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CASE STUDY: WIND - METRO REGION

Community Wind: The Next Frontier of Clean Energy in Mahtomedi

By Dan Krause • June 2011



A new wind is sweeping across the Northeast Metro: collaboration and a shared vision for a better, more sustainable community. It is a vision that is held by many, but seldom actually implemented. In Mahtomedi, Minnesota, the winds of sustainability are blowing, especially near the high school.

The Mahtomedi Area Green Initiative, or MAGI, is a community-based organization that started their efforts about five years ago. Their goals are to reduce use of nonrenewable energy, promote renewable energy, and encourage sustainability in their community.

MAGI began by hosting community meetings with speakers and workshops. As these community events picked up momentum, the group's efforts gained steam. They wrote grants to the MN Pollution Control Agency to enable the City of Mahtomedi to complete a municipal carbon footprint analysis using ICLEI – Local Governments for Sustainability software. This led to the city collaborating with a University of Minnesota class to draft a sustainability plan for the city. Other MPCA grants brought MN GreenCorps members to the school district and city to assist with community and municipal sustainability projects.

MAGI's biggest initiative to date has been to raise funds to purchase a 10 kW wind turbine to generate educational opportunities and clean energy. The idea came to parents attending events at the school athletic fields who realized that the winds off of White Bear Lake were always strong and always blowing.

"I think that people became really excited that the project was going to have a direct impact on the education of our children," Paul Hoff, MAGI member, says. "This got more people interested in helping fund the project."



Windy clean energy, Photo: hcpd.com

The Zephyr Wind Project (named for the school's mascot, the Zephyr, a Greek mythology symbol for the west wind) is one that has involved remarkable collaborations and the dedication of its community members. The project has been truly by the community and for the community.

Project Snapshot

Project:

Community-developed and school-owned wind turbine

Energy Output:

12,000-15,000 kWh/year

Benefits:

Renewable local energy generation, education for local schools, community awareness about renewable energy

Total Cost:

\$100,000

Partners and Funding:

Community members, organizations, schools, and businesses; foundation grants; in-kind contributions; student-led fundraisers, and grants from the Minnesota Office of Energy Security and the Metro CERT (\$7,400)

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This summer the Mahtomedi High School football field and track were being replaced, so the timing was perfect for installing the turbine. After five years of fundraising, education, outreach, and technical assessments, Zephyr Wind supporters were ready. On July 18, the 10 kW Bergey Excel "Zephyr Wind Turbine" was installed, becoming an exciting aspect of the field revamp.

Funded entirely by personal donations, foundation gifts, and grants from state and federal agencies, including a grant from the Metro CERT, the turbine will be donated to the school district. It is currently awaiting required inspections, after which the blades will be activated and begin capturing the Zephyr wind.

"The goal is to unveil the new football field and wind turbine at the same time this fall. People will see the lights on the new field being powered by the wind turbine right beside it," Hoff said. "It is a community effort, and it should have a community impact."

The turbine is equipped with data-logging systems that will feed real-time information to the schools for classroom use. It will serve as a demonstration and teaching tool for future generations, as well as offset some electricity costs for the school.

Like any grassroots organization, MAGI has encountered some bumps in the road to reaching their goals. "We've had to get beyond being seen as 'The Turbine People.' Folks would tend to think that the turbine was the only goal, and once it was up, that would be it, 'they're done now'," Paul Hoff said. But it's just the opposite. MAGI sees the Zephyr Wind Turbine as a beginning for the community, a symbol for a future with better energy efficiencies and use of renewable energy.

From its earliest stages to the final installation, the Zephyr Wind Project has been distinctly local and community based. This community-initiated and supported model can hopefully be duplicated by other cities or organizations looking to invest in clean energy. The efforts MAGI has taken on the small community scale are the first steps that make larger goals a reality. Winds of community change are blowing in Mahtomedi, where they will soon help power the school.

For more information about the Mahtomedi Area Green Initiative Zephyr Wind Turbine project, contact Mary Hoff at 651-426-5052 or email mary@mahtomedigreen.org.



MAGI Steering Committee meeting, with Metro CERT Director, Diana McKeown, lending support



A ground-breaking community energy project, literally!



Laying the foundation for the Zephyr Wind Turbine

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