

# Summary Northeast CERT Meeting

February 1<sup>st</sup>, 2008, 1:00 pm – 4:00 pm

Mid-Continent Ecology Division of EPA, Duluth, MN

## *Meeting Objectives:*

- ✓ Learn about NE CERT funded projects
- ✓ Help the NE CERT Coordinator prioritize opportunities for the coming year
- ✓ Lay out a series of meeting topics for the coming year

## ***Introductions and Announcements***

Meeting Attendees: Steve Robinson, Mark Thell, Dean Talbott, Dana Raines, Lauri Isaacson, Ray Hatinen, BJ Kohlstedt, Stephanie Love, Tom Koehler, Peter Harris, Chuck Hartley, Wendy Grethen, Mike Mageau, Okey Ukaga, Bill Mittlefehldt, Treavor Ossee, Celestia Goetsch, Kraig Dibb, Diane Rauschenfels, Diane Podgornik, Tim Ollhoff, Jamie Juenemann and Lissa Pawlisch

## ***Project overviews from NE CERT funded projects***

- Two Harbors High School Photovoltaic Array – Jaime Juenemann, Silver Creek Institute  
This PV array project @ the Lake Superior School District has been in the works for over 5 years. Two years ago political landscape for renewable energy changed and the school became more receptive to exploring alternative energy technologies. Indeed, in some respects, the school is hoping to recreate the Juenemann's own learning laboratory (their home) @ the school. This particular project involves the installation of a 2.8 kW dual axis tracking array which should produce around 5,500kW/year (half to two-thirds of an average home's energy use). The project is a good example of the school coming together. The school board is covering \$4,000 of \$28,000 and four or five science teachers plan to utilize the array in their classes (hence the ground mounting).
- Proctor Earth Fair for the Future – Diane Podgornik, Proctor Public Schools  
Proctor Public Schools have an Earth Education Committee to develop 1, 3, and 5 year goals for the school – one of their goals is to develop this Earth Fair. The November 2008 Earth Fair is designed to:
  - To encourage teachers and students to research environmental topics related to energy efficiency and renewable energy
  - To create and display projects that express the knowledge gained through this research
  - To achieve an attitudinal change among Proctor staff and students regarding energy efficiency and renewable energyThey really want to get everyone at the school involved – all teachers from preK-12<sup>th</sup> – and have a set of categories that will fit every grade level and that will incorporate science, art, and music. The fair really unites the whole District by bussing in kids from all schools, giving lots of awards and engaging students in a variety of activities from a debate to providing tours to the public.
- Wind Monitoring, Wind Resource Mapping and Economic Feasibility in NE MN – Mike Mageau, University of Minnesota Duluth  
This project has three primary objectives:
  - Conducting wind monitoring at 8 or 9 sites

- Developing a wind map for Northeastern Minnesota – maybe 30-40 m resolution
- Performing basic economic feasibility study analyses for all of the communities with a monitoring station

They have monitoring stations @ eight sites: Enger Tower, Clover Valley, Silver Bay, Finland, Lutsen, Grand Marais, Hovland and Grand Portage (Mt. Maud – where it all started and they now have 3 monitors). Mike reports that most of the data show a wind resource above the 10 mph range and that there appears to be a general trend of increasing wind resource as you move up the shore (with a few exceptions and a few odd spots where the wind resource actually dips as you go up). They're working with Stacy Stark – GIS Lab @ Duluth w/ WASP: doing overlays with bird migratory routes.

- Expanding the 2008 Lake Superior Energy Fair – Dean Talbott, Lake Superior Energy Association (LSEA)  
The LSEA has hosted an energy fair in conjunction with Harvest Fest for the past 3 years. This year they plan to expand the event into a 2 day event (Saturday and Sunday, September 6<sup>th</sup> and 7<sup>th</sup>) with the goals of:
  - Providing education on energy efficiency and renewable energy
  - Sharing information on company's providing sustainable products and services
  - Providing educational and inspirational workshops – they're even thinking of bringing in James Howard Kunstler as a keynote speaker this year.

LSEA gained non-profit status last summer and in addition to the fair are presenting a film series next month and a number of educational workshops. For more information see: <http://www.lakesuperiorenergy.org/>.

- Youth Outdoor Leadership Pilot Program – Stephanie Love, Positive Energy Outdoor (ed)Ventures  
Positive Energy Outdoor (ed)Ventures got their start by informally educating folks about renewable energy – solar ovens, wind etc. They would invite groups to their place and really draw a crowd. Last year they decided it was time to formalize things and thus launched this pilot program. Kids from the Boys and Girls Clubs, Fond du Lac and others will take existing curricula, update it on the website and tailor it to age-specific groups. Kids will help install a PV-array, lead tours of the facilities and teach other kids.
- Energy Sustainability at Wolf Ridge Environmental Learning Center – Peter Harris, Wolf Ridge  
Peter kicked off his discussion with a lima bean demonstration of our CO<sub>2</sub> emissions. This is just one small example of how Wolf Ridge tries to put big issues into representations that people can understand. Wolf Ridge reaches 180 communities per year with 15,000 children, parents, and teachers spending 3-5 days at their facilities. They are working on a carbon audit that first has them consider needs vs. wants, *then* conservation, energy efficiency, and low-carbon fuels. They're developing curriculum, training teachers and even plan to host a Student Climate Change Summit. Their Science building has all sorts of displays up about energy, and they are working on curbing their own energy usage (by for instance utilizing chalk board lighting which allows them to use 40 watts instead of 900 watts to light a classroom) and integrating renewable energy technologies.
- Geothermal System for the Finland Community Center – Adrienne Falcon, Finland Community Center Project

Adrienne talked about one of the goals of their project being to bring “unexpected” people into the project and into a broader energy conversation – like folks who attend graduation parties, snowmobilers, etc. The notion of “greening” the community center got started when Finland had a very green community board. Now the board dynamic has changed, but they’ve still been able to get broad community wide buy-in around utilizing a ground source heat pump. They think of this project as a process for community awareness and building community structure. They plan to develop educational panels for the building and are partnering with a number of organizations to make the project happen. They plan to eventually get solar panels to power the geothermal system.

The group discussed the pros and cons to geothermal systems and talked about how in some cases ground source heat pumps may actually increase CO2 emissions (see this WI study: <http://www.ecw.org/productdetail.php?productid=157>). One suggestion was that perhaps with the \$ they save using GSHPs instead of propane (one estimate suggested that it would be \$32/million BTU instead of \$81/million BTU) that perhaps they could enroll in a utility green pricing program. The group also discussed that right now electricity is the one thing you can make onsite and so this project might facilitate greater conversion to renewables in the future. They also discussed adding a solar hot water heating system to supplement the GSHP system.

***Meet and advise the new NE CERT Coordinator: Bill Mittlefehldt***

- What is one thing you’d want the Coordinator to know about NE CERT?
  - BJ – biggest supporter/help was CERT networking
  - Peter Harris – business community – direct funds to illustrate appliances in classroom or something. Draw in bigger grants – PEW
  - Carl Sagan of renewable energy videos
  - Bring to Grand Rapids KXLC radio station.
  - Tying contacts together – like Youth Summit, Lake Superior Youth Symposium in 2009, 2008 is climate change grades 8-12. 4 days long, one day to bus in local kids.
  - UMD coordinator
  - Don’t try to take on so much that you get spread too thin.
  - Question: Can you really do schools and communities? Maybe focus: communities to extent that that there are demo projects? Focus on schools?
  - Diane R – Iron Ridge gearing up: where is our workforce coming from? Long range planning – kids were unimpressed with adults vision. Easier to charge minds of young people.
  - Engage GRE and other utilities
  - <http://nmnrenewables.org> has a good listing of case studies
- What do you think the NE CERT Coordinator should prioritize?
  - Need to think about sustainable economies. Need to fit the pieces together: not just for young folks.
  - One turbine here and there won’t solve all problems. Keep broad picture – no one else is doing it.
  - Energy equity – who gets limited energy resources? Energy is a piece of a bigger picture.

***Brainstorming: what would you like to see in terms of meetings and tours from CERTs this year?***

- NE strategic vision – if we’re focusing on projects, how do we ensure we’re moving forward. Are our goals still the same as they were when we developed the Strategic Energy Plan? Is it still schools and communities? One or the other? Something broader?
- Opportunities for co-generation – 3x more efficient – could do at community campus setting.
- Ground source heat pumps – impacts of systems in different climates/scenarios
- School is hub of community – school board members, city council. Use schools to approach the community issue.
- NE MN energy use – logging and mining: Grand Rapids – efficiency opportunities. Approach businesses
- Coordinate a tour with the National Solar Tour in the fall – slated for October 4, 2008.
- Green Investing
- Conservation/Efficiency projects and policies and the new societal cost/benefit analysis that utilities must use before making efficiency investments
- Visit the St. Louis County Wind Project: six 1 kW turbines on top of government services building (tilted down to catch wind coming up – monitoring package to assess output). Also visit the Minnesota Power 25 MW wind facility @ U.S. Steel’s Minntac facility in Mountain Iron (ten 2.5 MW turbines)