

# Selected Highlights of the 2009 International Energy Conservation Code

This is not a complete statement of the requirements of the 2009 IECC and builders should refer to the full Code before making any design or construction decisions. A brief statement of each major new requirement is shown in regular type. We have added our own comments in italics to clarify or emphasize certain points.

**Certificate.** Builders must post a permanent certificate on the electrical panel stating the R value of building assemblies, the U and SHGC values of fenestration and the efficiencies of the heating, cooling and water heating equipment.

**Insulation.** The minimum prescriptive cavity insulation in above grade walls increases from R19 to R20. *Many builders use the Total UA Alternative method to demonstrate compliance with the energy code, e.g. REScheck, and will find very little difference between the insulation specifications required by the current and new codes.*

**Air sealing.** The building thermal envelope shall be durably air sealed with caulk, gaskets, weatherstripping or other air barrier material to limit infiltration. Some specified areas include all penetrations, joints and seams in the thermal envelope, openings between window or door jambs and framing, knee walls, garage/house walls, exterior walls behind tubs & showers, attic access openings, rim joist junctions & common walls between dwelling units. *Most of these requirements are familiar to ENERGY STAR 2.0 builders from the ENERGY STAR Thermal Bypass Checklist. Air permeable materials e.g. fiberglass, mineral wool may not be used as sealing materials.*

**Air Sealing Verification.** Air sealing must be verified by either (a) less than 7 ACH50 measured infiltration as determined by a blower door test or (b) a completed Air Barrier and Insulation Inspection Report. *7 ACH50 is not a difficult standard. This may be an easier way to comply with 2009 IECC as the Inspection Report includes some requirements that are often only met by spray foam insulation, e.g. air sealing behind electrical boxes.*

**Fireplaces.** New wood-burning fireplaces shall have gasketed doors and outdoor combustion air.

**Recessed lighting.** All recessed luminaires in the thermal envelope must be sealed to limit air leakage.

**Programmable Heating & Cooling Controls.** Forced air heating & cooling systems must be capable of maintaining different set points at different times of day.

**Duct Leakage.** All duct systems must be sealed and must be tested at either post construction or rough-in unless the entire system is within conditioned space. Post construction leakage must be less than 8 CFM25/100SF Leakage to Outdoors or 12 CFM25/100SF Total Leakage. Rough-in test leakage must be less than 6 CFM25/100SF including the air handler or 4CFM25/100 SF excluding the air handler. *This is probably the biggest improvement measure in IECC 2009. Studies have shown that over 80% of new homes fail to meet this standard. The required post construction standard for Duct Leakage to Outside of 8 CFM/100SF is still greater than the ENERGY STAR 2.0 standard of 6 CFM25/100SF and the new ENERGY STAR 3.0 standard of 4CFM25/100 SF but is a huge improvement over current levels.*

**Equipment Sizing.** Heating and cooling equipment shall be sized in accordance with Section M1401.3 of the International Residential Code. *i.e. according to ACCA Manual J or approved equivalent.*

**Lighting Equipment.** A minimum of 50% of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps.



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