



NewenHouse

by Madison Environmental Group, Inc.

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NewenHouse will provide small, super insulated, sustainable homes for people who want to live lightly on the earth.

NewenHouses are designed to be **80 to 90% more energy efficient** than the average home. The prototype, currently under construction in Viroqua, WI, is aiming for both **Passive House** and **LEED Platinum** certification.



East Elevation

Design Features

- Three sizes to choose from: 600 sf (1 br), 800 sf (2 br), & 1000 sf (3 br, 2 ba), all at least 50% smaller than an average new American home
- Cozy, contemporary interior
- Designed for entertaining and hosting overnight guests
- Large southern windows for day-lighting and solar gain
- Direct or borrowed light in all rooms
- Built-in benches and storage
- No furnace necessary (peak heat demand is only ~2500 W, the equivalent of 2 hairdryers)
- Designed to reduce interior electromagnetic fields
- Solar hot water system and PV system ready
- Semi-attached three-season porch and storage area with root cellar and sleeping loft
- 1200 gallon rainwater harvesting and storing system
- Vegetable garden and native and edible landscaping plan, plus green roof option for entry awning

Construction Details

- 16 inch-thick double wall system filled with dense pack cellulose
- Insulation R values of 57 under slab and around walls and 100 in the attic
- Heat Recovery Ventilation (HRV) system with 92% heat recovery
- Triple-pane windows with insulated fiberglass frames
- FSC certified wood roof trusses
- Shiplap cedar siding
- Standing seam metal roof with hidden fasteners
- 1.28 gpf or dual-flush toilets, plus low-flow faucets
- No-VOC paints and low/no-VOC sealers specified to improve air quality
- Local and natural materials sourced whenever possible
- Designed to incorporate optional salvaged materials
- Designed for deconstruction

How Can I Build a NewenHouse?

Madison Environmental Group, Inc. will market and distribute the designs, construction documents, special building materials, and a detailed specification sheet for the remaining building materials. We will also provide project management assistance and green construction consulting for customers during the building process, plus a comprehensive guide to living green in your new home. Please contact Sonya Newenhouse, President, for more information.

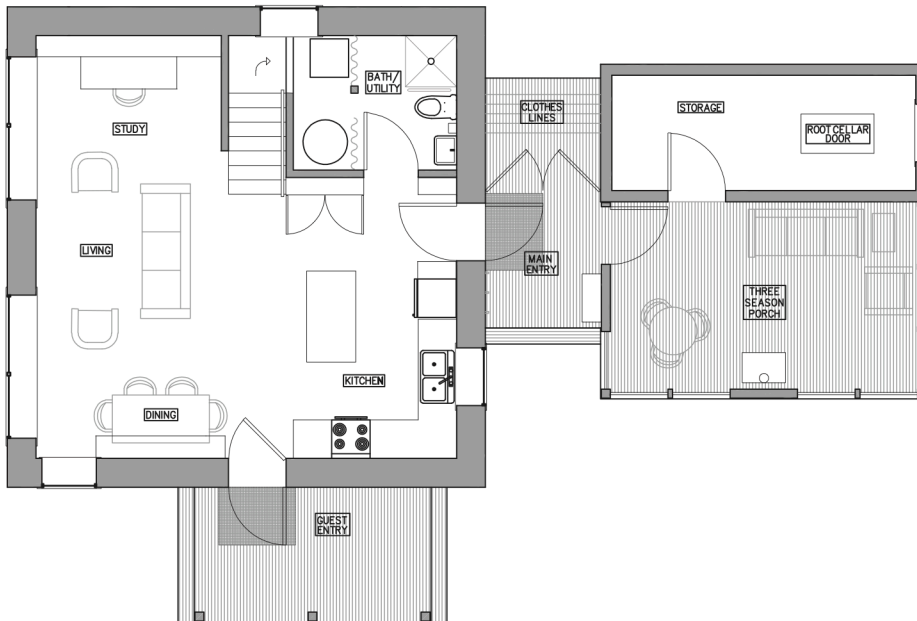
NewenHouse Under Construction

Sonya and her crew broke ground for the NewenHouse Prototype on October 29, 2010 in Viroqua, WI. You can follow the building process by visiting Sonya's Natural Home Magazine [blog](#) (see madisonenvironmental.com for link), or please stop by an **OpenHouse**, held at the site on the **fourth Friday** of every month from 3 to 5 pm (**RSVPs appreciated** – please feel free to call Sonya on her cell phone at the number above).

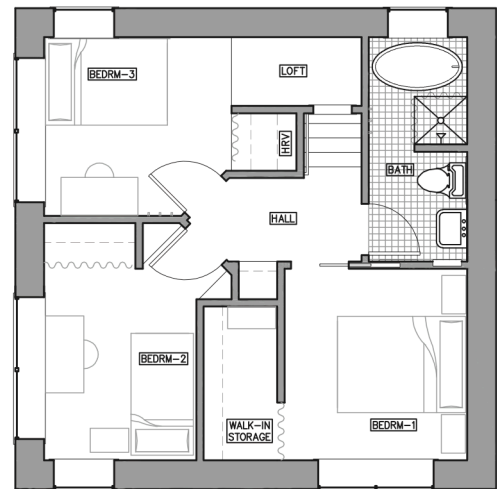
Prototype Details

- Two floors with three bedrooms and two bathrooms
- Interior dimensions: 968 sf (22' x 22')
- Exterior dimensions: 1250 sf (25' x 25')
- Porch/storage dimensions: 289 sf (17' x 17')
- Estimated total annual electric demand (heating, equipment, appliances, plug loads, and hot water for three occupants): ~6119 kWh/yr

First Floor Plan



Second Floor Plan



Prototype Aims for Passive House and LEED for Homes Platinum

- Certified Passive Houses aim to conserve energy first through a high performance envelope rather than through technologies (i.e. solar panels). To qualify for Passive House certification, a house must meet strict requirements: airtight building shell with 0.6 or fewer air changes per hour, annual heat requirement less than 4.75 kBtu/sf/yr, and primary energy use less than 38.1 kBtu/sf/yr ([passivehouse.us](#)).
- Platinum is the highest level in LEED for Homes, an internationally recognized third-party verification system that covers a broader range of green building elements ([usgbc.org/LEED](#)).