2015 International Energy Conservation Code

Rodney Patterson – Development Services Sept. 13, 2016

Objective:

- Provide information and receive direction from ~~Council~~ on the adoption of additional amendments to the 2015 International Energy Conservation Code (IECC) as proposed by the North Central Texas Council of Governments.

Proposed Amendment- Residential

- In an effort to prepare for the more stringent requirements of the 2015 IECC, home builders created test homes to determine best paths for compliance.

- Testing determined that envelope air leakage was the most difficult aspect of the code for most builders to comply with.

Pathways for Compliance - Residential

- Two alternatives for determining compliance with the 2015 IECC. Prescriptive path and performance based paths.

- Performance paths are extremely flexible and provide numerous alternatives and software programs to detail compliance. Prescriptive path is rigid and does not currently allow any flexibility.

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Proposed Amendment- Residential

- North Central Texas Council of Governments (COG) worked with Dallas Builders Association as well as other industry professionals to develop more flexible alternatives.

- COG submitted a proposed amendment to Energy Systems Laboratory (ESL) at Texas A&M for analysis and ESL deemed the proposed amendment equivalent to the 2015 IECC.

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Proposed Amendment- Residential

- 1. Limited to one- and two- family residences with a conditioned floor area between 1,000 and 6,000 square feet.
- 2. Limited to one- and two-family residences containing between 2 to 6 bedrooms.
- 3. Assumes all ductwork and mechanical equipment is located in the unconditioned attic.
- 4. Assumes typical wood framing in the walls and roof.
- 5. Assumes one of the following heating/cooling systems:
  - a. All electric system with a heat pump for heating, or
  - b. A system with electric cooling and natural gas heating.
- (Note: electric resistance strip heating does not qualify for this tradeoff.)

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ESL 4ACH50 Prescriptive Tradeoff Code Equivalency Compliance Envelope Component

	Option #1	**Option #2**
R402.4 Air Leakage	< 4ACH50	< 4ACH50
Wall Insulation *R*-value	R13 + R3b	R13 + R3b
Fenestration *U*-factor	< 0.32	< 0.32
Fenestration SHGC	< 0.25	< 0.25
Ceiling *R*-value	> R49	> R49
Duct Insulation *R*-value	R8	R6
Radiant Barrier Required	No	Yes

Key Points:

- Proposed amendment was reviewed by Energy Systems laboratory at Texas A&M University as required by state law and found to be as stringent as the 2015 IECC.

- Provides builders an additional prescriptive path to demonstrate compliance with the 2015 IECC.

Direction:

- 1. Seeking direction as to whether or not to include the proposed amendment as part of our proposed code adoption ordinance.

Rodney Patterson