

2009 IECC - Effective January 1, 2013

Overview of Significant Changes

This is a comprehensive listing of the significant changes as they apply to the 2009 International Energy Conservation Code. This overview is not to be considered an all inclusive listing of all the changes that can be found in the 2009 IECC.

Residential (DOES NOT INCLUDE R-1 OCCUPANCIES)

- Permanent energy certificate shall be posted on the electrical panel. *The only change is that the certificate cannot obstruct the panel label or any manufacturer nomenclature.*
- U-factors and SHGC have increased. *2009 IECC now requires a U-Factor of .50, and a solar heat gain coefficient of .30.*
- Attic access opening or attic doors are required to be insulated and weather stripped.
- Building thermal envelope air leakage now includes an option for blower testing and an option for visual inspections to be performed to ensure air sealing compliance. *Each one of the options has specific testing criteria that must be followed. For further information see section 402.4.2 through 402.5 and table 402.4.2 of the 2009 IECC.*
- All new wood burning fireplaces shall have outdoor combustion air and doors with gasket seals.
- All recessed lighting shall be IC rated and sealed to prevent air leakage. *This requirement applies only to all recessed lighting that penetrates the conditioned space envelope.*
- At a minimum, 50% of the lamps in permanently installed lighting fixtures shall be high efficiency.
- Forced air furnaces now require a minimum of one programmable thermostat.
- Sealing of all duct work is mandatory and shall be tested to ensure minimal leakage is achieved. *Duct tightness can be verified at post construction or during rough-in. Each test method has a set of test criteria that must be met for compliance.*

Information can be found by reviewing sections 403.2.2(1) and (2) of the 2009 IECC. If all HVAC equipment and duct work is located in a conditioned space, duct tightness testing is omitted.

- Existing HVAC systems that are changed/upgraded to include replacing all duct work shall be required to meet the test requirements listed above.
- If you have a multi-tenant building where one HVAC system is supplying more than one dwelling, the system shall be designed using the criteria found in sections 503 and 504 of the commercial section of the 2009 IECC.
- Heated pools now have mandatory requirements for energy conservation.
 - 1) *Readily accessible on/off switch that allows shutting off the heater without adjusting the thermostat.*
 - 2) *Gas pool heaters shall not have continuous burning pilot lights.*
 - 3) *Pool heaters and pumps shall be equipped with time switches that turn on and off equipment according to preset schedules. This does not apply where public health standards require 24 hour pump operation, or for solar and waste heat recovery pool heating systems.*
 - 4) *Pool covers are required. If the water temperature is greater than 90 degrees Fahrenheit a pool cover with a minimum insulation R-value of R-12 shall be installed. This does not apply where 60% of the energy for heating is derived from solar or a site recovery system.*

Note: In July of 2013 with the adoption of the 2012 International Codes it will become a city requirement to submit Manual "S" when submitting HVAC load calculation data sheets. To clarify manual "J", "D" and "S" will be required at the time of plan submittal for all new residential projects beginning **July 1, 2013**.

Commercial includes all R-1 Occupancies

As an alternative commercial projects shall comply with the requirements of ANSI/ASHRAE/IESNA 90.1 in its entirety.

- R-1 occupancies shall use the designated column of table 502.1 for building thermal envelope requirements.
- Recessed lighting is required to be IC rated and sealed when penetrating the conditioned space envelope.
- Designed heating and cooling loads shall be calculated using ASHRAE/ACCA standard 183.
- The exception to energy recovery systems for laboratory fume hood systems no longer has a CFM requirement. The new section allows for the exception for laboratory fume hoods providing they meet one of the exceptions of 503.2.6 (3)(3.1), Or (3.2).
- A new exception was added that will omit piping insulation requirements of section 503.2.8. *Factory-installed piping within room fan-coils and unit ventilators tested and rated according to AHRI 440 (sampling and variation provisions of section 6.5 shall not apply) and 840, respectively.*
- All pipe sizes equal to 1.5 inches and less shall be insulated to a minimum thickness of 1.5 inches.
- Fan motor sizing shall be the first motor size greater than brake horsepower rating. Brake horse power ratings (bhp) for fans shall be included on all plan submittals for review.
- Outside heating shall consist of radiant systems only. Such systems shall employ occupancy sensors that will automatically deenergize the system when no occupants are present.
- HVAC systems shall include controls that reset supply air to coincide to occupant loading, or to outdoor air. Section reference 503.4.5.4.
- Cooling systems shall not use hot gas bypass or other evaporator pressure control systems unless the system is designed with multiple steps of unloading or continuous capacity modulation. Section reference 503.4.7.
- Pool heaters shall meet the same requirements as listed above for residential pool heaters.
- When computing interior lighting loads the exception not to include specialized medical, dental and research lighting has been removed. [*2009 IECC has added exceptions to the lighting load requirements review section 505.5.1.*](#)