant Star program

(a) Definitions

In this section:

(1) High-performance energy efficiency measure

The term ''high-performance energy efficiency measure'' has the meaning given the term in section 17084 of this title.

(2) Separate spaces

The term ''separate spaces'' has the meaning given the term in section 17084 of this title.

(b) Tenant Star

The Administrator of the Environmental Protection Agency, in consultation with the Secretary of Energy, shall develop a voluntary program within the Energy Star program estab-

lished by section 6294a of this title, which may be known as ''Tenant Star'', to promote energy efficiency in separate spaces leased by tenants or otherwise occupied within commercial buildings.

(c) Expanding survey data

The Secretary of Energy, acting through the Administrator of the Energy Information Administration, shall—

(1) collect, through each Commercial Buildings Energy Consumption Survey of the Energy Information Administration that is conducted after April 30, 2015, data on—

(A) categories of building occupancy that are known to consume significant quantities of energy, such as occupancy by data centers, trading floors, and restaurants; and

(B) other aspects of the property, building operation, or building occupancy determined by the Administrator of the Energy Information Administration, in consultation with the Administrator of the Environmental Protection Agency, to be relevant in lowering energy consumption;

(2) with respect to the first Commercial Buildings Energy Consumption Survey conducted after April 30, 2015, to the extent full compliance with the requirements of paragraph (1) is not feasible, conduct activities to develop the capability to collect such data and begin to collect such data; and

(3) make data collected under paragraphs (1) and (2) available to the public in aggregated form and provide such data, and any associated results, to the Administrator of the Environmental Protection Agency for use in accordance with subsection (d).

(d) Recognition of owners and tenants

(1) Occupancy-based recognition

Not later than 1 year after the date on which sufficient data is received pursuant to subsection (c), the Administrator of the Environmental Protection Agency shall, following an opportunity for public notice and comment—

(A) in a manner similar to the Energy Star rating system for commercial buildings, develop policies and procedures to recognize tenants in commercial buildings that voluntarily achieve high levels of energy efficiency in separate spaces;

(B) establish building occupancy categories eligible for Tenant Star recognition based on the data collected under subsection (c) and any other appropriate data sources; and

(C) consider other forms of recognition for commercial building tenants or other occupants that lower energy consumption in separate spaces.

(2) Design- and construction-based recognition

After the study required by section 17084(b) of this title is completed, the Administrator of the Environmental Protection Agency, in consultation with the Secretary and following an opportunity for public notice and comment, may develop a voluntary program to recognize commercial building owners and tenants that use high-performance energy efficiency measures in the design and construction of separate spaces.

(Pub. L. 110–140, title IV, § 425, as added Pub. L. 114–11, title I, § 104(a), Apr. 30, 2015, 129 Stat. 185.)

§ 17086. Advanced integration of buildings onto the electric grid

(a) In general

The Secretary shall establish a program of research, development, and demonstration to enable components of commercial and residential buildings to serve as dynamic energy loads on and resources for the electric grid. The program shall focus on—

(1) developing low-cost, low power, wireless sensors to—

(A) monitor building energy load;

(B) forecast building energy need; and

(C) enable building-level energy control;

(2) developing data management capabilities and standard communication protocols to further interoperability at the building and grid-level;

(3) developing advanced building-level energy management of components through integration of smart technologies, control systems, and data processing, to enable energy efficiency and savings;

(4) optimizing energy consumption at the building level to enable grid stability and resilience;

(5) improving visualization of behind the meter equipment and technologies to provide better insight into the energy needs and energy forecasts of individual buildings;

(6) reducing the cost of key components to accelerate the adoption of smart building technologies;

(7) protecting against cybersecurity threats and addressing security vulnerabilities of building systems or equipment; and

(8) other areas determined appropriate by the Secretary.

(b) Considerations

In carrying out the program under subsection (a), the Secretary shall—

(1) work with utility partners, building owners, technology vendors, and building developers to test and validate technologies and encourage the commercial application of these technologies by building owners; and

(2) consider the specific challenges of enabling greater interaction between components of—

(A) small- and medium-sized buildings and the electric grid; and

(B) residential and commercial buildings and the electric grid.

(c) Buildings-to-grid integration report

Not later than 1 year after December 27, 2020, the Secretary shall submit to the Committee on Science, Space, and Technology and the Committee on Energy and Commerce of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a report on the results of a study that examines the research, development, and demonstration opportunities, challenges, and standards needed to en-