The International Energy Conservation Code is in effect for all new structures, additions, renovations or repairs with the following exceptions: (2009 IECC, 101.4.3)

1. Storm windows over existing fenestration. (Glass)
2. Replacing the glass only in existing sash and frames.
3. Existing ceiling, wall or floor cavities that are exposed during construction that are already insulated.
4. Construction where the existing roof, wall or floor cavities are not exposed.
5. Reroofs where the sheathing is not removed and the insulation is not exposed.
6. Replacing existing doors does not require a vestibule, existing vestibules cannot be removed.
7. Alterations replacing less than 50% of the lights in a space provided installed interior power is not increased.
8. Alterations that replace existing bulbs and ballasts provided installed interior power is not increased.

* For all other construction projects that involve conditioned space, the requirements of the Energy Code apply.

There are 3 main ways to show compliance with the Energy Code—
2. Hire a licensed design professional to fully engineer and certify the project
3. Build to the specific prescriptive requirements for components AND submit a REScheck Package Generator which is available free at www.energycodes.gov. Notes outlining the computations must be included with submittal.

Requirements for option 3 are outlined here. For further information, see Chapter 4 of the 2009 International Energy Code.

**2009 IECC 402.4.1 requires that all sources of air infiltration in the Building Thermal Envelope to be sealed. This includes all seams, joints, penetrations, rim joist junctions, openings between window/doors jams and walls, sill plates, knee walls, outlet openings, switches and lighting that is placed in a wall separating conditioned and unconditioned spaces.**
**Floors:** Where a floor covers any unconditioned space, it must have R30 OR insulation sufficient to completely fill the framing cavity, R19 minimum. *(2009 IECC Table 402.1.1, footnote g)*

**Crawlspaces**—as an alternative to insulating the floor an unvented crawl space may have the same application as basement walls provided the insulation shall be permanently attached to the wall and extend downward from the floor above to grade and then vertically or horizontally for at least 24 inches. The International Residential Code requires exposed earth to have a class 1 vapor retarder. *(2009 IECC 402.2.9)*

**Basement Walls**—Basement walls may have either R-10 continuous insulated sheathing on the interior or exterior of the basement walls installed per the Manufacturers Instructions for the application, or R-13 cavity insulation on the interior walls—as in a normally finished basement. If the manufacturer does not list the product for the application, it cannot be used. Insulation must extend from the top of the basement wall to 10 feet below finished grade OR to the floor, whichever is less. *(2009 IECC 402.2.7)*

*** Insulation on the exterior of walls and slabs must have a rigid, opaque and weather resistant covering to protect it from degradation of the thermal performance and it must extend down 6 inches below finished grade. *(2009 IECC 303.2.1)*

**Slab**—The most common area for required slab insulation is on walkout basements where the concrete floor is at or near grade. The slab is required to have R-10 on the outside to the top of the concrete, and down 2 ft below finished grade. Heated slabs are required to be R-15. *(2009 IECC Table 402.1.1, footnote d)*

**Ducts**—Supply ducts in attics shall be insulated to a minimum of R-8, all other ducts must be insulated to R-6 unless located COMPLETELY within the Building Thermal Envelope. All ducts, air handlers, filter boxes and building cavities used as ducts shall be sealed to comply with M1601.4.1 of the International Mechanical Code. *(2009 IECC 403.2.2)* Building cavities may NOT be used for supply side ducts. Ducts shall NOT displace required insulation.

**Fireplaces**—Wood-burning fireplaces SHALL have gasketed doors and outdoor combustion air. *(2009 IECC 402.4.3)*

**Lighting**—At least 50% of bulbs in permanent light fixtures shall be high efficacy lamps. *(2009 IECC 404.1)*

**Doors**—Different types of doors have different U-value requirements. *(2009 IECC 303.1.3 (2)) When filling out the RE-Scheck Product Generator, fill in the U-factor for your specific doors and include the catalogue section from the manufacturer showing the information with the list of materials as part of the construction documents. (Doors with over 50% glass are considered FENESTRATIONS so count them with windows.)*

**Disclaimer:** ILOWA Chapter of the ICC has created this handout to assist with plans submittal under the 2009 International Energy Conservation Code, and it is not intended to cover all circumstances. The person performing the work is responsible for understanding and performing compliance with all applicable codes. Please check with the Department of Building Safety for additional requirements.