

## **2003 International Energy Conservation Code** **Overview of Changes**

Results of changes to the 2003 *International Energy Conservation Code* (IECC) mean simpler prescriptive compliance options, relaxed energy standards for sunroom additions, and cost effective improvements for commercial lighting efficiency.

The 2003 IECC establishes regulations for the design of energy-efficient residential and commercial buildings and structures, as well as portions of factory and industrial occupancies designed for human comfort. When the window and glazed door area exceeds 15 percent of the gross wall area in one and two family dwellings and 25 percent in townhouses the IECC is used instead of Chapter 11 in the IRC.

### Chapter 2 – Definitions

- Includes definitions for several terms including: commercial building, residential building, and sunroom addition

### Chapter 3 – Design Conditions

- Maps designating climate zones relocated to chapter 9

### Chapter 4 – Residential Building Design by Systems Analysis and Design of Buildings Utilizing Renewable Energy Sources

- Section 402.1 -Analysis procedure (new section provides for more consistent and repeatable specifications for the standard design home)
- Section 402.2.1 - Orientation for groups of buildings (new section recognizes that building energy consumption is affected by orientation and states that the worst possible orientation of the proposed design must be considered)

### Chapter 5 – Residential Building Design by Component Performance Approach

- Section 502.2.5 -Prescriptive path for additions and window replacements (revisions relax the glazing requirements for sunroom additions less the 500 square feet in area)
- Table 503.3.3.3 - Minimum Duct Insulation (revisions to residential duct insulation requirements reflect higher insulation levels and distinguish between supply and return ducts)
- Section 503.3.3.4.3 -Sealing required (New language requires duct connections to be sealed and mechanically fastened. This requirement is consistent with most manufacture's installation requirements.)

### Chapter 6 – Simplified Prescriptive Requirements for Residential Buildings

- Table 602.1 - Simplified Prescriptive Building Envelope Performance (revised to clearly associate climate zone designations with the appropriate heating degree day references)
- Section 602.1.12 - Recessed lighting fixtures (provisions for air-tight recessed lighting fixtures installed in the building envelope are added)
- Section 605.1- Electrical energy consumption (Separate metering of electrical energy consumption for individual dwelling units is required)

### Chapter 7 – Building Design for all Commercial Buildings

- Recognizes ASHRAE 90.1, 2001 edition, as a suitable design alternative for commercial buildings

## Chapter 8 – Design by Acceptable Practice for Commercial Buildings

- Section 802.3.7 - Recessed lighting fixtures (new requirements address air leakage through recessed lighting fixtures installed in the building envelope)
- Section 803.2.3.1- Temperature controls (revised to recognize circumstances where thermostats for heating/cooling units are either built-in or where setbacks capabilities become impractical, such as hotel guest rooms)
- Section 803.3.9 – Heat recovery for service water heating (new provision requires heat recovery from the condenser side of water-cooled systems for preheating hot water in large, 24 hour facilities such as 1000+ bed hospitals)
- Section 805.2.2.2 – Automatic lighting shutoff (New section requires automatic “lights out” – hour controls for buildings greater than 5,000 square feet in area. Provisions for occupant override and holiday scheduling are included.)
- Table 805.5.2 – Interior lighting power (revisions add 12 new “entire building” categories for calculating interior lighting load allowing more users to use Chapter 8 rather than Chapter 7)