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November 2008 Newsletter

Xcel Energy Installs Battery to Store Wind Power

This spring Xcel Energy will be the first in the US to use a commercial scale sodium-sulfur battery as direct storage for wind-generated energy. The battery, which was built in Japan, will be used to store energy generated from wind at the Minwind facility in southwest Minnesota. Xcel Energy believes this technology will address some of the concerns with the variability of wind and limited predictability of wind-energy generation.

The batteries will be used to power nearby homes when there is not enough wind to power the turbines. In addition, as more turbines are installed there may be times when the grid cannot handle all of the energy that is generated. The batteries will be used to store that extra generation which will prevent the need to shut down some of the turbines. The batteries may prove to be especially helpful in the summer months when they can re-charge at night and provide extra energy to the grid during the day when air conditioners are running.

The battery is the size of two semi trailer trucks stacked on top of each other and weighs 80 tons. It can store 7.2 megawatt-hours of energy and when fully charged, the battery can power about 500 homes for approximately 7 hours. Read the Star Tribune article or listen to the interview with Xcel Energy's Frank Novachek on Minnesota Public Radio.

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New York Attorney General Creates Voluntary Ethics Standards for Wind Developers

On October 30th, 2008 New York Attorney General Andrew M. Cuomo announced a voluntary ethics code for wind developers in the state of New York. This comes as the result of the Attorney General's investigation into whether wind developers improperly sought land-use agreements and whether they attempted to influence public officials with gifts. Both Noble Environmental Power, LLC and First Wind, who cooperated with the investigation, have signed onto the Code and are urging other companies to follow their lead. The Code is aimed at eliminating conflicts of interest and increasing transparency in wind farm development.

A multi-agency Task Force will oversee the Code which requires that all wind easements and leases be in writing and filed with the county clerk. It also bans wind companies from hiring municipal employees or their relatives, giving gifts of more than $10 within a one-year period, or providing any form of compensation that is contingent on any action before a municipal agency. Participating companies also agree to not solicit or use confidential information from a municipal employee when that information was acquired in the course of their official duties. Further, as a condition for signing onto the Code, companies must within 30 days conduct a seminar for their employees about identifying and preventing conflicts of interest when working with municipal employees.

To promote transparency in wind energy development, the Code requires wind companies to maintain a public website that discloses the names of all the municipal employees and their relatives who have a financial stake in wind farm development. They must also submit in writing to the municipal clerk and for publication in the local newspaper the nature and scope of a municipal employee's stake in a wind energy project. You can read the press release here, and download a .pdf file of the Wind Industry Ethics Code here.

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Wind Energy in Times Square

Windustry has received a growing number of questions lately regarding vertical access wind turbines. Vertical axis wind turbines have blades that rotate around an axis that is perpendicular to the ground, whereas the typical horizontal axis turbines rotate around an axis that is parallel to the ground. While we do not work directly with vertical axis wind turbines, we have seen increasing interest in them.

In general, vertical access wind turbines are designed to work when located on or near the ground, in lower speed winds, or on top of buildings. They are also praised by their advocates for being quieter than traditional horizontal axis turbines. The trade-off comes in the amount of energy that is able to be produced by these machines. Because of their size and design, they cannot

generate energy on the same scale as the large horizontal-axis wind turbines can. Despite this, vertical axis turbines are gaining popularity in urban areas.

A new billboard will soon illuminate Times Square in New York City. Ricoh Americas Corporation announced their plans for a wind and solar powered billboard in Times Square. The sign weighs 35,000 pounds and will be powered by 16 wind turbines and 64 solar panels. The cylindrical turbines (a.k.a. vertical axis) will supply 90% of the power for the sign and will produce 22 kilowatts in 10 mph wind, the average wind speed at Times Square. Ricoh already has a similar sign in Japan.

If you have questions regarding vertical axis wind turbines, there are many companies that work more closely with the technology that you can contact for more information. You can find a listing of them here.

Duluth Port Keeps Itself and Others Busy With Wind Turbine Components

The head of the Great Lakes has become a major funnel of wind turbine components and is set to handle a record 2,000 this year. The increasing popularity with alternative energy has pushed wind turbines to the majority of the port's heavy lifting work. Most of the machines that pass through the Duluth-Superior region arrive from Germany and Denmark and are bound for wind farms in Montana, Oklahoma, Illinois, Iowa and Minnesota.

The Duluth port has a distinct advantage as the world's most inland port because it is located near the major windy regions in the country. Many developers find it more efficient to work through the Duluth port because of the team effort that has occured with the Port, trucking companies and the State of Minnesota in getting the turbines to their final destinations.

The State of Minnesota requires state trooper escorts for trucks hauling turbine components and will issue permits and devise routes for the trucks to take. The massive trucks required for the nacelle (over 200 feet long) must avoid overpasses, bridges and Twin Cities traffic. There were so many parts being delivered this year that the Minnesota Department of Transportation had to form a special "wind team" to handle the permits and plan the routes. The number of components to transport is only expected to rise next year.

The full article from the Star Tribune can be found here.

On the Wind Energy Trail...

- On Monday, November 10th, Windustry staff, Melissa Peterson, attended the Youth Energy Summit (YES!) event at Prairie Wood Environmental Learning Center in Spicer, MN. The Youth Energy Summit (YES!) engages teams of youth in action projects to literally put energy into our future. Youth (grades 8-12) participate in four special events during the school year to learn about and discuss renewable energy, climate change, energy entrepreneurship, and energy economics. Melissa attended the event to provide guidance, resources and information to the youth teams as they develop and carry out their energy projects. Click here for more information about the YES! program.

- On November 13th, 2008 Saint Francis University's Renewable Energy Center presented "Community Wind Power: Energy for Home, Farm, and Business" with guest speaker Lisa Daniels, Windustry's Executive Director. The following day Lisa Daniels also participated in a Community Wind Round Table "Lessons from Minnesota" with local policy makers and regulatory officials.

- Lisa Daniels and Melissa Peterson attended the University of Minnesota's E3 conference in St. Paul, MN on November 18th. As part of the Energy, Economic and Environmental Conference Lisa Daniels was also the moderator of a breakout session: "Wind Power - Future Expansion and Grid Impacts in the U.S.".