2015 IECC - Setting the Record Straight

An Overview of the Insulation and Testing Requirements

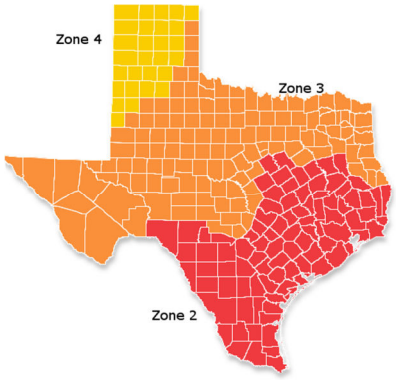
Texas legislature HB 1736 was signed into law by Governor Abbott on June 16th 2015 and the new state code goes into effect for houses permitted ***after September 1, 2016.*** Since it's signing there has been lots of confusion and conflicting information as to what this means for the builders. The following synopsis was developed in order to help clarify and simplify the new code and to clear up the confusion and dispel some of the misinformation that is already out there.

The main question which needs addressed, and which has been asked time and time again, is:

"What is required to pass the new code?"

This seemingly simple question is actually more complicated than it appears because there is not ***one*** single answer; there are in fact ***four*** different answers. The 2015 IECC requires that the builder comply with ***one*** of the following options in order to show compliance with the new code:

1. **Option # 1 - Install insulation that meets or exceeds the requirements of Table 402.1.2**, which includes:
   - **a. Climate Zone 2**
     - i. R-13 at the exterior walls
     - ii. R-38 at the attic
     - iii. R-13 at floors over unconditioned
     - iv. Windows with a U-Value of .40 or lower
   - **b. Climate Zone 3**
     - i. R-20 or R-13 + R-5 continuous at the exterior walls
     - ii. R-38 at the attic
     - iii. R-19 at floors over unconditioned
     - iv. Windows with a U-Value of .35 or lower



2. **Option #2 – Use software to show that the insulation is at-least-as-good as Option #1, (RES Check)**
   - a. This option allows for trade-offs in the insulation, for example:
     - i. Using a better than code window allows for the attic to only be insulated to an R-30

3. **Option #3 – Use software to show that the heating, cooling and water heating costs are less than if the house was built using the values in option # 1. (REM Rate)**
   - a. This allows for several trade-offs that Option #2 would not allow, for example:
     - i. Using spray foam insulation on the roof deck with a much lower R-value
     - ii. Using high efficiency HVAC and water heaters instead of higher insulation values
   - b. This option also removes a few of the requirement of the above 2 options, including:
     - i. R-6 ductwork in uninsulated attics can be used instead of R-8
     - ii. R-38 attic covers over stairs and attic access hatches are not required

4. **Option #4 – Use software to produce an ERI (HERS Rating) that has a value equal to or less than specified**
   - a. The state adopted a different HERS requirement than what is written in the 2015 IECC with a target that starts lowering in 2019.
   - b. The starting ERI is a **65** which is considerably more efficient than a house built to the 2015 IECC and would typically significant energy improvements.

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In short, **the new code gives the builder flexibility** in meeting the compliance and is not limited to the values in Table 402.1.2. For example, a builder can install R-13 wall insulation and R-30 attic insulation and still pass using option #2, or a builder can use R-13 wall insulation and R-22 foam insulation on the roof deck and still pass code using option #3.

The code doesn't end with the design of the project, after selecting one of the compliance options above, the builder must also follow all of the insulation and framing requirements of the code and have several different tests performed on the house including:

1. Install air barriers on all insulated cavities, including attic knee walls, floor cavities adjacent to unconditioned spaces, and double exterior walls so that the insulation is in full contact with both exterior and interior air barrier.
2. Air seal all holes, penetrations, and seams in the air barrier including wire and plumbing holes, HVAC register boots, recessed can lights and exhaust fan housings to the drywall, sealing the bottom plate to the slab and/or floor sheathing, and door and window frames to the house frame.
3. Install insulation around all pipes, wires and any other obstruction in the cavity by installing a loose fill insulation product, such as cellulose, or by splitting fiberglass batts so as to provide insulation behind and in front of obstructions.
4. Install insulation to fit small cavities by using a loose fill product such as cellulose or to cut fiber glass batts so as to fit the cavities without compression or voids.
5. Insulate the exterior wall headers with a product that has an R-Value of 3 per inch or greater.
6. Install IC rated and air tight lights for all can lights installed into an insulated surface.
7. Install 75% high efficient light bulbs in the house, either CFL or LED
8. Install at least one programmable thermostat per HVAC system
9. Install a whole house ventilation system which meets ASHRAE 62.2
10. Have the above items verified by a 3rd party
11. Have a blower door test performed on the house, achieving 5 ACH50 or better
12. Have a duct blaster performed on the house, achieving 4 CFM25 or better if options 1 or 2 are used.

With proper guidance and consultation, the migration from the current 2009 IECC to the new 2015 IECC can be achieved **with little change to building process.** Let **BER** help you through this process and provide you with the tools and information needed to build a quality, cost-effective house for your customers.

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"Every house is built by someone, but God is the builder of everything." - Hebrews 3:4

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