

West Central CERT Meeting Summary

Solar Thermal Installations and Green School Projects

Monday, October 29th, 2007 11:00 am – 3:00 pm

Solar Skies, 800 Industrial Park, HWY 28 West, Starbuck, MN Phone: 1-877-765-2757.

<http://solarskies.com/>

Attendees: (I apologize for any miss-spelled names. Over 60 people attended the tour and meeting including...) Sen. Gary Kubly, Al Buss, Diana McKeown, Wes Hompe, Craig Ziegler, Albert Richter, Matt Molenaar, Caryl Nelson, Dave Arenson, Bob Bonawitz, Grace Gomm, Joel Haskard, Steve Wagner, Dean Schmidt, Stan Simon, Casey Backhaus, Rob Palmer, Bill Klyve, Marie Pederson, Shannon Rohne, Jim Barbour, Keith Naig, Curt Kreklau, W. Rois, Terina Coplay, Dan Tepfer, Duane Ninneman, Mike Reese, Karen Hildiag, Phil Lord, Dave Opsall, Carmen Rohne, Paul Ranum, Al Cotter, Cheryl Kittle, Stephanie Howe, Joshua Gesch, Chelsey Sorenson, Scott Wilson, Pat Charlson, Dave Pederson, Jerry Gesch, Emma Ostby, Marie Ostby, Andy Martin, Brad Barth, Randy Nelson, Dawn Hegland, Steve Nelson, Dorothy Rosemeier, John Baumgartner, Lisa Harris, Bev Ahlquist, and Beth Erickson.

The West Central Clean Energy Resource Team Steering Committee met before the tour and discussed the recent Request for Proposal that is available through CERTs with the **November 16th application deadline:** http://www.cleanenergyresourceteams.org/pdf/CERT_2007RFP.pdf

They also discussed the \$18,000 regional funding available at their discretion to assist funding clean energy projects prioritized by the strategic energy plan and recent developments across the region. After discussion they agreed to use 2/3 of the funds (\$12,000) to assist entities applying for the federal Clean Renewable Energy Bonds (CREBs). For more information about CREBs visit <http://www.elpc.org/energy/farm/crebs.php> and <http://www.appanet.org/files/PDFs/CREB.pdf> and see the IRS legalese here <http://www.irs.gov/pub/irs-tege/n-07-26a.pdf> Details are still being worked out, but the idea is to partially pay down the technical assistant that an engineering firm provides for the CREB application, and thus hopefully removing one of the barriers that applicants might have in applying for this federal incentive.

The remaining 1/3 of the \$18,000 (\$6,000) will be evenly distributed between the eleven Youth Energy Summit (YES) teams <http://www.prairiewoodselc.org/YES.html> to help with technical assistance needed to implement their projects.

Meet Summary

11:00 am Tour of Solar Skies Solar Thermal Manufacturing Plant

Randy Hagen, Kurt Koegel and Shannon Snell all helped out with the tour of the manufacturing plant. They said that a family of four uses about 80 gallons of water a day and about 6500 Kw of electricity heating it. They could offset 75% of their domestic hot water needs with two 4X8 panels which, depending on the installer (self or professional), may cost anywhere between \$5,000 -- \$10,000. These systems can hook up with most any water heater, but are best with electric heat. They noted that solar thermal is 70% efficient compared with solar photovoltaic which is 15% efficient. To prove how tough the panels are Kurt jumped on one. Kurt said that an Olympic sized pool would take about 80 panels to heat and have approximately a 10 year payback, but the solar thermal system should last for 30 years. Shannon gave a tour of the plant and noted that they practice lean manufacturing http://en.wikipedia.org/wiki/Lean_manufacturing to save on material storage and labor. The plant was extremely clean and orderly, with markers on the floor to indicate where everything goes so that they can quickly see if something is misplaced. Various stations for making the panels included “box building,” “squaring,” and “absorber installation” towards the end with a final coating put over the glass. Thank you Solar Skies for a great tour!

12:00 pm Depart for Lakeside Ballroom

12:30 pm Lunch, Introductions & Updates @ Lakeside Ballroom, 180 S Lake Shore Dr, Glenwood.

After a fantastic lunch, the Team voted on and approved the following fifteen members of the West Central CERT Steering Committee: Becky West, Chuck Walters, Steve Wagner, Dan Tepfer, Dean Schmidt, Mike Reese, Duane Ninneman, Steve Nelson, Randy Nelson, Curt Kreklau, Dawn Hegland, Cheryl Glaeser, Duaine Flanders, Bob Bonawitz, John Baumgartner. Staff wish to thank all of these individuals for the time and effort that have put into the CERTs program.

To see Stan and Dan and Rebecca's power point presentations, visit <http://www.cleanenergyresource teams.org/presentations.html#westcentral> and scroll down to the "West Central" segment.

Stan Simon, SL Simon Engineering P.A. – Audit of Murdock Elementary: Reworking an Existing Facility. Murdoch school bldg- elementary school, had existing steam heat, not too efficient, gym heating unit, corn burning/heating but then corn \$ went up. It had domestic water heating, good sized electric system- In the 1980s the school had an energy audit and the windows, which provided good day lighting, were blocked off. The 1958 addition was brick and block, single pane glass and no insulation, EPA rating of 33 (see presentation). Ottetail power is now going over the list of potential efficiency upgrades and working with Stan to implement some of them

Dan Miller, JLG Architects – Designing Green Schools and Questions to Ask Before Buildings are Built

- Why aren't schools being built green? 68% Fear higher costs, 64% lack of awareness, 47% difficulty quantifying benefits
- Benefits of building green: improves student performance, improves daily attendance (students and teachers!), increases satisfaction and retention rate of teachers, decreases operating costs
- Need to think about materials: Recycled and recyclable materials, extracted/harvested sustainably, local products, environmental wall, roof etc.
- Mold is a huge issue in schools
- See this report- Greening America's Schools: Costs & Benefits by Greg Kats <http://www.cap-e.com/ewebeditpro/items/O59F9819.pdf> . Typical green school uses 1/3 less energy, and Typically a green school has 1-2% higher construction costs, about %3 more per sq ft, but 33% reduction in costs to operate.
- Little green school house- Bryan Walsh, www.time.com
- Commerce dept. website- keywork energy info center www.usgbc.org

1:00 pm Discuss potential projects and opportunities for "green" schools: The group discussed issues around implementing green school projects.

2:15 pm Head to R&R Plumbing & Heating, 16155 State HWY 29, Glenwood.

2:30 pm Tour R & R Plumbing & Heating to see some of the Solar Skies panels in action. Richard Blakeman and Michael Salonen (Phone 320-634-3608) Sell and install the Solar Skies panels and have them installed on their shops' roof under a big banner that reads "Free Solar Heat!" They have a drain back system with six 4x10 panels. \$8k was the total cost. They have a 15 gallon drain back system and heat the floors with it; they are happy with the system so far. For a list of dealers and installers of the Solar Skies thermal panels, please visit <http://solarskies.com/dealers-installers>

3:00 pm Adjourn