The applicable building codes that determine the minimum insulation requirements for commercial roofs in Virginia are the [2018 Virginia Energy Conservation Code](https://www.virginia.gov/energy-conservation-code/) (VECC) and the [2018 Virginia Existing Building Code](https://www.virginia.gov/energy-existing-code/) (VEBC). These codes are effective July 1, 2021. The minimum insulation requirements apply both to new construction and roof replacements on existing buildings.

For existing buildings, Chapter 6 of the 2018 VEBC ([Section 601.4.5](https://www.virginia.gov/energy-existing-code/)) contains the insulation requirements applicable to roof replacements. Under the 2018 VEBC, roof replacement projects meeting the following conditions must include a minimum of R-30 continuous insulation:

1. The roof replacement exceeds 75 percent or 30,000 square feet of the roof area, whichever is less.
2. The roof assembly is part of the building thermal envelope, as defined by the VECC.
3. The roof assembly contains insulation entirely above the roof deck.

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

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<th>Climate Zone 4: R-30ci</th>
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**Notes**

- **Roof area** is defined as the “area of the existing roof of the same building that is bounded by exterior walls, different roof levels, roof edges or perimeters, roof dividers, building expansion joints, or parapets.” Therefore, the “roof area” can be smaller than the building’s total roof space.

- **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](https://www.polyiso.com/)
- [U.S. Department of Energy](https://www.energy.gov/)

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[2018 Virginia Energy Conservation Code](https://www.virginia.gov/energy-conservation-code/)

[2018 Virginia Existing Building Code](https://www.virginia.gov/energy-existing-code/)
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