

Powerline

Serving Energy Education Needs in Our Community

Winter 2008

In This Issue

- New Lussier Center Showcases Geothermal Heating System
- CO2gether Calculates Carbon Footprint
- New Paul Olson Elementary School Hosts Teacher Energy Workshop
- Urban Turbine Makes its Debut in Madison
- MGE Receives Safe Communities Leadership Award
- Switch to Safety in Your Classroom
- WEEB Energy Grants

New Lussier Center Showcases Geothermal Heating System

The new Lussier Community Education Center (formerly the Wexford Ridge Neighborhood Center) located at 55 S. Gammon Road in Madison is now open to the public. Opened in August 2008, the Center serves a variety of intergenerational community needs ranging from educational programming, senior meal programs, public meeting space and recreational opportunities.

Named after lead donor, John "Jack" H. Lussier, the 12,000-square-foot innovative building incorporates a variety of "green" building elements into the structure and site footprint. One of the more interesting features of the building is a geothermal heating and cooling system installed as part of a grant from MGE to study the performance, environmental and economic benefits of geothermal systems in Madison.



In addition to the geothermal system, the Center features passive solar design, daylighting, management of surface water runoff, use of recycled materials in the building, energy-efficient lighting and a sophisticated building energy management system for tracking building energy consumption.

CO2gether.org Calculates Carbon Footprint

MGE, 1000 Friends of Wisconsin and the UW Madison Center for Sustainability and the Global Environment (SAGE) have collaborated to build a first-of-a-kind Web-based carbon calculator. What separates the new CO2gether site from others is the ability to download your MGE gas and electricity consumption, saving time and increasing accuracy. If you are not an MGE customer, you can load your gas and electricity manually provided you have your annual consumption history. Co2gether.org allows the user to calculate a carbon footprint and track emissions over time. Your data is converted into a variety of charts so you can view your data several ways. You can journal your actions on the site to reduce your carbon emissions and show your



entries as data points on your charts to see the resulting correlation, if any. Another unique feature is the ability to participate in discussion groups or start one of your own. You can share your experiences and data, if you choose.

Urban Turbine Makes its Debut in Madison



MGE's newest renewable energy demonstration project features the first vertical axis wind turbine installed in Wisconsin. Located in Fitchburg's McKee Farms Park, the 10,000-watt turbine resembles more of a rotating DNA helix strand mounted on a pole than a wind turbine.

The turbine is mounted on a 42-foot pole that is anchored into a concrete foundation. The urban turbine feeds enough electricity into the local grid to produce electricity for three homes. The turbine is extremely quiet and unobtrusive. MGE will monitor the urban turbine to determine its operating characteristics, environmental benefits, maintenance requirements and power production.

The small-scale urban turbine may be new to Wisconsin, but the technology is gaining popularity worldwide especially in densely populated urban areas where noise and aesthetic issues can often derail wind turbine installations.



New Paul Olson Elementary School Hosts Teacher Energy Workshop

What better way to learn about school building energy efficiency than to use a new energy-efficient school as your laboratory? A group of 12 area teachers from Madison-area schools recently completed a 16-hour WI K-12 Energy Education Course on Building Energy Efficiency at the new Paul Olson Elementary School in Madison. Located on Madison's far west side, Olson is Madison Metropolitan School District's (MMSD) newest school. According to Doug Pearson, MMSD Facilities Director, "the MMSD is seeking

a silver level Leadership in Energy Efficient Design (LEED) certification from the U.S. Green Building Council." Silver is one step below platinum, the highest level of energy efficiency for LEED commercial buildings. Green schools are healthy for students, teachers and the environment. Built right, green schools are productive learning environments with ample natural light, high-quality acoustics and air that is safe to breathe.

In order to be certified as a silver LEED building, the building must incorporate specific energy and environmentally friendly features including highly recycled low-maintenance flooring; low or no volatile organic compounds (VOC) paints and flooring; extensive daylighting throughout the building;



a 25,000-watt solar photovoltaic system; recycled playground surface materials; rainwater collection system to reduce runoff; LED lighting in display cases; use of motion detectors in hallways, bathrooms, and classrooms to save electricity costs; high-efficiency

lighting; low-flow toilets and urinals in the bathrooms; high-bay fluorescent lighting combined with daylighting in the gymnasium; and individual thermostatically controlled classrooms each tied directly to the geothermal system.

Teachers from Thoreau, Chavez,

West High School and Olson Elementary School participated in the graduate-level course which uses the school building as the basis for learning how energy systems in schools work and methods for integrating that knowledge into a broad range of curricula areas. As part of the workshop experience, teachers participated in a building audit/tour, reviewed school energy bills, participated in classroom activities and toured MGE's West Campus Cogeneration Facility.

The workshop offers hands-on classroom activities and a broad range of free school and classroom building and classroom energy resources.

As part of the workshop experience, teachers are required to develop an energy action plan they can implement at their school.

WEEB Energy Grants Available

The Wisconsin Environmental Education Board (WEEB) is offering energy education grants in three categories for 2009-2010. The grant categories include school building energy action plans, school building energy education and broad energy education. The maximum grant amount is \$2,500 for school building energy education and broad energy education categories. The maximum grant for school building energy action plans is \$5,000. Grant applications are due Feb. 14, 2009, for the period of July 2009 through December 2010, an 18-month implementation period. The purpose of

the Energy Education Grant Program is designed to increase and improve energy-related education initiatives within schools and the community. For more information about WEEB grants, go to www.uwsp.edu/cnr/weeb/grant-program/index.htm. A free WEEB Energy Grant Writing Workshop is planned for Dec. 11, 2008, at the CESA 7 office, 595 Baeten Road, Green Bay, Wisconsin 54304. You'll get background information, resources and tips to become a successful energy grant writer. Contact (715) 346-4956 for more information.

MGE Receives Safe Communities Leadership Award

MGE was honored this fall at the Second Annual Safer Communities Luncheon at the Inn on the Park as the recipient of the Leadership Safety Award for 2008. The award was presented to Lynn Hobbie, MGE Senior Vice President, to honor MGE's commitment to safety education in the classroom and in the community.



Switch to Safety in Your Classroom



Do you want your students to know how to respond to an electric safety emergency? If so, consider hosting the MGE Switch to Safety electric safety demonstration for your students. Find out what hundreds of teachers and students in the MGE electric service area have been learning about how to safely respond to outdoor electric hazards like downed power lines, transformers in their backyards, overhead lines, conductors and insulators, digging where power lines are buried, safe kite flying and more. These situations are demonstrated by Kathy Laubmeier, MGE's teacher demonstrator, with the aid of the live Hazard Hamlet safety simulator. Each year, MGE reaches about 2,000 students with important safety demonstrations. To schedule a demonstration for your school, contact Kathy Laubmeier at jklaub@tds.net or (608) 271-4399.

If you have any questions about MGE education services or want to request energy education materials, contact Jim Jenson, editor, at (608) 252-7091 or e-mail jejenson@mge.com.

Madison Gas and Electric, P.O. Box 1231, Madison, Wis. 53701-1231