ADMINISTRATION

Code Points
The main objective of the IECC® is to save energy. It establishes two options for compliance: prescriptive and performance. The major features are:

- Reducing heat loss through the building envelope
- Providing for energy-efficient operation and maintenance in:
  - New buildings
  - Existing buildings that have any of the following: additions, alterations, or occupancy changes
- Allowing compliance using either:
  - A prescriptive method of construction design
  - A performance method of construction design

KEYS TO COMPLIANCE

The provisions of the IECC® apply to the following:

- Additions to existing buildings are considered as newly constructed portions onto an existing building and need to meet the requirements of new buildings according to the IECC®

Figure 2 New ductwork installed in the basement of a building to change a previously unconditioned space to conditioned space

- Alterations and repairs to existing buildings shall conform to the provisions of this code without triggering a requirement for the entire building to comply, as long as the alteration or repair complies and does not create unsafe or hazardous conditions within the building.

A change in occupancy or change in space conditioning that increases the building’s demand for fossil fuel or electrical usage shall meet the requirements of this code. Examples would be changing a semi-conditioned space to a conditioned space or changing occupancy from an unconditioned warehouse to a conditioned office space within the warehouse itself. The conditioned office space must meet the requirements of the code.

Figure 4 Conditioned and unconditioned spaces within a building have different requirements

- Mixed-occupancy/mixed-use buildings may have both residential and commercial occupancies within them. Each occupancy shall be considered as a separate occupancy and shall comply with the requirements of that occupancy. Figure 4 is an example of a conditioned office space that must meet all the requirements of the IECC®. However, the unconditioned warehouse does not need to meet all the requirements of the IECC®, but it may need to meet the electrical requirements of the code, depending on the warehouse lighting design.
Some building changes not subject to code requirements:

- Storm windows
- Glass-only replacements

**Figure 5** Residential and commercial (retail) occupancies in one building

- Changes that expose existing ceiling, wall, or floor cavities filled with insulation
- Changes where existing roof, wall, or floor cavity is not exposed
- Reroofing
- Areas where the existing building cavity is not exposed
- Changes that expose existing building cavities insulated to full depth of cavity
- Replacement of some existing doors
- Alterations replacing less than 50% of the luminaires
- Alterations replacing only bulbs or ballasts within existing luminaires

**IECC Section—101.3**

**INTENT**

**Code Points**

▷ The code is intended to be flexible to allow the use of alternate and innovative materials, methods, and approaches.

▷ However, life safety, health, and environmental requirements will always take precedence over the provisions for energy conservation (Figures 5 and 6).

**EXAMPLE:** The provisions of the *International Mechanical Code* (IMC) will be enforced and take precedence over the IECC.

**KEYS TO COMPLIANCE**

The code regulates four main areas of compliance for new and existing buildings.

▷ **Building envelope:** To maintain energy savings, the building envelope must address energy conservation measures such as air sealing, glazing, and insulation levels.

▷ **Mechanical systems:** The mechanical systems can save energy in many ways, including energy-efficient equipment, proper sizing of the equipment and the distribution systems, and proper design and use of the heating, ventilating, and air conditioning (HVAC) controls to optimize the system.

▷ **Electrical system:** Many system features are addressed by the code to save energy, such as limiting the wattage of interior and exterior lighting and their controls by considering in the design the amount of lighting needed in a space and incorporating task and day lighting in the design.

▷ **Service water heating systems:** These systems can dramatically save energy, for example by the use of insulation or heat traps on a system’s piping and the use of high-efficiency equipment.

**Other notes:**

- The code always takes precedence when the requirements of a standard conflict with the requirements of the code.
- The provisions of the code shall not nullify any provisions of local, state, or federal law.
The code compliance process is as follows:

- Determine whether the project must comply with the IECC® or if the building is exempt.
  - Low-energy buildings are exempt from the requirements of this code.
  - Those with a peak rate of energy usage less than 3.4 Btu/h per square foot for space conditioning purposes are exempt.
  - Those with a peak rate of energy usage less than 1 watt per square foot for space conditioning purposes are exempt.
  - Is the designer using the IECC® or ASHRAE for a commercial building (see Section 501)?
- Determine if the project is residential or commercial or both:
  - Residential: Buildings or portions of buildings shall meet the requirements of Chapter 4.
  - Commercial: Buildings or portions of buildings shall meet the requirements of Chapter 5.

- Determine compliance with the mandatory provisions of the code for residential or commercial buildings.
- Determine if the designer has chosen a prescriptive or a performance path for compliance.
- If designed to a prescriptive path, determine the method of design (R-value, U-value, or total UA).
- Compliance documentation is submitted to jurisdiction for plan review and clearly identifies the designed and energy features that meet or exceed code.
- Compliance is verified through the field inspection process to confirm that energy-using features of the building are installed per the approved plans and documentation.

**Figure 7** IECC® residential compliance process