



## 2012 IECC Residential Energy Efficiency Code Requirements Flow Chart

In accordance with Maryland Building Performance Standards and the currently adopted Howard County Building Code all residential structures must comply with the 2012 International Energy Conservation Code. All of the Mandatory provisions and either the Prescriptive or Performance based approached must be followed.

### Building Thermal Envelope Compliance Exception

R101.5.2 Low energy buildings. The following buildings, or portions thereof, separated from remainder of the building by building thermal envelope assemblies complying with this code shall be exempt from the building thermal envelope provisions of this code.

1. Those with a peak design rate of energy usage less than 3.4 Btu/h ft<sup>2</sup> (10.7W/m<sup>2</sup>) or 1.0 watt/ft<sup>2</sup> (10.7W/m<sup>2</sup>) of floor area for space conditioning purposes.
2. Those that do not contain conditioned space.

### Mandatory Requirements

Section R401.3	Certificate to be posted on/in panel box
Section R402.4	Air Leakage building thermal envelope shall be sealed to comply with Table R402.4.1 and tested for air leakage rate, not to exceed 3 air changes per hour with a blower door of a pressure of 0.2 inches e.g. (50 Pa). A written repeat shall be submitted.
Section R402.5	Maximum Fenestration U-factor and SHGC: U-factor 0.35 (or area weighted average maximum fenestration U factor of 0.48 using tradeoffs R402.1.4) and a U-factor of 0.75 for skylights.
Section R403.1	HVAC Controls: a programmable thermostat capable of controlling the heating and cooling system on a daily schedule.
Section R403.1.2	Heat Pump Supplementary Heat: shall have controls that except during defrost prevent supplemental heat operations when heat pump compressor can meet loads.
Section R403.2.2	Duct Sealing: duct tightness shall be verified by; post construction test or rough-in test, $\leq$ 4cfm per 100 square feet at 0.1 inch e.g. (25 Pa).
Section R403.2.3	Building Cavities: cavities shall not be used for ducts or plenums either supply or return.
Section R403.3	Mechanical System Piping Insulation: piping carrying fluids above 105°F (41°C) or below 55°F (13°C) shall have R-3 minimum insulation.
Section R403.4.1	Circulating Hot Water Systems: automatic or readily accessible manual switch to turn off hot water circulating pump when system is not in use.
Section R403.5	Mechanical Ventilation: approval ventilation systems and outdoor air intakes and exhausts shall have automatic or gravity dampers that close when ventilation system is not in operation.
Section R403.6	Equipment Sizing: heating and cooling in accordance with ACCA (Air Conditioning Contractors of America) Manual S based on good calculation for Manual J or other approved heating a cooling methodologies.
Section R403.8	Snow Melts Systems Controls: controls shall be supplied with automatic and manual shutoff based on outdoor temperatures.
Section R403.9	Pools and Inground Permanently Installed Spas: Heaters equipped with accessible on-off switch mounted outside the heater. Gas fired heaters shall not have constant burning pilot lights. Heated pools shall have vapor retardant cover.

### Prescriptive Requirements

Section R402.1	General: The building thermal envelope shall meet the requirements of Climate Zone 4 Table R402.1.1.
Section R402.2	Specific Insulation: See Section 402.2.1 through 402.2.12.
Section R402.3	Fenestration: See Section 402.3.1 through 402.3.6.
Section R403.2.1	Duct Insulation: Supply ducts in attic R-8 all other duct insulation R-6, except ducts inside building thermal

OR

### Performance Option Requirements

Section R405	Simulated Performance Alternative
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