

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
DIVISION OF ENERGY AND CLIMATE

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

FINAL

Secretary's Order No.: 2014-EC-0008

Date of Issuance: April 15, 2014

Effective Date of the Amendment: May 11, 2014

103 Regulations for State Energy Conservation Code

Under the authority vested in the Secretary of the Department of Natural Resources and Environmental Control ("Department" or "DNREC") the following findings, reasons and conclusions are entered as an Order of the Secretary in the above-referenced rulemaking proceeding.

Background and Procedural History

This Order considers a proposed new regulation to adopt the most recent and/or highest available version of the International Energy Conservation Code and the latest ASHRAE/IESNA energy standard as required by 16 **Del.C.** §7602, as well as 29 **Del.C.** §8058. The proposed new regulation will hereinafter be known as 7 **DE Admin. Code** 103: State Energy Conservation Code.

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 ASHRAE/IESNA energy standard. Such regulation must also set forth procedures for certification of compliance with these codes and standards to be utilized by the respective local governments.

On January 1, 2010, the 2009 IECC was adopted by the State of Delaware as a result of Delaware's Energy Conservation Code Act. In January 2012, the most recent IECC and ASHRAE/IESNA energy standards were published. The Department's Division of Energy & Climate ("DEC"), along with the Delaware Energy Codes Coalition and the Home Builders Association of DE, have reviewed these new codes extensively over the last year, and propose this new regulation to adopt the 2012 IECC and 2010 ASHRAE standards with amendments.

The Department's Division of Energy & Climate commenced the regulatory development process with Start Action Notice 2013-27. The Department published its initial proposed regulation in the December 1, 2013 Delaware *Register of Regulations*. The Department then held a public hearing on January 6, 2014. The public hearing record remained open at that time for public comment through January 22, 2014.

The proposed new regulation seeks to enable the Department to (1) formally adopt the 2012 IECC and 2010 ASHRAE standards with amendments; and (2) set forth procedures for certification of compliance with these codes and standards to be utilized by respective local governments. The proposed new regulation was thoroughly vetted by the Department at the public hearing on January 6, 2014.

Pursuant to Delaware law, the record remained open for fifteen (15) additional days subsequent to the date of the public hearing, for the purpose of receiving additional public comment. Of the comment received, three voiced support for the Department's proposed regulation as proposed, and applauded Delaware's efforts to create a better energy future for its citizens. Four other organizations, while voicing support for the Department's efforts in this matter, suggested various modifications to the proposed regulations, in order to provide a greater clarity and understanding to the regulated community. The Department's DEC agreed with all such suggested changes, and amended the initial proposed regulations to reflect the same.

Comment was also received from the Homebuilders Association of Delaware ("HBADE"), which requested further changes to the proposed regulation. It should be noted that the Department had been working with HBADE for approximately nine months leading up to the drafting of these regulations, and both parties had come to agreement of the tiered thresholds as outlined in the proposed draft regulation. Subsequently, HBADE's comment asked for further weakening of the proposed regulation by increasing the square footage thresholds, which would reduce the energy savings to be achieved by the new code. The Department notes that the U.S. Department of Energy has ensured the cost-effectiveness of the new building air leakage requirements for all building sizes through rigorous analysis. Therefore, although the Department has carefully considered this proposal, DEC will not be implementing the additional changes proposed by HBADE.

It should also be noted that all proper notification and noticing requirements concerning this proposed promulgation were met by the Department. Proper notice of the hearing was provided as required by law.

The Department's presiding hearing officer, Lisa A. Vest, prepared a Hearing Officer's Report dated April 2, 2014 (Report). The Report recommends certain findings and the adoption of the proposed new Regulation, as attached to the

Findings and Discussion

I find that the proposed new Regulation is well-supported by the record developed by the Department, and I adopt the Report to the extent it is consistent with this Order. The Department's experts developed the record and drafted the proposed new Regulation. As previously noted, comment voicing support of this proposed action was received from the public that attended the hearing held on January 6, 2014.

I find that the Department's experts in the Division of Energy & Climate fully developed the record to support adoption of this new Regulation. The adoption of this Order will allow Delaware to (1) formally adopt the 2012 IECC and 2010 ASHRAE standards with amendments; and (2) set forth procedures for certification of compliance with these codes and standards to be utilized by respective local governments.

In conclusion, the following findings and conclusions are entered:

1. The Department has jurisdiction under its statutory authority to issue an Order adopting this proposed new Regulation as final;
2. The Department provided adequate public notice of the proposed new Regulation, and provided the public with an adequate opportunity to comment on the proposed new Regulation, including at the public hearing held on January 6, 2014;
3. The Department held a public hearing on January 6, 2014 in order to consider public comment before making any final decision;
4. The Department's Hearing Officer's Report, including its recommended record and the recommended new Regulation as set forth in Appendix A, are adopted to provide additional reasons and findings for this Order;
5. The adoption of this Order will enable Delaware to adopt the most recent and/or highest available version of the International Energy Conservation Code ("IECC") and the latest ASHRAE/IESNA energy standard, as required by Delaware's Energy Conservation Code Act (16 Del.C. §7602);
6. The recommended new regulation should be adopted as a final regulation because Delaware will be enabled to (1) adopt the 2012 IECC and 2010 ASHRAE standards with amendments; (2) formally set forth procedures for certification of compliance with these codes and standards to be utilized by respective local governments; and lastly, because (3) the proposed regulation is well supported by documents in the record;
7. The Department shall submit this Order approving the final regulation to the Delaware *Register of Regulations* for publication in its next available issue, and provide such other notice as the law and regulation require and the Department determines is appropriate.

Collin P. O'Mara, Secretary

103 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 provides the authority for adopting Delaware 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: 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 or the Delaware Energy Office.

"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) ~~Analyst~~ 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 International Energy Conservation Code published by the International Code Council, Inc.

3.0 Incorporation by Reference

- 3.1 The 2012 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 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: Energy Standard for Buildings except Low-Rise Residential Buildings and Commercial Provisions of the 2012 International Energy Conservation Code are hereby adopted and incorporated by reference in their entirety as the Delaware Commercial Building Energy 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 feet (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 feet (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 from the water heater to kitchen outlets.
 4. Piping located outside the conditioned space.
 5. Piping from the water heater to a distribution manifold.
 6. Piping located under a floor slab.
 7. Buried piping.
 8. Supply and return piping in recirculation systems other than demand recirculation systems.
 9. Piping with run lengths greater than the maximum run lengths for the nominal pipe diameter given in Table R403.4.2.

All remaining piping shall be insulated to at least R-3 or meet the run-length requirements of Table R403.4.2. Delete Table R403.4.2 without substitution.

- 4.1.3 R402.4.1.2:

Exception: A building or dwelling unit with 2,000 ft² or less of conditioned floor area (CFA) may satisfy R402.4.1.2 if it:

[(1) attains a HERS Score of 69, using ResNET appliance and plugload defaults;

AND]

[(2)(1)] is tested to have an air leakage rate no greater than:

5 ACH-50 for homes with < 1,500 ft² of CFA, or

4 ACH-50 for homes with 1,500 – 2,000 ft² 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)

5.0 Implementation and Enforcement

- 5.1 All buildings must meet all requirements of the applicable referenced code six months after date of promulgation.
- 5.2 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.

6.0 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 (5/01/14) (Final)