Step-by-Step Instructions

1. Using the climate zone map to the right, match the jurisdiction to the appropriate IECC climate zone. Use the simplified table of IECC building envelope requirements (below) to determine the basic thermal envelope requirements associated with the jurisdiction.

2. Use the “Outline of 2009 IECC Requirements” printed on the back of this sheet as a reference or a categorized index to the IECC requirements. Construct the building according to the requirements of the IECC and other applicable code requirements.

The 2009 International Energy Conservation Code

The 2009 IECC was developed by the International Code Council (ICC) and is currently available to states for adoption. The IECC is the national model standard for energy-efficient residential construction recognized by federal law. The American Recovery and Reinvestment Act of 2009 makes funds available to jurisdictions, like Iowa, that have committed to adopt and implement the 2009 IECC. Users of this guide are strongly recommended to obtain a copy of the IECC and refer to it for any questions and further details on compliance. IECC compliance training is also available from many sources. To obtain a copy of the 2009 IECC, contact the ICC or visit www.iccsafe.org.

Limitations

This guide is an energy code compliance aid for Iowa based upon the simple prescriptive option of the 2009 IECC. It does not provide a guarantee for meeting the IECC. This guide is not designed to reflect the actual energy code, with amendments, if any, adopted in Iowa and does not, therefore, provide a guarantee for meeting the state energy code. For details on the energy code adopted by Iowa, including how it may differ from the IECC, please contact your local building code official.

### Windows

<table>
<thead>
<tr>
<th>Zone 6</th>
<th>Zone 5</th>
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</thead>
<tbody>
<tr>
<td>Fishe 0.35</td>
<td>0.35</td>
</tr>
<tr>
<td>Skyl</td>
<td>0.60</td>
</tr>
<tr>
<td>GLaze</td>
<td>NR</td>
</tr>
<tr>
<td>ShGC</td>
<td>49</td>
</tr>
<tr>
<td>Cel 20 or 20</td>
<td></td>
</tr>
<tr>
<td>R-V</td>
<td>13 + 5</td>
</tr>
<tr>
<td>Win 15/19</td>
<td>15/19</td>
</tr>
<tr>
<td>Eam 10, 4 ft</td>
<td>10, 2 ft</td>
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<tr>
<td>Foun 10/13</td>
<td>10/13</td>
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</tbody>
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NR indicates No Requirement
The simplified table of building envelope requirements (on the previous page) applies to new residential buildings, as defined in the IECC, with wood framing and/or mass walls. For steel-framed buildings, the same window requirements apply; however, refer to IECC section 402.2.5 for specific ceiling, wall and floor insulation R-value requirements. The table also applies to all additions, alterations and replacement windows. The table is based upon the thermal envelope requirements in the 2009 IECC's prescriptive compliance option for the appropriate climate zones (Table 402.1.1) and does not reflect any state-specific amendments to the IECC.

Fenestration (IECC sections 303.1.3, 402.3, 402.5)
- Fenestration (including all windows and doors) and Skylight
  U-factor and Glazed Fenestration SHGC values are
  maximum acceptable levels. The Glazed Fenestration
  maximum applies to all windows, skylights and glazed doors.
  An area-weighted average of fenestration products
  is permitted to satisfy these requirements.
- Window, door and skylight U-factors and SHGCs must be
determined from a National Fenestration Rating Council
(NFRC) rating that is independently certified and set forth on
a label on the product or from a limited table of product
default values in the IECC. See www.nfrc.org for more
details on the NFRC rating system.
- Windows must also be labeled in a manner to show that they
  meet the IECC's air infiltration requirements.
- Up to 15 square feet of glazed fenestration is permitted to be
  exempt from the U-factor and SHGC requirements. One
  side-hinged opaque door assembly up to 24 square feet is
  exempted from the Fenestration U-factor requirement.
  These exceptions apply in the prescriptive path only. Special
  exceptions may apply for fenestration U-factor requirements
  in thermally isolated sunrooms. (see IECC section 402.3.5)

Insulation (IECC sections 303.1.4 and 402)
- Insulation R-values are minimum acceptable levels and must
determine according to FTC rule.
- R-values for walls represent the sum of cavity insulation plus
  insulated sheathing, if any. The second R-value for mass
  walls applies when more than half the insulation is on the
  interior of the mass wall.
- The insulation for basement walls must be from the top of
  the wall down 10 feet below grade or to the basement floor,
  whichever is less. Basement wall insulation is not required in
  warm-humid locations as defined in IECC Figure 301.1 and
  Table 301.1. Insulation requirements for crawl space walls
  are further specified in IECC section 402.2.9.
- Floor insulation must be installed to maintain contact with
  the underside of the subfloor decking.
- Access doors from conditioned spaces to unconditioned
  spaces (e.g., attics and crawl spaces) shall be weatherstripped
  and insulated to a level equivalent to the insulation on the
  surrounding surfaces.
- Insulation requirements for slab on grade floors is further
  specified in IECC section 402.2.8. R-5 shall be added to the
  required slab edge R-values for heated slabs.
- Special Insulation exceptions related to ceilings with attic
  spaces, ceilings without attic spaces, masonry veneer and
  thermally isolated sunrooms are set forth in IECC section
  402.

Ducts (IECC section 403.2)
- Ducts must be tested for tightness, as specified in IECC
  section 403.2.2, except where the air handler and all ducts are
  located within conditioned space.
- Supply ducts in attics shall be sealed and insulated to a
  minimum of R-8. All other ducts shall be sealed and
  insulated to a minimum of R-6. Ducts or portions thereof
  located completely inside the building thermal envelope are
  exempted from the insulation requirement. Air handlers,
  filter boxes and building cavities used as ducts must also be
  properly sealed.

Air Sealing (IECC section 402.4)
- The building envelope is required to be properly sealed to
  limit air infiltration. Air tightness and insulation installation
  must be demonstrated either by testing or visual inspection.
  Recessed lighting must also be sealed to limit air leakage.

Documentation (IECC sections 103, 303.3, 401.3)
- The appropriate construction documents and preventative
  maintenance information must be provided, along with a
  permanent certificate listing certain insulation, window and
  HVAC performance information.

Systems (IECC Section 403 and IRC section M1401.3)
- HVAC system must be properly sized using a procedure like
  ACCA Manual J.
- Temperature controls must be installed, including a
  programmable thermostat where required.
- Mechanical system piping must be insulated to a minimum of
  R-3.
- Specific requirements apply to circulating hot water systems,
  mechanical ventilation, snow melt systems, and pools.

Lighting (IECC Sections 202 and 404.1.1)
- A minimum of 50% of lamps in permanently installed
  fixtures must be high-efficacy as defined in the IECC.