

Tips for Energy Code Compliance

Higher Profits, More Efficient Homes, Happier Clients

Complying with the local energy code goes a long way to assuring a new home meets your client's expectations for a safe, healthy and comfortable living environment. The good news is that builders are doing a great job of meeting energy code requirements most of the time. However, non-compliance can result in call-backs and added costs to you, the builder.

A recent study by the Missouri Department of Economic Development, Division of Energy (DED-DE) and the Midwest Energy Efficiency Alliance (MEEA) showed newly-built homes in Missouri were often non-compliant in these five areas:

Common Issues	How to improve compliance
1 High efficiency light bulbs are not installed as required. 94% of new homes were non-compliant.	Make sure the light bulbs installed meet or exceed minimum high efficiency bulb requirements (LED or similar) - 50% for 2009 IECC, 75% for 2012 and 2015 IECC, and 90% for 2018 IECC.
2 HVAC equipment is oversized. 90% of new homes had oversized equipment. The average units were 1.4 tons over-sized, costing builders and customers over \$4 million annually in equipment costs.	Ensure that your HVAC contractor is using ACCA Manual J and S standards to calculate and select a properly sized unit for each home you build. The old "rules of thumb" will not work for the way new homes are built.
3 Basement insulation is not installed. 70% of new homes had no insulation installed in conditioned basements.	Most local energy codes require that basement insulation be installed. Ensure the basement is watertight and then determine the insulation type and location for optimum building performance, comfort and efficiency.*
4 Insulation installation requires attention to detail. 75% of wall insulation failed to meet installation standards.	Carefully install insulation without gaps or compression. Split batts around pipes and wires. Cut around switch and outlet boxes.
5 Duct sealing proves challenging. 93% of the homes failed to meet a 12 CFM25 standard for ducts in conditioned space, and 50% failed to meet the standard for ducts in unconditioned space.	Framed return plenums are difficult to seal. Most customers expect the quality and performance of a metal ducted return. Be sure to seal framed return plenums at all edges, corners, joints, fasteners and penetrations. Seal supply and return ducts with mastic at all joints, plenums, take-offs and connections, including main trunks, filter boxes and register boots.

* Reference <https://www.nrel.gov/docs/fy13osti/55802.pdf> for more information
<https://energy.mo.gov/energy-codes/missouri-residential-building-codes-study>