

Energy Code Checklist for Residential Construction

(This form is required for New Residential Buildings, Additions, Alterations, Repairs and other Permits as Applicable)
 Effective Jan. 1, 2016, the State of Illinois requires that all construction follow the Energy Efficient Building Act. This law requires the 2018 International Energy Conservation Code (IECC) be the energy code for all construction in Illinois. Code sections listed from the 2018 IECC-Residential Provisions.

Project Address:		Permit #:
Applicant Name:	Signature:	Checked By:
Phone #:	Email:	Date:
Project Type: (check one) <input type="checkbox"/> New Building <input type="checkbox"/> Addition <input type="checkbox"/> Renovation		Method:

Required Documentation with Permit Submittal:

1. Energy Compliance Documentation – Choose ONE method. All methods must meet mandatory requirements.

- Prescriptive Meth**
- Trade Off Method** Use this form and attach documentation to show compliance (i.e. ResCheck). ResCheck must include compliance form, inspection checklist and certificate. www.energycodes.gov/REScheck (it's free & easy)
- Simulated Performance Alternative**
- Energy Rating Index**

2. **Mandatory Requirements** – All projects must meet the **mandatory** requirements of the IECC.

<u>Mandatory Requirements</u>	<u>Compliance</u>
a) Certificate (R401.3) Permanent certificate posted on/near elec. panel with energy values	<input type="checkbox"/> Will Comply (Provided by City)
b) Building Thermal Envelope (R402.4.1) Seal building envelope from air infiltration	<input type="checkbox"/> Will Comply
c) Air Sealing and Insulation Testing/Insp. (R402.4.1.2) Verify sealing and insulation- choose one method. Blower Door Test Required for NEW BUILDINGS ONLY	<input type="checkbox"/> Blower Door (provide report) <input type="checkbox"/> Visual Inspection
d) Fireplaces (R402.4.2) Wood-burning have tight flue damper and outdoor combustion air	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
e) Fenestration Air Leakage (R402.4.3) Windows, sliding glass doors, skylights	<input type="checkbox"/> ≤ 0.3 cfm/sf (Check Label) <input type="checkbox"/> N/A
f) Fenestration Air Leakage (R402.4.3) Exterior swinging doors	<input type="checkbox"/> ≤ 0.5 cfm/sf (Check Label) <input type="checkbox"/> N/A
g) Recessed Lighting (R402.4.5) IC-rated and air tight when in thermal envelope	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
h) Heating/Cooling System Controls (R403.1.1) Programmable thermostat for furnace	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
i) Duct Sealing (R403.3.2) All ducts sealed with approved material(s)	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
j) Building Cavities (R403.3.5) Building framing cavities shall not be used as ducts both S&R	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
k) Mechanical System Piping Insulation (R403.4) R-3 minimum for > 105°F or <55°F	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
l) Circulating Hot Water System (R403.5) Piping insulated R-3 min. and on/off switch	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
m) Mechanical Ventilation (R403.6) See State of Illinois Amendments for requirements	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
n) Equipment Sizing (R403.7) Heating/Cooling equipment sized per ACCA Manuals S & J	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
o) Hot Water Pipe Insulation (R403.5.3) R-3 Insulation on: piping ≥ 3/4" in normal diameter. 2. Piping serving more than one dwelling unit. 3. Piping located outside the conditioned space. 4. Piping from the water heater to a distribution manifold. 5. Piping located under a floor slab. 6. Buried piping. 7. Supply and return piping in recirculation systems other than demand recirculation systems.	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
p) Lighting Equipment (R404.1) Min. 90% of lamps in permanent light fixtures=high efficacy	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A

3. **Building Wall Section** – Required for all new buildings and additions. Additional documents may be required by the Building Official. Minimum (1) section required. For interior alterations include documents to illustrate code compliance as necessary. Use City of Rockford BUILDING WALL SECTION sheet to help with this requirement.
4. **Floor Plan** – Required for all new buildings and additions. Floor plan must indicate thermal envelope, conditioned/unconditioned spaces and heating system location.
5. **Prescriptive Requirements** – COMPLETE THIS TABLE, if Prescriptive Method is chosen. Letters correspond to #3 above in regards to the City of Rockford BUILDING WALL SECTION sheet.

Building Components	Prescriptive Standard	Proposed/ Actual Value	Remarks
Insulation (R402.2) Prescriptive Standard is Minimum R-Value			
A. Ceilings with Attic Spaces (R402.2.1)	R-49 / R-38		R-49 for standard truss, can be reduced to R-38 with Raised Heel/Energy Truss
B. Ceilings without Attic Spaces (R402.2.2)	R-30		Limited to 500 sq ft OR 20% of the total insulated ceiling area, whichever is less
C. Wood Frame Wall (Table R402.1.2)	R-20 or R-13+5		R-20 for interiors cavity or R-13 for interiors cavity plus R-5 insulated sheathing
D. Floors Over Unconditioned Space (R402.2.8)	R-30		Floor insulation shall maintain permanent contact with subfloor decking
E. Basement Walls (R402.2.9)	R-15 or R-19		R-15 continuous insulation on the interior or exterior or R-19 for interior wall cavity
F. Slab-on-Grade Floors (R402.2.10)	R-10		Insulation depth shall be the depth of the footing or 2 feet whichever is less
G. Crawl Space Walls (R402.2.11)	R-15 or R-19		R-15 continuous insulation on the interior or exterior or R-19 for interior wall cavity
Fenestrations (R402.3) Prescriptive Standard is Maximum U-Factor			
H. Windows, Sliding Glass Doors, and Swinging Doors with >50% glazing	U-0.30		An area weighted average may be used to satisfy the U-factor requirements but must include all windows, skylights, glass doors and opaque doors. Provide documentation if this is used.
J. Skylights	U-0.55		

(The above table is based on wood frame construction and common building practices, if not addressed in the table above, please attach separate documentation to illustrate code compliance. See code book for sunrooms. Values are based on Climate Zone 5A in the 2018 IECC).

6. Other Prescriptive Requirements:

Other Prescriptive Requirements if applicable	Compliance
Duct Insulation (R403.3.1) S&R ducts in attics \geq R-8 for ducts \geq 3" diameter and \geq R-6 for ducts < 3" diameter. S&R ducts in other portions of the building \geq R-6 for ducts 3" diameter and \geq R-4.2 for ducts < 3"diameter.	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
Duct Tightness Test (R403.3.3) Required if furnace or any duct is outside of the thermal envelope	<input type="checkbox"/> Test 1 <input type="checkbox"/> Test 2 <input type="checkbox"/> N/A
Eave Baffle (R402.2.3) For air-permeable insulations in vented attics, a baffle shall be installed adjacent to soffit and eave vents.	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
Attic Hatches (R402.2.4) Access doors to attic must be weather-stripped and insulated	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A

Notes:

- i. For further clarification of the above items, please refer to the 2018 International Energy Conservation Code (IECC).
- ii. The City of Rockford has other useful material related to the energy code, please visit us at www.rockfordil.gov
- iii. Visit the State of Illinois Energy Code page for amendments and other info at www.ildceo.net/energycode
- iv. For free, up-to-date energy references, energy training and energy code info, visit www.energycodes.gov



City of Rockford, Illinois

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