

Iowa Energy Code Consultant Program

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MIDWEST ENERGY EFFICIENCY ALLIANCE

Who am I?

- ▶ Ryan Lovan
 - ▶ Iowa State University
 - ▶ The Energy Group (2014)
 - ▶ Residential, commercial, industrial energy audits, modeling, energy sales tax exemptions, diagnostic testing
 - ▶ BPI Certifications
 - ▶ Building Analyst
 - ▶ Multifamily Building Analyst
 - ▶ Envelope Professional
 - ▶ Infiltration & Duct Leakage
 - ▶ Iowa Energy Code Consultant (2022)



Program Information

- ▶ **Midwest Energy Efficiency Alliance (MEEA)**
 - ▶ Network which promotes energy efficiency
 - ▶ Optimize generation
 - ▶ Reduce consumption
 - ▶ Decrease carbon emissions
- ▶ **Iowa Energy Code Consultant Program**
 - ▶ Advisory position; not a Code official
 - ▶ Funded by US Department of Energy
 - ▶ Provide free assistance, training, education (focus on Residential)
 - ▶ Goal to improve compliance through improved understanding and best practices



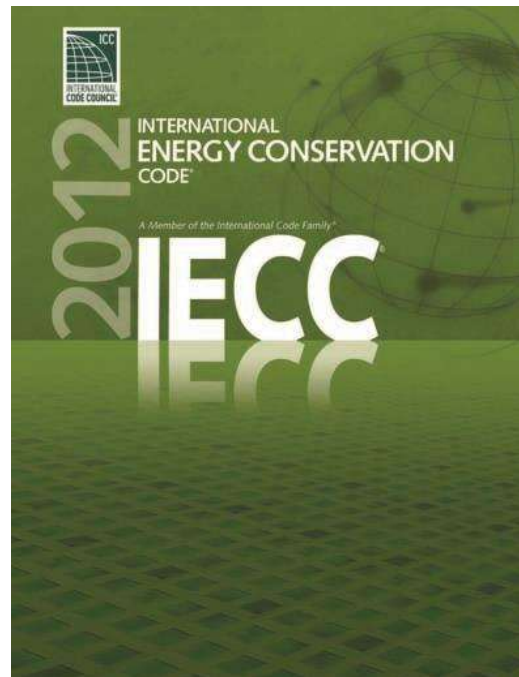
Program Overview

- ▶ Providing free, individually tailored residential energy code assistance, training, and education
- ▶ Goal of improving code compliance
 - ▶ Improving compliance = better quality homes, less customer callbacks, increasing home value
- ▶ Free webinars eligible for CEU credits, presentations, on-site diagnostic tool demonstrations, energy code section walkthroughs, etc.



Current State Energy Code (2012)

- ▶ Energy Code is a State requirement for new construction or additions/renovations
- ▶ What's in the Code?
 - ▶ Insulation requirements
 - ▶ Air-leakage requirements
 - ▶ Fenestration requirements
 - ▶ Mechanical system requirements
 - ▶ Electrical (lighting) requirements



Importance of Energy Codes

- ▶ Buildings consume 40% of our total energy
 - ▶ Saving energy = saving money
- ▶ Energy Codes can increase the comfort, health, and durability of buildings
- ▶ Energy Codes can increase the value of the home
- ▶ Energy Codes can reduce builder liability and comfort callbacks



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Residential Buildings

- ▶ One- and two-family dwellings, townhouses of any size and R-2, R-3, & R-4 (less than or equal to 3 stories)
 - ▶ R-2: Apartments, boarding houses, dormitories, etc.
 - ▶ R-3: One- and two-family dwellings
 - ▶ R-4: Residential care and assisted living facilities
- ▶ Includes new construction, additions, alterations, renovations, and repairs
- ▶ Buildings that are not residential by definition are considered commercial



Exempted Buildings

- ▶ Existing buildings
 - ▶ Code designed to regulate new construction & new work; not intended to be applied retroactively
- ▶ Historic buildings
- ▶ Very low energy use buildings ($< 3.4 \text{ Btu/h-ft}^2$ or 1 watt/ft^2)
 - ▶ Includes only space conditioning (unconditioned basement)



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Code Application Examples

- ▶ Additions
 - ▶ Treated as stand alone buildings; ignore the common walls between the existing building and the addition
- ▶ Alterations, Renovations, or Repairs
 - ▶ Applies to any new construction
 - ▶ Unaltered portions do not need to comply
 - ▶ Exceptions: storm windows over existing fenestration, glass-only replacements, exposed cavities if already filled with insulation, reroofing where sheathing nor insulation is exposed, lighting if less than 50% is replaced or only bulbs & ballasts in existing fixtures replaced
 - ▶ Any nonconditioned space that is altered to become conditioned must be brought into compliance (garage to a bedroom or heating unfinished basement)



Overview of Residential Code Requirements

- ▶ **The focus of requirements is on the building envelope**
 - ▶ Includes ceilings, walls, windows, floors & foundations
 - ▶ Insulation and fenestration levels, solar heat gain coefficients
 - ▶ Infiltration control
- ▶ Ducting, air handlers, and filter boxes → sealing, insulating & testing
- ▶ Lighting equipment → 75% of lamps/fixtures must be high-efficacy
- ▶ Limited space heating, air conditioning, and water heating requirements
 - ▶ Federal law sets most efficiency requirements
- ▶ No appliance requirements



Why follow code?

- ▶ Energy Code is a state requirement
- ▶ Ensuring energy code standards increase the sell and resale value of a home
- ▶ Ensuring energy code standards means increased occupant & tenant comfort
- ▶ Ensuring energy code standards means less callbacks from homeowners to address issues in the home



How We Can Help

- ▶ Provide the training and knowledge to your customers and employees
- ▶ Provide information in the form of flyers, one-page documents, and references
- ▶ Provide guidance on best energy practices and their benefits
- ▶ **ALL AT NO CHARGE TO YOU**



Contact Information

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