with the procedures set forth in this appendix for the rated circulator pump. Perform all calculations using raw measured values without rounding. Round CER to three significant figures. Round CEI to the hundredths decimal place. Round rated hydraulic horsepower to the less precise of the following two values: three significant figures; the fourth decimal place when expressed in units of horsepower.

6. Calculation of CEI

Determine CEI using the following equation:

$$CEI = \frac{\text{CER}}{CER_{STD}}$$

Where:

CEI = the circulator energy index (dimensionless);

CER = the circulator energy rating determined in accordance with Table 1 of this appendix (hp); and

CER_{STD} = the CER for a circulator pump that is minimally compliant with DOE's energy conservation standards with the same hydraulic horsepower as the tested pump, as determined in accordance with the specifications at paragraph (i) of § 431.465.

7. Determination of Additional Circulator Performance Parameters

7.1 To determine flow and head at BEP; pump power output (hydraulic horsepower) and driver power input at load points used in the calculation of CEI, including the rated hydraulic horsepower; and any other reported performance parameters, conduct testing according to section 1 of this appendix.

7.2 Determine the rated hydraulic horsepower as the pump power output measured at BEP and full impeller diameter for the rated pump.

7.3 Determine the true power factor at each applicable load point specified in the applicable test method listed in Table 1 of this appendix for each circulator pump control variety as a ratio of driver power input to the motor (or controls, if present) (P_i), in watts, divided by the product of the true RMS voltage in volts and the true RMS current in amps at each load point i, as shown in the following equation:

$$PF_i = \frac{P_i}{V_i \times I_i}$$

Where:

PF_i = true power factor at each load point i, dimensionless;

P_i = driver power input to the motor (or controls, if present) at each load point i, in watts;

V_i = true RMS voltage at each load point i, in volts;

I_i = true RMS current at each load point i, in amps; and

i = load point(s), defined uniquely for each circulator pump control variety as specified in the applicable test method listed in Table 1 of this appendix.

[87 FR 57299, Sept. 19, 2022]

Subpart Z—Dedicated-Purpose Pool Pump Motors

SOURCE: 86 FR 40774, July 29, 2021, unless otherwise noted.

§ 431.481 Purpose and scope.

(a) *Purpose.* This subpart contains definitions and test procedures requirements for electric motors that are dedicated-purpose pool pump motors, pursuant to Part A–1 of Title III of the Energy Policy and Conservation Act, as amended, 42 U.S.C. 6311–6317. It also identifies materials incorporated by reference in this part. This subpart does not cover other ''electric motors,'' which are addressed in subpart B of

this part, nor does it cover ''small electric motors,'' which are addressed in subpart X of this part.

(b) *Scope.* The requirements of this subpart apply to dedicated-purpose pool pump motors, as specified in paragraphs 1.2, 1.3 and 1.4 of UL 1004–10:2022 (incorporated by reference, see § 431.482).

(c) *Incorporation by reference.* In § 431.482, DOE incorporates by reference entire standards for use in this subpart; however, only the provisions of the document enumerated in an approved section are applicable within § 431.482.

[86 FR 40774, July 29, 2021, as amended at 88 FR 67041, Sept. 28, 2023]

§ 431.482 Materials incorporated by reference.

(a) Certain material is incorporated by reference into this subpart with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Department of Energy (DOE) must publish a document in the FEDERAL REGISTER and the material must be available to the public. All approved incorporation by reference (IBR) material is available for inspection at DOE, and at the National Archives and Records Administration (NARA). Contact DOE at: the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, 1000 Independence Ave SW, EE–5B, Washington, DC 20585, (202) 586–9127, *Buildings@ee.doe.gov*, *https://www.energy.gov/eere/buildings/building-technologies-office*. For information on the availability of this material at NARA, visit *www.archives.gov/federal-register/cfr/ibr-locations.html* or email *fr.inspection@nara.gov*. The material may be obtained from the sources in the following paragraphs of this section.

(b) *CSA.* Canadian Standards Association, Sales Department, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, L4W 5N6, Canada, 1–800–463–6727, or *https://www.csagroup.org/store*.

(1) CSA C747–09 (Reaffirmed 2014) (''CSA C747–09''), ''Energy efficiency test method for small motors'' as revised through August 2016, including Update No. 1; IBR approved for § 431.484.

(2) [Reserved]

(c) *UL.* Underwriters Laboratories, 333 Pfingsten Road, Northbrook, IL 60062, (841) 272–8800, or go to *https://www.ul.com*.

(1) UL 1004–10 (''UL 1004–10:2022''), *Standard for Safety for Pool Pump Motors,* Revised First Edition, Dated March 24, 2022; IBR approved for §§ 431.481 and 431.483.

(2) [Reserved]

[86 FR 40774, July 29, 2021, as amended at 88 FR 67041, Sept. 28, 2023; 88 FR 71990, Oct. 19, 2023]

§ 431.483 Definitions.

The definitions applicable to this subpart are defined in section 2 ''Glossary'' of UL 1004–10:2022 (incorporated by reference, see § 431.482). In addition, the following definition applies:

Basic model means all units of dedicated purpose pool pump motors manufactured by a single manufacturer, that are within the same equipment class, have electrical characteristics that are essentially identical, and do not have any differing physical or functional characteristics that affect energy consumption or efficiency.

[88 FR 67041, Sept. 28, 2023]

§ 431.484 Test procedure.

(a) *Scope.* Pursuant to section 343(a) of EPCA, this section provides the test procedures for measuring the efficiency of dedicated-purpose pool pump motors. (42 U.S.C. 6314) For purposes of this part and EPCA, the test procedures for measuring the efficiency of dedicated-purpose pool pump motors shall be the test procedure specified in paragraph (b) of this section.

(b) *Testing and calculations.* At such time as compliance is required with a labeling requirement or an energy conservation standard, the full-load efficiency of each dedicated-purpose pool pump motor model (inclusive of the drive, if the dedicated-purpose pool pump motor model is placed into commerce with a drive, or is unable to operate without the presence of a drive) is determined in accordance with CSA C747–09, Section 1.6 ''Scope'', Section 3

''Definitions'', Section 4 ''General requirements'', Section 5, ''General test requirements'', and Section 6 ''Test method'' (incorporated by reference, see § 431.482).

§ 431.485 Energy conservation standards.

(a) For the purpose of paragraphs (b), (c) and (d) of this section, ''THP'' means dedicated-purpose-pool pump motor total horsepower.

(b) Each dedicated-purpose pool pump motor manufactured starting on September 29, 2025, with a THP less than 0.5 THP, must have a full-load efficiency that is not less than 69 percent.

(c) Each dedicated-purpose pool pump motor manufactured starting on the dates provided in table 1 to this paragraph (c) with a THP greater than or equal to 0.5 THP must be a variable speed control dedicated-purpose pool pump motor, and must follow the requirements in paragraph (d) of this section.

TABLE 1 TO PARAGRAPH (c)

Equipment class	Compliance date
Small-size (0.5 ≤ THP <1.15)	September 28, 2027.
Standard-size (1.15 ≤ THP ≤ 5).	September 29, 2025.

(d) All dedicated-purpose pool pump motors with a THP greater than or equal to 0.5 THP and distributed in commerce with freeze protection controls, must be shipped with freeze protection disabled or with the following user-adjustable settings:

(1) The default dry-bulb air temperature setting is no greater than 40 °F;

(2) The default run time setting shall be no greater than 1 hour (before the temperature is rechecked); and

(3) The default motor speed (in revolutions per minute, or rpm) in freeze protection mode shall not be more than half of the maximum operating speed.

[88 FR 67041, Sept. 28, 2023]

PART 433—ENERGY EFFICIENCY STANDARDS FOR THE DESIGN AND CONSTRUCTION OF NEW FEDERAL COMMERCIAL AND MULTI-FAMILY HIGH-RISE RESIDENTIAL BUILDINGS

AUTHORITY: 42 U.S.C. 6831–6832, 6834–6835; 42 U.S.C. 7101 *et seq*.

SOURCE: 71 FR 70281, Dec. 4, 2006, unless otherwise noted.

§ 433.1 Purpose and scope.

(a) This part establishes an energy efficiency performance standard for the new Federal commercial and multi-family high-rise buildings, for which design for construction began on or after January 3, 2007, as required by section 305(a) of the Energy Conservation and Production Act, as amended (42 U.S.C. 6834(a)).

(b) This part also establishes a maximum allowable fossil fuel-generated energy consumption standard for new Federal buildings that are commercial or multi-family high-rise residential buildings and major renovations to Federal buildings that are commercial or multi-family high-rise residential buildings, for which design for construction began on or after May 1, 2025.

(c) This part also establishes green building certification requirements for new Federal buildings that are commercial and multi-family high-rise residential buildings and major renovations to Federal buildings that are commercial and multi-family high-rise residential buildings, for which design for construction began on or after October 14, 2015.

[71 FR 70281, Dec. 4, 2006, as amended at 79 FR 61569, Oct. 14, 2014; 89 FR 35415, May 1, 2024]

§ 433.2 Definitions.

For purposes of this part, the following terms, phrases and words are defined as follows:

ANSI means the American National Standards Institute.

ASHRAE means the American Society of Heating, Refrigerating and Air-Conditioning Engineers.

ASHRAE Baseline Building 2004 means a building that is otherwise identical to the proposed building but is designed to meet, but not exceed, the energy efficiency specifications in ANSI/ASHRAE/IESNA Standard 90.1–2004, Energy Standard for Buildings Except Low-Rise Residential Buildings, January 2004 (incorporated by reference, see § 433.3).

ASHRAE Baseline Building 2007 means a building that is otherwise identical to the proposed building but is designed to meet, but not exceed, the energy efficiency specifications in ANSI/ASHRAE/IESNA Standard 90.1–2007, Energy Standard for Buildings Except Low-Rise Residential Buildings, December 2007 (incorporated by reference, see § 433.3).

ASHRAE Baseline Building 2010 means a building that is otherwise identical to the proposed building but is designed to meet, but not exceed, the energy efficiency specifications in ANSI/ASHRAE/IESNA Standard 90.1–2010, Energy Standard for Buildings Except Low-Rise Residential Buildings, 2010 (incorporated by reference, see § 433.3).

ASHRAE Baseline Building 2013 means a building that is otherwise identical to the proposed building but is designed to meet, but not exceed, the energy efficiency specifications in ASHRAE 90.1–2013 (incorporated by reference, see § 433.3).

ASHRAE Baseline Building 2019 means a building that is otherwise identical to the proposed building but is designed to meet, but not exceed, the energy efficiency specifications in ASHRAE 90.1–2019 (incorporated by reference, see § 433.3).

Commercial and multi-family high-rise residential building means all buildings other than low-rise residential buildings.

Construction cost means all costs associated with the construction of a new Federal building. It includes, but is not limited to, the cost of preliminary planning, engineering, architectural, permitting, fiscal and economic investigations and studies, surveys, designs, plans, working drawings, specifications, procedures, and other similar actions necessary for the construction of a new Federal building. It does not include the cost of acquiring the land.

Design for construction means the stage when the energy efficiency and sustainability details (such as insulation levels, HVAC systems, water-using systems, etc.) are either explicitly determined or implicitly included in a project cost specification.

Design for renovation means the stage when the energy efficiency and sustainability details (such as insulation levels, HVAC systems, water-using systems, etc.) are either explicitly determined or implicitly included in a renovation project cost specification.

DOE means the U.S. Department of Energy.

EISA-subject building or project means, for purposes of this rule, any new Federal building or renovation project that is subject to the cost thresholds and reporting requirements in Section 433 of Energy Independence and Security Act of 2007 (EISA) ((Pub. L. 110–140, codified at 42 U.S.C. 6834(a)(3)(D)(i))).

Federal agency means any department, agency, corporation, or other entity or instrumentality of the executive branch of the Federal Government, including the United States Postal Service, the Federal National Mortgage Association, and the Federal Home Loan Mortgage Corporation.

Federal building means any building to be constructed by, or for the use of, any Federal agency. Such term shall include buildings built for the purpose

of being leased by a Federal agency and privatized military housing.

Fiscal year (FY) means the 12-month period beginning on October 1 of the year prior to the specified calendar year and ending on September 30 of the specified calendar year.

Fossil fuel-generated energy consumption means the on-site stationary consumption of fossil fuels that contribute to Scope 1 emissions for generation of electricity, heat, cooling, or steam as defined by ''Federal Greenhouse Gas Accounting and Reporting Guidance'' (Council on Environmental Quality, January 17, 2016). This includes, but is not limited to, combustion of fuels in stationary sources (*e.g.,* boilers, furnaces, turbines, and emergency generators). This term does not include mobile sources, fugitive emissions, or process emissions as defined by ''Federal Greenhouse Gas Accounting and Reporting Guidance'' (Council on Environmental Quality, January 17, 2016).

IESNA means Illuminating Engineering Society of North America.

Life-cycle cost means the total cost related to energy conservation measures of owning, operating and maintaining a building over its useful life as determined in accordance with 10 CFR part 436.

Life-cycle cost-effective means that the proposed building has a lower life-cycle cost than the life-cycle costs of the baseline building, as described by 10 CFR 436.19, or has a positive estimated net savings, as described by 10 CFR 436.20; or has a savings-to-investment ratio estimated to be greater than one, as described by 10 CFR 436.21; or has an adjusted internal rate of return, as described by 10 CFR 436.22, that is estimated to be greater than the discount rate as listed in OMB Circular Number A–94 (Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs.''

Low-rise residential building means any building three stories or less in height above grade that includes sleeping accommodations where the occupants are primarily permanent in nature (30 days or more).

Major renovation means either major renovation of all Scope 1 fossil fuel-using systems in a Federal building or major renovation of one or more Scope 1 fossil fuel-using building systems or components, as defined in this section.

Major renovation cost means all costs associated with the repairing, remodeling, improving, extending, or other changes in a federal building. It includes, but is not limited to, the cost of preliminary planning, engineering, architectural, permitting, fiscal and economic investigations and studies, surveys, designs, plans, working drawings, specifications, procedures, and other similar actions necessary for the alteration of a Federal building.

Major renovation of all Scope 1 fossil fuel-using systems in a building means construction on an existing Federal building that is so extensive that it replaces all Scope 1 fossil fuel-using systems in the building. This term includes, but is not limited to, comprehensive replacement or restoration of most or all major systems, interior work (such as ceilings, partitions, doors, floor finishes, etc.), or building elements and features.

Major renovation of a Scope 1 fossil fuel-using building system or Scope 1 fossil fuel-using component means changes to a federal building that provide significant opportunities for energy efficiency or reduction in fossil fuel-related energy consumption. This includes, but is not limited to, replacement of the HVAC system, hot water system, or cooking system, or other fossil fuel-using systems or components of the building that have a major impact on fossil fuel usage.

Multi-family high-rise residential building means a residential Federal building that contains 3 or more dwelling units and that is designed to be 4 or more stories above grade.

New Federal building means any new building (including a complete replacement of an existing building from the foundation up) to be constructed by, or for the use of, any Federal agency. Such term shall include new buildings (including a complete replacement of an existing building from the foundation up) built for the purpose of being leased by a Federal agency, and privatized military housing.

Process load means the load on a building resulting from energy consumed in support of a manufacturing, industrial, or commercial process.

Process loads do not include energy consumed maintaining comfort and amenities for the occupants of the building (including space conditioning for human comfort).

Proposed building means the design for construction of a new Federal commercial or multi-family high-rise residential building, proposed for construction, or a major renovation to a Federal commercial or multi-family high-rise residential building.

Receptacle load means the load on a building resulting from energy consumed by any equipment plugged into electrical outlets.

Shift adjustment multiplier means a multiplication factor that agencies may apply to their Maximum Allowable Fossil Fuel-Generated Energy Consumption by Building Category target based upon the weekly hours of active operation of the building. The weekly hours of operation used as a basis for the shift adjustment multiplier lookup include the time in which in the building is actively occupied and operating per its intended use type and unoccupied hours or other times of limited use (such as night-time setback hours).

Technical impracticability means achieving the fossil fuel-based energy consumption targets would:

(1) Not be feasible from an engineering design or execution standpoint due to existing physical or site constraints that prohibit modification or addition of elements or spaces;

(2) Significantly obstruct building operations and the functional needs of a building, specifically for industrial process loads, critical national security functions, mission critical information systems as defined in NIST SP 800–60 Vol. 2 Rev. 1, and research operations; or

(3) Significantly degrade energy resiliency and energy security of building operations as defined in 10 U.S.C. 101(e)(6) and 10 U.S.C. 101(e)(7) respectively.

[71 FR 70281, Dec. 4, 2006, as amended at 72 FR 72570, Dec. 21, 2007; 76 FR 49284, Aug. 10, 2011; 78 FR 40953, July 9, 2013; 80 FR 68757, Nov. 6, 2015; 87 FR 20293, Apr. 7, 2022; 89 FR 35415, May 1, 2024]

EDITORIAL NOTE: At 87 FR 20293, Apr. 7, 2022, § 433.2 was amended; however, a portion of the amendment could not be incorporated due to inaccurate amendatory instruction.

§ 433.3 Materials incorporated by reference.

(a) Certain material is incorporated by reference into this subpart with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, DOE must publish a document in the FEDERAL REGISTER and the material must be available to the public. All approved material is available for inspection at DOE, and at the National Archives and Records Administration (NARA). Contact DOE at: The U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, Sixth Floor, 950 L'Enfant Plaza SW, Washington, DC 20024, (202) 586–9127, *Buildings@ee.doe.gov*, *https://www.energy.gov/eere/buildings/building-technologies-office*. For information on the availability of this material at NARA, email: *fr.inspection@nara.gov*, or go to: *www.archives.gov/federal-register/cfr/ibr-locations.html*. The material may be obtained from the sources in the following paragraphs of this section.

(b) *ASHRAE*. American Society of Heating Refrigerating and Air-Conditioning Engineers, Inc., 180 Technology Parkway NW, Peachtree Corners, GA 30092; (404) 636–8400; *www.ashrae.org*.

(1) ANSI/ASHRAE/IESNA 90.1–2004, (''ASHRAE 90.1–2004''), Energy Standard for Buildings Except Low-Rise Residential Buildings, January 2004, ISSN 1041–2336, IBR approved for §§ 433.2, 433.100, and 433.101;

(2) ANSI/ASHRAE/IESNA Standard 90.1–2007, (''ASHRAE 90.1–2007''), Energy Standard for Buildings Except Low-Rise Residential Buildings, 2007, ISSN 1041–2336, IBR approved for §§ 433.2, 433.100, and 433.101.

(3) ANSI/ASHRAE/IESNA 90.1–2010, (''ASHRAE 90.1–2010''), Energy Standard for Buildings Except Low-Rise Residential Buildings, I–P Edition, Copyright 2010, IBR approved for §§ 433.2, 433.100, and 433.101.

(4) ANSI/ASHRAE/IES 90.1–2013, (''ASHRAE 90.1–2013''), Energy Standard for Buildings Except Low-Rise Residential Buildings, I–P Edition, Copyright 2013, IBR approved for §§ 433.2, 433.100, and 433.101.

(5) ANSI/ASHRAE/IES 90.1–2019, (''ASHRAE 90.1–2019''), Energy Standard for Buildings Except Low-Rise Residential Buildings, I–P Edition, copyright 2019, IBR approved for §§ 433.2, 433.100 and 433.101.

[76 FR 49284, Aug. 10, 2011, as amended at 78 FR 40953, July 9, 2013; 79 FR 61569, Oct. 14, 2014; 80 FR 68757, Nov. 6, 2015; 87 FR 20294, Apr. 7, 2022]

§§ 433.4–433.7 [Reserved]

§ 433.8 Life-cycle costing.

Each Federal agency shall determine life-cycle cost-effectiveness by using the procedures set out in subpart A of part 436. A Federal agency may choose to use any of four methods, including lower life-cycle costs, positive net savings, savings-to-investment ratio that is estimated to be greater than one, and an adjusted internal rate of return that is estimated to be greater than the discount rate as listed in OMB Circular Number A–94 ''Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs.''

Subpart A—Energy Efficiency Performance

SOURCE: 79 FR 61569, Oct. 14, 2014, unless otherwise noted.

§ 433.100 Energy efficiency performance standard.

(a) (1) All Federal agencies shall design new Federal buildings that are commercial and multi-family high-rise residential buildings, for which design for construction began on or after January 3, 2007, but before August 10, 2012, to:

(i) Meet ASHRAE 90.1–2004, (incorporated by reference, see § 433.3); and

(ii) If life-cycle cost-effective, achieve energy consumption levels, calculated consistent with paragraph (b) of this section, that are at least 30 percent below the levels of the ASHRAE Baseline Building 2004.

(2) All Federal agencies shall design new Federal buildings that are commercial and multi-family high-rise residential buildings, for which design for construction began on or after August 10, 2012, but before July 9, 2014, to:

(i) Meet ASHRAE 90.1–2007, (incorporated by reference, see § 433.3); and

(ii) If life-cycle cost-effective, achieve energy consumption levels, calculated consistent with paragraph (b) of this section, that are at least 30 percent below the levels of the ASHRAE Baseline Building 2007.

(3) All Federal agencies shall design new Federal buildings that are commercial and multi-family high-rise residential buildings, for which design for construction began on or after July 9, 2014, but before November 6, 2016 to:

(i) Meet ASHRAE 90.1–2010, (incorporated by reference, see § 433.3); and

(ii) If life-cycle cost-effective, achieve energy consumption levels, calculated consistent with paragraph (b) of this section, that are at least 30 percent below the levels of the ASHRAE Baseline Building 2010.

(4) All Federal agencies shall design new Federal buildings that are commercial and multi-family high-rise residential buildings, for which design for construction began on or after November 6, 2016, but before April 7, 2023, to:

(i) Meet ASHRAE 90.1–2013, (incorporated by reference, see § 433.3); and

(ii) If LCC effective, achieve energy consumption levels, calculated consistent with paragraph (b) of this section, that are at least 30 percent below the levels of the ASHRAE Baseline Building 2013.

(5) All Federal agencies shall design new Federal buildings that are commercial and multi-family high-rise residential buildings, for which design for construction began on or after April 7, 2023, to:

(i) Meet ASHRAE 90.1–2019, (incorporated by reference, see § 433.3); and

(ii) If LCC effective, achieve energy consumption levels, calculated consistent with paragraph (b) of this section, that are at least 30 percent below the levels of the ASHRAE Baseline Building 2019.

(b) If a 30 percent reduction is not LCC effective, the design of the proposed building shall be modified so as

to achieve an energy consumption level at or better than the maximum level of energy efficiency that is LCC effective, but at a minimum complies with paragraph (a) of this section.

[79 FR 61569, Oct. 14, 2014, as amended at 80 FR 68757, Nov. 6, 2015; 87 FR 20294, Apr. 7, 2022]

§ 433.101 Performance level determination.

(a)(1) For Federal buildings for which design for construction began on or after January 3, 2007, but before August 10, 2012, each Federal agency shall determine energy consumption levels for both the ASHRAE Baseline Building 2004 and proposed building by using the Performance Rating Method found in Appendix G of ASHRAE 90.1–2004 (incorporated by reference, see § 433.3), except the formula for calculating the Performance Rating in paragraph G1.2 shall read as follows:

(i) Percentage improvement = 100 × ((Baseline building consumption—Receptacle and process loads)—(Proposed building consumption—Receptacle and process loads))/(Baseline building consumption—Receptacle and process loads) (which simplifies as follows):

(ii) Percentage improvement = 100 × (Baseline building consumption—Proposed building consumption)/(Baseline building consumption—Receptacle and process loads).

(2) For Federal buildings for which design for construction began on or after August 10, 2012, but before July 9, 2014, each Federal agency shall determine energy consumption levels for both the ASHRAE Baseline Building 2007 and proposed building by using the Performance Rating Method found in Appendix G of ASHRAE 90.1–2007 (incorporated by reference, see § 433.3), except the formula for calculating the Performance Rating in paragraph G1.2 shall read as follows:

(i) Percentage improvement = 100 × ((Baseline building consumption—Receptacle and process loads)—(Proposed building consumption—Receptacle and process loads))/(Baseline building consumption—Receptacle and process loads) (which simplifies as follows):

(ii) Percentage improvement = 100 × (Baseline building consumption—Proposed building consumption)/(Baseline building consumption—Receptacle and process loads).

(3) For Federal buildings for which design for construction began on or after July 9, 2014, but before November 6, 2016 each Federal agency shall determine energy consumption levels for both the ASHRAE Baseline Building 2010 and proposed building by using the Performance Rating Method found in Appendix G of ASHRAE 90.1–2010 (incorporated by reference, see § 433.3), except the formula for calculating the Performance Rating in paragraph G1.2 shall read as follows:

(i) Percentage improvement = 100 × ((Baseline building consumption—Receptacle and process loads)—(Proposed building consumption—Receptacle and process loads))/(Baseline building consumption—Receptacle and process loads) (which simplifies as follows):

(ii) Percentage improvement = 100 × (Baseline building consumption—Proposed building consumption)/(Baseline building consumption—Receptacle and process loads).

(4) For Federal buildings for which design for construction began on or after November 6, 2016, but before April 7, 2023, each Federal agency shall determine energy consumption levels for both the ASHRAE Baseline Building 2013 and proposed building by using the Performance Rating Method found in Appendix G of ASHRAE 90.1–2013 (incorporated by reference, see § 433.3), except the formula for calculating the Performance Rating in Section G1.2 shall read as follows:

(i) Percentage improvement = 100 × ((Baseline building consumption − Receptacle and process loads) − (Proposed building consumption − Receptacle and process loads))/(Baseline building consumption − Receptacle and process loads) (which simplifies as follows):

(ii) Percentage improvement = 100 × (Baseline building consumption − Proposed building consumption)/(Baseline building consumption − Receptacle and process loads).

(5) For Federal buildings for which design for construction began on or after April 7, 2023, each Federal agency shall determine energy consumption levels for both the ASHRAE Baseline Building 2019 and proposed building by

using the Performance Rating Method found in Appendix G of ASHRAE 90.1–2019 (incorporated by reference, see § 433.3). The formula for determining the percentage improvement shall be as follows:

$$\text{Percentage Improvement} = 100 \times (1 - \text{PCI}/\text{PCIt})$$

Where

PCI = Performance Cost Index calculated in accordance with Section G1.2 of ASHRAE Standard 90.1–2019

PCIt = Performance Cost Index Target calculated by formula in Section 4.2.1.1 of ASHRAE Standard 90.1–2019

(b) Energy consumption for the purposes of calculating the 30 percent savings requirements shall include the building envelope and energy consuming systems normally specified as part of the building design by ASHRAE Standard 90.1 such as space heating, space cooling, ventilation, service water heating, and lighting, and all process and receptacle loads, except for energy-intensive process loads that are driven by mission and operational requirements, not necessarily buildings, and not influenced by conventional building energy conservation measures.

[79 FR 61569, Oct. 14, 2014, as amended at 80 FR 68757, Nov. 6, 2015; 87 FR 20294, Apr. 7, 2022]

Subpart B—Reduction in Scope 1 Fossil Fuel-Generated Energy Consumption

SOURCE: 89 FR 35416, May 1, 2024, unless otherwise noted.

§ 433.200 Scope 1 Fossil fuel-generated energy consumption requirement.

(a) *New EISA-Subject buildings.* (1) New Federal buildings that are commercial or multi-family high-rise residential buildings, for which design for construction began on or after May 1, 2025 must be designed to meet the requirements of paragraph (c) of this section if:

(i) For Federally owned public buildings or leased Federal buildings, the construction cost of the new building exceeds GSA's Annual Prospectus Thresholds that are found at *https://www.gsa.gov/real-estate/design-construction/gsa-annual-prospectus-thresholds;* or

(ii) For Federally owned non-public buildings, the cost of the building is at least $2,500,000 (in 2007 dollars, adjusted for inflation). For the purposes of calculating this threshold, projects should set the Bureau of Labor and Statistics CPI Inflation calculator to $2,500,000 in October of 2006 (to represent the value of the original cost threshold) and then set for October of the FY during which the design for construction of the project began or is set to begin.

(2) [Reserved]

(b) *Major renovations of EISA-Subject buildings.* (1) Major renovations to Federal buildings that are commercial or multi-family high-rise residential buildings, for which design for construction began on or after May 1, 2025, must be designed to meet the requirements of paragraphs (c) or (d) of this section, as applicable, if:

(i) The renovation is a major renovation to a public building as defined in 40 U.S.C. 3301 and for which transmittal of a prospectus to Congress is required under 40 U.S.C. 3307; or

(ii) The cost of the major renovation of a Federally owned building is at least $2,500,000 (in 2007 dollars, adjusted for inflation). For the purposes of calculating this threshold, projects should set the Bureau of Labor and Statistics CPI Inflation calculator to $2,500,000 in October of 2006 (to represent the value of the original cost threshold) and then set for October of the FY during which the design for construction of the project began or is set to begin. The cost of a major renovation for a Federally leased building is at least the amount listed for alterations in leased buildings that would need to transmit a prospectus to Congress under section 3307 of title 40. *See* GSA Annual Prospectus Thresholds at *https://www.gsa.gov/real-estate/design-construction/gsa-annual-prospectus-thresholds*.

(2) This subpart only applies to major renovations that meet the definition of ''major renovation of all Scope 1 fossil fuel-using systems in a federal building'' or ''major renovation of a Scope 1 fossil fuel-using building system or Scope 1 fossil fuel-using component.''

(3) For leased buildings, this subpart applies to major renovations only if the building was originally built for

the use of any Federal agency, including being leased by a Federal agency.

(4) This subpart applies only to the portions of the proposed building or proposed building systems that are being renovated and to the extent that the scope of the renovations permits compliance with the applicable requirements of this subpart. Unaltered portions of the proposed building or proposed building systems are not required to comply with this subpart.

(c) *Federal buildings that are of the type included in appendix A of this subpart.*

(1) *New Construction and Major Renovations of all Scope 1 Fossil Fuel-Using Systems in EISA-Subject Buildings.*

(i) *Design for construction began during FY 2024 through FY 2029.* For new construction or major renovations of all Scope 1 fossil fuel-using systems in a Federal building for which design for construction or renovation, as applicable, began during FY 2024 through 2029, the Scope 1 fossil fuel-generated energy consumption of the proposed building, based on the building design and calculated according to §433.201(a), must not exceed the value identified in Tables A–1a to A–2a (if targets based on emissions are used) or Tables A–1b to A–2b (if targets based on kBtu of fossil fuel usage are used) of appendix A of this subpart for the associated building type, climate zone, and fiscal year in which design for construction begins.

(A) Federal agencies may apply a shift adjustment multiplier to the values in Tables A–1a to A–2a or Tables A–1b to A–2b based on the following baseline hours of operation assumed in Tables A–1a to A–2a or Tables A–1b to A–2b. To calculate the shift adjustment multiplier, agencies shall estimate the number of shifts for their new building and multiply by the appropriate factor shown below in Table 1 of this section for their building type.

(B) The Scope 1 fossil fuel-generated energy consumption target for the building is the applicable value in either Tables A–1a to A–2a or Tables A–1b to A–2b multiplied by the shift adjustment multiplier calculated for that building.

TABLE 1—SHIFT ADJUSTMENT MULTIPLIER BY HOURS OF OPERATION AND BUILDING TYPE

Building activity type	Weekly hours of operation		
	50 or less	51 to 167	168
Admin/professional office	1	1	1.4
Bank/other financial	1	1	1.4
Government office	1	1	1.4
Medical office (non-diagnostic)	1	1	1.4
Mixed-use office	1	1	1.4
Other office	1	1	1.4
Laboratory	1	1	1.4
Distribution/shipping center	0.7	1.4	2.1
Nonrefrigerated warehouse	0.7	1.4	2.1
Convenience store	1	1	1.4
Convenience store with gas	1	1	1.4
Grocery store/food market	1	1	1.4
Other food sales	1	1	1.4
Fire station/police station	0.8	0.8	1.1
Other public order and safety	0.8	0.8	1.1
Medical office (diagnostic)	1	1	1.5
Clinic/other outpatient health	1	1	1.5
Refrigerated warehouse	1	1	1
Religious worship	0.9	1.7	1.7
Entertainment/culture	0.8	1.5	1.5
Library	0.8	1.5	1.5
Recreation	0.8	1.5	1.5
Social/meeting	0.8	1.5	1.5
Other public assembly	0.8	1.5	1.5
College/university	0.8	1.3	1.3
Elementary/middle school	0.8	1.3	1.3
High school	0.8	1.3	1.3
Preschool/daycare	0.8	1.3	1.3
Other classroom education	0.8	1.3	1.3
Fast food	0.4	1.1	2.1
Restaurant/cafeteria	0.4	1.1	2.1
Other food service	0.4	1.1	2.1
Hospital/inpatient health	1	1	1
Nursing home/assisted living	1	1	1

TABLE 1—SHIFT ADJUSTMENT MULTIPLIER BY HOURS OF OPERATION AND BUILDING TYPE—Continued

Building activity type	Weekly hours of operation		
	50 or less	51 to 167	168
Dormitory/fraternity/sorority	1	1	1
Hotel	1	1	1
Motel or inn	1	1	1
Other lodging	1	1	1
Vehicle dealership/showroom	0.8	1.2	1.8
Retail store	0.8	1.2	1.8
Other retail	0.8	1.2	1.8
Post office/postal center	0.7	1.5	1.5
Repair shop	0.7	1.5	1.5
Vehicle service/repair shop	0.7	1.5	1.5
Vehicle storage/maintenance	0.7	1.5	1.5
Other service	0.7	1.5	1.5
Strip shopping mall	1	1	1
Enclosed mall	1	1	1
Bar/Pub/Lounge	1	1	1.4
Courthouse/Probation Office	1	1	1.4

(ii) *Design for construction began during or after FY 2030.* For new construction or major renovations of all fossil fuel-using systems in an EISA-subject building for which design for construction or renovation, as applicable, began during or after FY 2030, the Scope 1 fossil fuel-generated energy consumption of the proposed building, based on building design and calculated according to § 433.201(a), must be zero.

(2) *Major Renovations of a Federal Building System or Component within an EISA-Subject Building.* System level renovations shall follow the renovation requirements in section 4.2.1.3 of the applicable building baseline energy efficiency standards listed in § 433.100 substituting the ''design for construction'' with ''design for renovation'' for the relevant date and shall replace all equipment that is included in the renovation with all electric or non-fossil fuel-using ENERGY STAR or Federal Energy Management Program (FEMP) designated products as defined in § 436.42 of this chapter. For component level renovations, Agencies shall replace all equipment that is part of the renovation with all electric or non-fossil fuel-using ENERGY STAR or FEMP designated products as defined in § 436.42 of this chapter.

(3) *Mixed-use buildings.*

(i) For Federal buildings subject to the requirements of paragraph (c)(1)(i) of this section that combine two or more building types identified in Tables 1a to 2a or Tables 1b to 2b of appendix A of this subpart, the maximum allowable fossil fuel-generated energy consumption of the proposed building is equal to the averaged applicable building type values in Tables A–1a to A–2a or Tables A–1b to A–2b weighted by floor area of the two or more building types. The equation which follows shall be used for mixed use buildings.

Equation 1: Scope 1 Fossil fuel-generated energy consumption for a mixed-use building = the sum across all building uses of (the fraction of total floor building floor area for building use i times the allowable fossil fuel-generated energy consumption for building use i)

Equation 1 may be rewritten as:

$$\textit{Scope 1 Fossil Fuel} - \textit{Generated Energy Consumption for a Mixed Use Building} = \sum_{i=1}^{n} (\textit{Fraction of Total Building Floor Area for Building Use } i \textit{ times Allowable Scope 1 Fossil Fuel} - \textit{Generated Energy Consumption for Building Use } i)$$

(ii) For example, if a proposed building for which design for construction began in FY 2026 that is to be built in climate zone 4a has a total of 200 square feet—100 square feet of which qualifies as College/University and 100 square feet of which qualifies as Laboratory—the maximum allowable Scope 1 fossil fuel-generated energy consumption is equal to:

[(100 sqft. × 3 kBtu/yr.-sqft.) + (100 sqft × 10 kBtu/yr.-sqft.)]/200 sqft. = 6.5 kBtu/yr.-sqft.

(d) *Federal buildings that are of the type not included in Appendix A of this subpart—*

(1) *Process load buildings.* For building types that are not included in any of the building types listed in Tables A–1a to A–2a or A–1b to A–2b of appendix A of this subpart, or for building types in these tables that contain significant process loads that are not likely to be found in the Commercial Buildings Energy Consumption Survey (CBECS) and qualify for exemption per § 433.202, Federal agencies must select the applicable building type, climate zone, and fiscal year in which design for construction began from Tables 1a to 2a or 1b to 2b of appendix A of this subpart that most closely corresponds to the proposed building without the process load. The estimated Scope 1 fossil fuel-generated energy consumption of the process load must be added to the maximum allowable Scope 1 fossil fuel-generated energy consumption of the applicable building type for the appropriate fiscal year and climate zone to calculate the maximum allowable Scope 1 fossil fuel-generated energy consumption for the building. The same estimated Scope 1 fossil fuel-generated energy consumption of the process load that is added to the maximum allowable Scope 1 fossil fuel-generated energy consumption of the applicable building must also be used in determining the Scope 1 fossil fuel-generated energy consumption of the proposed building.

(2) *Mixed-use buildings.* For buildings that combine two or more building types with process loads or, alternatively, that combine one or more building types with process loads with one or more building types in Tables A–1a to A–2a or A–1b to A–2b of appendix A of this subpart, the maximum allowable Scope 1 fossil fuel-generated energy consumption of the proposed building is equal to the averaged process load building values determined under paragraph (d)(1) of this section and the applicable building type values in Tables A–1a to A–2a or A–1b to A–2b of appendix A of this subpart, weighted by floor area.

[89 FR 35416, May 1, 2024, as amended at 89 FR 48266, June 6, 2024]

§ 433.201 Scope 1 Fossil fuel-generated energy consumption determination.

(a) The fossil fuel-generated energy consumption of a proposed building is calculated as follows:

Equation 2: Fossil fuel-generated energy consumption = Direct Scope 1 Fossil Fuel-Generated Consumption of Proposed Building/Floor Area

Where:

Direct Scope 1 Fossil Fuel-Generated Energy Consumption of Proposed Building equals the total Scope 1 fossil fuel-generated energy consumption of the proposed building calculated in accordance with the method required in § 433.101(a)(5) and measured in thousands of British thermal units per year (kBtu/yr), except that this term does not include fossil fuel consumption for emergency electricity generation. Agencies must include all onsite fossil fuel use or Scope 1 emissions associated with non-emergency generation from backup generators (such as those for peak shaving or peak shifting). Any energy generation or Scope 1 emissions associated with biomass fuels are excluded. Any emissions associated with natural gas for alternatively fueled vehicles (''AFVs'') (or any other alternative fuel defined at 42 U.S.C. 13211 that is provided at a Federal building) is excluded. For buildings with manufacturing or industrial process loads, the process loads should be accounted for in the analysis for the building's fossil fuel consumption and GHG emissions, but are not subject to the phase down targets.

Floor Area is the area enclosed by the exterior walls of a building, both finished and unfinished, including indoor parking facilities, basements, hallways, lobbies, stairways, and elevator shafts.

§ 433.202 Petition for downward adjustment.

(a) *New Federal buildings, major renovations of all Scope 1 fossil fuel-using*

systems, and major renovations of a Scope 1 fossil fuel-using building system or component in an EISA-subject building. (1) Upon petition by a Federal agency, the Director of FEMP may adjust the applicable maximum allowable Scope 1 fossil fuel-generated energy consumption standard with respect to a specific building, upon written certification from the head of the agency designing the building or major renovation, that the requested adjustment is the largest feasible reduction in Scope 1 fossil fuel energy consumption that can practicably be achieved in light of the specified functional needs for that building, as demonstrated by the following (which is not an exhaustive list and whose components may be further modified by guidance):

(i) A statement from the Head of the Agency or their designee requesting the petition for downward adjustment for the building or renovation, that the building or renovation reduces consumption of Scope 1 fossil fuel energy consumption in accordance with the applicable energy performance standard to the maximum extent practicable and that each fossil fuel using product included in the proposed building that is of a product category covered by the ENERGY STAR program or FEMP for designated products is an ENERGY STAR product or a product meeting the FEMP designation criteria, as applicable;

(ii) A description of the systems, technologies, and practices that were evaluated and unable to meet the required fossil fuel reduction, including a justification of why achieving the Scope 1 fossil fuel-based energy consumption targets would be technically impracticable;

(iii) Any other information the agency determines would help explain its request;

(iv) A general description of the building or major renovation, including but not limited to location, use type, floor area, stories, expected number of occupants and occupant schedule, project type, project cost, and functional needs, mission critical activity, research, and national security operations as applicable;

(v) The maximum allowable Scope 1 fossil fuel energy consumption for the building from § 433.200(c) or (d);

(vi) The estimated Scope 1 fossil fuel energy consumption of the proposed building; and

(vii) A description of the proposed building's energy-related features, such as:

(A) HVAC system or component type and configuration;

(B) HVAC equipment sizes and efficiencies;

(C) Ventilation systems or components (including outdoor air volume, controls technique, heat recovery systems, and economizers, if applicable);

(D) Service water heating system or component configuration and equipment (including solar hot water, wastewater heat recovery, and controls for circulating hot water systems, if applicable);

(E) Estimated industrial process loads; and

(F) Any other on-site fossil fuel using equipment.

(2)(i) Agencies may file one petition for a project with multiple buildings if the buildings are

(A) Of the same building, building system, or component type and of similar size, location, and functional purpose;

(B) Are being designed and constructed to the same set of targets for fossil fuel-generated energy consumption reduction; and

(C) would require similar measures to reduce fossil fuel-generated energy consumption and similar adjustment to the numeric reduction requirement.

(ii) The bundled petition must include the information in paragraph (a) of this section that pertains to all buildings, building systems, or components included in the petition and an additional description of the differences between each building, building system, or component. The agency is only required to show work for adjustment once.

(3) Petitions for downward adjustment should be submitted to *cerpetition@hq.doe.gov*, or to: U.S. Department of Energy, FEMP, Director, Clean Energy Reduction Petitions, EE–5F, 1000 Independence Ave. SW, Washington, DC 20585–0121.

(4) The Director of FEMP will make a best effort to notify the requesting agency in writing whether the petition for downward adjustment to the numeric reduction requirement is approved or rejected, in 30 calendar days of submittal, provided that the petition is complete. If the Director rejects the petition or establishes a value other than that presented in the petition, the Director will forward its reasons for rejection to the petitioning agency.

(b) *Exclusions.* The General Services Administration (GSA) may not submit petitions under paragraph (a) of this section. Agencies that are tenants of GSA buildings for which the agency, not GSA, has significant design control may submit petitions in accordance with this section.

APPENDIX A TO SUBPART B OF PART 433—MAXIMUM ALLOWABLE SCOPE 1 FOSSIL FUEL-GENERATED ENERGY CONSUMPTION

(a) For purposes of the tables in this appendix, the climate zones are the same as those listed in the performance standards required by §433.100(a)(5)(i).

(b) For purpose of appendix A, the following definitions apply:

(1) *Education* means a category of buildings used for academic or technical classroom instruction, such as elementary, middle, or high schools, and classroom buildings on college or university campuses. Buildings on education campuses for which the main use is not as a classroom are included in the category relating to their use. For example, administration buildings are part of ''Office,'' dormitories are ''Lodging,'' and libraries are ''Public Assembly.''

(2) *Food sales* means a category of buildings used for retail or wholesale of food. For example, grocery stores are ''Food Sales.''

(3) *Food service* means a category of buildings used for preparation and sale of food and beverages for consumption. For example, restaurants are ''Food Service.''

(4) *Health care (Inpatient)* means a category of buildings used as diagnostic and treatment facilities for inpatient care.

(5) *Health care (Outpatient)* means a category of buildings used as diagnostic and treatment facilities for outpatient care. Medical offices are included here if they use any type of diagnostic medical equipment (if they do not, they are categorized as an office building).

(6) *Laboratory* means a category of buildings equipped for scientific experimentation or research as well as other technical, analytical and administrative activities.

(7) *Lodging* means a category of buildings used to offer multiple accommodations for short-term or long-term residents, including skilled nursing and other residential care buildings.

(8) *Mercantile (Enclosed and Strip Malls)* means a category of shopping malls comprised of multiple connected establishments.

(9) *Multi-Family High-Rise Residential Buildings* means a category of residential buildings that contain 3 or more dwelling units and that is designed to be 4 or more stories above grade.

(10) *Office* means a category of buildings used for general office space, professional office, or administrative offices. Medical offices are included here if they do not use any type of diagnostic medical equipment (if they do, they are categorized as an outpatient health care building).

(11) *Public assembly* means a category of public or private buildings, or spaces therein, in which people gather for social or recreational activities.

(12) *Public order and safety* means a category of buildings used for the preservation of law and order or public safety.

(13) *Religious worship* means a category of buildings in which people gather for religious activities, (such as chapels, churches, mosques, synagogues, and temples).

(14) *Retail (Other Than Mall)* means a category of buildings used for the sale and display of goods other than food.

(15) *Service* means a category of buildings in which some type of service is provided, other than food service or retail sales of goods.

(16) *Warehouse and storage* means a category of buildings used to store goods, manufactured products, merchandise, raw materials, or personal belongings (such as self-storage).

Table A-1a – FY 2020-FY 2024 Maximum Allowable Fossil Fuel-Generated Energy Consumption by Building Category, Building Type and Climate Zone, Commercial Buildings and Multi-Family High-Rise Residential Buildings (CO_2e/yr-sqft)

Building Category	Climate Zone:	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
	Building Type	**Fossil Fuel-Generated Energy Use Intensity (CO_2e/yr-sqft)**																		
Education	College/ university	0.21	0.22	0.23	0.28	0.35	0.33	0.47	0.42	0.47	0.61	0.59	0.60	0.76	0.72	0.64	0.89	0.89	1.04	1.39
Education	Elementary/ middle school	0.33	0.34	0.36	0.44	0.54	0.51	0.73	0.65	0.73	0.95	0.92	0.94	1.19	1.13	1.01	1.38	1.39	1.63	2.17
Education	High school	0.02	0.02	0.06	0.17	0.34	0.29	0.62	0.50	0.62	0.96	0.90	0.94	1.33	1.22	1.04	1.62	1.63	1.99	2.82
Education	Other classroom education	0.13	0.13	0.14	0.16	0.20	0.19	0.27	0.25	0.27	0.36	0.35	0.35	0.45	0.42	0.38	0.52	0.52	0.61	0.82
Education	Preschool/ daycare	0.30	0.31	0.33	0.40	0.49	0.46	0.66	0.59	0.66	0.87	0.83	0.85	1.08	1.02	0.92	1.26	1.26	1.48	1.97
Enclosed Mall	Enclosed mall	0.35	0.35	0.38	0.46	0.57	0.54	0.76	0.68	0.76	1.00	0.96	0.99	1.25	1.18	1.06	1.45	1.46	1.71	2.27
Food Sales	Convenience store	0.33	0.34	0.36	0.43	0.54	0.51	0.73	0.65	0.73	0.95	0.91	0.94	1.19	1.12	1.00	1.38	1.39	1.62	2.16
Food Sales	Convenience store with gas station	0.24	0.24	0.26	0.31	0.39	0.36	0.52	0.46	0.52	0.68	0.65	0.67	0.85	0.80	0.72	0.98	0.99	1.16	1.54
Food Sales	Grocery store/food market	0.35	0.36	0.38	0.46	0.58	0.54	0.77	0.69	0.78	1.01	0.97	1.00	1.27	1.20	1.07	1.47	1.48	1.73	2.30
Food Sales	Other food sales	1.09	1.11	1.18	1.43	1.78	1.68	2.38	2.13	2.39	3.12	3.00	3.08	3.91	3.69	3.30	4.54	4.56	5.33	7.11
Food Service	Fast food	2.06	2.09	2.23	2.70	3.37	3.16	4.50	4.02	4.51	5.90	5.67	5.82	7.39	6.97	6.24	8.56	8.60	10.06	13.41
Food Service	Other food service	0.27	0.27	0.29	0.35	0.44	0.41	0.59	0.52	0.59	0.77	0.74	0.76	0.96	0.91	0.81	1.11	1.12	1.31	1.74
Food Service	Restaurant/ cafeteria	1.47	1.49	1.59	1.92	2.40	2.25	3.21	2.87	3.21	4.20	4.04	4.15	5.26	4.96	4.44	6.10	6.13	7.17	9.56
Inpatient Health Care	Hospital/ inpatient health	1.06	1.08	1.13	1.31	1.56	1.48	1.99	1.81	2.00	2.53	2.44	2.50	3.10	2.93	2.66	3.54	3.56	4.12	5.40
Laboratory	Laboratory	0.79	0.80	0.85	1.03	1.28	1.21	1.72	1.53	1.72	2.25	2.16	2.22	2.82	2.66	2.38	3.26	3.28	3.83	5.11
Lodging	Dormitory/frat ernity/sorority	0.51	0.51	0.55	0.66	0.83	0.78	1.10	0.99	1.11	1.45	1.39	1.43	1.81	1.71	1.53	2.10	2.11	2.47	3.29
Lodging	Hotel	0.46	0.47	0.50	0.60	0.75	0.71	1.00	0.90	1.01	1.32	1.26	1.30	1.65	1.55	1.39	1.91	1.92	2.24	2.99
Lodging	Motel or inn	0.60	0.61	0.65	0.78	0.98	0.92	1.31	1.17	1.31	1.71	1.65	1.69	2.14	2.02	1.81	2.49	2.50	2.92	3.90
Lodging	Other lodging	0.23	0.24	0.25	0.30	0.38	0.36	0.51	0.45	0.51	0.66	0.64	0.65	0.83	0.78	0.70	0.96	0.97	1.13	1.51
Nursing	Nursing home/ assisted living	0.82	0.83	0.88	1.07	1.33	1.25	1.78	1.60	1.79	2.34	2.25	2.31	2.93	2.76	2.47	3.39	3.41	3.99	5.32
Office	Administrative/	0.30	0.31	0.33	0.39	0.49	0.46	0.66	0.59	0.66	0.86	0.83	0.85	1.08	1.02	0.91	1.25	1.26	1.47	1.96

Building Category	Climate Zone:	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
	Building Type	Fossil Fuel-Generated Energy Use Intensity (CO_2e/yr-sqft)																		
	professional office																			
Office	Bank/other financial	0.18	0.19	0.20	0.24	0.30	0.28	0.40	0.36	0.40	0.53	0.50	0.52	0.66	0.62	0.56	0.76	0.77	0.90	1.19
Office	Government office	0.31	0.31	0.33	0.40	0.50	0.47	0.67	0.60	0.67	0.88	0.84	0.87	1.10	1.04	0.93	1.27	1.28	1.50	2.00
Office	Medical office (non-diagnostic)	0.34	0.35	0.37	0.45	0.56	0.52	0.74	0.66	0.74	0.97	0.94	0.96	1.22	1.15	1.03	1.41	1.42	1.66	2.21
Office	Mixed-use office	0.26	0.27	0.28	0.34	0.43	0.40	0.58	0.51	0.58	0.75	0.72	0.74	0.94	0.89	0.80	1.10	1.10	1.29	1.72
Office	Other office	0.40	0.40	0.43	0.52	0.65	0.61	0.86	0.77	0.87	1.13	1.09	1.12	1.42	1.34	1.20	1.64	1.65	1.93	2.58
Outpatient Health Care	Clinic/other outpatient health	0.25	0.25	0.27	0.33	0.41	0.38	0.55	0.49	0.55	0.71	0.69	0.71	0.90	0.84	0.76	1.04	1.04	1.22	1.63
Outpatient Health Care	Medical office (diagnostic)	0.27	0.27	0.29	0.35	0.44	0.41	0.58	0.52	0.59	0.77	0.74	0.76	0.96	0.90	0.81	1.11	1.12	1.31	1.74
Public Assembly	Entertainment/ culture	0.20	0.20	0.21	0.25	0.32	0.30	0.43	0.38	0.43	0.56	0.54	0.55	0.70	0.66	0.59	0.81	0.81	0.95	1.27
Public Assembly	Library	0.23	0.24	0.25	0.30	0.38	0.36	0.51	0.45	0.51	0.67	0.64	0.66	0.83	0.79	0.70	0.97	0.97	1.14	1.51
Public Assembly	Other public assembly	0.23	0.24	0.25	0.31	0.38	0.36	0.51	0.46	0.51	0.67	0.64	0.66	0.84	0.79	0.71	0.97	0.97	1.14	1.52
Public Assembly	Recreation	0.24	0.24	0.26	0.31	0.39	0.37	0.53	0.47	0.53	0.69	0.66	0.68	0.86	0.81	0.73	1.00	1.00	1.17	1.57
Public Assembly	Social/meeting	0.30	0.30	0.32	0.39	0.49	0.46	0.65	0.58	0.65	0.85	0.82	0.84	1.06	1.00	0.90	1.23	1.24	1.45	1.93
Public Order & Safety	Fire station/ police station	0.54	0.55	0.58	0.70	0.88	0.83	1.17	1.05	1.18	1.54	1.48	1.52	1.93	1.82	1.63	2.23	2.25	2.62	3.50
Public Order & Safety	Other public order and safety	0.26	0.27	0.29	0.35	0.43	0.40	0.58	0.52	0.58	0.75	0.73	0.74	0.95	0.89	0.80	1.10	1.10	1.29	1.72
Religious Worship	Religious worship	0.24	0.24	0.26	0.31	0.39	0.37	0.52	0.47	0.52	0.68	0.66	0.67	0.85	0.81	0.72	0.99	1.00	1.16	1.55
Retail (except malls)	Other retail	0.40	0.40	0.43	0.52	0.65	0.61	0.86	0.77	0.86	1.13	1.09	1.12	1.42	1.34	1.20	1.64	1.65	1.93	2.57
Retail (except malls)	Retail store	0.01	0.01	0.04	0.11	0.22	0.18	0.40	0.32	0.40	0.62	0.58	0.61	0.85	0.79	0.67	1.04	1.05	1.28	1.81
Retail (except malls)	Vehicle dealership/ showroom	0.56	0.57	0.60	0.73	0.91	0.86	1.22	1.09	1.22	1.60	1.54	1.58	2.00	1.89	1.69	2.32	2.33	2.72	3.63
Service	Other service	0.58	0.59	0.63	0.76	0.95	0.89	1.27	1.13	1.27	1.66	1.60	1.64	2.08	1.96	1.76	2.41	2.42	2.83	3.78

Building Category	Climate Zone:	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
	Building Type	Fossil Fuel-Generated Energy Use Intensity (CO_2e/yr-sqft)																		
Service	Post office/postal center	0.24	0.25	0.26	0.32	0.40	0.37	0.53	0.47	0.53	0.69	0.67	0.69	0.87	0.82	0.73	1.01	1.01	1.19	1.58
Service	Repair shop	0.18	0.18	0.20	0.24	0.30	0.28	0.40	0.35	0.40	0.52	0.50	0.51	0.65	0.61	0.55	0.75	0.76	0.89	1.18
Service	Vehicle service/repair shop	0.37	0.37	0.39	0.48	0.60	0.56	0.80	0.71	0.80	1.04	1.00	1.03	1.31	1.23	1.10	1.51	1.52	1.78	2.37
Service	Vehicle storage/maintenance	0.29	0.30	0.31	0.38	0.47	0.45	0.63	0.57	0.64	0.83	0.80	0.82	1.04	0.98	0.88	1.21	1.21	1.42	1.89
Strip Shopping Mall	Strip shopping mall	0.35	0.35	0.38	0.45	0.57	0.53	0.76	0.68	0.76	0.99	0.96	0.98	1.25	1.17	1.05	1.44	1.45	1.70	2.26
Warehouse	Distribution/ shipping center	0.20	0.20	0.21	0.26	0.32	0.31	0.43	0.39	0.44	0.57	0.55	0.56	0.71	0.67	0.60	0.83	0.83	0.97	1.29
Warehouse	Non-refrigerated warehouse	0.19	0.19	0.20	0.25	0.31	0.29	0.41	0.37	0.41	0.54	0.52	0.53	0.68	0.64	0.57	0.78	0.79	0.92	1.23
Warehouse	Refrigerated warehouse	0.03	0.04	0.04	0.05	0.06	0.05	0.08	0.07	0.08	0.10	0.10	0.10	0.12	0.12	0.11	0.14	0.15	0.17	0.23

Table A-1b – FY 2020-FY 2024 Maximum Allowable Fossil Fuel-Generated Energy Consumption by Building Category, Building Type and Climate Zone, Commercial Buildings and Multi-Family High-Rise Residential Buildings (source kBtu/yr-sqft)

Building Category	Climate Zone:	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
	Building Type	Fossil Fuel-Generated Energy Use Intensity (site kBtu/yr-sqft)																		
Education	College/ university	2	2	2	3	3	3	4	4	4	6	5	5	7	7	6	8	8	9	13
Education	Elementary/ middle school	3	3	3	4	5	5	7	6	7	9	8	9	11	10	9	13	13	15	20
Education	High school	0	0	1	2	3	3	6	5	6	9	8	9	12	11	9	15	15	18	26
Education	Other classroom education	1	1	1	1	2	2	2	2	2	3	3	3	4	4	3	5	5	6	7
Education	Preschool/ daycare	3	3	3	4	4	4	6	5	6	8	8	8	10	9	8	11	11	13	18
Enclosed Mall	Enclosed mall	3	3	3	4	5	5	7	6	7	9	9	9	11	11	10	13	13	15	21
Food Sales	Convenience store	3	3	3	4	5	5	7	6	7	9	8	9	11	10	9	13	13	15	20
Food Sales	Convenience store with gas station	2	2	2	3	4	3	5	4	5	6	6	6	8	7	7	9	9	10	14
Food Sales	Grocery store/ food market	3	3	3	4	5	5	7	6	7	9	9	9	12	11	10	13	13	16	21
Food Sales	Other food sales	10	10	11	13	16	15	22	19	22	28	27	28	36	33	30	41	41	48	64
Food Service	Fast food	19	19	20	24	31	29	41	37	41	54	51	53	67	63	57	78	78	91	122
Food Service	Other food service	2	2	3	3	4	4	5	5	5	7	7	7	9	8	7	10	10	12	16
Food Service	Restaurant/ cafeteria	13	14	14	17	22	20	29	26	29	38	37	38	48	45	40	55	56	65	87
Inpatient Health Care	Hospital/ inpatient health	10	10	10	12	14	13	18	16	18	23	22	23	28	27	24	32	32	37	49
Laboratory	Laboratory	7	7	8	9	12	11	16	14	16	20	20	20	26	24	22	30	30	35	46
Lodging	Dormitory/ fraternity/ sorority	5	5	5	6	7	7	10	9	10	13	13	13	16	16	14	19	19	22	30
Lodging	Hotel	4	4	5	5	7	6	9	8	9	12	11	12	15	14	13	17	17	20	27
Lodging	Motel or inn	5	6	6	7	9	8	12	11	12	16	15	15	19	18	16	23	23	27	35
Lodging	Other lodging	2	2	2	3	3	3	5	4	5	6	6	6	8	7	6	9	9	10	14
Nursing	Nursing home/ assisted living	7	8	8	10	12	11	16	14	16	21	20	21	27	25	22	31	31	36	48
Office	Administrative/	3	3	3	4	4	4	6	5	6	8	8	8	10	9	8	11	11	13	18

Building Category	Climate Zone:	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
	Building Type	Fossil Fuel-Generated Energy Use Intensity (site kBtu/yr-sqft)																		
Office	professional office	2	2	2	2	3	3	4	3	4	5	5	5	6	6	5	7	7	8	11
	Bank/ other financial	3	3	3	4	5	4	6	5	6	8	8	8	10	9	8	12	12	14	18
	Government office	3	3	3	4	5	5	7	6	7	9	8	9	11	10	9	13	13	15	20
	Medical office (non-diagnostic)	2	2	2	3	4	3	5	4	5	6	6	6	8	8	7	9	9	11	15
	Mixed-use office	4	4	4	5	6	6	8	7	8	10	10	10	13	12	11	15	15	18	23
	Other office	2	2	3	3	4	4	5	5	5	7	7	7	9	8	7	10	10	12	16
Outpatient Health Care	Clinic/other outpatient health	2	2	3	3	4	3	5	4	5	6	6	6	8	8	7	9	9	11	15
Outpatient Health Care	Medical office (diagnostic)	2	2	3	3	4	4	5	5	5	7	7	7	9	8	7	10	10	12	16
Public Assembly	Entertainment/ culture	2	2	2	2	3	3	4	3	4	5	5	5	6	6	5	7	7	9	11
Public Assembly	Library	2	2	2	3	3	3	5	4	5	6	6	6	8	7	6	9	9	10	14
Public Assembly	Other public assembly	2	2	2	3	3	3	5	4	5	6	6	6	8	7	6	9	9	10	14
Public Assembly	Recreation	2	2	2	3	4	3	5	4	5	6	6	6	8	7	7	9	9	11	14
Public Assembly	Social/meeting	3	3	3	4	4	4	6	5	6	8	7	8	10	9	8	11	11	13	18
Public Order & Safety	Fire station/ police station	5	5	5	6	8	7	11	10	11	14	13	14	17	16	15	20	20	24	32
Public Order & Safety	Other public order and safety	2	2	3	3	4	4	5	5	5	7	7	7	9	8	7	10	10	12	16
Religious Worship	Religious worship	2	2	2	3	4	3	5	4	5	6	6	6	8	7	7	9	9	11	14
Retail (except malls)	Other retail	4	4	4	5	6	6	8	7	8	10	10	10	13	12	11	15	15	17	23
Retail (except malls)	Retail store	0	0	0	1	2	2	4	3	4	6	5	5	8	7	6	9	9	12	16
Retail (except malls)	Vehicle dealership/ showroom	5	5	5	7	8	8	11	10	11	14	14	14	18	17	15	21	21	25	33
Service	Other service	5	5	6	7	9	8	12	10	12	15	14	15	19	18	16	22	22	26	34

Building Category	Climate Zone:	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
	Building Type	Fossil Fuel-Generated Energy Use Intensity (site kBtu/yr-sqft)																		
Service	Post office/ postal center	2	2	2	3	4	3	5	4	5	6	6	6	8	7	7	9	9	11	14
Service	Repair shop	2	2	2	2	3	3	4	3	4	5	5	5	6	6	5	7	7	8	11
Service	Vehicle service/ repair shop	3	3	4	4	5	5	7	6	7	9	9	9	12	11	10	14	14	16	22
Service	Vehicle storage/ maintenance	3	3	3	3	4	4	6	5	6	8	7	7	9	9	8	11	11	13	17
Strip Shopping Mall	Strip shopping mall	3	3	3	4	5	5	7	6	7	9	9	9	11	11	10	13	13	15	21
Warehouse	Distribution/ shipping center	2	2	2	2	3	3	4	4	4	5	5	5	6	6	5	7	8	9	12
Warehouse	Non-refrigerated warehouse	2	2	2	2	3	3	4	3	4	5	5	5	6	6	5	7	7	8	11
Warehouse	Refrigerated warehouse	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	2	2

Table A-2a – FY 2025-FY 2029 Maximum Allowable Fossil Fuel-Generated Energy Consumption by Building Category, Building Type and Climate Zone, Commercial Buildings and Multi-Family High-Rise Residential Buildings (CO_2e/yr-sqft)

Building Category	Climate Zone:	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
	Building Type	**Fossil Fuel-Generated Energy Use Intensity (CO_2e/yr-sqft)**																		
Education	College/ university	0.11	0.11	0.12	0.14	0.17	0.16	0.23	0.21	0.23	0.30	0.29	0.30	0.38	0.36	0.32	0.44	0.44	0.52	0.69
Education	Elementary/ middle school	0.17	0.17	0.18	0.22	0.27	0.26	0.36	0.33	0.36	0.48	0.46	0.47	0.60	0.56	0.50	0.69	0.70	0.81	1.08
Education	High school	0.01	0.01	0.03	0.09	0.17	0.14	0.31	0.25	0.31	0.48	0.45	0.47	0.66	0.61	0.52	0.81	0.81	0.99	1.41
Education	Other classroom education	0.06	0.06	0.07	0.08	0.10	0.10	0.14	0.12	0.14	0.18	0.17	0.18	0.22	0.21	0.19	0.26	0.26	0.31	0.41
Education	Preschool/dayc are	0.15	0.15	0.16	0.20	0.25	0.23	0.33	0.30	0.33	0.43	0.42	0.43	0.54	0.51	0.46	0.63	0.63	0.74	0.98
Enclosed Mall	Enclosed mall	0.17	0.18	0.19	0.23	0.29	0.27	0.38	0.34	0.38	0.50	0.48	0.49	0.63	0.59	0.53	0.73	0.73	0.85	1.14
Food Sales	Convenience store	0.17	0.17	0.18	0.22	0.27	0.25	0.36	0.32	0.36	0.48	0.46	0.47	0.60	0.56	0.50	0.69	0.69	0.81	1.08
Food Sales	Convenience store with gas station	0.12	0.12	0.13	0.15	0.19	0.18	0.26	0.23	0.26	0.34	0.33	0.33	0.42	0.40	0.36	0.49	0.49	0.58	0.77
Food Sales	Grocery store/ food market	0.18	0.18	0.19	0.23	0.29	0.27	0.39	0.35	0.39	0.51	0.49	0.50	0.63	0.60	0.54	0.74	0.74	0.86	1.15
Food Sales	Other food sales	0.55	0.55	0.59	0.71	0.89	0.84	1.19	1.07	1.19	1.56	1.50	1.54	1.96	1.85	1.65	2.27	2.28	2.66	3.55
Food Service	Fast food	1.03	1.05	1.11	1.35	1.68	1.58	2.25	2.01	2.26	2.95	2.83	2.91	3.69	3.48	3.12	4.28	4.30	5.03	6.71
Food Service	Other food service	0.13	0.14	0.14	0.18	0.22	0.21	0.29	0.26	0.29	0.38	0.37	0.38	0.48	0.45	0.41	0.56	0.56	0.65	0.87
Food Service	Restaurant/cafe teria	0.74	0.75	0.79	0.96	1.20	1.13	1.60	1.43	1.61	2.10	2.02	2.07	2.63	2.48	2.22	3.05	3.06	3.58	4.78
Inpatient Health Care	Hospital/ inpatient health	0.53	0.54	0.56	0.65	0.78	0.74	1.00	0.91	1.00	1.26	1.22	1.25	1.55	1.47	1.33	1.77	1.78	2.06	2.70
Laboratory	Laboratory	0.39	0.40	0.42	0.51	0.64	0.60	0.86	0.77	0.86	1.12	1.08	1.11	1.41	1.33	1.19	1.63	1.64	1.92	2.56
Lodging	Dormitory/ fraternity/ sorority	0.25	0.26	0.27	0.33	0.41	0.39	0.55	0.49	0.55	0.72	0.70	0.71	0.91	0.85	0.76	1.05	1.06	1.23	1.65
Lodging	Hotel	0.23	0.23	0.25	0.30	0.38	0.35	0.50	0.45	0.50	0.66	0.63	0.65	0.82	0.78	0.70	0.96	0.96	1.12	1.50
Lodging	Motel or inn	0.30	0.30	0.32	0.39	0.49	0.46	0.65	0.58	0.66	0.86	0.82	0.84	1.07	1.01	0.91	1.24	1.25	1.46	1.95
Lodging	Other lodging	0.12	0.12	0.13	0.15	0.19	0.18	0.25	0.23	0.25	0.33	0.32	0.33	0.42	0.39	0.35	0.48	0.48	0.57	0.75
Nursing	Nursing home/ assisted living	0.41	0.42	0.44	0.53	0.67	0.63	0.89	0.80	0.89	1.17	1.12	1.15	1.46	1.38	1.24	1.70	1.71	1.99	2.66

Building Category	Climate Zone:	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
	Building Type	Fossil Fuel-Generated Energy Use Intensity (CO_2e/yr-sqft)																		
Office	Administrative/ professional office	0.15	0.15	0.16	0.20	0.25	0.23	0.33	0.29	0.33	0.43	0.41	0.43	0.54	0.51	0.46	0.63	0.63	0.74	0.98
Office	Bank/other financial	0.09	0.09	0.10	0.12	0.15	0.14	0.20	0.18	0.20	0.26	0.25	0.26	0.33	0.31	0.28	0.38	0.38	0.45	0.60
Office	Government office	0.15	0.16	0.17	0.20	0.25	0.24	0.33	0.30	0.34	0.44	0.42	0.43	0.55	0.52	0.46	0.64	0.64	0.75	1.00
Office	Medical office (non-diagnostic)	0.17	0.17	0.18	0.22	0.28	0.26	0.37	0.33	0.37	0.49	0.47	0.48	0.61	0.58	0.51	0.71	0.71	0.83	1.11
Office	Mixed-use office	0.13	0.13	0.14	0.17	0.22	0.20	0.29	0.26	0.29	0.38	0.36	0.37	0.47	0.45	0.40	0.55	0.55	0.64	0.86
Office	Other office	0.20	0.20	0.21	0.26	0.32	0.30	0.43	0.39	0.43	0.57	0.54	0.56	0.71	0.67	0.60	0.82	0.83	0.97	1.29
Outpatient Health Care	Clinic/ other outpatient health	0.13	0.13	0.13	0.16	0.20	0.19	0.27	0.24	0.27	0.36	0.34	0.35	0.45	0.42	0.38	0.52	0.52	0.61	0.81
Outpatient Health Care	Medical office (diagnostic)	0.13	0.14	0.14	0.18	0.22	0.21	0.29	0.26	0.29	0.38	0.37	0.38	0.48	0.45	0.41	0.56	0.56	0.65	0.87
Public Assembly	Entertainment/ culture	0.10	0.10	0.11	0.13	0.16	0.15	0.21	0.19	0.21	0.28	0.27	0.27	0.35	0.33	0.29	0.40	0.41	0.48	0.63
Public Assembly	Library	0.12	0.12	0.13	0.15	0.19	0.18	0.25	0.23	0.25	0.33	0.32	0.33	0.42	0.39	0.35	0.48	0.49	0.57	0.76
Public Assembly	Other public assembly	0.12	0.12	0.13	0.15	0.19	0.18	0.25	0.23	0.26	0.33	0.32	0.33	0.42	0.39	0.35	0.49	0.49	0.57	0.76
Public Assembly	Recreation	0.12	0.12	0.13	0.16	0.20	0.18	0.26	0.23	0.26	0.34	0.33	0.34	0.43	0.41	0.36	0.50	0.50	0.59	0.78
Public Assembly	Social/ meeting	0.15	0.15	0.16	0.19	0.24	0.23	0.32	0.29	0.33	0.42	0.41	0.42	0.53	0.50	0.45	0.62	0.62	0.72	0.97
Public Order & Safety	Fire station /police station	0.27	0.27	0.29	0.35	0.44	0.41	0.59	0.53	0.59	0.77	0.74	0.76	0.96	0.91	0.81	1.12	1.12	1.31	1.75
Public Order & Safety	Other public order and safety	0.13	0.13	0.14	0.17	0.22	0.20	0.29	0.26	0.29	0.38	0.36	0.37	0.47	0.45	0.40	0.55	0.55	0.64	0.86
Religious Worship	Religious worship	0.12	0.12	0.13	0.16	0.19	0.18	0.26	0.23	0.26	0.34	0.33	0.34	0.43	0.40	0.36	0.50	0.50	0.58	0.78
Retail (except malls)	Other retail	0.20	0.20	0.21	0.26	0.32	0.30	0.43	0.39	0.43	0.57	0.54	0.56	0.71	0.67	0.60	0.82	0.82	0.96	1.29
Retail (except malls)	Retail store	0.01	0.01	0.02	0.06	0.11	0.09	0.20	0.16	0.20	0.31	0.29	0.30	0.43	0.39	0.34	0.52	0.52	0.64	0.90
Retail (except malls)	Vehicle dealership/ showroom	0.28	0.28	0.30	0.37	0.46	0.43	0.61	0.55	0.61	0.80	0.77	0.79	1.00	0.94	0.84	1.16	1.17	1.36	1.82

Building Category	Climate Zone:	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
	Building Type	Fossil Fuel-Generated Energy Use Intensity (CO_2e/yr-sqft)																		
Service	Other service	0.29	0.29	0.31	0.38	0.47	0.45	0.63	0.57	0.64	0.83	0.80	0.82	1.04	0.98	0.88	1.21	1.21	1.42	1.89
Service	Post office/ postal center	0.12	0.12	0.13	0.16	0.20	0.19	0.27	0.24	0.27	0.35	0.33	0.34	0.44	0.41	0.37	0.50	0.51	0.59	0.79
Service	Repair shop	0.09	0.09	0.10	0.12	0.15	0.14	0.20	0.18	0.20	0.26	0.25	0.26	0.33	0.31	0.27	0.38	0.38	0.44	0.59
Service	Vehicle service/ repair shop	0.18	0.19	0.20	0.24	0.30	0.28	0.40	0.36	0.40	0.52	0.50	0.51	0.65	0.62	0.55	0.76	0.76	0.89	1.19
Service	Vehicle storage/ maintenance	0.15	0.15	0.16	0.19	0.24	0.22	0.32	0.28	0.32	0.42	0.40	0.41	0.52	0.49	0.44	0.60	0.61	0.71	0.95
Strip Shopping Mall	Strip shopping mall	0.17	0.18	0.19	0.23	0.28	0.27	0.38	0.34	0.38	0.50	0.48	0.49	0.62	0.59	0.53	0.72	0.73	0.85	1.13
Warehouse	Distribution/ shipping center	0.10	0.10	0.11	0.13	0.16	0.15	0.22	0.19	0.22	0.28	0.27	0.28	0.36	0.34	0.30	0.41	0.41	0.49	0.65
Warehouse	Non-refrigerated warehouse	0.09	0.10	0.10	0.12	0.15	0.14	0.21	0.18	0.21	0.27	0.26	0.27	0.34	0.32	0.29	0.39	0.39	0.46	0.61
Warehouse	Refrigerated warehouse	0.02	0.02	0.02	0.02	0.03	0.03	0.04	0.03	0.04	0.05	0.05	0.05	0.06	0.06	0.05	0.07	0.07	0.08	0.11

Building Category	Climate Zone:	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
	Building Type	Fossil Fuel-Generated Energy Use Intensity (site kBtu/yr-sqft)																		
Office	Bank/ other financial	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	4	5
Office	Government office	1	1	2	2	2	2	3	3	3	4	4	4	5	5	4	6	6	7	9
Office	Medical office (non-diagnostic)	2	2	2	2	3	2	3	3	3	4	4	4	6	5	5	6	6	8	10
Office	Mixed-use office	1	1	1	2	2	2	3	2	3	3	3	3	4	4	4	5	5	6	8
Office	Other office	2	2	2	2	3	3	4	4	4	5	5	5	6	6	5	7	7	9	12
Outpatient Health Care	Clinic/ other outpatient health	1	1	1	1	2	2	2	2	2	3	3	3	4	4	3	5	5	6	7
Outpatient Health Care	Medical office (diagnostic)	1	1	1	2	2	2	3	2	3	3	3	3	4	4	4	5	5	6	8
Public Assembly	Entertainment/ culture	1	1	1	1	1	1	2	2	2	3	2	2	3	3	3	4	4	4	6
Public Assembly	Library	1	1	1	1	2	2	2	2	2	3	3	3	4	4	3	4	4	5	7
Public Assembly	Other public assembly	1	1	1	1	2	2	2	2	2	3	3	3	4	4	3	4	4	5	7
Public Assembly	Recreation	1	1	1	1	2	2	2	2	2	3	3	3	4	4	3	5	5	5	7
Public Assembly	Social/meeting	1	1	1	2	2	2	3	3	3	4	4	4	5	5	4	6	6	7	9
Public Order & Safety	Fire station/ police station	2	2	3	3	4	4	5	5	5	7	7	7	9	8	7	10	10	12	16
Public Order & Safety	Other public order and safety	1	1	1	2	2	2	3	2	3	3	3	3	4	4	4	5	5	6	8
Religious Worship	Religious worship	1	1	1	1	2	2	2	2	2	3	3	3	4	4	3	4	5	5	7
Retail (except malls)	Other retail	2	2	2	2	3	3	4	3	4	5	5	5	6	6	5	7	7	9	12
Retail (except malls)	Retail store	0	0	0	1	1	1	2	1	2	3	3	3	4	4	3	5	5	6	8
Retail (except malls)	Vehicle dealership/ showroom	3	3	3	3	4	4	6	5	6	7	7	7	9	9	8	11	11	12	16
Service	Other service	3	3	3	3	4	4	6	5	6	8	7	7	9	9	8	11	11	13	17
Service	Post office/ postal center	1	1	1	1	2	2	2	2	2	3	3	3	4	4	3	5	5	5	7