North Dakota does not enforce a uniform state-wide building energy code. Building owners should consider meeting or exceeding the requirements of the most current version of the International Energy Conservation Code (IECC) when installing a new or replacement roof system in order to improve energy efficiency and reduce operating costs. The IECC’s minimum insulation requirements apply both to new construction and roof replacements on existing buildings. Information on applicable local building energy codes is available from the North Dakota Division of Community Services [here](#).

### Minimum R-value Requirements for Insulation Entirely Above the Roof Deck

<table>
<thead>
<tr>
<th>Climate Zone</th>
<th>R-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>R-35ci</td>
</tr>
<tr>
<td>6</td>
<td>R-30ci</td>
</tr>
</tbody>
</table>

#### Notes
- **About R-value:** R-value is a measurement of a material’s ability to resist heat flow. The higher the R-value, the greater the insulating power. Installers should consult data sheets provided by polyiso manufacturers for information on product-specific R-values.

- **Code Compliance:** The International Energy Conservation Code recognizes ASHRAE 90.1 as an alternate compliance option for both new construction and existing buildings.

#### Resources
- [Polyisocyanurate Insulation Manufacturers Association](#)
- [U.S. Department of Energy](#)
Option #1 - R-30ci Roof Assembly

- Roof Membrane
- Two layers of 2.6” polyiso
- 2.6” Polyiso Boards
- Structural Roof Deck
- R-30

Option #2 - R-30ci Roof Assembly

- Roof Membrane
- Two layers of 2.4” polyiso
- 2.4” Polyiso Boards
- 0.5” HD Polyiso Cover Board
- Structural Roof Deck
- R-27.6

- 0.5” HD polyiso cover board
- R-2.5

- Total R-30.1

Option #1 - R-35ci Roof Assembly

- Roof Membrane
- Two layers of 3.1” polyiso
- 3.1” Polyiso Boards
- Structural Roof Deck
- R-36.0

Option #2 - R-35ci Roof Assembly

- Roof Membrane
- Two layers of 2.9” polyiso
- 2.9” Polyiso Boards
- 0.5” HD Polyiso Cover Board
- Structural Roof Deck
- R-33.6

- 0.5” HD polyiso cover board
- R-2.5

- Total R-36.1
PIMA

For more than 30 years, the Polyisocyanurate Insulation Manufacturers Association (PIMA) has served as the voice of the rigid polyiso industry, proactively advocating for safe, cost-effective, sustainable, and energy-efficient construction. Organized in 1987, PIMA is an association of polyiso manufacturers and industry suppliers. Polyiso is one of North America’s most widely-used and cost-effective insulation products.

About Polyiso Insulation

Polyiso is a rigid foam insulation used in more than 70% of commercial roof construction and offers a continuous insulation solution for commercial and residential wall assemblies. As one of North America’s most widely used and readily available building products, polyiso is a cost-effective insulation option for reducing building energy use and improving the overall service-life of roofs and walls.

For more information on polyisocyanurate insulation, visit www.polyiso.org