Project Profile

BioBased Insulation®
Division of BioBased Technologies®

Power Haus

Built by Florida-based builder, Josh Wynne Construction, Power Haus is located in Sarasota, Florida. The house achieved a minus 22 HERS rating - the lowest HERS rating in the U.S. The negative score means the Power Haus produces more energy than it consumes on a net basis.

Earning 118 LEED points, the home is just shy of also being the highest scoring LEED home in the country by 1.5 points. Power Haus is also at the top of the FGBC standard and NAHB's National Green Building Standard. Josh Wynne Construction was recognized for their achievement with an AURORA award from the Southeastern Building Council.

"Power Haus was designed to exceed every standard in green construction today while maintaining the clients' desired aesthetic and comfort requirements," said Josh Wynne. "It is a shining example of the level of performance and sustainability that can be achieved while maintaining a high standard of quality and comfort."

The home has a 14.2 kW solar array to bring it into so-called climate positive territory. Even without the solar, Power Haus would still achieve a 42 HERS index which is noteworthy. They were able to achieve this level of energy savings through a variety of passive and technological applications.

The house is equipped with ceiling fans and large expanses of operable windows and doors. An independent dehumidification was installed to counter the Florida humidity and increase the number of natural ventilation days.

The building envelop is a standard CMU construction wall type with foam insulation filled within the open cells of the CMU block (R-15) and permeable radiant barrier (R-7.2) to fight against

thermal bridging. Closed cell bio-based R-30 spray foam insulation from BioBased Insulation® was applied exterior of the moisture barrier to allow for the elegant interior tongue and groove ceiling and glu-lam beams.

With durability in mind, impact resistant, low-e, argon filled windows with a 0.3 SHGC and 0.19 U-value were used. Technological applications include a 21 SEER HVAC system, gas tankless hybrid water heater, Energy Star appliances and LED lighting. Power Haus is fully automated with real-time energy production and lighting controls available on an iPad or iPhone. The home also shows a commitment to sustainability with polished concrete floors, clay wall finish, and reclaimed cypress or FSC wood throughout the house.

Josh Wynne has a great history of producing sustainable homes, previously designing and constructing another award-winning home, Codding Cottage, which also used BioBased Insulation ®in its construction. Both projects were insulated by EcoTechnologies, an approved contractor for BioBased Insulation®.

View the project photo album on Facebook.
www.facebook.com/BioBasedInsulation