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Watt's New? *Michigan Energy News*

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“Over the last two years, we’ve collected wind data in locations that were previously inaccessible.”

Arnold Boezaart, Director, Michigan Alternative and Renewable Energy Center at Grand Valley State University

Community Solar Success

Cherryland Electric Cooperative has installed 48 solar panels on a site adjacent to its offices in Grawn. Individual customers have signed up to lease each panel for 25 years for a one-time fee of \$470 per solar panel. A rebate of up to \$150 will be given the customer to account for energy optimization credits. The customer will also receive a monthly billing credit for the electricity produced by the solar panel, which is expected to be at least 25 kWh per month. As many as 360 panels will be installed on the racking at the site, depending on customer support.

Energy Innovation with Nanoparticles

Grid Logic Incorporated of Lapeer is developing a low-cost superconducting wire for electric utility application. Using a new manufacturing technique, it will embed very fine particles into metals to induce superconductivity. This will reduce the cost of transmission lines, motors, wind turbines, and other electric devices. At Michigan Technological University in Houghton research on growing manganese dioxide nanorods may lead to new high performance electric capacitors. By minimizing internal resistance, such material will store more energy, allow extraction of energy more quickly, and operate longer between recharging. University of Michigan labs in Ann Arbor have added silver nanoparticles to increase solar cell efficiency by 8 percent. The nanoparticles also allow for thinner silicon layers, which means lower costs (ten times less silicon used) and flexible substrates for solar panels.

Annual Meeting of Energy Group

The Michigan Energy Innovation Business Council held its Annual Meeting on April 17 in Lansing and elected new Board members. The meeting featured a solar industry panel discussion and a keynote address on the Department of Energy’s New Clean Energy Manufacturing Initiative. The new Board is composed of top officials from Astraeus Wind Energy, Growth Capital Network, Novi Energy, Ecotelligent Homes, Dowding Industries, Advanced Energy Group, Dow Chemical Company, TOGGLED, Sakti 3, First Energy Finance, Wind Resource LLC, and Ventower Industries. These are companies already engaged in wind, solar, bioenergy, geothermal, energy storage, and energy efficiency businesses. Committees on policy and advocacy, membership and marketing, and market and business development were also formed. The group participated in all seven energy forums held around Michigan in February, March, and April.

Wind Buoy Goes Back into Lake Michigan

The Grand Valley State University Wind Sentinel research buoy, one of only three in the world, will be returned to Lake Michigan this month. It will be placed about seven miles offshore, northwest of the Muskegon Channel, for its third research season. The project is running short of funding, and its future activities beyond this year are uncertain. Project partners include researchers from: Michigan Technological University, who are studying wind turbulence; Michigan Natural Features Inventory, a component of the Michigan State University Extension program, who are studying bird and bat activity (and who confirmed for the first time ever last summer that bats do fly over the Great Lakes); and the University of Michigan, who are conducting research on large data sets.

"We know that this integrated approach will drive the most powerful solutions to our energy challenges."

Lou Anna K. Simon, MSU President

Michigan Energy Venues

- *West Michigan Bioenergy Consortium*, Site visit to Grandville Clean Water Center, Grandville, May 2, 8 AM. Email chaplar@rightplace.org
- *Power Surge* (movie), West Michigan Environmental Action Council, Grand Rapids Public Museum, May 7, 6 PM. www.wmeac.org/events
- *Midwest Energy Efficiency Alliance*, annual membership meeting, MGM Grand Detroit, Detroit, May 9, 8 AM. www.mwalliance.org/node/3209
- *Michigan Municipal Electric Association General Membership Meeting*, Lansing Center, Lansing, May 15. www.mmeanet.org/index.htm
- *Great Lakes Electric Utility Show*, Lansing Center, Lansing, May 15-16. <http://tinyurl.com/GLEUS-Lansing>
- *West Michigan Solar Supply Chain*, site visit to Hemlock Semiconductor, Hemlock, May 23, 9 AM. Email chaplar@rightplace.org

Correction: Contractors Building Supply of Copemish will be assembling solar panels under agreement with Sonali Energiees of India, with most of the parts manufactured outside the State of Michigan.



DOE Renews MSU Biofuels Funding

The U.S. Department of Energy has awarded \$25 million per year for another five years to fund the Great Lakes Bioenergy Research Center. Michigan State University is a partner in the Center which is physically based at the University of Wisconsin-Madison. The Center supports nearly 400 researchers, students and staff working in disciplines ranging from microbiology to economics to plant biology to engineering aimed at advanced cellulosic biofuels technologies.

Courts to Rule on Wind Issues

Seventeen neighbors of the Consumers Energy Lake Wind Energy Park have filed a complaint in Mason County claiming the wind farm has negatively impacted property values and caused sleep disruption, headaches, ringing ears, dizziness, stress, extreme fatigue, nausea, and other physical and mental problems. A cease and desist order is being sought, together with damage awards, in a jury trial. In Clinton County, Forest Hill Energy-Fowler Farms LLC is suing Essex, Dallas, and Bengal townships for adopting ordinances that effectively block its wind farm development. The county had previously granted a special land use permit to Forest Hill Energy for its \$120 million wind project, and the townships have moved to override that permit.

Energy Forums Concluded

With the conclusion of the last of the seven energy forums ordered by Governor Snyder in November, the next stage of fact-finding is underway. The schedule describes the May-June period as the time when the two forum chairs will be "outlining reports in each program and laying out plan for development of information that is not yet available." The following three months is reserved for "compilation/development of information." October-November will see the release of draft reports for public feedback. Final reports will be released in the November-December timeframe. Governor Snyder will be "making his comprehensive recommendations regarding Michigan's energy future in December of 2013." See www.michigan.gov/energy

Michigan Shorts

ΩΩ Orisol Energy US, Inc. of Ann Arbor is one of the companies selected to bid on leases for submerged land in the Atlantic Ocean for offshore wind developments in the coastal waters of Virginia Ω Midwest Independent System Operator (MISO) reported that on November 23 more than a quarter of its total generation came from wind turbines at 10,012 MW Ω The Michigan Public Service Commission has approved a special rate contract between Cloverland Electric Cooperative and the Manistique paper mill of MPI Acquisition LLC Ω State Senator Hoon-Yung Hopgood has introduced a bill to increase Michigan's renewable energy standard to 22 percent by 2022 Ω Mascoma, cellulosic ethanol maker with plans for commercial operations in the U.P., has withdrawn its \$100 million initial public offering citing market conditions ΩΩ

Exporting Pure Michigan

Two years ago President Obama challenged the nation to increase its exports. American exports are up 34 percent since that time, with 70 percent of total exports being manufactured goods. "Made in America" still has a huge cache around the world. "Made in Michigan" can and should have significance overseas as well. Now is the time for Michigan's alternative energy supply chain and manufacturers to look abroad for new markets, niche and otherwise. The demand for electricity is exploding in emerging markets of developing and less developed countries. The Kyoto Treaty and other international efforts are aimed at satisfying this demand with renewable resources rather than fossil fuels. With its technology, engineering, and lean manufacturing prowess, Michigan could be on the leading edge of this effort. The export market is wide open. Let's go to work on exporting "Pure Michigan."