

NEW RESIDENTIAL ENERGY CODE

Enforcement of the Indiana Residential Energy Code (675 IAC 14-4.3-139.1) began on June 25, 2012. All new residential construction built as, or attached to, a conditioned living space is required to meet these guidelines.

A Building Permit will not be issued until the Builder or Design Professional signs a Compliance Proposal or Compliance Certification Sheet. No exceptions.

Compliance can be either Prescriptive (by complying with the pre-set Insulation Ratings for this area) or Performance, by using an approved energy performance-based software. REScheck is a free and acceptable software offered by the Department of Energy in order to meet compliance.

REScheck: <http://www.energycodes.gov/rescheck/>

LOCAL PRESCRIPTIVE R-VALUES

Ceiling	R-38
Walls	R-20 or R-13 (int. cavity) +R-5 (ext. continuous)
Basement	R-10 (ext. continuous) R-13 (int. cavity)
Floor	R-30
*over conditioned space	R-19 (if cavity is fully packed)
Slab	R-10 (extending at least 2 ft. below grade)
Crawl Space	R-10 (ext. continuous) R-13 (from top wall to 2 ft. below or horizontal to grade)

*See compliance sheet for Sunroom/3-season porch values

2012 Indiana Residential Energy Code

Prescriptive Path:

Basement walls: R-10/13
Crawlspace walls: R-10/13
Slabs: R-10 2' down
Rim & Band: R-13+5 or R-20
Exterior Walls: R-13+5 or R-20
Ceilings: R-38 Flat, R-38 Vaulted
Windows: .35 U-Factor or lower
Doors: Standard insulated steel

UA Trade-off:

Basement walls: R-10
Crawlspace walls: R-10
Slabs: R-10 2' down
Rim & Band: R-13+3
Exterior Walls: R-13+3
Ceilings: R-38 Flat, R-38 Vaulted
Windows: .35 U-Factor or lower
Doors: Standard insulated steel

Typical Performance Path:

Basement walls: R-10 4' down
Crawlspace walls: R-10 interior
Slabs: R-10 2' down
Rim & Band: R-13
Exterior Walls: R-13 & OSB
Ceilings: R-38 Flat, R-38 Vaulted
Windows: .35 U-Factor or lower
Doors: Standard insulated steel

***Note: above listed are typical assemblies and may vary.**

Synopsis of New Requirements:

- ****Certificate of all insulation values and equipment sizes posted on electrical panel**
- ****Weather stripped and insulated attic access panel**
- All HVAC equipment sized according to ACCA Manual J eighth edition
- ****All ducts sealed w/ mastic or UL 181 tape (see attached)**
- R-3 refrigerant line insulation
- 50% CFL lightbulbs in permanent fixtures
- ****Air Leakage: The following must be caulked, sealed, or gasketed**
 - Site-built windows, doors, and sky-lights
 - Openings between door and window assemblies (fiberglass not permitted)
 - Utility penetrations
 - Dropped ceilings or chases adjacent to the thermal envelope
 - Knee walls
 - Walls and ceilings separating a garage from conditioned space
 - Behind tubs and showers on exterior walls
 - Common walls between dwelling units
 - Attic access openings
 - Rim joist junctions
 - Bottom plates
- Setback/programmable thermostat initially set at 70 heat and 78 cool
- ****Blower door testing showing less than 7 ACH @50 pa, or 3rd party verified inspection checklist completed. Note: Testing removes many expensive checklist items (see attached checklist)**
- ****Duct testing showing less than 8 CFM per 100 sq ft, required if any portion of the duct work is outside the thermal boundary**
- Special requirements for pools and snow melt controls

***Note: above listed are typical assemblies and may vary.**

****When using the Performance Path, see next page for required items:**

****When using the Performance Path, these are the only items required:**

Indiana Register

N1102.4.2.2

**TABLE N1102.4.2
AIR BARRIER AND INSULATION INSPECTION**

COMPONENT	CRITERIA
Air barrier and thermal barrier	Exterior thermal envelope insulation for framed walls is installed in substantial contact and continuous alignment with building envelope air barrier. Breaks or joint in the air barrier are filled or repaired. Air-permeable insulation is not used as a sealing material. Air-permeable insulation is inside of an air barrier.
Ceiling/attic	Air barrier in any dropped ceilings/soffit is substantially aligned with insulation and any gaps are sealed. Attic access (except unvented attic), knee wall door, or drop down stair is sealed.
Walls	Corners and headers are insulated. Junction of foundation and sill plate is sealed.
Windows and doors	Space between window/door jambs and framing is sealed.
Rim joists	Rim joists are insulated and include an air barrier.
Floors (including above garage and cantilevered floors)	Insulation is installed to maintain permanent contact with underside of subfloor decking. Air barrier is installed at any exposed edge of floor.
Crawl space walls	Insulation is permanently attached to walls. Exposed earth in unvented crawl spaces is covered with Class I vapor retarder with overlapping joints taped.
Shafts, penetrations	Duct shafts, utility penetrations, knee walls and flue shafts opening to exterior or unconditioned space are sealed.
Narrow cavities	Batts in narrow cavities are cut to fit, or narrow cavities are filled by sprayed/blown insulation.
Garage separation	Air sealing is provided between the garage and conditioned space.
Recessed lighting	Recessed luminaries are airtight, IC rated and sealed to drywall. Exception-luminaries in conditioned space.
Plumbing and wiring	Insulation is placed between outside and pipes. Batt insulation is cut to fit around wiring and plumbing, or sprayed/blown insulation extends behind piping and wiring.
Shower/tub on exterior wall	Showers and tubs on exterior walls have insulation and an air barrier separating them from the exterior wall.
Electrical/phone box on exterior wall	Air barrier extends behind boxes or air sealed type boxes are installed.
Common wall	Air barrier is installed in common wall between dwelling units.
HVAC register boots	HVAC register boots that penetrate building envelope are sealed to subfloor or drywall.
Fireplace	Fireplace walls include an air barrier.

N1102.4.2.1 Testing option. Tested air leakage is less than 7 air changes per hour (ACH) when tested with a blower door at a pressure of 0.007 psi (50 pascals). Testing shall occur after rough in and after installation of penetrations of the building envelope, including penetrations for utilities, plumbing, electrical, ventilation and combustion appliances. During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed. But not sealed;
2. Dampers shall be closed, but not sealed, including exhaust, intake, makeup air, back draft, and flue dampers;
3. Interior doors shall be open;
4. Exterior openings for continuous ventilation systems and heat recovery ventilators shall be closed and sealed;
5. Heating and cooling system(s) shall be turned off;
6. HVAC ducts shall not be sealed; and
7. Supply and return registers shall not be sealed.

N1102.4.2.2 Visual inspection option. The items listed in Table N1102.4.2, applicable to the method of construction, are field verified. Where required by local ordinance, an approved party independent from the installer of the insulation, shall inspect the air barrier and insulation.

N1102.4.3 Fireplaces. New wood-burning fireplaces shall have gasketed doors and outdoor combustion air.

N1102.4.4 Fenestration air leakage. Windows, skylights and sliding glass doors shall have an air infiltration rate of no more than 0.3 cubic foot per minute per square foot [1.5(L/s)/m²], and swinging

Duct Sealing

N1103.2.2 Sealing. Ducts, air handlers, filter boxes and building cavities used as ducts shall be sealed. Joints and seams shall comply with Section M1601.3.1 of this code.

