

Northeast CERT Clean Energy Homes Tour Summary

Friday, June 29th, 2007

12:15 pm – 5:30 pm

Meet at Minnesota Power's Herbert Service Center (3215 Arrowhead Road, Duluth).

There will be several mini-vans available for the tour, so people are invited to park and then jump aboard a mini-van or to carpool together to tour the various sites.

Attendees: Machenzie Kelly, Gerry Synhorst, Dick Synhorst, Tim Ollhoff, Chris Reed, Dean Talbott, Kathy Draeger, Dave Stark, Tom Koehler, Stephanie Koehler, Peter Harris, Steve Robinson, Doreen Robinson, David Lake, Scott Simenson, Russ Kurhajetz, John Eckfoldt, Nancy Schultz, Carl Wagner, Joel Haskard

Meeting Objectives:

- ✓ See first-hand clean energy projects/ sustainable buildings in action
- ✓ Learn about the technologies from the home owners/builders
- ✓ Assess what clean energy practices you might be able to use at your home

12:35 Tour the EcoHome at Hawk Ridge Estates (52ndAve. East & Boreal Circle, Duluth). Tour time 45 minutes; drive time 15 minutes.

CERTs participants toured the 2,000 square foot Eco-Home at Hawk Ridge. The home was designed by the Wagner Zaun Architecture firm and Developed/Built by Women in Construction Company. The energy consultant was conservation technologies. The Eco-Home combines passive solar with a 2 kW grid-connected solar photovoltaic array, solar hybrid heating system, and solar domestic hot water system. The home was built with low-VOC emitting construction materials and is a demonstration site for the ENERGY STAR® rated appliances and lighting. The home has many detailed- efficient designs, but the general categories of environmentally-friendly measures it includes are: sustainable, passive solar design, high performance building envelope, renewable and alternative energy systems, heating, ventilation, and air conditioning (HVAC) and Water Heating Systems, and Environmentally Preferred Materials, Lighting, and Appliances.

1: 35 Tour Dave Starks' Home (5101 Lester River Road, Duluth). Tour time 45 minutes; drive time 15 minutes.

Dave Starks' home in Duluth employs numerous green design features, including:

- 1) Conservation Design Measures (Stormwater Mitigation)
- 2) Energy Conservation measures
 - a. Energy-efficient appliances, use of CFLs, interior clothesline
- 3) Solar Applications
 - a. Passive solar, grid tied photovoltaic system, solar thermal/woodstove/propane backup heating system with radiant tubes

- 4) Water and Waste Systems
 - a. Zero discharge home (no connection to municipal water service or septic system)
 - b. Separation and treatment of grey and black water
 - c. Integrated recycling system for glass, plastic, aluminum and toxic substances
- 5) Timber Frame Structure and Building Systems
 - a. Reclaimed Douglas fir timber frame
 - b. SIP enclosure with additional air/vapor barrier
- 6) Building Materials and Products
 - a. Bamboo and marmoleum flooring
 - b. Low VOC paints

2: 35 Tour Mike LeBeau's Home (5069 Lakewood Road, Duluth). Tour time 45 minutes; drive time 45 minutes.

4: 05 Tour Jamie Juenemann's Home (1454 Press Camp Road, Two Harbors). Tour time 45 minutes; Cookout following.