

Energy Code (5 hrs)

Ohio & Kentucky

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5.0 continuing education hours for engineers, contractors, designers and energy professionals

Course Description

Engineers, designers, technicians, contractors, consultants, building or equipment operators, and sometimes even owners who are responsible for new commercial or residential structures, additions and major upgrades requiring permits in Ohio and Kentucky are required to comply with the International Energy Conservation Code (IECC). The current code in 2014 is the 2009 IECC. It includes references to and in some applications allows alternative energy code compliance for commercial projects via the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 90.1-2007. These 2 code documents include many mandates affecting electrical and thermal efficiencies as well as specific instructions about how to correctly size and/or limit capacities, especially for lighting power and HVAC equipment capacities. The documents are not simple or one-size-fits-all. There are often unique specifics covering particular applications. They also allow some limited “trade-offs” between worse-than-spec performance in some areas of jurisdiction and better-than-spec performance in other similar areas. The two documents are mostly similar in scope and overall requirements but differ in some important ways. This course presents the precise language from the 2009 IECC, includes discussion about practical meanings and definitions, and compares different language and options cited in ASHRAE 90.1-2007 where such differences occur.

This course covers both commercial and residential aspects of the energy code, including electricals, service hot water and HVAC. The 2009 IECC and ASHRAE 90.1-2007 sections covering thermal envelope design and construction, more relevant to architects, designers and construction contractors, are not covered in this course.

Both the 2009 IECC and ASHRAE 90.1-2007 include allowances for “performance-based” compliance where pre-approved hour-by-hour software or other detailed calculations are used to demonstrate equivalent energy performance for special applications which may not comply with specifics in the energy code. This course only includes brief description and discussion of this process.

Learning Objectives

- Understand the specific power and efficiency requirements in the IECC 2009 which relate to electrical power, service hot water and HVAC in commercial and residential projects
- Become familiar with the different requirements and options for compliance where available in the ASHRAE Standard 90.1-2007.
- Learn code-required methods for calculating maximum lighting wattage budgets and HVAC capacities.
- Become more aware of what is required for “performance-based” compliance calculations.

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