

# Active House USA

St. Louis, Missouri, USA



## Insulspan® SIPs play key role in North America's first Active House

Builder Matt Belcher is no stranger to building sustainable homes. His resume as a custom-home builder and consultant boasts several of the nation's top green homes, authoring a book on sustainable construction, and direct involvement in the development U.S. building codes and green building standards.

In 2011, Belcher was approached by the Belgium-based Active House Alliance with an entirely new take on green building. Following a holistic approach to net zero energy design, the Active House standard merges energy-efficiency with a focus on environmental impact and indoor air quality. Belcher's consulting firm Verditek Solutions partnered with Hibbs Homes to construct the North American prototype: Active House USA.

Reaching the energy efficiency metrics of the Active House standard demanded a robust building envelope to reduce heating and cooling loads.

"It all starts with the building envelope," said Belcher. "SIPs give you the confidence going in that the building envelope is not going to be an issue."

Belcher and his team specified the Insulspan® Structural

Insulating Panel (SIP) System for the walls and roof of the home. By selecting Insulspan SIPs, they greatly reduced both thermal bridging and air infiltration.



"We used a salvaged 2.5 ton electric furnace as a temporary heat source during construction and heated the house all winter with that little furnace,"

said Belcher. "The thermal performance was incredible."

Building on the efficiency of the SIP envelope is a 98% AFUE natural gas furnace, an energy recovery ventilator, high performance windows and doors, a solar thermal system, and a 4.8kW PV array. The home is expected to reach net zero energy use.

"My experience with Insulspan was good," said Belcher. "The end result is a superior home, and that is what we were going for."

"We are excited that the Insulspan SIP System helped Matt reach the energy performance and indoor air quality goals of this new, emerging standard," said Insulspan Sales Representative Aaron Hinde.