

# DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

## DIVISION OF CLIMATE, COASTAL, & ENERGY

Statutory Authority: 16 Delaware Code, Section 7602 (16 Del.C. §7602)

7 DE Admin. Code 2101

### PROPOSED

#### REGISTER NOTICE

SAN# 2019-04

#### 2101 Regulations for State Energy Conservation Code

**1. TITLE OF THE REGULATIONS:**

7 DE Admin. Code 2101 *Regulations for State Energy Conservation Code*

**2. BRIEF SYNOPSIS OF THE SUBJECT, SUBSTANCE, AND ISSUES:**

Delaware's Energy Conservation Code Act (16 Del.C. §7602) requires DNREC to adopt the most recent and/or highest available version of the International Energy Conservation Code (IECC), and the latest American Society of Heating, Refrigerating and Air-Conditioning Engineers/Illuminating Engineering Society of North America (ASHRAE/IESNA) energy standard. The regulations must also set out procedures for certification of compliance with these codes and standards to be utilized by the respective local governments. The Energy Conservation Code Act instructs DNREC to review the state energy codes triennially for potential updates to adopt newer versions of the IECC and ASHRAE energy code standards.

Since May 1, 2014, Delaware has required the 2012 IECC for residential buildings and ASHRAE 90.1-2010 for commercial and high-rise residential structures. In 2017, the Department convened the Delaware Energy Code Coalition to begin the triennial review of the available energy conservation codes and evaluate the impacts of adopting a newer version of the IECC and ASHRAE standards. The Coalition met eleven times between March 2017 and January 2019 to review newer versions of the IECC and ASHRAE standards. The Department, in consultation with the Codes Coalition, considered the 2015 and 2018 versions of the IECC standards and ASHRAE 90.1-2013 and ASHRAE 90.1-2016. The Department collected input through the Delaware Energy Code Coalition to inform the proposed draft regulations.

The Department is proposing to adopt by reference the 2018 IECC and ASHRAE 90.1-2016 in their entirety. The modest increased cost of the more stringent energy conservation codes is offset by the benefits accrued to the building owners and occupants over the life of the building. Adopting the current version of the IECC and ASHRAE energy conservation codes will increase building sector energy efficiency, bring energy cost savings for building owners and occupants, increase occupant comfort, and reduce emissions in Delaware.

**3. POSSIBLE TERMS OF THE AGENCY ACTION:**

None

**4. STATUTORY BASIS OR LEGAL AUTHORITY TO ACT:**

Delaware Energy Conservation Code Act pursuant to 16 Del.C. §7602.

**5. OTHER REGULATIONS THAT MAY BE AFFECTED BY THE PROPOSAL:**

None

**6. NOTICE OF PUBLIC COMMENT:**

Persons wishing to comment on the proposed amendments to 7 DE Admin. Code 2101 *Regulations for State Energy Conservation Code* may do so either orally or in written form at the public hearing on Tuesday, December 3, 2019 beginning at 6:00 PM in the DNREC Auditorium at 89 Kings Highway, Dover, DE 19901. In lieu of attending the public hearing, written comments may be submitted to the Hearing Officer via either email to [DNRECHearingComments@delaware.gov](mailto:DNRECHearingComments@delaware.gov), or via USPS to the DNREC Hearing Officer, 89 Kings Highway, Dover, DE 19901. The Department will accept public comment through the close of business on Wednesday, December 18, 2019.

**7. PREPARED BY:**

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#### 2101 Regulations for State Energy Conservation Code

## 1.0 Purpose and Statutory Authority

- 1.1 The purpose of these regulations is to provide the Department of Natural Resources and Environmental Control's determination of the most recent and/or highest available version of the International Energy Conservation Code and the latest ASHRAE/IESNA standard. The goal of establishing these regulations is to provide a statewide building energy conservation code.
- 1.2 These regulations provide rules of practice and procedures for certification of compliance with these codes and standards to be utilized by the respective local governments.
- 1.3 ~~Delaware Code Title 16 Section 7602~~ 16 Del.C. §7602 provides the authority for adopting ~~Delaware Energy Conservation~~ the State Energy Conservation Code. These regulations are promulgated under the authority of 16 Del.C. §7602.

## 2.0 Definitions

For purposes of these regulations, the following words and phrases shall have the meanings set forth below.

**"ASHRAE"** means the ANSI/ASHRAE/IES Standard ~~90.1~~ 90.1-2016: Energy Standard for Buildings except Low-Rise Residential Buildings published by the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.

**"Department"** means the Department of Natural Resources and Environmental Control, the Division of ~~Energy and Climate~~ Climate, Coastal, & Energy or the Delaware Energy Office, as appropriate.

**"DET verifier"** means a certified Duct and Envelope Tightness verifier. A certified DET verifier shall be a certified Home Energy Rating Systems (HERS) rater, or be a certified Home Performance with ENERGY STAR contractor, or be a Building Performance Institute (BPI) Heating Professional to perform duct tightness testing or a BPI Building Analyst or Envelope Professional to perform building tightness testing, or successfully complete a course that is approved by the Department of Natural Resources and Environmental Control.

**"IECC"** means the 2018 International Energy Conservation Code published by the International Code Council, Inc.

## 3.0 Incorporation by Reference

- 3.1 The ~~2012~~ 2018 International Energy Conservation Code (IECC), published by the International Code Council, Inc., is hereby adopted and incorporated by reference ~~with revisions~~ as the Delaware Residential Building Energy Conservation Code and is an enforceable part of the Delaware Building Codes. ~~The revisions to the 2012 IECC code are stated in Section 4.0 of these regulations.~~
- 3.2 The American Society of Heating, Refrigerating and Air-Conditioning Engineers Standards (ASHRAE) ~~90.1-2010~~ 90.1-2016: Energy Standard for Buildings except Low-Rise Residential Buildings and ~~Commercial Provisions~~ the commercial provisions of the ~~2012~~ 2018 International Energy Conservation Code are hereby adopted and incorporated by reference in their entirety as the Delaware Commercial Building Energy Conservation Code and is an enforceable part of the Delaware Building Codes.

## 4.0 Revisions to the 2012 IECC

- 4.1 ~~The following additions, insertions, deletions, and other changes are hereby made to the 2012 International Energy Conservation Code.~~
  - 4.1.1 ~~R403.2.2 amend to add: Supply duct tightness shall be verified by either of the following:~~
    1. ~~Post construction test: Total leakage less than or equal to 6 cfm (169.9/min) per square foot (9.29 m2) of conditioned floor area when tested at the pressure differential of 0.1 inches w.g. (25 Pa)....~~
    2. ~~Rough-in test: Total leakage less than or equal to 6 cfm (169.9/min) per square foot (9.29 m2) of conditioned floor area when tested at the pressure differential of 0.1 inches w.g. (25 Pa) (remainder unchanged — If the air handler is not installed.... ≤ 4 cfm....)~~
  - 4.1.2 ~~R403.4.2: amend list to:~~
    1. ~~Piping larger than 3/4 inch nominal diameter.~~
    2. ~~Piping serving more than one dwelling unit.~~
    3. ~~Piping located outside the conditioned space.~~
    4. ~~Piping from the water heater to a distribution manifold.~~
    5. ~~Piping located under a floor slab.~~
    6. ~~Buried piping.~~
    7. ~~Supply and return piping in recirculation systems.~~
- ~~Delete Table R403.4.2 without substitution.~~

4.1.3 R402.4.1.2:

~~**Exception:** A building or dwelling unit with 2,000 ft<sup>2</sup> or less of conditioned floor area (CFA) may satisfy R402.4.1.2 if it:~~

~~(1) is tested to have an air leakage rate no greater than:~~

~~5 ACH-50 for homes with < 1,500 ft<sup>2</sup> of CFA, or~~

~~4 ACH-50 for homes with 1,500 – 2,000 ft<sup>2</sup> of CFA.)~~

4.1.4 R403.2.3 Building framing cavities shall not be used as ducts or plenums.

~~**Exception:** Returns run exclusively through conditioned space.~~

4.1.5 R403.5 The building shall be provided with ventilation that meets the requirements of the ~~International Residential Code (IRC) or International Mechanical Code (IMC)~~, as applicable, or with other approved means of ventilation. Outdoor air intakes shall have automatic or gravity dampers that close when the ventilation system is not operating. Required ventilation rates shall also include adequate provisions for fuel-fired appliance, stove and fireplace makeup air supply; kitchen, bath, clothes dryer, and central vacuum exhausts; and other makeup air system supplies and/or exhausts as required in either the IRC or IMC.

~~(remainder of section unchanged)~~

## **5.04.0 Implementation and Enforcement**

5.14.1 All buildings must meet all requirements of the applicable referenced code six months after date of promulgation.

5.24.2 All projects may utilize the new applicable reference codes at any time after the date of promulgation, provided such choice is stated on the construction documents.

4.3 Procedures for certification of compliance and standards to be utilized by respective local governments are those specified in the IECC at Chapter 1 ("Scope and Administration") and in the ASHRAE at Chapter 4 ("Administration and Enforcement") as enforceable parts of the Delaware Building Codes pursuant to subsections 3.1 and 3.2 herein.

## **6.05.0 Certified duct and envelope tightness (DET) verifier.**

Testing for duct and building envelope tightness shall be conducted by a certified DET verifier.

17 DE Reg. 1086 (05/01/14)

23 DE Reg. 363 (11/01/19) (Prop.)