The Schaller Eco-Home
New Hartford, CT

Energy Star Home Level 5 Star Plus

“I love having a more comfortable and clean house for my family... retaining the heat in winter and keeping cool in the summer”
-Karann Schaller, Home owner

Project Size:
2,600 SF
3 bedrooms

Construction Budget:
$125/SF

Anticipated Annual Savings:
96% less energy use than code-built home
60,000G of water/year
92.7% or 10.5 T/year in reduced CO emissions

Homeowner Incentives:
CEEF Residential New Construction Program = $4895
CEEF Zero Energy Challenge = $10,500
Federal Energy Efficiency (Windows/Doors) Tax Credit = $2,000
Federal Energy Efficiency (Solar Thermal) Tax Credit = 30% of cost
Standout Green Features:

Water Efficiency

The Passive Solar design uses a 3’ deep sand heat sink under the slab floor that is heated by south facing windows and solar thermal panels. The pre-heated water is brought to temperature by a very efficient tankless hot water heater and runs through radiant tubing in the slab.

Thermal Envelope

A very tight envelope, efficient lighting & appliances, and high performing heating & ventilation equipment contribute to the HERS Index 39. Once PhotoVoltaic panels were added (through a PV Leasing Program) the Index dropped to 4.

Efficient Materials

The Schallers were able to create a beautiful, modern, efficient home for a very affordable $125/sf. The Schallers used prefabricated materials as much as possible, such as a pre-cast concrete foundation and structural insulated panels (SIPs). During construction there was very little waste material (only one dumpster was used for all phases) and the Schallers were able to incorporate reclaimed interior doors, cabinets, countertops, and light fixtures to the finishes.

“The Structurally Insulated Panels (SIPS) were well-sealed and there were few penetrations through the walls and roof, resulting in a very tight shell and low infiltration testing numbers (0.4 ACH50), the lowest I’ve tested thus far!”

- Karla Donnelly, Steven Winter Associates, HERS Rater
“I would use SIPS every day of the week if I could. It’s a fabulous product and it goes up very quickly. We went from foundation to weather-tight in a 2 ½ week window. It rained 29 days in June and the weather was never a factor ”

- Dave Nugent, Greenworks Builders
Project Team:

General Contact: Karla Donnelly
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Designers: Jeremy and Karann Schaller
David Sines Designs

Builder: Dave Nugent, Greenworks Builders
HERS Rater: Karla Donnelly

Resources:

USGBC green homes - http://greenhomeguide.com
Northeast Sustainable Energy Association - http://www.nesea.org

The Connecticut Chapter of the US Green Building Council

http://www.ctgbc.org