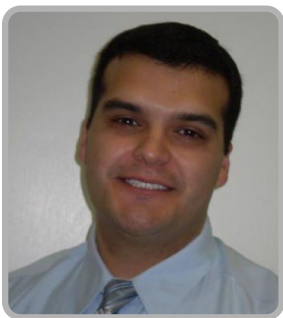




2021 ENERGY CODE --NOW IS THE TIME TO PREPARE



James Rodriguez

The published version of the 2021 International Energy Conservation Code (IECC) was released in January 2021 and is now under review by many municipalities across the State of Texas. This edition of the IECC has many significant changes when compared to previous editions currently enforced across the state (i.e., 2015, 2018 IECC).

The 2021 IECC will force many builders to change their energy efficiency packages significantly. Trades including HVAC contractors, insulators, plumbers, drywallers/painters, framers, electricians and low voltage contractors will also be affected. James Rodriguez,

Chief Operating Officer of Fox Energy Specialists, who recently addressed Savvy Builders at a Building Savvy Education Class, said, "This code appears to have the most substantial changes we have seen in the Texas market since before the 2015 IECC."

Universal takeaways, pertaining to both Texas Climate Zones (2 and 3), include:

R8 ducts will need to be part of HVAC packages, unless you plan to locate all ducts and air handler equipment inside the thermal boundary. This is no longer a prescriptive option as in previous code cycles.

Whole House Mechanical Ventilation will need to be upgraded. Because of the fan efficacy requirements and the added airflow testing required in this code, the use of air cyclers systems for whole house mechanical ventilation will be eliminated. Builders will need to choose either an in-line fan or an ERV system for mechanical fresh air. Technically, a continuous exhaust fan can be used and considered code compliant; however, Fox Energy Specialists does not recommend that strategy because of our hot/humid climate region and its increased risk of warranty callbacks.

Lighting upgrades are not as straight forward as previous code cycles. Usually, lighting has been an easy upgrade to implement since its progressions from the 2009 code cycle. So, transitioning to 100% of light fixtures being high efficacy, should not be a surprise. However, pay special attention to the occupancy sensor and/or dimmer controls language in this code, Rodriguez warned. This has been a trend in the commercial IECC and is now part of the 2021 IECC Residential provisions. Many cities are amending out the occupancy sensor language of this code section, but it is important to verify with your local municipalities to be certain, he said. He urges builders to consult with their electricians on how to incorporate these controls in the required areas of a home, if required by the municipality.

DFW Climate Zones Are Now Split

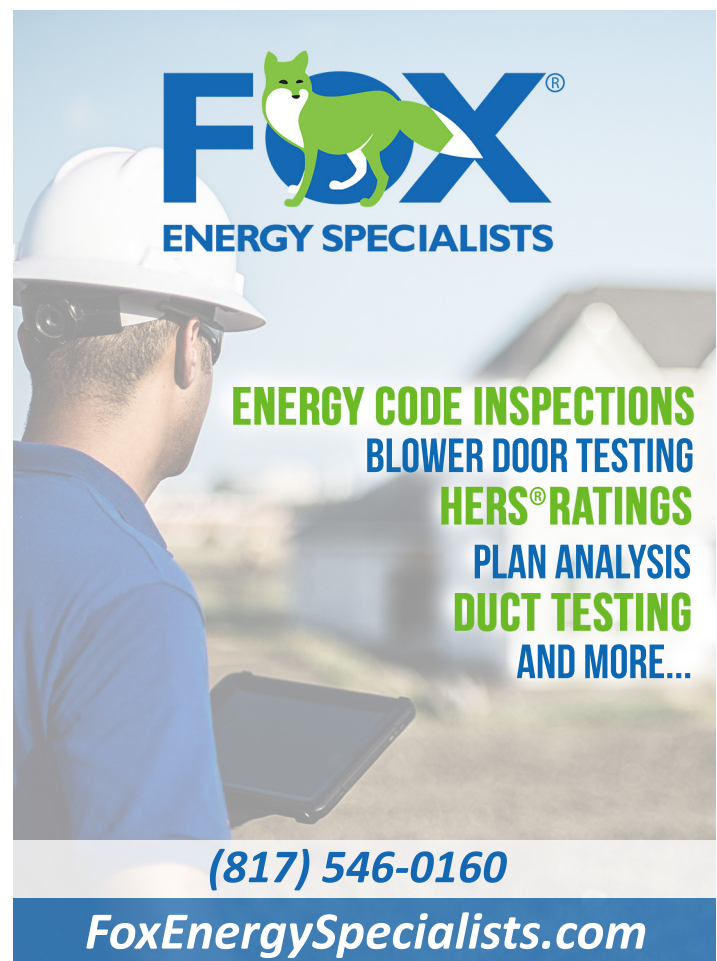
One particularly interesting change is that Dallas, Tarrant, Johnson, Ellis and Navarro counties are now considered Climate Zone 2 under the new code. All other Dallas/Fort Worth area counties remain in Climate Zone 3 including those immediately west, north and east, including Parker, Hood, Somervell, Wise, Collin, Denton, Collin, Hunt, Rockwall and Kaufman Counties. Rodriguez cited some examples where new homes by builders active in different neighborhoods just a few miles away from each other (but across a different county line) will have a price tag up to \$5,000 more due to the heightened requirements in Climate Zone 3 versus Climate Zone 2.

Aside from the universal takeaways listed above for all Texas markets, most builders in CZ2 will experience minimal impacts to their building envelope packages. The increase of attic insulation R-values to R49 (prescriptively) will likely cause CZ2 builders to adjust their building envelope packages to some degree. Whether its attic insulation, window efficiencies, or wall insulation packages, they will likely discover that an upgrade in performance specifications will be necessary in one of those three areas of the envelope, Rodriguez said.

As with prior editions of the IECC, CZ3 bears the brunt of the most aggressive energy code changes. “The days of 2x4 exterior walls with ‘TPLY’ style exterior sheathing are over in CZ3,” said Rodriguez. “Pick your option between 2x6 exterior walls or insulated sheathing.” He explained that since slab edge insulation is not yet a viable option in our local region, it is anticipated that the wall assemblies need to make up the difference in the energy performance calculations.

“If you are a DFW area builder that has communities all over the metroplex, the ENERGY STAR alternative compliance solution may be your best option if the 2021 IECC is adopted in multiple jurisdictions. The 2021 IECC (as published) is almost on par with today’s ENERGY STAR Version 3.1 Certification standards in climate zone 3. While ENERGY STAR still requires more HVAC performance testing, design documentation and administrative reporting for each home, you may discover that those procedural changes are worth doing in exchange for more flexible product tradeoffs when compared to the 2021 IECC,” Rodriguez said.

Contact your local area Fox Energy Specialists office if you have any questions, or need clarification regarding the code changes: Dallas/Fort Worth (817) 546-0160; San Antonio (210) 390-0250; Austin (512) 651-5753; Houston (713) 937-6060.



FOX
ENERGY SPECIALISTS

ENERGY CODE INSPECTIONS
BLOWER DOOR TESTING
HERS® RATINGS
PLAN ANALYSIS
DUCT TESTING
AND MORE...

(817) 546-0160
FoxEnergySpecialists.com