



2018 International Energy Conservation Code

Statewide Alternate Methods are approved by the division administrator in consultation with the appropriate advisory board. The advisory board's review includes technical and scientific facts of the proposed alternate method. In addition:

- *Building officials shall approve the use of any material, design or method of construction addressed in a statewide alternate method;*
- *The decision to use a statewide alternate method is at the discretion of the applicant; and*
- *Statewide alternate methods do not limit the authority of the building official to consider other proposed alternate methods encompassing the same subject matter.*

Code and edition: 2019 Oregon Structural Specialty Code (OSSC), Chapter 13, Energy provisions
2018 International Energy Conservation Code (IECC)

Date: October 2019

Initiated by: Building Codes Division

Subject Allow commercial structures the use of the *2018 International Energy Conservation Code (IECC)* as an alternate method to the provisions of Chapter 13 of the *2019 Oregon Structural Specialty Code (OSSC)*.

Background

Chapter 13 of the 2019 OSSC, based on the 2016 edition of *ANSI/ASHRAE/IES Standard 90.1* (Standard 90.1), is the adopted energy code for the State of Oregon. This alternate method will allow designers, contractors, and owners to voluntarily use the 2018 IECC as an additional design choice. The adoption of Standard 90.1 is new to Oregon. The 2014 and earlier Oregon energy code provisions have been based on the IECC.

Discussion

Oregon Building Codes Division finds the 2018 IECC to be a contemporary building code advancing the public safety and general welfare through timely evaluation and recognition of the latest advancements in construction techniques, energy efficiency, and emerging science and technology related to the built environment. The division anticipates adopting the 2019 edition of Standard 90.1 in October 2020. This statewide alternate method is intended to create an additional design choice.

Conclusion

Accordingly, the 2018 IECC serves as an effective alternative to Chapter 13 of the 2019 OSSC for the construction of commercial buildings in Oregon subject to the following:

1. The use of this alternate method constitutes a separate compliance path from Chapter 13 of the 2019 OSSC in that designs must comply with the 2018 IECC in its entirety. Limited cross-over applications are allowed where approved by the building official.
2. Specified existing Oregon amendments as noted below are considered part of this ruling.



The technical and scientific facts for this statewide alternate method are approved.

(Signature on file)

10/23/2019

Mark Long, Administrator
Building Codes Division

Date

The following Oregon amendments are made part of the 2018 IECC statewide alternate method:

Commercial Provisions:

Chapter 1 [CE]

Chapter one of the 2018 IECC is deleted in its entirety and replaced with chapter one of the 2019 OSSC and the following revisions:

- **Replace Section 101.1:**

101.1 Oregon Energy Statewide Alternate Method. The 2018 International Energy Conservation Code, herein after referred to as “this code”, shall be an alternate compliance path that shall serve as, and replace, Chapter 13 of the Oregon Structural Specialty Code (OSSC). These provisions shall apply to any structure constructed under the *Building Code*. Chapter 1 of the OSSC shall apply with the following modifications.

- **Replace Section 102.4:**

102.4 Referenced codes and standards. The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections 102.4.1 and 102.4.2.

Exception: Where enforcement of a code provision would violate the conditions of the listing of the equipment or appliance, the conditions of the listing and manufacturer’s instructions shall apply.

References to the *International Building Code* or the *Building Code* shall mean the *Oregon Structural Specialty Code* as adopted by OAR 918-460-0100.

References to the *International Electrical Code*, the *NFPA 70*, or the *Electrical Code* shall mean the *Oregon Electrical Specialty Code* as adopted by OAR 918-400-0455.

References to the *International Fuel Gas Code* shall mean the *Oregon Mechanical Specialty Code, Appendix C* as adopted by OAR 918-440-0010.

References to the *International Mechanical Code* or the *Mechanical Code* shall mean the *Oregon Mechanical Specialty Code* as adopted by OAR 918-440-0010.

References to the *International Plumbing Code* or the *Plumbing Code* shall mean the *Oregon Plumbing Specialty Code* as adopted by OAR 918-750-0110.

- **Add Section 102.6.1.1:**

102.6.1.1 Energy compliance for existing structures. Except as specified in Chapter 1, the provisions of this code shall not be used to require the removal, *alteration* or abandonment of, nor prevent the continued use and maintenance of, an existing building or building system lawfully in existence at the time of adoption of this code. Additions, alterations, renovations or repairs to an existing building, building system or portion thereof shall conform to the provisions of this code as they relate to energy provisions for new construction without requiring the unaltered portion(s) of the existing building or building system to comply. Additions, alterations, renovations or repairs shall not create an unsafe or hazardous condition or overload existing building systems.

- **Add Section 107.2.8:**

107.2.8 Energy information on the construction documents. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment as herein governed. Details shall include but are not limited to, as applicable, insulation materials and their R-values; fenestration U-factors and SHGCs; system design criteria; mechanical and service water heating system and equipment types, sizes and efficiencies; economizer description; equipment and system controls; fan motor horsepower (hp) and controls; duct sealing, duct and pipe insulation and location; daylight areas on floor plans; lighting fixture schedule with wattage and control narrative; air sealing details; and COMcheck compliance report or equivalent division forms. Construction documents shall include requirements for testing, commissioning, and maintenance manuals where required per Section 408 of the IECC. The *building official* shall not require or expect physical copies of record drawings, manuals, completion and test reports, or energy reporting noted in Section 408.

Exception: The *building official* is authorized to waive the requirements for construction documents, COMcheck reports, or other supporting data if the *building official* determines these are not necessary to confirm compliance with this code.

- **Replace Section 110.3.8:**

110.3.8.1 Energy efficiency inspections. Inspections shall be made by a local *municipality* to determine compliance with this code and shall include, but not be limited to, inspections for: envelope air sealing, envelope insulation *R-values* and *U-factors*, fenestration *U-factor*, duct system insulation *R-value*, and HVAC and water-heating equipment efficiency. Reports and testing, if specified by the designer, owner, or contractor and included in construction documents per Section C408 of this code shall not be reviewed or inspected by the *building official* and are not required for issuance of certificate of occupancy.

Chapter 2 [CE]

The following definitions are additional to or replace those in chapter two of the 2018 IECC.

BUILDING OFFICIAL. The officer charged with the administration and enforcement of this code, or a duly authorized representative.

CODE OFFICIAL. See "Building Official."

RESIDENTIAL BUILDING. For this code, includes structures regulated by the *Residential Code*.

Chapter 4 [CE]

The following sections in chapter four of the 2018 IECC are added or modified.

- **Replace Tables C402.1.3 and C402.1.4 footnote g:**

g. Mass walls shall be in accordance with C402.2.2. Integral insulated concrete block walls complying with ASTM C90 with all cores filled shall be considered compliant when meeting both of the following: 1) at least 50 percent of cores shall be filled with vermiculite or equivalent fill insulation, and 2) the structure encloses one of the following uses: gymnasium, auditorium, church chapel, arena, kennel, manufacturing plant, indoor swimming pool, pump station, water and wastewater treatment facility, storage facility, restroom/concessions, mechanical electrical structures, storage area, warehouse (storage and retail), motor vehicle service facility.

- **Add Section C403.3.5:**

C403.3.5 Packaged equipment with electric heat. Forced air and packaged systems covered by Tables C403.3.2(1) through C403.3.2(3) with a total electric resistance heating capacity greater than 20,000 Btu/h (5862 W) shall be a heat pump for the primary first stage of heating.

Exceptions:

1. Unstaffed equipment shelters.

2. Systems with greater than 240,000 Btu/h cooling capacity.

- **Add Section C403.7.6:**

C403.7.6 Variable flow exhaust. Each kitchen with a total Type I exhaust capacity greater than 5,000 cfm (2360 l/s) shall be equipped with a demand ventilation system on at least 75 percent of the exhaust and make-up air. Such systems shall be equipped with automatic controls that reduce airflow in response to cooking operation.

- **Delete Section C403.7.2 exception no. 2.**

- **Add Section C403.7.7 exception no. 4:**

4. Type I grease exhaust systems

- **Add Section C403.12.1.1:**

C403.12.1.1 Spot heating within enclosed spaces. Infra-red spot heating meeting the control requirements of Section C403.12.1 shall be allowed within unconditioned and semi-heated spaces without requiring the envelope to comply as a conditioned space. Spot heating shall be limited to the larger of 500 ft² or 10 percent of the floor area.

- **Replace Section C405.1:**

C405.1 General. This section covers requirements for lighting system controls, the maximum lighting power for interior and exterior applications and electrical energy consumption.

Exceptions:

1. Dwelling and sleeping unit spaces in R-2, R-3 and R-4 occupancies that comply the following: not less than 90 percent of the lighting in dwelling units and sleeping units shall be provided by lamps with an efficacy of no less than 65 lm/W or light fixtures with an efficacy of 55 lm/W. Exterior fixtures switched from within the unit meeting these efficacy requirements are exempt from Section C405.4.
2. Lighting installed in walk-in coolers and freezers, refrigerated warehouse coolers and refrigerated warehouse freezers shall comply with the requirements of Section C403.10.1 or C403.10.2.

- **Replace Section C408.2:**

C408.2 Mechanical Systems and service water-heating systems commissioning and completion requirements. This code or any code under the adopting authority of the State of Oregon Building Codes Division does not require commissioning. Owners, designers, and contractors may choose to include commissioning in the design documents. However, *building officials* are prohibited from inspecting or requiring commissioning. Commissioning is not required for a *certification of occupancy*. *Construction document* notes shall clearly indicate provisions for *commissioning* and completion requirements in accordance with this section and are permitted to refer to specifications for further requirements. Copies of all documentation shall be given to the owner or owner's authorized agent in accordance with Sections C408.2.4 and C408.2.5.

Exceptions: The following systems are exempt:

1. Mechanical systems and service water heater systems in buildings where the total mechanical equipment capacity is less than 480,000 Btu/h (140.7 kW) cooling capacity and 600,000 Btu/h (175.8 kW) combined service water-heating and space-heating capacity.
2. Systems included in Section C403.5 that serve individual *dwelling units* and *sleeping units*.

- **Delete Sections C408.2.3 through C408.3.1.3.** Sections C408.2.5 and C408.2.6

Residential Provisions [RE]

- **Chapters 1 through 6 [RE] are not adopted.**