

114TH CONGRESS
1ST SESSION

H. R. 1802

To promote energy efficiency.

IN THE HOUSE OF REPRESENTATIVES

APRIL 15, 2015

Mr. MCKINLEY (for himself and Mr. WELCH) introduced the following bill;
which was referred to the Committee on Energy and Commerce

A BILL

To promote energy efficiency.

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; TABLE OF CONTENTS.

4 (a) SHORT TITLE.—This Act may be cited as the
5 “Energy Efficiency Improvement Act of 2015”.

6 (b) TABLE OF CONTENTS.—The table of contents for
7 this Act is as follows:

Sec. 1. Short title; table of contents.

TITLE I—BETTER BUILDINGS

Sec. 101. Short title.

Sec. 102. Energy efficiency in Federal and other buildings.

Sec. 103. Separate spaces with high-performance energy efficiency measures.

Sec. 104. Tenant Star program.

TITLE II—GRID-ENABLED WATER HEATERS

Sec. 201. Grid-enabled water heaters.

TITLE III—ENERGY INFORMATION FOR COMMERCIAL BUILDINGS

Sec. 301. Energy information for commercial buildings.

TITLE I—BETTER BUILDINGS

2 SEC. 101. SHORT TITLE.

3 This title may be cited as the “Better Buildings Act
4 of 2015”.

5 SEC. 102. ENERGY EFFICIENCY IN FEDERAL AND OTHER
6 BUILDINGS.

7 (a) DEFINITIONS.—In this section:

8 (1) ADMINISTRATOR.—The term “Administrator” means the Administrator of General Services.

1 savings in an amount that is not less than the cost
2 of such installing, implementing, or operating.

3 (b) MODEL PROVISIONS, POLICIES, AND BEST PRAC-
4 TICES.—

5 (1) IN GENERAL.—Not later than 180 days
6 after the date of enactment of this Act, the Adminis-
7 trator, in consultation with the Secretary of Energy
8 and after providing the public with an opportunity
9 for notice and comment, shall develop model com-
10 mercial leasing provisions and best practices in ac-
11 cordance with this subsection.

12 (2) COMMERCIAL LEASING.—

13 (A) IN GENERAL.—The model commercial
14 leasing provisions developed under this sub-
15 section shall, at a minimum, align the interests
16 of building owners and tenants with regard to
17 investments in cost-effective energy efficiency
18 measures and cost-effective water efficiency
19 measures to encourage building owners and ten-
20 ants to collaborate to invest in such measures.

21 (B) USE OF MODEL PROVISIONS.—The
22 Administrator may use the model commercial
23 leasing provisions developed under this sub-
24 section in any standard leasing document that

1 designates a Federal agency (or other client of
2 the Administrator) as a landlord or tenant.

3 (C) PUBLICATION.—The Administrator
4 shall periodically publish the model commercial
5 leasing provisions developed under this sub-
6 section, along with explanatory materials, to en-
7 courage building owners and tenants in the pri-
8 vate sector to use such provisions and mate-
9 rials.

10 (3) REALTY SERVICES.—The Administrator
11 shall develop policies and practices to implement
12 cost-effective energy efficiency measures and cost-ef-
13 fective water efficiency measures for the realty serv-
14 ices provided by the Administrator to Federal agen-
15 cies (or other clients of the Administrator), including
16 periodic training of appropriate Federal employees
17 and contractors on how to identify and evaluate
18 those measures.

19 (4) STATE AND LOCAL ASSISTANCE.—The Ad-
20 ministrator, in consultation with the Secretary of
21 Energy, shall make available model commercial leas-
22 ing provisions and best practices developed under
23 this subsection to State, county, and municipal gov-
24 ernments for use in managing owned and leased
25 building space in accordance with the goal of encour-

1 aging investment in all cost-effective energy effi-
2 ciency measures and cost-effective water efficiency
3 measures.

4 **SEC. 103. SEPARATE SPACES WITH HIGH-PERFORMANCE**
5 **ENERGY EFFICIENCY MEASURES.**

6 (a) IN GENERAL.—Subtitle B of title IV of the En-
7 ergy Independence and Security Act of 2007 (42 U.S.C.
8 17081 et seq.) is amended by adding at the end the fol-
9 lowing:

10 **“SEC. 424. SEPARATE SPACES WITH HIGH-PERFORMANCE**
11 **ENERGY EFFICIENCY MEASURES.**

12 “(a) DEFINITIONS.—In this section:

13 “(1) HIGH-PERFORMANCE ENERGY EFFICIENCY
14 MEASURE.—The term ‘high-performance energy effi-
15 ciency measure’ means a technology, product, or
16 practice that will result in substantial operational
17 cost savings by reducing energy consumption and
18 utility costs.

19 “(2) SEPARATE SPACES.—The term ‘separate
20 spaces’ means areas within a commercial building
21 that are leased or otherwise occupied by a tenant or
22 other occupant for a period of time pursuant to the
23 terms of a written agreement.

24 “(b) STUDY.—

1 “(1) IN GENERAL.—Not later than 1 year after
2 the date of enactment of this section, the Secretary,
3 acting through the Assistant Secretary of Energy
4 Efficiency and Renewable Energy, shall complete a
5 study on the feasibility of—

6 “(A) significantly improving energy effi-
7 ciency in commercial buildings through the de-
8 sign and construction, by owners and tenants,
9 of separate spaces with high-performance en-
10 ergy efficiency measures; and

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

14 “(2) SCOPE.—The study shall, at a minimum,
15 include—

16 “(A) descriptions of—

17 “(i) high-performance energy effi-
18 ciency measures that should be considered
19 as part of the initial design and construc-
20 tion of separate spaces;

21 “(ii) processes that owners, tenants,
22 architects, and engineers may replicate
23 when designing and constructing separate
24 spaces with high-performance energy effi-
25 ciency measures;

1 “(iii) policies and best practices to
2 achieve reductions in energy intensities for
3 lighting, plug loads, heating, cooling, cooking,
4 laundry, and other systems to satisfy
5 the needs of the commercial building ten-
6 ant;

7 “(iv) return on investment and pay-
8 back analyses of the incremental cost and
9 projected energy savings of the proposed
10 set of high-performance energy efficiency
11 measures, including consideration of avail-
12 able incentives;

13 “(v) models and simulation methods
14 that predict the quantity of energy used by
15 separate spaces with high-performance en-
16 ergy efficiency measures and that compare
17 that predicted quantity to the quantity of
18 energy used by separate spaces without
19 high-performance energy efficiency meas-
20 ures but that otherwise comply with appli-
21 cable building code requirements;

22 “(vi) measurement and verification
23 platforms demonstrating actual energy use
24 of high-performance energy efficiency
25 measures installed in separate spaces, and

1 whether such measures generate the sav-
2 ings intended in the initial design and con-
3 struction of the separate spaces;

4 “(vii) best practices that encourage an
5 integrated approach to designing and con-
6 structing separate spaces to perform at op-
7 timum energy efficiency in conjunction
8 with the central systems of a commercial
9 building; and

10 “(viii) any impact on employment re-
11 sulting from the design and construction of
12 separate spaces with high-performance en-
13 ergy efficiency measures; and

14 “(B) case studies reporting economic and
15 energy savings returns in the design and con-
16 struction of separate spaces with high-perform-
17 ance energy efficiency measures.

18 “(3) PUBLIC PARTICIPATION.—Not later than
19 90 days after the date of the enactment of this sec-
20 tion, the Secretary shall publish a notice in the Fed-
21 eral Register requesting public comments regarding
22 effective methods, measures, and practices for the
23 design and construction of separate spaces with
24 high-performance energy efficiency measures.

1 “(4) PUBLICATION.—The Secretary shall pub-
2 lish the study on the website of the Department of
3 Energy.”.

4 (b) CLERICAL AMENDMENT.—The table of contents
5 in section 1(b) of the Energy Independence and Security
6 Act of 2007 is amended by inserting after the item relat-
7 ing to section 423 the following new item:

“Sec. 424. Separate spaces with high-performance energy efficiency measures.”.

8 **SEC. 104. TENANT STAR PROGRAM.**

9 (a) IN GENERAL.—Subtitle B of title IV of the En-
10 ergy Independence and Security Act of 2007 (42 U.S.C.
11 17081 et seq.) (as amended by section 103) is amended
12 by adding at the end the following:

13 **“SEC. 425. TENANT STAR PROGRAM.**

14 “(a) DEFINITIONS.—In this section:

15 “(1) HIGH-PERFORMANCE ENERGY EFFICIENCY
16 MEASURE.—The term ‘high-performance energy effi-
17 ciency measure’ has the meaning given the term in
18 section 424.

19 “(2) SEPARATE SPACES.—The term ‘separate
20 spaces’ has the meaning given the term in section
21 424.

22 “(b) TENANT STAR.—The Administrator of the Envi-
23 ronmental Protection Agency, in consultation with the
24 Secretary of Energy, shall develop a voluntary program
25 within the Energy Star program established by section

1 324A of the Energy Policy and Conservation Act (42
2 U.S.C. 6294a), which may be known as ‘Tenant Star’, to
3 promote energy efficiency in separate spaces leased by ten-
4 ants or otherwise occupied within commercial buildings.

5 “(c) EXPANDING SURVEY DATA.—The Secretary of
6 Energy, acting through the Administrator of the Energy
7 Information Administration, shall—

8 “(1) collect, through each Commercial Build-
9 ings Energy Consumption Survey of the Energy In-
10 formation Administration that is conducted after the
11 date of enactment of this section, data on—

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

16 “(B) other aspects of the property, build-
17 ing operation, or building occupancy determined
18 by the Administrator of the Energy Information
19 Administration, in consultation with the Admin-
20 istrator of the Environmental Protection Agen-
21 cy, to be relevant in lowering energy consump-
22 tion;

23 “(2) with respect to the first Commercial Build-
24 ings Energy Consumption Survey conducted after
25 the date of enactment of this section, to the extent

1 full compliance with the requirements of paragraph
2 (1) is not feasible, conduct activities to develop the
3 capability to collect such data and begin to collect
4 such data; and

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

10 “(d) RECOGNITION OF OWNERS AND TENANTS.—

11 “(1) OCCUPANCY-BASED RECOGNITION.—Not
12 later than 1 year after the date on which sufficient
13 data is received pursuant to subsection (c), the Ad-
14 ministrator of the Environmental Protection Agency
15 shall, following an opportunity for public notice and
16 comment—

17 “(A) in a manner similar to the Energy
18 Star rating system for commercial buildings,
19 develop policies and procedures to recognize
20 tenants in commercial buildings that voluntarily
21 achieve high levels of energy efficiency in sepa-
22 rate spaces;

23 “(B) establish building occupancy cat-
24 egories eligible for Tenant Star recognition

1 based on the data collected under subsection (c)
2 and any other appropriate data sources; and

3 “(C) consider other forms of recognition
4 for commercial building tenants or other occu-
5 pants that lower energy consumption in sepa-
6 rate spaces.

7 “(2) DESIGN- AND CONSTRUCTION-BASED REC-
8 OGNITION.—After the study required by section
9 424(b) is completed, the Administrator of the Envi-
10 ronmental Protection Agency, in consultation with
11 the Secretary and following an opportunity for pub-
12 lic notice and comment, may develop a voluntary
13 program to recognize commercial building owners
14 and tenants that use high-performance energy effi-
15 ciency measures in the design and construction of
16 separate spaces.”.

17 (b) CLERICAL AMENDMENT.—The table of contents
18 in section 1(b) of the Energy Independence and Security
19 Act of 2007 is amended by inserting after the item relat-
20 ing to section 424 (as added by section 103(b)) the fol-
21 lowing new item:

“Sec. 425. Tenant Star program.”.

TITLE II—GRID-ENABLED WATER HEATERS

3 SEC. 201. GRID-ENABLED WATER HEATERS.

4 Part B of title III of the Energy Policy and Conserva-
5 tion Act is amended—

(1) in section 325(e) (42 U.S.C. 6295(e)), by adding at the end the following:

8 “(6) ADDITIONAL STANDARDS FOR GRID-EN-
9 ABLED WATER HEATERS.—

10 “(A) DEFINITIONS.—In this paragraph:

“(i) ACTIVATION LOCK.—The term ‘activation lock’ means a control mechanism (either a physical device directly on the water heater or a control system integrated into the water heater) that is locked by default and contains a physical, software, or digital communication that must be activated with an activation key to enable the product to operate at its designed specifications and capabilities and without which activation the product will provide not greater than 50 percent of the rated first hour delivery of hot water certified by the manufacturer.

1 “(ii) GRID-ENABLED WATER HEAT-
2 ER.—The term ‘grid-enabled water heater’
3 means an electric resistance water heater
4 that—
5 “(I) has a rated storage tank vol-
6 ume of more than 75 gallons;
7 “(II) is manufactured on or after
8 April 16, 2015;
9 “(III) has—
10 “(aa) an energy factor of
11 not less than 1.061 minus the
12 product obtained by multi-
13 plying—
14 “(AA) the rated storage
15 volume of the tank, ex-
16 pressed in gallons; and
17 “(BB) 0.00168; or
18 “(bb) an equivalent alter-
19 native standard prescribed by the
20 Secretary and developed pursu-
21 ant to paragraph (5)(E);
22 “(IV) is equipped at the point of
23 manufacture with an activation lock;
24 and

1 “(V) bears a permanent label ap-
2 plied by the manufacturer that—

3 “(aa) is made of material
4 not adversely affected by water;

5 “(bb) is attached by means
6 of non-water-soluble adhesive;
7 and

8 “(cc) advises purchasers and
9 end-users of the intended and ap-
10 propriate use of the product with
11 the following notice printed in
12 16.5 point Arial Narrow Bold
13 font:

14 “‘IMPORTANT INFORMATION: This water heater is
15 intended only for use as part of an electric thermal storage
16 or demand response program. It will not provide adequate
17 hot water unless enrolled in such a program and activated
18 by your utility company or another program operator.
19 Confirm the availability of a program in your local area
20 before purchasing or installing this product.’.

21 “(B) REQUIREMENT.—The manufacturer
22 or private labeler shall provide the activation
23 key for a grid-enabled water heater only to a
24 utility or other company that operates an elec-
25 tric thermal storage or demand response pro-

1 gram that uses such a grid-enabled water heat-
2 er.

3 “(C) REPORTS.—

4 “(i) MANUFACTURERS.—The Sec-
5 retary shall require each manufacturer of
6 grid-enabled water heaters to report to the
7 Secretary annually the quantity of grid-en-
8 abled water heaters that the manufacturer
9 ships each year.

10 “(ii) OPERATORS.—The Secretary
11 shall require utilities and other demand re-
12 sponse and thermal storage program oper-
13 ators to report annually the quantity of
14 grid-enabled water heaters activated for
15 their programs using forms of the Energy
16 Information Agency or using such other
17 mechanism that the Secretary determines
18 appropriate after an opportunity for notice
19 and comment.

20 “(iii) CONFIDENTIALITY REQUIRE-
21 MENTS.—The Secretary shall treat ship-
22 ment data reported by manufacturers as
23 confidential business information.

24 “(D) PUBLICATION OF INFORMATION.—

1 “(i) IN GENERAL.—In 2017 and
2 2019, the Secretary shall publish an anal-
3 ysis of the data collected under subpara-
4 graph (C) to assess the extent to which
5 shipped products are put into use in de-
6 mand response and thermal storage pro-
7 grams.

8 “(ii) PREVENTION OF PRODUCT DI-
9 VERSION.—If the Secretary determines
10 that sales of grid-enabled water heaters ex-
11 ceed by 15 percent or greater the quantity
12 of such products activated for use in de-
13 mand response and thermal storage pro-
14 grams annually, the Secretary shall, after
15 opportunity for notice and comment, estab-
16 lish procedures to prevent product diver-
17 sion for non-program purposes.

18 “(E) COMPLIANCE.—

19 “(i) IN GENERAL.—Subparagraphs
20 (A) through (D) shall remain in effect
21 until the Secretary determines under this
22 section that—

23 “(I) grid-enabled water heaters
24 do not require a separate efficiency
25 requirement; or

1 “(II) sales of grid-enabled water
2 heaters exceed by 15 percent or greater
3 the quantity of such products activated
4 for use in demand response and
5 thermal storage programs annually
6 and procedures to prevent product diversion
7 for non-program purposes would not be adequate to prevent such
8 product diversion.

9
10 “(ii) EFFECTIVE DATE.—If the Secretary exercises the authority described in clause (i) or amends the efficiency requirement for grid-enabled water heaters, that action will take effect on the date described in subsection (m)(4)(A)(ii).

11
12 “(iii) CONSIDERATION.—In carrying out this section with respect to electric water heaters, the Secretary shall consider the impact on thermal storage and demand response programs, including any impact on energy savings, electric bills, peak load reduction, electric reliability, integration of renewable resources, and the environment.

13
14 “(iv) REQUIREMENTS.—In carrying out this paragraph, the Secretary shall re-

1 quire that grid-enabled water heaters be
2 equipped with communication capability to
3 enable the grid-enabled water heaters to
4 participate in ancillary services programs if
5 the Secretary determines that the tech-
6 nology is available, practical, and cost-eф-
7 fective.”;

8 (2) in section 332(a) (42 U.S.C. 6302(a))—
9 (A) in paragraph (5), by striking “or” at
10 the end;
11 (B) in the first paragraph (6), by striking
12 the period at the end and inserting a semicolon;
13 (C) by redesignating the second paragraph
14 (6) as paragraph (7);
15 (D) in subparagraph (B) of paragraph (7)
16 (as so redesignated), by striking the period at
17 the end and inserting “; or”; and
18 (E) by adding at the end the following:
19 “(8) for any person—
20 “(A) to activate an activation lock for a
21 grid-enabled water heater with knowledge that
22 such water heater is not used as part of an
23 electric thermal storage or demand response
24 program;

1 “(B) to distribute an activation key for a
2 grid-enabled water heater with knowledge that
3 such activation key will be used to activate a
4 grid-enabled water heater that is not used as
5 part of an electric thermal storage or demand
6 response program;

7 “(C) to otherwise enable a grid-enabled
8 water heater to operate at its designed speci-
9 fication and capabilities with knowledge that
10 such water heater is not used as part of an
11 electric thermal storage or demand response
12 program; or

13 “(D) to knowingly remove or render illegi-
14 ble the label of a grid-enabled water heater de-
15 scribed in section 325(e)(6)(A)(ii)(V).”;

16 (3) in section 333(a) (42 U.S.C. 6303(a))—

17 (A) by striking “section 332(a)(5)” and in-
18 serting “paragraph (5), (6), (7), or (8) of sec-
19 tion 332(a)”;
20 (B) by striking “paragraph (1), (2), or (5)
21 of section 332(a)” and inserting “paragraph
22 (1), (2), (5), (6), (7), or (8) of section 332(a)”;
23 and

24 (4) in section 334 (42 U.S.C. 6304)—

1 (A) by striking “section 332(a)(5)” and in-
2 serting “paragraph (5), (6), (7), or (8) of sec-
3 tion 332(a)”; and

4 (B) by striking “section 332(a)(6)” and in-
5 serting “section 332(a)(7)”.

6 **TITLE III—ENERGY INFORMATION FOR COMMERCIAL
7 BUILDINGS**

9 **SEC. 301. ENERGY INFORMATION FOR COMMERCIAL BUILD-
10 INGS.**

11 (a) REQUIREMENT OF BENCHMARKING AND DISCLO-
12 SURE FOR LEASING BUILDINGS WITHOUT ENERGY STAR
13 LABELS.—Section 435(b)(2) of the Energy Independence
14 and Security Act of 2007 (42 U.S.C. 17091(b)(2)) is
15 amended—

16 (1) by striking “paragraph (2)” and inserting
17 “paragraph (1)”; and

18 (2) by striking “signing the contract,” and all
19 that follows through the period at the end and in-
20 serting the following: “signing the contract, the fol-
21 lowing requirements are met:

22 “(A) The space is renovated for all energy
23 efficiency and conservation improvements that
24 would be cost effective over the life of the lease,
25 including improvements in lighting, windows,

1 and heating, ventilation, and air conditioning
2 systems.

3 “(B)(i) Subject to clause (ii), the space is
4 benchmarked under a nationally recognized, on-
5 line, free benchmarking program, with public
6 disclosure, unless the space is a space for which
7 owners cannot access whole building utility con-
8 sumption data, including spaces—

9 “(I) that are located in States with
10 privacy laws that provide that utilities shall
11 not provide such aggregated information to
12 multitenant building owners; and

13 “(II) for which tenants do not provide
14 energy consumption information to the
15 commercial building owner in response to a
16 request from the building owner.

17 “(ii) A Federal agency that is a tenant of
18 the space shall provide to the building owner, or
19 authorize the owner to obtain from the utility,
20 the energy consumption information of the
21 space for the benchmarking and disclosure re-
22 quired by this subparagraph.”.

23 (b) STUDY.—

24 (1) IN GENERAL.—Not later than 2 years after
25 the date of enactment of this Act, the Secretary of

1 Energy, in collaboration with the Administrator of
2 the Environmental Protection Agency, shall complete
3 a study—

4 (A) on the impact of—

5 (i) State and local performance
6 benchmarking and disclosure policies, and
7 any associated building efficiency policies,
8 for commercial and multifamily buildings;
9 and

10 (ii) programs and systems in which
11 utilities provide aggregated information re-
12 garding whole building energy consumption
13 and usage information to owners of multi-
14 tenant commercial, residential, and mixed-
15 use buildings;

16 (B) that identifies best practice policy ap-
17 proaches studied under subparagraph (A) that
18 have resulted in the greatest improvements in
19 building energy efficiency; and

20 (C) that considers—

21 (i) compliance rates and the benefits
22 and costs of the policies and programs on
23 building owners, utilities, tenants, and
24 other parties;

- (ii) utility practices, programs, and systems that provide aggregated energy consumption information to multitenant building owners, and the impact of public utility commissions and State privacy laws on those practices, programs, and systems;
 - (iii) exceptions to compliance in existing laws where building owners are not able to gather or access whole building energy information from tenants or utilities;
 - (iv) the treatment of buildings with—
 - (I) multiple uses;
 - (II) uses for which baseline information is not available; and
 - (III) uses that require high levels of energy intensities, such as data centers, trading floors, and television studios;
 - (v) implementation practices, including disclosure methods and phase-in of compliance;
 - (vi) the safety and security of benchmarking tools offered by government agencies, and the resiliency of those tools against cyber attacks; and

(vii) international experiences with regard to building benchmarking and disclosure laws and data aggregation for multi-tenant buildings.

5 (2) SUBMISSION TO CONGRESS.—At the conclu-
6 sion of the study, the Secretary shall submit to the
7 Committee on Energy and Commerce of the House
8 of Representatives and the Committee on Energy
9 and Natural Resources of the Senate a report on the
10 results of the study.

11 (c) CREATION AND MAINTENANCE OF DATABASE.—

(A) data provided under Federal, State, local, and other laws or programs regarding building benchmarking and energy information disclosure;

(B) information on buildings that have disclosed energy ratings and certifications; and

(C) energy-related information on buildings provided voluntarily by the owners of the buildings, only in an anonymous form unless the owner provides otherwise.

10 (d) INPUT FROM STAKEHOLDERS.—The Secretary of
11 Energy shall seek input from stakeholders to maximize the
12 effectiveness of the actions taken under this section.

13 (e) REPORT.—Not later than 2 years after the date
14 of enactment of this Act, and every 2 years thereafter,
15 the Secretary of Energy shall submit to the Committee
16 on Energy and Commerce of the House of Representatives
17 and the Committee on Energy and Natural Resources of
18 the Senate a report on the progress made in complying
19 with this section.

