2012 IECC Residential Energy Conservation Code Process

In accordance with Iowa State Energy Conservation Code all new residential structures must comply with the 2012 International Energy Conservation Code with State amendments. All of the Mandatory provisions and either the Prescriptive or Performance based approach must be followed.

**Applicant sign off at time of building permit approval**
(Third party field inspections to verify compliance)

Heating and cooling equipment shall be sized in accordance with ACCA manual S/J. Load calculations shall be submitted before mechanical permit is issued.

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**Then**

Mandatory Requirements

- R401.3 Certificate
- R402.4 Air Leakage
- R402.5 Maximum fenestration U-factor and SHGC
- R403.1 HVAC Controls (Programmable Thermostat)
- R403.1.2 Heat Pump Supplementary Heat (Controls)
- R403.2.2 Duct Sealing
- R403.2.3 Building Cavities as ducts or plenums
- R403.3 Mechanical system piping insulation Section
- R403.4.1 Circulating hot water systems (Manual Switch)
- R403.5 Mechanical ventilation
- R403.6 Equipment sizing
- R403.7 Systems serving multiple dwelling units
- R403.8 Snow melt systems controls
- R403.9 Pools and in-ground permanently installed spas
- R404.1 Lighting Equipment
- R404.1.1 Fuel Gas Lighting Equipment

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and either the Prescriptive or Performance provisions
**Prescriptive Option Requirements**

- R402.1 General
- R402.2 Specific insulation requirements
- R402.3 Fenestration
- R403.2.1 Duct insulation
- R403.4.2 Hot water pipe insulation

**Prescriptive Option Requirements**

- R405 Simulated performance alternative

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**Prescriptive Compliance Path**

Choose of the three available options:

- Prescriptive R-Value
- Prescriptive U-Value

**Performance Option Requirements**

Must submit compliance documentation

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**Mandatory Requirements**

All provisions must be complied with regardless of the compliance path that is chosen.

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**Prescriptive UA Alternative**

Third Party in-field inspections to verify compliance

Supporting documents to be supplied before CO

(Compliance Report, Inspection Checklist, and Panel Certificate)

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**Table R402.1.1 Insulation and Fenestration Requirements by Component (2012 IECC)**

<table>
<thead>
<tr>
<th>Climate Zone</th>
<th>Fenestration U-Factor</th>
<th>Skylight U-Factor</th>
<th>Glazed Fenestration SHGC</th>
<th>Ceiling R-value</th>
<th>Wood Frame Wall R-value</th>
<th>Mass Wall R-value</th>
<th>Floor R-value</th>
<th>Basement Wall R-value</th>
<th>Slab R-value &amp; Depth</th>
<th>Crawl Space Wall R-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 And Marine 4</td>
<td>0.32</td>
<td>0.55</td>
<td>NR</td>
<td>49</td>
<td>20 or 13+5</td>
<td>13/17</td>
<td>30</td>
<td>15/19</td>
<td>10, 2ft</td>
<td>15/19</td>
</tr>
</tbody>
</table>

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**Table R402.1.3 Insulation and Fenestration Requirements by Component (2012 IECC)**

<table>
<thead>
<tr>
<th>Climate Zone</th>
<th>Fenestration U-Factor</th>
<th>Skylight U-Factor</th>
<th>Ceiling U-Factor</th>
<th>Wood Frame Wall U-Factor</th>
<th>Mass Wall U-Factor</th>
<th>Floor U-Factor</th>
<th>Basement Wall U-Factor</th>
<th>Crawl Space Wall U-Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 And Marine 4</td>
<td>0.32</td>
<td>0.55</td>
<td>0.026</td>
<td>0.057</td>
<td>0.082</td>
<td>0.033</td>
<td>0.050</td>
<td>0.055</td>
</tr>
</tbody>
</table>

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**Prescriptive UA Alternative**

Third Party in-field inspections to verify compliance

Supporting documents to be supplied before CO

(Compliance Report, Inspection Checklist, and Panel Certificate)