



FACT SHEET: John & Rebecca Scheller's GreenMax Home

What is a net zero energy home?

- A net zero energy home (NZEH) is designed and constructed to produce as much energy as it consumes.
- The home is connected to the local utility electric grid.
- By installing one or more residential renewable energy systems, such as solar photovoltaics or a wind generator, the homeowners supply back to the grid at least as much energy as consumed.
- The result: a home with net zero impact on our nation's energy supply.

About the Scheller home

- John and Rebecca Scheller's home is anticipated to be the first net zero energy home in Dane County.
- Partial grant funding was provided through WPPI Energy's GreenMax Home initiative.
- Among their reasons for building a NZEH: the Schellers desired to accommodate their family's needs while also being stewards of the environment.
- The home is located in the Town of Rutland, in the service territory of Stoughton Utilities, a member of WPPI Energy.
- The Schellers worked with Shaw Building & Design, Inc. to design their highly efficient, 4,000 square-foot home and apply for GreenMax Home funding from WPPI Energy.
- Construction commenced July 7, 2009 and was finished in late November 2009.

The GreenMax Home initiative

- WPPI Energy solicited competitive proposals for NZEHs within WPPI Energy member utility service areas.
- The GreenMax Home grant helped cover the incremental cost of taking a highly efficient home to net zero energy use.

About WPPI Energy

- WPPI Energy is a nonprofit utility serving 51 customer-owned electric utilities in Wisconsin, Upper Michigan and Iowa, including Stoughton Utilities.

Why does WPPI Energy want customers to save energy?

- Everyone can save energy at home. The GreenMax Home initiative demonstrates a wide variety of ways to do so. Helping customers become more efficient will help lower utility bills, protect the environment, and help defer the need to build expensive new power plants.

Key features of the Scheller home

- **Building shell improvements** – ENERGY STAR® windows, special attention to air sealing, and increased insulation levels will help prevent energy loss.
- **Solar photovoltaic (PV) system** – Two pole-mounted 2.88 kilowatt arrays of PV panels harness the power of the sun, tilting and moving to collect sunlight throughout the day.
- **Geothermal systems** – Two ground source heat pumps take advantage of stable year-round underground temperatures to provide heating, cooling and hot water.
- **Structural Plumbing** – Advanced plumbing designs and controls eliminate the need to let taps run before hot water arrives at faucets, reducing water waste and energy use.
- **Smart Design** – The strength and simplicity of the New England Saltbox design, a Colonial style of architecture, made the building easy to insulate and seal.
- **Lighting** – LED technology significantly reduces energy use while providing the homeowners with great dimming functionality.
- **Attention to detail** – Although unique in its goal of net zero energy use, the home's construction methods are similar to most average homes today. The home's remarkable efficiency is largely attributable to simple steps anyone can take, such as extra attention to air sealing. The home tested in the top one percentile for air tightness among 11,000 homes tested by the Wisconsin Energy Star Home program.
- **Commitment** – The homeowners will work with Stoughton Utilities and WPPI Energy to ensure their home energy use is truly net zero.

Cost & Funding

The total incremental, “above and beyond” cost to move the Schellers’ home from highly efficient to net zero is approximately \$98,000.

- **Focus on Energy Incentives:** \$15,500
- **Federal tax credits:** \$27,000
- **WPPI Energy GreenMax Home grant:** \$42,000
 - \$18,000 awarded at project kickoff
 - \$18,000 awarded upon completion of construction
 - \$6,000 after one year, upon meeting energy use goals
- **Remaining incremental costs** for the Schellers: approximately \$13,500.

Ensuring net zero energy use

- Energy used and produced by the home will be monitored.
- Ongoing updates and details available at www.greenmaxhome.com.