

114TH CONGRESS
1ST SESSION

H. R. 2564

To accelerate the adoption of smart building technologies in the private sector and key Federal agencies.

IN THE HOUSE OF REPRESENTATIVES

MAY 21, 2015

Mr. WELCH (for himself and Mr. KINZINGER of Illinois) introduced the following bill; which was referred to the Committee on Energy and Commerce, and in addition to the Committees on Transportation and Infrastructure and Science, Space, and Technology, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To accelerate the adoption of smart building technologies in the private sector and key Federal agencies.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Smart Building Accel-
5 eration Act”.

6 **SEC. 2. FINDINGS.**

7 Congress finds that—

1 (1) the building sector uses more than 40 per-
2 cent of the energy of the Nation;

3 (2) emerging building energy monitoring and
4 control technologies are enabling a transition of the
5 building sector to “smart” buildings that have dra-
6 matically reduced energy use and improved quality
7 of service to occupants;

8 (3) an analysis of select private-sector smart
9 buildings by the Department of Energy would docu-
10 ment the costs and benefits of those emerging tech-
11 nologies, promote their adoption, and accelerate that
12 transition;

13 (4) with over 400,000 buildings, the Federal
14 Government is the largest building owner in the
15 United States; and

16 (5) the Federal Government can also accelerate
17 the transition to smart building technologies by dem-
18 onstrating and evaluating emerging smart building
19 technologies using existing programs and funding to
20 showcase selected Federal smart buildings.

21 **SEC. 3. DEFINITIONS.**

22 In this Act:

23 (1) **PROGRAM.**—The term “program” means
24 the smart building program established under sec-
25 tion 5(a).

1 (2) SECRETARY.—The term “Secretary” means
2 the Secretary of Energy.

3 (3) SMART BUILDING.—The term “smart build-
4 ing” means a building with an energy system that—

5 (A) is flexible and automated;

6 (B) has extensive operational monitoring
7 and communication connectivity, allowing re-
8 mote monitoring and analysis of all building
9 functions;

10 (C) is integrated with the overall building
11 operations for control of energy generation, con-
12 sumption, and storage; and

13 (D) communicates with utilities and other
14 third-party commercial entities where appro-
15 priate.

16 **SEC. 4. SURVEY OF PRIVATE SECTOR SMART BUILDINGS.**

17 (a) SURVEY.—The Secretary shall conduct a survey
18 of privately owned smart buildings throughout the Nation,
19 including commercial buildings and buildings owned by
20 nonprofit organizations and institutions of higher edu-
21 cation.

22 (b) SELECTION.—From among the smart buildings
23 surveyed under subsection (a), the Secretary shall select
24 at least 1 building each from an appropriate range of
25 building sizes and types.

1 (c) EVALUATION.—Using the guidelines of the Fed-
2 eral Energy Management Program relating to whole-build-
3 ing evaluation, measurement, and verification, the Sec-
4 retary shall evaluate the costs and benefits of the buildings
5 selected under subsection (b), including an identification
6 of—

- 7 (1) which advanced building technologies—
8 (A) are most cost-effective; and
9 (B) show the most promise for—
10 (i) increasing building energy savings;
11 (ii) increasing service performance to
12 building occupants; and
13 (iii) reducing environmental impacts;
14 and
15 (2) any other information the Secretary deter-
16 mines to be appropriate.

17 **SEC. 5. FEDERAL SMART BUILDING PROGRAM.**

18 (a) ESTABLISHMENT.—The Secretary shall establish
19 a program to establish 1 or more smart buildings under
20 the jurisdiction of several key Federal agencies, including
21 buildings that are owned by the Federal Government but
22 are commercially operated, to demonstrate the costs and
23 benefits of smart buildings.

24 (b) FEDERAL AGENCY DESCRIBED.—The key Fed-
25 eral agencies referred to in subsection (a) shall include—

- 1 (1) the Department of Defense;
- 2 (2) the Department of Energy;
- 3 (3) the Department of Veterans Affairs; and
- 4 (4) the General Services Administration.

5 (c) REQUIREMENT.—In carrying out the program,
6 the Secretary shall leverage existing procurement mecha-
7 nisms.

8 (d) EVALUATION.—Using the guidelines of the Fed-
9 eral Energy Management Program relating to whole-build-
10 ing evaluation, measurement, and verification, the Sec-
11 retary shall evaluate the costs and benefits of the buildings
12 selected under this section including an identification of—

- 13 (1) which advanced building technologies—
 - 14 (A) are most cost-effective; and
 - 15 (B) show the most promise for—
 - 16 (i) increasing building energy savings;
 - 17 (ii) increasing service performance to
 - 18 building occupants; and
 - 19 (iii) reducing environmental impacts;
- 20 and

21 (2) any other information the Secretary deter-
22 mines to be appropriate.

23 **SEC. 6. LEVERAGING EXISTING PROGRAMS.**

24 (a) BETTER BUILDING CHALLENGE.—As part of the
25 Better Building Challenge of the Department of Energy,

1 the Secretary shall develop a smart building accelerator
2 in consultation with major private sector property owners
3 to demonstrate innovative policies and approaches that
4 will accelerate the transition to smart buildings.

5 (b) RESEARCH AND DEVELOPMENT.—

6 (1) IN GENERAL.—The Secretary shall conduct
7 research and development to address key barriers to
8 the integration of advanced building technologies
9 and to accelerate the transition to smart buildings.

10 (2) INCLUSION.—The research and development
11 conducted under paragraph (1) shall include re-
12 search and development on—

13 (A) physical components, such as sensors
14 and controls;

15 (B) reducing the cost of key components to
16 accelerate the adoption of smart building tech-
17 nologies;

18 (C) data management, including the cap-
19 ture and analysis of data and the interoper-
20 ability of the energy systems;

21 (D) business models, including how busi-
22 ness models may limit the adoption of smart
23 building technologies and how to support
24 transactive energy;

1 (E) characterization of buildings and com-
2 ponents;

3 (F) consumer and utility protections;

4 (G) continuous management, including the
5 challenges of managing multiple energy systems
6 and optimizing systems for disparate stake-
7 holders; and

8 (H) other areas of research and develop-
9 ment, as determined appropriate by the Sec-
10 retary.

11 **SEC. 7. REPORT.**

12 Not later than 18 months after the date of enactment
13 of this Act, the Secretary shall submit to the Committee
14 on Energy and Natural Resources of the Senate and the
15 Committee on Energy and Commerce of the House of
16 Representatives a report on—

17 (1) the survey and evaluation of private sector
18 smart buildings carried out under section 4;

19 (2) the evaluation of Federal smart buildings
20 carried out under section 5; and

21 (3) any recommendations of the Secretary to
22 further accelerate the transition to smart buildings.

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