



CLEAN ENERGY RESOURCE TEAMS

CASE STUDY: WIND ENERGY | SCHOOLS | CENTRAL REGION

JULY 2007

Park Rapids School District #309: Uniting a Community Behind Educational Wind

By Holly Lahd, CERTs Research Assistant

CERTs PARTNERS

- University of Minnesota Regional Sustainable Development Partnerships
- The Minnesota Project
- Southwest Regional Development Commission
- Green Institute
- Minnesota Department of Commerce

Wind will not only generate electricity in Park Rapids, Minnesota but it will also generate educational opportunities for the students of Park Rapids School District #309.

With funding from the Central CERT, University of Minnesota’s Central Regional Partnership, Minnesota Power, Itasca Mantrap, and local donations of goods and services, the Park Rapids School District is conducting an integrated wind study to measure the wind speed and is moving ahead with plans of erecting a wind turbine at the K-8 Century School, which is also located near the High School in Park Rapids.



Teachers from across the district will be able to integrate the wind turbine into science lessons

and school projects. “It’s more of an educational piece, to have a real example (of renewable energy)” said Shawn Anderson, Chairman of the Wind Generated Energy Committee of Park Rapids.

The total funding so far has gotten the team half-way towards the total project need of \$62,000 for the turbine and installation. The CERTs grant went towards a wind study of the proposed site that was conducted by Professor Mike Mageau and graduate students at the University of Minnesota-Duluth’s Center for Sustainable Community Development (CSCD). The final wind study report is due this summer. So far, the team has collected 2 to 3 months of wind speed data, after early delays from a malfunctioning wind anemometer. The initial data seems to support further small wind development in the area.

The committee has selected a Jacobs® 20 kilowatt wind turbine for the site. The small turbine is not expected to significantly reduce electricity costs for

Project Snapshot

Type of project Wind Turbine

Technology

- 20 Kw Wind Turbine
- Wind anemometer

Brands Jacobs® 20 Kw Wind Turbine

Contractor TBD

Incentives

Grants

- \$1,000 Central CERT
- \$4,000 Central Regional Partnership (U of M)
- \$20,000 Minnesota Power
- \$2,000 Itasca-Mantrap Electrical Cooperative Ass’n
- TOTAL \$27,000

Donations

- \$2500 Community electrician donated labor pledge
- \$800 excavation labor committed

Costs \$62,000: Cost of Wind Turbine and Installation

Benefits

- Creating educational opportunities for the approximately 1,700 students in the Park Rapids School District to learn about wind energy right outside the classroom.
- Small reduction in electricity bills for School District.

the school district but is seen more as an educational opportunity for students. As of May 2007, the school district was in the process of conducting a bidding process for contractors to install the turbine. The team hopes to have the turbine installed and running by the time the snow sets in during winter 2007.

The idea for an educational wind turbine was born out of a March 2006 Blandin Community Leadership Program workshop, where Anderson and four others from Park Rapids met and formed a team to erect a wind turbine. The five member team has since grown into a group of 10–15 that meets every few weeks.

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CERTs FUNDERS

Minnesota
Department of
Commerce
Blandin Foundation
Minnesota Pollution
Control Agency
University of
Minnesota Institute
for Renewable
Energy and the
Environment
University of
Minnesota Regional
Sustainable
Development
Partnerships
U.S. Department of
Energy

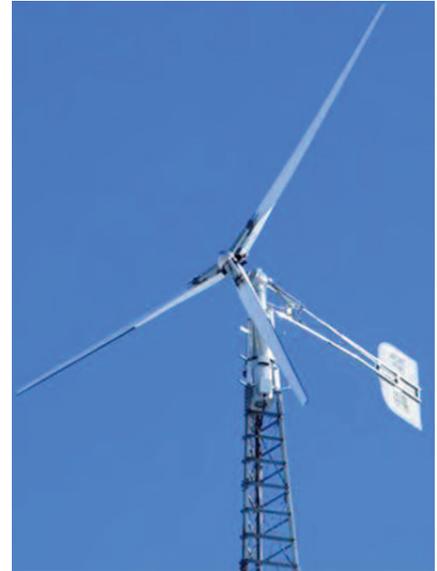
Anderson said the common attribute of the team members is a desire to improve their community:

“Members of the wind committee come from all walks of life, but we share a common interest — to educate area students about clean energy as a viable option for their future. People travel hundreds of miles to breathe the fresh air and swim in the clean waters in the Park Rapids area. It’s in our best interest and our children’s best interest to use our resources wisely and remember the impact our lifestyles have on the environment. When this project is done, we’ll have a 135 foot spinning reminder for the students and the entire community.”

And beyond the community members who meet, this group has spawned broad interest across the community in the project. Community members are volunteering their talents to the project, including a local electrician who has pledged \$2,500 in labor and expertise to help install the turbine.

When asked what some of the biggest hindrances to the project over the year-long time span of the project were, Shawn Anderson replied that securing funding was by far the most time consuming part of the job. He explained that because the school district isn’t in a situation to financially contribute to the project, the team must raise the needed \$62,000 on its own. They are still applying for grants and reaching out to local businesses for support. The project has also required a lot of time- “hundreds of hours”- to get to the point they are at now. Anderson did have a recommendation to others who are interested in a similar project: “don’t think you have to know everything up front. There are experts out there, like the CSCD, who have done this before and are willing to help.” One of the most successful parts of the project has been the connection to the University of Minnesota-Duluth and the resources their staff and faculty can offer to such a project. Connecting projects with the technical-know how is one way CERTs fulfills its mission of helping communities determine their energy futures. “The connection with CERTs has been absolutely wonderful,” said Anderson. “We had the interest but not the knowledge.”

For more information on the project, contact Shawn Anderson at esa@unitelc.com.



Jacobs® 20 Kw Wind Turbine

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helping Minnesota
communities
determine their
energy future