

## ENERGY TIDBITS – July 2010

Michigan Appliance Rebate program still has incentives available, but dollars are limited. To date, 49% of the program funds for refrigerators, clothes washers, and dishwashers have been spent, with approximately 50,000 rebates being issued to Michigan residents. The furnaces and water heaters program has spent approximately 5%, with approximately 150 rebates being issued to Michigan residents. DOE has recently approved a rebate increase for this portion of the program. Rebate levels have increased for the following products: 1) Propane Furnaces—increase to \$500, 2) Propane Water Heaters—increase to \$300, 3) Oil Furnaces—increase to \$500, and 4) Solar Water Heaters—increase to 25%, maximum of \$2,500. Residents who already received a rebate will get an additional amount to raise them to the new levels. [www.mirebates.com](http://www.mirebates.com) & [www.michrebate.com](http://www.michrebate.com)

Governor Granholm has announced that the state of Michigan has achieved a 22% reduction in energy use at state facilities throughout Michigan during the last fiscal year compared to fiscal year 2002. If this reduction had not been achieved, the state would have paid an additional \$30 million last year. Since the Governor took office, the state has achieved a total utility cost avoidance of \$89.9 million. Energy Use Reduction Coordinators representing each agency meet regularly to exchange ideas, gather information, and provide updates on their progress.

Clean Energy Advanced Manufacturing grants and loans will go to 9 small Michigan manufacturers. Governor Granholm announced that the manufacturers will share \$20 million funded by the federal Recovery Act. One of the companies is Great Lakes Industry in Jackson which will convert its existing gear manufacturing operations to meet the growing demand for precision gear boxes needed in large wind turbines. Another company is Ventower Industries, which recently broke ground for its new facility in Monroe. Ventower will build the structural steel towers that are used to support commercial-sized wind turbines. A third company, URV USA in Rochester will establish a foundry to produce high-quality castings for the wind industry. <http://www.michigan.gov/gov/>

DTE Energy has introduced a new 100 home, 6 month program to promote whole home energy savings for residential combo customers in Southeast Michigan with both MichCon gas and Detroit Edison electricity. To deliver the Whole Home Performance Program, DTE Energy has teamed up with WellHome (a Masco company), and Michigan SAVES to promote, incentivize, and deliver comprehensive home energy retrofits. The program, which started on June 1 offers rebates of up to \$3,500 for whole-home energy retrofits achieving 20% in savings, and low interest unsecured financing through Michigan SAVES. For more information, go to Whole Home Performance Program link at [www.yourenergysavings.com](http://www.yourenergysavings.com).

Uni-Solar has unveiled a "Technology Roadmap" to 12% conversion efficiency by 2012 with a cost per watt of less than \$1. The company is targeting 20% plus for conversion efficiency. The roadmap includes enhancing the laminate which will improve conversion

efficiencies to 8.2% by close of 2010, high rate deposition which targets 10% by end of 2011, and use of nanotech to result in 12% by end of 2012.

Michigan Uniform Energy Code Public Hearing will be held on July 20, 9:00 AM in the MSP Auditorium, Michigan State Police Training Academy, 7426 N. Canal Rd., Dimondale. The MUEC rules are proposed to be effective 120 days after filing with the Secretary of State. The proposed energy residential rules will adopt the 2009 International Energy Conservation Code with Michigan amendments. The proposed energy commercial rules will adopt the ANSI/ASHRAE Standard 90.1-2007. Oral or written comments may be presented in person at the hearing or must be received in writing no later than 5:00 PM on July 20. <http://www.michigan.gov/dleg/0,1607,7-154-10575---,00.html>

Michigan Energy Appraisal: Summer 2010 from the MPSC indicates that Michigan's total electric sales are projected to increase by 2.1% in 2010, following a 6.7% decrease in 2009. Impacted by the recession, sales in 2009 were the lowest seen since 1997 with declines in all sectors: residential, commercial, and industrial. Part of last year's decline can be attributed to the cooler than normal summer, which saw cooling degree days 35% below normal. Even with the projected moderate increase in 2010, sales will only approach a return to their 1998 levels. <http://www.dleg.state.mi.us/mpsc/reports/energy/10summer/index.htm>

Southeast Michigan Resource Conservation & Development Council is offering a \$62,600 grant to one institution to fund the retrofit or replacement of an existing boiler to accommodate wood fuel. Boiler systems in the range of 500,000 to 4 million BTU/hour are targeted. A matching requirement of at least 1:1.5 (or \$93,900) is required. Funding preference will be given to facilities with high public demonstration potential within the Southeast Michigan RC&D Council area (Lenawee, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne Counties). All project proposals must be submitted by July 26. <http://semircd.org/ash/news/woodenergyRFP0610.pdf>

Harlan Byker and his company, Pleotint LLC, have worked for 12 years to develop a window film that reacts to sunlight. Sandwiched between two panes of glass, the film darkens on hot, sunny days, keeping out heat, and goes transparent on cloudy days to let in available sunlight to heat the interior. Sunlight Responsive Thermo-chromic film got a boost this week with a \$402,457 federal grant that will be used for independent research to determine the effectiveness of the film on sunlight control. A year-long test of the window film product is planned at the Iowa Energy Center. A 2006 study by GMB Architecture + Engineering, of Holland, found that the product can provide between 17-30% in energy cost savings.

University of Michigan Team has won the American Solar Challenge for a third consecutive North American title. The week-long, biennial 1,100-mile competition for solar-powered vehicles started in Broken Arrow, Okla., on June 20 and ended in Naperville, Ill., on June 26. The UM car was the first of 13 to cross the finish line for a final time of 28 hours, 14 minutes and 44 seconds. This is the sixth North American title

for UM, which won the inaugural event in 1990 with its first car, the Sunrunner. Infinium is believed to be the university's fastest solar car ever. It reached 100 mph in testing. <http://solarcar.engin.umich.edu/>

Dow Corning has been awarded \$1.2 million from DOE to develop an insulating façade system for commercial buildings. The funding will assist Dow Corning in the development of a silicon-based high-efficiency building insulation system which could be used in retro-fit and new construction applications. The insulation project is focused on achieving R-40 or greater for exterior insulation and finish systems.

1.26 kW PV roof-integrated system has been installed on my house. I needed a new roof and Consumers Energy \$.65/kWh Experimental Advanced Renewable Program (EARP) incentive certainly helped. Unfortunately that "feed-in-tariff" program is completely full right now. PV Watts software program estimates I should get 1440 kWh's per year or about 20% of my electric needs. So far, I'm averaging 4.8 kWh's per day. If you want to see the type of PV system, go to [www.lumaresources.com](http://www.lumaresources.com).

GreenRoad attempts to change drivers' fuel-wasting ways by giving them constant feedback – a little black box -- and by sending them weekly emails that analyze their driving and offer tips. The box has three lights and when the car's driver makes a fuel-wasting or dangerous move, such as making fast, sharp turns or weaving through traffic -- the LEDs go from green to yellow to red. The GreenRoad system has been installed in more than 80 corporate fleets since 2008. Some clients have seen accident rates halved and fuel savings of 5 to 10%.

Underwater Power Generation Concept is the top winner of Motivate Michigan, a corporate-sponsored collegiate competition to generate ideas to improve Michigan's economy. UM students Tarun Koshy and Nicholas Williams presented "Thunder From Down Under," a proposal to install underwater turbines in all the major lakes and rivers of Michigan. They also presented the technology of a UM spinoff called Vivace Power that uses a property of moving water called vortex induced vibration to make tubes move up and down in a frame, generating power. The first place proposal won \$20,000 in scholarship money. More than 300 ideas were received from virtually every university in the state. [www.motivatemichigan.org](http://www.motivatemichigan.org)

Pulte Homes, the nation's largest homebuilder, is expanding its offering of solar power in its new home communities. Bloomfield Hills-based Pulte Group says its renewable energy strategy is unique, in that its solar offerings span the homebuilder's diverse brand portfolio: from first-time buyers to move-up buyers to those in 55+ active adult communities.

University of Michigan has adopted LEED Silver certification as its standard for major new construction projects. The new policy builds upon an existing UM commitment to exceed by 30% ASHRAE Standard 90.1-2007, giving the university one of the most rigorous collegiate construction standards in the nation. UM buildings that have already achieved LEED certification include the Gold LEED Dana Building, home of the School

of Natural Resources and Environment, and the Silver LEED Stephen M. Ross School of Business.

GenShocks, can use the kinetic energy of bounces to generate watts, putting the electricity to use running a vehicle's windshield wipers, fans or dashboard lights. The company making the devices indicate they can lower fuel consumption by 1-6% depending on the vehicle and road conditions. GenShocks are projected to be on the market in the second quarter of 2011. <http://www.levantpower.com/>.

DTE Music Theatre lawn seats won't be the only thing that's green this summer during the 2010 concert series. DTE Energy will pair up with its GreenCurrents program to provide the amphitheater with 100% renewable energy throughout the concert series. This is the third year that the Palace Sports & Entertainment will use 100% "green" energy.

East Michigan Chapter of AEE has been successful in getting the AEE to bring the CEM 5 day course to Michigan this fall. The CEM course and exam will be held at Westin Book Cadillac in Detroit on October 25-29. Space is limited, please sign up immediately! <https://www.aeeprogams.com/seminars/calendar.htm>

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