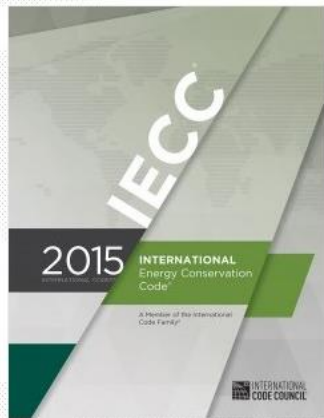


# 2015 INTERNATIONAL ENERGY CONSERVATION CODE SIGNIFICANT CHANGES



The International Energy Conservation Code regulates the design and construction of buildings for the use and conservation of energy. The Texas state legislature passed HB 1736 in 2015, which adopted the 2015 IRC (Chapter 11 referencing the 2015 IECC) for new homes as the statewide minimum for residential energy codes, effective on September 1, 2016. Because the 2015 energy provisions are mandatory in Texas, the City has little leeway to amend the code, and deferred mostly to the North Central Texas Council of Governments for recommended amendments.

## SIGNIFICANT CODE CHANGES:

- Additional required energy inspections are listed, such as foundation insulation, plumbing, electrical, and mechanical systems. [C104.2 & R104.2]
- Over 50 new technical definitions have been added. [C202 & R202]
- The geographic border line designating Warm-Humid locations moved, affecting 14 Texas counties (not Dallas). [Figures C301.1 & R301.1]
- The minimum R-value increased for commercial roof insulation and residential wall insulation. [Tables C402.1.3 & R402.1.2]
- New regulations reconcile the ambient fresh air intake requirements for fuel-burning appliances with the air-sealing requirements for the building envelope.
- HVAC efficiency ratings and lighting power restrictions have increased.
- New regulations have been added for commercial walk-in coolers and freezers, refrigerated warehouses, and refrigerated display cases. [403.2.14-17 & C403.5]
- The allowable rate of air changes per hour is reduced from five to three for residential buildings. [R402.4.1.2]
- The Energy Rating Index (ERI) is a new compliance alternative. [R406]

## CHANGES IN PROPOSED AMENDMENTS:

- Section R102.1.2 Alternative Compliance has been further amended to clarify that all dwelling units must be tested for air and duct leakage, regardless of compliance method.
- The qualifications and objectivity of third-party testing agencies have been clarified.



**ORDINANCE NO. \_\_\_\_\_**

**AN ORDINANCE OF THE CITY OF COPPELL, TEXAS AMENDING THE CODE OF ORDINANCES BY AMENDING CHAPTER 15 ARTICLE 15-7, “ENERGY CONSERVATION CODE”, TO ADOPT THE INTERNATIONAL ENERGY CONSERVATION CODE, 2015 EDITION, AS THE CITY OF COPPELL ENERGY CODE; PROVIDING AMENDMENTS TO THE INTERNATIONAL ENERGY CODE 2015 EDITION; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A REPEALING CLAUSE; PROVIDING A SAVINGS CLAUSE; PROVIDING A PENALTY FOR VIOLATION OF THIS ORDINANCE NOT TO EXCEED THE SUM OF FIVE HUNDRED DOLLARS (\$500.00) FOR EACH OFFENSE; EXCEPT HOWEVER, WHERE A DIFFERENT PENALTY HAS BEEN ESTABLISHED BY STATE LAW FOR SUCH OFFENSE WHICH IS A VIOLATION OF ANY PROVISION OF LAW THAT GOVERNS FIRE SAFETY, ZONING, OR PUBLIC HEALTH AND SANITATION, INCLUDING DUMPING OF REFUSE, THE PENALTY SHALL BE A FINE NOT TO EXCEED THE SUM OF TWO THOUSAND DOLLARS (\$2,000.00) FOR EACH OFFENSE; AND PROVIDING AN EFFECTIVE DATE.**

**BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF COPPELL, TEXAS:**

**SECTION 1.** That the Code of Ordinances of the City of Coppel, Texas be, and the same is, hereby amended by amending Chapter 15, Article 15-7, “Energy Conservation Code”, in part to adopt the International Energy Conservation Code, 2015 Edition, with amendments to read as follows:

**“ARTICLE 15-7. ENERGY CONSERVATION CODE**

**Sec. 15-7-1 Energy Conservation Code – Adopted.**

There is hereby adopted the International Energy Conservation Code, 2015 Edition, and made a part hereof for all purposes, the same as if fully copied in full herein, with the exception of such sections hereof, which are hereafter deleted, modified or amended.

**Sec. 15-7-2 Amendments.**

The following sections of the International Energy Conservation Code, 2015 Edition, are hereby amended to read as follows:

**1. Amend Section C102/R102 by adding Sections C102.1.2 and R102.1.2 to read as follows:**

**C102.1.2 Alternative compliance.** A building certified by a national, state, or local accredited energy efficiency program and determined by the Energy Systems Laboratory to be in compliance with the energy efficiency requirements of this section may, at the option of the Code Official, be considered in compliance. The United States Environmental Protection Agency's Energy Star Program certification of energy code equivalency shall be considered in compliance.

**R102.1.2 Alternative compliance.** A building certified by a national, state, or local accredited energy efficiency program and determined by the Energy Systems Laboratory to be in compliance with the energy efficiency requirements of this section may, at the option of the Code Official, be considered in compliance. The United States Environmental Protection Agency's Energy Star Program certification of energy code equivalency shall be considered in compliance. Regardless of the program or the path to compliance, each 1- and 2-family dwelling shall be tested for air and duct leakage as prescribed in Section R402.4 and R403.3.3 respectfully.

**2. Amend Section C202 and R202 by adding the following definitions:**

**DYNAMIC GLAZING.** Any fenestration product that has the fully reversible ability to change its performance properties, including *U*-factor, solar heat gain coefficient (SHGC), or visible transmittance (VT).

**GLAZING AREA.** Total area of the glazed fenestration measured using the rough opening and including sash, curbing or other framing elements that enclose conditioned space. Glazing area includes the area of glazed fenestration assemblies in walls bounding conditioned basements. For doors where the daylight opening area is less than 50 percent of the door area, the glazing area is the daylight opening area. For all other doors, the glazing area is the rough opening area for the door including the door and the frame.

**PROJECTION FACTOR.** The ratio of the horizontal depth of the overhang, eave or permanently attached shading device, divided by the distance measured vertically from the bottom of the fenestration glazing to the underside of the overhang, eave or permanently attached shading device.

**3. Amend Section C402.2/R402.2 by adding Sections C402.2.9 and R402.2.14 to read as follows:**

Section C402.2.9/R402.2.14 Insulation installed in walls. To insure that insulation remains in place, insulation batts installed in walls shall be totally secured by an enclosure on all sides consisting of framing lumber, gypsum, sheathing, wood structural panel sheathing, netting or other equivalent material approved by the building official.

**4. Amend Section R402.3.2 by adding a paragraph and table following the exception to read as follows:**

Where vertical fenestration is shaded by an overhang, eave, or permanently attached shading device, the SHGC required in Table R402.1.2 shall be reduced by using the multipliers in Table R402.3.2 SHGC Multipliers for Permanent Projections.

**Table R402.3.2 SHGC Multipliers for Permanent Projections <sup>a</sup>**

Projection Factor	SHGC Multiplier (all Other Orientation)	SHGC Multiplier (North Oriented)
0 - 0.10	1.00	1.00
>0.10 – 0.20	0.91	0.95
>0.20 – 0.30	0.82	0.91
>0.30 – 0.40	0.74	0.87
>0.40 – 0.50	0.67	0.84
>0.50 – 0.60	0.61	0.81
>0.60 – 0.70	0.56	0.78

>0.70 – 0.80	0.51	0.76
>0.80 – 0.90	0.47	0.75
>0.90 – 1.00	0.44	0.73

<sup>a</sup> North oriented means within 45 degrees of true north.

**5. Amend Section R402.4.1.2 by adding a last paragraph to read as follows:**

Mandatory testing shall only be performed by individuals that are certified to perform air infiltration testing certified by national or state organizations as approved by the building official. The certified individuals must be an independent third-party entity, and may not be employed, or have any financial interest in the company that constructs the structure.

**6. Amend Section C402.2.7/R402.2 by adding Section C402.2.9 and R402.2.14 to read as follows:**

Section C402.2.7/R402.2.14 Insulation installed in walls. To insure that insulation remains in place, insulation installed in walls shall be totally enclosed on all sides consisting of framing lumber, gypsum, sheathing, wood structural panel sheathing, netting or other equivalent material approved by the building official.

**7. Amend Section R403.3.3 by adding a last paragraph to read as follows:**

Mandatory testing shall only be performed by individuals that are certified to perform duct testing leakage testing certified by national or state organizations as approved by the building official. The certified individuals must be an independent third-party entity, and may not be employed; or have any financial interest in the company that constructs the structure.

**8. Amend Section R403.3.3 by adding a last paragraph to read as follows:**

Mandatory testing shall only be performed by individuals that are certified to perform duct testing leakage testing certified by national or state organizations as approved by the building official. The certified individuals must be an independent third-party entity, and may not be employed; or have any financial interest in the company that constructs the structure.

**9. Amend Section R403.3.5 to read as follows:**

**R403.3.5 Building cavities (Mandatory).** Building framing cavities shall not be used as supply ducts and plenums. Building framing wall cavities in the exterior thermal envelope shall not be used as return ducts

**10. Amend Section R405.6 by adding the following sentence to the end of paragraph:**

Acceptable performance software simulation tools may include, but are not limited to, REM Rate™, Energy Gauge and IC3. Other performance software programs accredited by RESNET BESTEST and having the ability to provide a report as outlined in R405.4.2 may also be deemed acceptable performance simulation programs and may be considered by the building official.

**11. Amend Table R406.4 to read as follows:****TABLE R406.4<sup>1</sup>****MAXIMUM ENERGY RATING INDEX**

<b>CLIMATE ZONE</b>	<b>ENERGY RATING INDEX</b>
3	65

<sup>1</sup> This table is effective until August 31, 2019.”

**SECTION 2.** If any section, subsection, paragraph, sentence, phrase or work in this ordinance, or application thereof to any person or circumstance is held invalid by any court of competent jurisdiction, such holding shall not affect the validity of the remaining portions of this ordinance, and the City Council of the City of Coppel, Texas hereby declares it would have enacted such remaining portions despite any such invalidity.

**SECTION 3.** That the repeal of any ordinance or any portion thereof by the preceding sections shall not affect or impair any act done or right vested or accrued or any proceeding, suit or prosecution had or commenced in any cause before such repeal shall take effect; but every such act done, or right vested or accrued, or proceedings, suit or prosecution had or commenced shall remain in full force and effect to all intents or purposes as if such ordinance or part thereof so repealed shall remain in force.

**SECTION 4.** That any person, firm or corporation violating any of the provisions of this ordinance or the Code of Ordinances as amended hereby, shall be guilty of a misdemeanor and upon conviction in the Municipal Court of the City of Coppell, Texas, shall be subject to a fine not to exceed the sum of Five Hundred Dollars (\$500.00) for each offense, except where a different penalty has been established by State law for such offense, the penalty shall be that fixed by State law, and for any offense which is a violation of any provision of law that governs fire safety, zoning or public health and sanitation, including dumping of refuse, the penalty shall be fine not to exceed the sum of Two Thousand Dollars (\$2,000.00) for each offense; and each and every day such offense is continued shall constitute a new and separate offense.

**SECTION 5.** That this ordinance shall become effective immediately from and after its passage and the publication of the caption, as the law and charter in such cases provide.

**DULY PASSED** by the City Council of Coppell, Texas, this the \_\_\_\_\_ day of \_\_\_\_\_, 2017.

**APPROVED:**

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**Karen Hunt, MAYOR**

**ATTEST:**

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**CHRISTEL PETTINOS, CITY SECRETARY**

**APPROVED AS TO FORM:**

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**ROBERT HAGER, CITY ATTORNEY**