

2015 International Energy Conservation Code

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August 16, 2016



Objective:

- ▶ Provide information and receive direction from Council on the proposed adoption of the 2015 International Energy Conservation Code with proposed amendments and hear input from citizens.

History of State Energy Code

- ▶ **September 1, 2001** - 2000 International Residential Code (IRC) as well as the 2000 International Energy Conservation Code (IECC) goes into affect as the first statewide energy code in Texas.
- ▶ **April 1, 2011** – State energy code is updated to the 2009 IRC and IECC.
- ▶ **May of 2015** – State legislature adopts 2015 IRC and IECC as state energy code effective September 1, 2016 for residential structures and November 1, 2016 for commercial structures.

History of City of Denton Code Adoptions

- ▶ **November 27, 2001** - Adopted the 2000 IECC with no above code requirement.
- ▶ **February 7, 2006** - Adopted the 2003 IECC with 10% above code requirement for one and two family dwellings.
- ▶ **February 3, 2009** - Adopted the 2006 IECC with 10% above code requirement for one and two family dwellings.
- ▶ **September 11, 2012** - Adopted the 2009 IECC with 10% above code requirement for one and two family dwellings.
- ▶ **April 1, 2014** - Adopted the 2012 IECC with 4% above code requirement for one and two family dwellings.

Major Changes - Residential

- ▶ Majority of the major changes occurred from the 2009 to the 2012 versions of the IECC.
(approximately 30% increase)
- ▶ COG amendments delayed the affect of some of those changes (2012 with COG approximately 10-12% increase over 2009)

Major Changes - Residential

- ▶ 2012 IECC with COG Amendments:
 - ▶ Minimum wall insulation R-13
 - ▶ Maximum air leakage to outdoors 5 air changes per hour
- ▶ 2012 IECC and 2015 IECC:
 - ▶ Minimum wall insulation R-20 or R13 Cavity + R5 continuous
 - ▶ Maximum air leakage to outdoors 3 air changes per hour

Major Changes - Residential

- ▶ A home built to comply with the 2015 IECC would be 19-20% more energy efficient than a home built to the 2012 IECC as amended by COG.
- ▶ Estimated additional costs of residential construction associated with changes from the 2009 IECC to the 2015 IECC is \$2,500.

Major Changes – Residential

Code Version	2012 IECC WO/ COG	2015 IECC W/COG	Difference
Single Story	16% Increase Over Current Ordinance	Additional 1-4% Increase	17-20%
Two Story	15% Increase Over Current Ordinance	Additional 1-4% Increase	16-19%

Major Changes - Residential

- ▶ Net change from current City Ordinance with 4% above 2012 Code with amendments to 2015 Code with proposed amendments (no above code requirement) 16-20%. Home built to 2015 IECC with proposed amendments would be 16-20% more energy efficient than a home built under our current ordinance.

Major Changes - Commercial

- ▶ New efficiency requirements for motors, commercial refrigeration and freezer units including walk-ins and warehouses, elevators and escalators, as well as numerous new standards for commercial kitchen ventilation systems.
- ▶ Set new commissioning and testing requirements before final inspection.

Major Changes - Commercial

Added mandatory requirements for automatic lighting controls including occupancy sensors and/or time switch controls in all areas. Provided a list of 5 exceptions. Also added requirements for daylight responsive controls.

Appendix RB

Requests from citizens and trade groups included adoption of Appendix RB of the 2015 International Energy Conservation Code which includes “Solar Ready” provisions.

Key Points:

- ▶ Residential requirements of 2015 IECC increased between 16-20% over currently adopted code (2012 with COG amendments plus 4%).
- ▶ Numerous changes for commercial structures relative to lighting, equipment efficiency and commissioning of equipment and lighting systems.

Direction:

- ▶ 1. Seeking direction to move forward with adoption of the 2015 International Energy Conservation Code as proposed with local amendments.



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