



## Article Side

Structural Insulated Panels: a Green Alternative to Building Durable Homes by [Kevinnoel](#)

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The Environmental Protection Agency's (EPA) motion to build green homes aims to reduce energy consumption and carbon dioxide emissions. Green buildings utilize less energy, lessening carbon dioxide discharge. As a result, green homes greatly contribute in combating global climate change.

As buildings use a tremendous amount of natural resources to construct and operate, constructing green homes that use resources more efficiently and minimize pollution can also be beneficial. In this regard, those in the process of building their homes may consider structural insulated panels (SIPs) as resilient and environmental-friendly materials.

These SIPs are one of the most airtight and well-insulated construction systems. Efficiently-constructed SIP establishments consume less electricity to heat and cool for an improved management of indoor environmental conditions. This superior building envelope with high thermal resistance and minimal infiltration capabilities outperforms stick framed walls with fiberglass insulation.

These SIPs take less energy and raw materials to produce compared with other structural building systems. They are fabricated in a controlled environment, radically reducing the waste generated during construction through the use of advanced optimization software and automated fabrication technology.

The main components of SIPs are foam and oriented strand board (OSB). Oriented strand board is manufactured from easily renewable, underutilized, and inexpensive wood species grown in carefully managed forests. As much as 90% of log can be used to make SIPs, and the remainder (bark, saw trim, and sawdust) can all be converted into energy, bark dust, or pulp chips.

Today, SIP construction is becoming the preferred choice for high-performance homes. These insulated wall panels come in the form of roof trusses and panels and floor trusses and basement panels that serve as the foundations of your house. Additionally, a completely-engineered SIP building is constructed faster with less labor costs because the insulation, framing, and sheathing are incorporated in the manufacture of a single panel.

Thus, SIP homes offer a lifetime of value and comfort. These insulated panels reduce air movement, moisture and drafts, eliminate noise, and prevent dust and allergens from penetrating your household. Moreover, e-friendly families have the option of having a specially designed Energy Star SIP home that will save them as much as \$1,500 in annual utility bills.

Finally, SIP panels can be built to meet your desired R-Value performance and unique design preference. An SIP home can be finished with a variety of materials including drywall, vinyl siding, or brick. If you would like to read up some more on SIPs, visit [sips.org/about/what-are-sips](http://sips.org/about/what-are-sips).

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