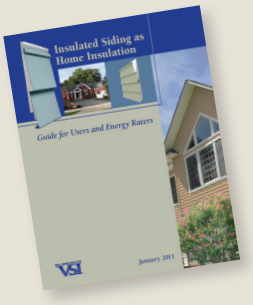
Siding with Energy Efficiency

Today's homeowners know consuming less energy can reduce their energy costs. And while they may be familiar with ENERGY STAR® qualified appliances or energy efficient windows, they may be surprised to learn that insulated siding can also improve a home's energy performance.

Insulated siding is vinyl siding with rigid foam insulation that is laminated or permanently attached to the panel. It can help improve a home's energy efficiency and supports energy efficient construction. What's more, insulated siding helps contribute to achieving points in the leading green building certification programs.



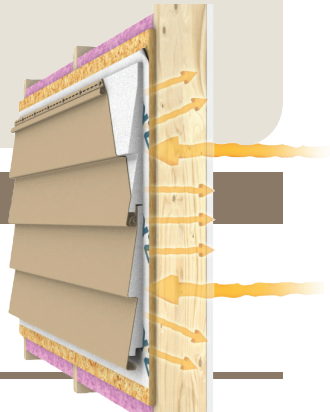
Insulated Siding as Home Insulation

VSI has created a go-to resource on insulated siding that explains how it works, how it's been tested, and how it can help improve a home's energy efficiency. The complete *Guide* is available to view and/or download at www.insulatedsiding.info.

Added Insulating Power

Insulated siding is now accepted as home insulation in various energy efficiency programs. In fact, due to its ability to reduce thermal bridging, insulated siding has been added to the checklist of building products or methodologies that can help meet the requirements to qualify new homes under ENERGY STAR Qualified Homes Version 3.

Additionally, using section 402 of the *2009 International Energy Conservation Code*, the rated R-value of insulated siding can be used to calculate the energy performance of the entire wall (often expressed as the wall's U-factor).



DID YOU KNOW?

A product's R-value is a measure of its thermal resistance; the higher the R-value, the better the insulation is at resisting heat flow.

VINYL SIDING INSTITUTE
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High-Performance Homes

The New York State Energy Research and Development Authority's (NYSERDA) High Performance Residential Challenge included studies conducted by independent research firm Newport Ventures on the performance of insulated siding.

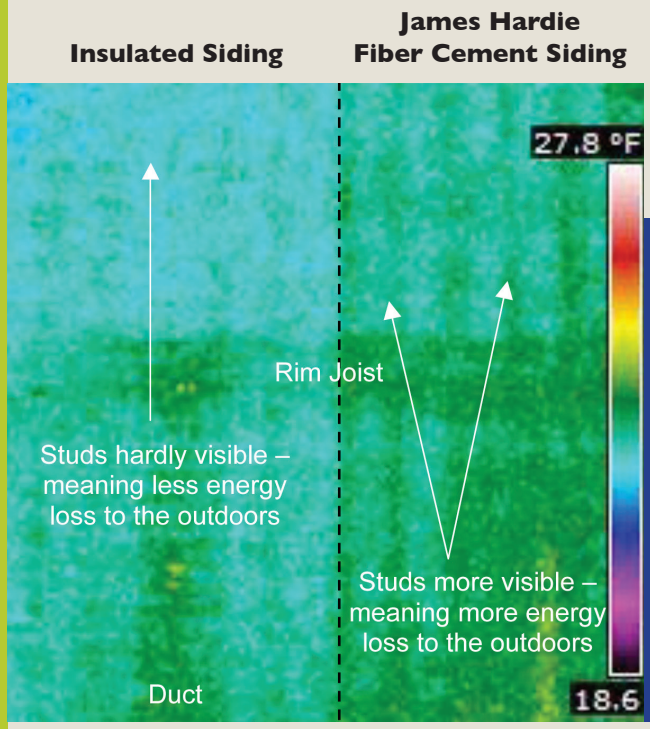
One of the homes studied was a two-story colonial in Burnt Hills, New York. The home had a section of a south-facing wall with no openings, clad using both insulated siding and James Hardie fiber cement siding.

Newport found insulated siding minimized heat loss through the wall assembly, especially through the studs which have the lowest R-value in the overall assembly (see image at right). Newport projected that the Burnt Hills home could save significant resources by specifying insulated siding over fiber cement siding, including annual savings of $56 in natural gas and energy costs, 448 pounds of CO_2 and 3.2 million Btu.

Breaking the Thermal Bridge

Insulated siding performs an important function in a home's energy performance – breaking the "thermal bridge" between the home's studs and exterior cladding. Thermal bridging occurs when materials with poor insulating properties contact each other, allowing heat to flow through them.

Most wall insulation is placed *between* the studs. Wall studs, both wood and metal, conduct heat. And since wall studs represent up to 25% of the wall surface of an average home, that's like having one entire wall with no insulation. Insulated siding blankets the home, providing continuous insulation to help increase the total wall R-value for buildings.



These thermal images from the NYSERDA study show how a home's studs allow heat to pass through a wall – a process known as thermal bridging. Insulated siding creates a barrier over the studs, interrupting the flow of heat.

A true star in exterior cladding!

Beyond helping new homes meet the requirements to qualify under ENERGY STAR® Qualified Homes Version 3 and contributing to points in leading green building certification programs, insulated siding is available in the latest color palettes, profiles and textures. So you can suit many architectural styles beautifully, all while enhancing energy efficiency!

For more information, visit www.insulatedsiding.info.

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For more information on why America Sides with Vinyl, visit www.vinylsiding.org.