

# Calendar No. 220

116TH CONGRESS  
1ST SESSION

# S. 1245

[Report No. 116–117]

To improve energy performance in Federal buildings, and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

APRIL 30, 2019

Mr. HOEVEN (for himself and Mr. MANCHIN) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

SEPTEMBER 25, 2019

Reported by Ms. MURKOWSKI, with amendments

[Omit the part struck through and insert the part printed in *italic*]

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## A BILL

To improve energy performance in Federal buildings, and  
for other purposes.

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 “All-of-the-Above Fed-  
5 eral Building Energy Conservation Act of 2019”.

1 **SEC. 2. ENERGY PERFORMANCE REQUIREMENT FOR FED-**  
 2 **ERAL BUILDINGS.**

3 Section 543 of the National Energy Conservation  
 4 Policy Act (42 U.S.C. 8253) is amended—

5 (1) by striking ~~subsections (a) and (b) sub-~~  
 6 ~~section (a)~~ and inserting the following:

7 “(a) ENERGY PERFORMANCE REQUIREMENT FOR  
 8 FEDERAL BUILDINGS.—

9 “(1) IN GENERAL.—Subject to paragraph (2),  
 10 to the maximum extent life cycle cost-effective, each  
 11 agency shall apply energy conservation measures to,  
 12 and shall improve the design for the construction of,  
 13 the Federal buildings of the agency (including each  
 14 industrial or laboratory facility) so that the energy  
 15 consumption per gross square foot of the Federal  
 16 buildings of the agency in fiscal years 2020 through  
 17 2027 is reduced, as compared with the energy con-  
 18 sumption per gross square foot of the Federal build-  
 19 ings of the agency in fiscal year 2018, by the per-  
 20 centage specified in the following table:

| “Fiscal Year | Percentage Reduction |
|--------------|----------------------|
| 2020 .....   | 2.5                  |
| 2021 .....   | 5                    |
| 2022 .....   | 7.5                  |
| 2023 .....   | 10                   |

| <b>“Fiscal Year</b> | <b>Percentage Reduction</b> |
|---------------------|-----------------------------|
| 2024 .....          | 12.5                        |
| 2025 .....          | 15                          |
| 2026 .....          | 17.5                        |
| 2027 .....          | 20.                         |

1           “(2) EXCLUSION FOR BUILDINGS WITH ENERGY  
2           INTENSIVE ACTIVITIES.—

3           “(A) IN GENERAL.—An agency may ex-  
4           clude from the requirements of paragraph (1)  
5           any building (including the associated energy  
6           consumption and gross square footage of the  
7           building) in which energy intensive activities are  
8           carried out.

9           “(B) REPORTS.—Each agency shall iden-  
10          tify and include in each report under section  
11          548(a) each building designated by the agency  
12          for exclusion under subparagraph (A) during  
13          the period covered by the report.

14          “(3) RECOMMENDATIONS.—Not later than De-  
15          cember 31, 2026, the Secretary shall—

16          “(A) review the results of the implementa-  
17          tion of the energy performance requirement es-  
18          tablished under paragraph (1); and

1           “(B) submit to Congress recommendations  
2           concerning energy performance requirements  
3           for fiscal years 2028 through 2037.”;

4           *(2) in subsection (b), by striking paragraphs (1)*  
5           *and (2) and inserting the following:*

6           ~~“(b) ENERGY MANAGEMENT REQUIREMENT FOR~~  
7           ~~FEDERAL AGENCIES.—~~

8           “(1) IN GENERAL.—Each agency shall—

9           “(A) not later than October 1, 2019, begin  
10           installing in Federal buildings owned by the  
11           United States all energy and water conservation  
12           measures determined by the Secretary to be  
13           life-cycle cost-effective; and

14           “(B) complete the installation described in  
15           subparagraph (A) as soon as practicable after  
16           the date referred to in that subparagraph.

17           “(2) EXPLANATION OF NONCOMPLIANCE.—

18           “(A) IN GENERAL.—If an agency fails to  
19           comply with paragraph (1), the agency shall  
20           submit to the Secretary, using guidelines devel-  
21           oped by the Secretary, an explanation of the  
22           reasons for the failure.

23           “(B) REPORT TO CONGRESS.—Not later  
24           than October 1, 2021, and every 2 years there-  
25           after, the Secretary shall submit to Congress a

1 report describing any noncompliance with the  
2 requirements of paragraph (1).”; and

3 ~~(2)~~(3) in subsection (f)—

4 (A) in paragraph (1)—

5 (i) by redesignating subparagraphs  
6 (E), (F), and (G) as subparagraphs (F),  
7 (G), and (H), respectively; and

8 (ii) by inserting after subparagraph  
9 (D) the following:

10 “(E) ONGOING COMMISSIONING.—The  
11 term ‘ongoing commissioning’ means an ongo-  
12 ing process of commissioning using monitored  
13 data, the primary goal of which is to ensure  
14 continuous optimum performance of a facility,  
15 in accordance with design or operating needs,  
16 over the useful life of the facility, while meeting  
17 facility occupancy requirements.”;

18 (B) in paragraph (2), by adding at the end  
19 the following:

20 “(C) ENERGY MANAGEMENT SYSTEM.—An  
21 energy manager designated for a facility under  
22 subparagraph (A) shall take into consider-  
23 ation—

24 “(i) the use of a system to manage  
25 energy use at the facility; and

1           “(ii) the applicability of certification  
2           of the facility in accordance with the Inter-  
3           national Organization for Standardization  
4           standard numbered 50001 and entitled  
5           ‘Energy Management Systems’.”; and

6           (C) by striking paragraphs (3) and (4) and  
7           inserting the following:

8           “(3) ENERGY AND WATER EVALUATIONS AND  
9           COMMISSIONING.—

10           “(A) EVALUATIONS.—Except as provided  
11           in subparagraph (B), not later than the date  
12           that is 180 days after the date of enactment of  
13           the All-of-the-Above Federal Building Energy  
14           Conservation Act of 2019, and annually there-  
15           after, each energy manager shall complete, for  
16           the preceding calendar year, a comprehensive  
17           energy and water evaluation and recommis-  
18           sioning or retrocommissioning for approxi-  
19           mately 25 percent of the facilities of the appli-  
20           cable agency that meet the criteria under para-  
21           graph (2)(B) in a manner that ensures that an  
22           evaluation of each such facility is completed not  
23           less frequently than once every 4 years.

24           “(B) EXCEPTIONS.—An evaluation and re-  
25           commissioning or retrocommissioning shall not

1 be required under subparagraph (A) with re-  
2 spect to a facility that, as of the date on which  
3 the evaluation and recommissioning or retro-  
4 commissioning would otherwise occur—

5 “(i) has had a comprehensive energy  
6 and water evaluation during the preceding  
7 8-year period;

8 “(ii)(I) has been commissioned, re-  
9 commissioned, or retrocommissioned dur-  
10 ing the preceding 10-year period; or

11 “(II) is under ongoing commissioning;

12 “(iii) has not had a major change in  
13 function or use since the previous evalua-  
14 tion and recommissioning;

15 “(iv) has been benchmarked with pub-  
16 lic disclosure under paragraph (8) during  
17 the preceding calendar year; and

18 “(v)(I) based on the benchmarking de-  
19 scribed in clause (iv), has achieved at a fa-  
20 cility level the most-recent cumulative en-  
21 ergy savings target under subsection (a),  
22 as compared to the earlier of—

23 “(aa) the date of the most recent  
24 evaluation; and

25 “(bb) the date—

1                   “(AA) of the most recent  
2                   commissioning, recommissioning,  
3                   or retrocommissioning; or

4                   “(BB) on which ongoing  
5                   commissioning began; or

6                   “(II) has a long-term contract in  
7                   place guaranteeing energy savings at least  
8                   as great as the energy savings target under  
9                   subclause (I).

10                   “(4) IMPLEMENTATION OF IDENTIFIED ENERGY  
11                   AND WATER EFFICIENCY MEASURES.—Not later  
12                   than 2 years after the completion of each evaluation  
13                   under paragraph (3), each energy manager shall—

14                   “(A) implement any energy- or water-sav-  
15                   ing measure that the Federal agency identified  
16                   in the evaluation conducted that is life cycle  
17                   cost-effective; and

18                   “(B) bundle individual measures of varying  
19                   paybacks together into combined projects.”.

20 **SEC. 3. FEDERAL BUILDING ENERGY EFFICIENCY PER-**  
21 **FORMANCE STANDARDS; CERTIFICATION**  
22 **SYSTEM AND LEVEL FOR GREEN BUILDINGS.**

23                   (a) DEFINITIONS.—Section 303 of the Energy Con-  
24                   servation and Production Act (42 U.S.C. 6832) is amend-  
25                   ed—



1           (1) in each of paragraphs (1) through (16), by  
2           inserting a paragraph heading, the text of which is  
3           comprised of the term defined in that paragraph;

4           (2) by redesignating paragraphs (2) through  
5           (16) (as so amended) as paragraphs (3), (4), (6),  
6           (7), (8), (10), (12), (13), (14), (15), (16), (9), (17),  
7           (5), and (2), respectively, and moving the para-  
8           graphs so as to appear in numerical order; and

9           (3) by inserting after paragraph (10) (as so re-  
10          designated) the following:

11           “(11) MAJOR RENOVATION.—The term ‘major  
12          renovation’ means a modification of the energy sys-  
13          tems of a building that is sufficiently extensive to  
14          ensure that the entire building can achieve compli-  
15          ance with applicable energy standards for new build-  
16          ings, based on such criteria as the Secretary shall  
17          establish, by regulation.”.

18          (b) FEDERAL BUILDING ENERGY EFFICIENCY  
19          STANDARDS.—Section 305(a)(2)(A) of the Energy Con-  
20          servation and Production Act (42 U.S.C. 6834(a)(2)(A))  
21          is amended by striking “the 2004 International Energy  
22          Conservation Code (in the case of residential buildings)  
23          or ASHRAE Standard 90.1–2004 (in the case of commer-  
24          cial buildings)” and inserting “the most recently published  
25          edition of the International Energy Conservation Code (in

1 the case of residential buildings) or ASHRAE Standard  
 2 90.1 (in the case of commercial buildings) on the date of  
 3 enactment of the All-of-the-Above Federal Building En-  
 4 ergy Conservation Act of 2019”.

5 (c) REVISED FEDERAL BUILDING EFFICIENCY  
 6 STANDARDS.—Section 305(a)(3) of the Energy Conserva-  
 7 tion and Production Act (42 U.S.C. 6834(a)(3)) is amend-  
 8 ed—

9 (1) by striking “(3)(A) Not later than” and all  
 10 that follows through subparagraph (B) and inserting  
 11 the following:

12 “(3) REVISED FEDERAL BUILDING ENERGY EF-  
 13 FICIENCY PERFORMANCE STANDARDS; CERTIFI-  
 14 CATION FOR GREEN BUILDINGS.—

15 “(A) REVISED FEDERAL BUILDING EN-  
 16 ERGY EFFICIENCY PERFORMANCE STAND-  
 17 ARDS.—

18 “(i) IN GENERAL.—Not later than 1  
 19 year after the date of enactment of the All-  
 20 of-the-Above Federal Building Energy  
 21 Conservation Act of 2019, the Secretary  
 22 shall establish, by regulation, revised Fed-  
 23 eral building energy efficiency performance  
 24 standards that require that—

1 “(I) unless demonstrated not to  
2 be life-cycle cost-effective for new  
3 Federal buildings and Federal build-  
4 ings with major renovations—

5 “(aa) the buildings shall be  
6 designed to achieve energy con-  
7 sumption levels that are not less  
8 than 30 percent below the levels  
9 established in the most recently  
10 published version of the  
11 ASHRAE Standard or the Inter-  
12 national Energy Conservation  
13 Code, as appropriate, on the date  
14 of enactment of the All-of-the-  
15 Above Federal Building Energy  
16 Conservation Act of 2019, unless  
17 the Secretary determines, pursu-  
18 ant to subparagraph (B), that a  
19 subsequent version of such a  
20 standard or code shall apply; and

21 “(bb) sustainable design  
22 principles are applied to the loca-  
23 tion, siting, design, and construc-  
24 tion of all new Federal buildings

1 and replacement Federal build-  
2 ings;

3 “(II) if water is used to achieve  
4 energy efficiency, water conservation  
5 technologies shall be applied to the ex-  
6 tent that the technologies are life-  
7 cycle cost-effective; and

8 “(III) if life-cycle cost-effective,  
9 as compared to other reasonably avail-  
10 able technologies, not less than 30  
11 percent of the hot water demand for  
12 each new Federal building or Federal  
13 building undergoing a major renova-  
14 tion shall be met through the installa-  
15 tion and use of solar hot water heat-  
16 ers.

17 “(B) UPDATES.—Not later than 1 year  
18 after the date of approval of each subsequent  
19 revision of the ASHRAE Standard or the Inter-  
20 national Energy Conservation Code, as appro-  
21 priate, the Secretary shall determine whether  
22 the revised standards established under sub-  
23 paragraph (A) and the Federal building energy  
24 standards established under paragraph (1)  
25 should be updated to reflect the revisions, based

1 on the energy savings and life-cycle cost-effec-  
2 tiveness of the revisions.”;

3 (2) in subparagraph (C)—

4 (A) by striking “(C) In the budget re-  
5 quest” and inserting the following:

6 “(C) BUDGET REQUEST.—In the budget  
7 request”; and

8 (B) by indenting clauses (i) and (ii) appro-  
9 priately; and

10 (3) in subparagraph (D)—

11 (A) in the matter preceding clause (i), by  
12 striking “that require that:” and inserting  
13 “that require the following:”;

14 (B) in clause (i), by striking “annually for  
15 inflation for other buildings:” in the matter pre-  
16 ceding subclause (I) and all that follows  
17 through “(III) Sustainable design principles”  
18 and inserting “annually for inflation for other  
19 buildings, sustainable design principles”;

20 (C) in clause (v), by striking “clause  
21 (i)(III)” each place it appears and inserting  
22 “clause (i)”; and

23 (D) in clause (vi)—

24 (i) by striking “subclauses (I) and  
25 (III) of”; and

1                   (ii) by striking “energy savings, sus-  
2                   tainable design, and green building per-  
3                   formance” and inserting “sustainable de-  
4                   sign and green building performance”.

5           (d) FEDERAL COMPLIANCE.—Section 306 of the En-  
6   ergy Conservation and Production Act (42 U.S.C. 6835)  
7   is amended—

8           (1) in subsection (a)—

9           (A) in paragraph (1)—

10                   (i) by striking “(1) The head” and in-  
11                   serting the following:

12                   “(1) IN GENERAL.—The head”; and

13                   (ii) by striking “assure that new Fed-  
14                   eral buildings” and inserting “ensure that  
15                   new Federal buildings and Federal build-  
16                   ings with major renovations”; and

17           (B) in paragraph (2)—

18                   (i) by striking the second sentence  
19                   and inserting the following:

20                   “(B) PROCEDURES.—The Architect of the  
21                   Capitol shall adopt procedures necessary to en-  
22                   sure that the buildings referred to in subpara-  
23                   graph (A) meet or exceed the standards de-  
24                   scribed in that subparagraph.”; and

25                   (ii) in the first sentence—

1 (I) by inserting “and Federal  
2 buildings with major renovations”  
3 after “new buildings”; and

4 (II) by striking “(2) The Fed-  
5 eral” and inserting the following:

6 “(2) APPLICABILITY.—

7 “(A) IN GENERAL.—The Federal”; and

8 (2) in subsection (b), by striking the subsection  
9 designation and heading and all that follows through  
10 “new Federal building” and inserting the following:

11 “(b) EXPENDITURES.—The head of a Federal agency  
12 may expend Federal funds for the construction of a new  
13 Federal building or a Federal building with major renova-  
14 tions”.

Calendar No. 220

116<sup>TH</sup> CONGRESS  
1<sup>ST</sup> Session

**S. 1245**

[Report No. 116-117]

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**A BILL**

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buildings, and for other purposes.

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SEPTEMBER 25, 2019

Reported with amendments