Issue 1 **July 2011**

MILWAUKEE

OFFICE OF ENVIRONMENTAL SUSTAINABILITY

Newsletter

Welcome to the inaugural newsletter of the City of Milwaukee's Office of Environmental Sustainability. The purpose of this semi-annual newsletter is to update residents, businesses, and City employees on current and future Office of Environmental Sustainability (OES) programs, projects, and initiatives. OES especially thanks Mayor Tom Barrett for his nationally recognized leadership on environmental sustainability issues and thanks all those Milwaukeeans who work with OES to make the city a more sustainable place to call home.

If someone you know would like to receive the OES Newsletter by e-mail, request a copy at sustainability@milwaukee.gov.

Wind Turbine To Power Port of Milwaukee Building

OES has finalized plans for one small, commercial scale wind turbine to be constructed on City-owned land next to the Port of Milwaukee Administration Building at 2323 S. Lincoln Ave. When constructed the turbine will stand 154 feet from the ground to the tip of the highest extension of the blades and is expected to produce 110-150% of the building's energy needs. During times of excess power generation the City will generate revenue by selling excess electricity to We Energies.

The wind turbine's capital, operational, and maintenance costs will be funded through federal energy efficiency or renewable energy grants and generous incentives through Wisconsin Focus on Energy and We Energies. The federal grant forming the primary funding source for this project must be spent on City-owned property whereby the City is able to showcase its commitment to energy efficiency and renewable energy. As a result the Mayor and Common Council approved spending these funds on a "high-visibility" project, demonstrating the City's commitment to renewable energy. This project also supports the Port's strategic plan for enhanced sustainability of its operations while complementing other OES clean energy projects (see *Milwaukee Shines* section). OES expects the wind turbine to be up and running by next summer.

A special thanks to all City and Port staff who in some way assisted on this effort – OES could not have done this alone!

The photographs to the right are of a Northern Power 100kW wind turbine located at the MATC campus in Fort Atkinson, WI. The same or similar model of wind turbine will be constructed at the Port of Milwaukee.

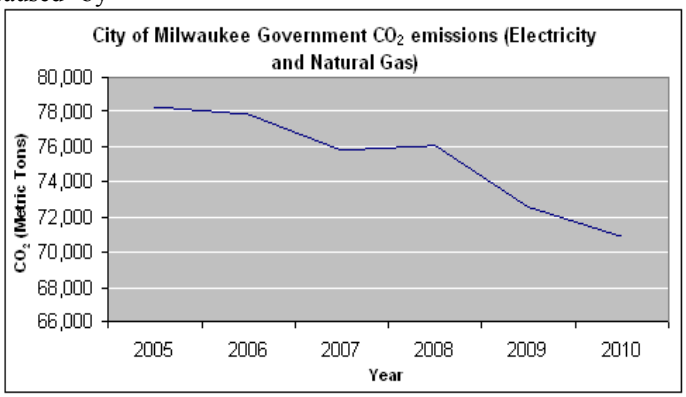
About Us:

The Office of Environmental Sustainability (OES) was created by Mayor Tom Barrett to position Milwaukee as a leader in environmental sustainability and performance in the 21st century. OES promotes both economically viable and environmentally sound practices, projects and initiatives. The Office works with City departments, businesses and residents to reduce material and natural resource consumption while promoting strategies that address critical sustainability needs in the community. The Office of Environmental Sustainability is entirely grant funded. Since 2006, OES has successfully attracted more than $20 million in grant funding to Milwaukee to help create a more sustainable community.

Greenhouse Gas Emissions

OES supports and is committed to programs that improve air quality in the city and reduce greenhouse gases. The following graph shows carbon dioxide (CO_2) emissions caused by electrical production and natural gas use in City of Milwaukee operations.

This graph was produced by entering We Energies distribution and billing data into the U.S. Environmental Protection Agency's (EPA) greenhouse gas calculator. When considering electrical production and natural gas use, the City of Milwaukee has decreased its annual CO_2 emissions by 9.43% since 2005.



City Government

In 2005 Mayor Tom Barrett issued a challenge to the City of Milwaukee to reduce energy use 15%. At the end of 2010, OES organized a biweekly Energy Reduction Team meeting of building and facility representatives from across all City departments to measure City performance vis-à-vis the Mayor's challenge. The Team was tasked with three goals: 1) verify City energy use as collected directly from We Energies and other providers; 2) systematize energy and water use tracking across City departments; and 3) use this data to identify energy efficiency upgrades that OES can fund with stimulus dollars.

In terms of meeting the Mayor's goal, the City has reduced its electricity and natural gas use by over 8%. The City's major buildings are on track to meet the reduction goal. Steam and fleet data still need to be accounted for in order to produce a complete energy use metric for the City.

Over the last six months this cross-departmental team has made significant progress on completing an energy use inventory using We Energies billing data. In addition to helping the City track where it stands in terms of meeting the Mayor's energy reduction challenge, the data for over 170 buildings and facilities has been entered into energy tracking software developed by EPA called *Portfolio Manager*. *Portfolio Manager* tracks every individual building's energy use and provides the ability to benchmark them against baseline performance of similar buildings across the nation.

The Energy Reduction Team also identified multiple opportunities for the City to find savings through energy efficiency upgrades. The Energy Reduction Team identified 16 buildings to receive energy audits including the Central Library and Port Administration Building. The team also identified buildings to receive immediate lighting retrofits. The team aims to completely phase out T-12 fluorescent lighting over the next two years. Lighting upgrades were chosen because they have the quickest payback. In addition to those upgrades new indoor environment controls were installed in some buildings to control lighting and HVAC systems.

Future projects also include additional solar hot water installations at several City of Milwaukee Fire Department engine houses.

Recent Highlights

Great Lakes and St. Lawrence Cities Initiative Award:
On June 17 the City of Milwaukee and Milwaukee Metropolitan Sewerage District received an award for innovation in leadership to address storm water impacts through green infrastructure.

Mayor Tom Barrett was also named the 2011-2012 vice chair of the Cities Initiative. The Cities Initiative is an international coalition of mayors and other public officials dedicated to protecting and restoring the Great Lakes and St. Lawrence River. Details at: www.glslcities.org

Green Corridor Designation:
Alderman Witkowski sponsored a resolution passed by the Common Council designating a three mile stretch of S. 6th Street from Howard Ave to College Ave as "*The Green Corridor.*" This corridor will serve as an urban laboratory for community-driven storm water management techniques and other sustainability initiatives.

Milwaukee Shines Solar Financing:
The City of Milwaukee's solar program, *Milwaukee Shines,* will launch a low-interest solar financing program for city residents on July 28.

Sponsored by Alderman Zielinksi, and approved by Common Council, the *Milwaukee Shines Solar Financing* program offers up to $2 million in low-interest solar financing and a $1,000 incentive to the first 20 participants in the program. Details can be found at www.MilwaukeeShines.com

Brewers Green Week:
OES sponsored the Brewers Green Week through the Milwaukee Energy Efficiency (Me^2) program. During the week of June 20-26 the Brewers showcased the importance of energy efficiency and other sustainability issues through promotions and community events at Miller Park, while promoting Me^2.

Green Business

ME3

The City of Milwaukee and 13 partner organizations launched a sustainable manufacturing program for the City's small and medium-sized manufacturers in February. This program – Milwaukee Economy, Energy and Environment (ME3) – is a no-cost program to help manufacturers cut costs while at the same time helping to minimize negative environmental impacts of their manufacturing processes and practices.

ECONOMY
ENERGY
ENVIRONMENT

The ME3 mission is to improve the competitiveness of small and medium sized manufacturers in Milwaukee by promoting the implementation of cost-effective sustainable manufacturing practices and technologies that collectively reduce community-wide negative environmental impacts.

OES leveraged $200,000 in stimulus funding to raise an additional $200,999 from two of the ME3 partners: Milwaukee Economic Development Corporation (MEDC) and Wisconsin Manufacturing Extension Partnership (WMEP). Alderman Murphy sponsored the resolution which created the cooperation agreement between the City, WMEP and MEDC to expend these funds in support of the ME3 mission.

Along with the in-kind contributions from all of the partners, ME3 has funding and technical assistance services available for up to 20 manufacturers located in the City of Milwaukee with between 20-500 employees.

As of press time, the ME3 partners have accepted eight small and medium sized manufacturers into the program. By the next issue of this newsletter OES will have some preliminary metrics to report. In the meantime, please check out www.milwaukee.gov/ME3 for more information.

Mayor Barrett provides information to local manufacturers on ME3

Commercial Me^2

The City of Milwaukee, Wisconsin Energy Conservation Corporation and Summit Credit Union launched the Commercial Milwaukee Energy Efficiency Upgrade Program in June, or Commercial Me^2. This program uses $3.85 million from OES's BetterBuildings Grant to leverage up to $24 million in private capital to help stimulate and finance energy efficiency improvements in the City's commercial and retail sectors.

Commercial Me^2 takes a three-pronged approach to helping improve Milwaukee's commercial building stock:

1) OES raised $10 million in private capital from Summit Credit Union to finance energy efficiency improvements for small commercial and retail for projects under $20,000;

2) For larger projects, the Me^2 Cash Collateral Account financing product benefits both businesses and financial institutions. It provides collateral on behalf of businesses implementing energy-efficiency projects, allowing for no-money-down financing and mitigating financial institution's risk. Plus, when combined with Focus on Energy incentives and other rebates, this financing product enhances a business' entire energy-efficiency project;

3) Alternatively tenants of buildings can utilize the City's recently passed Clean Energy Financing ordinance which allows repayments of energy efficiency improvement financing to be treated as a special charge on property tax bills.

The innovative Clean Energy Financing program overcomes a long-standing obstacle to energy efficiency in commercial buildings. Commercial Me^2 Clean Energy Financing allows property owners whose tenants pay the energy bills and municipal special charges, to pass along the cost of energy efficiency improvements *and* resulting savings to the tenants. Tenants receive lower energy bills and the property owner gets an upgraded property. For more information on Commercial Me^2 or how the Clean Energy Financing ordinance works, visit us online at: www.smartenergypays.com/businesses

Service Heat Treating, Inc. on the northwest side receives first ME3 diagnostic

Business Grants

OES and Milwaukee Economic Development Corporation (MEDC) have been running a successful energy efficiency business grant program since July 2010. OES has assigned $754,000 of American Recovery and Reinvestment Act funds to MEDC to use as a portion of total financing

packages for manufacturers and information technology centers in the City of Milwaukee that want to make energy efficiency improvements to their facilities.

All the money under this program has been allocated to 11 companies in Milwaukee for 12 energy efficiency improvement projects.

Mayor Barrett tours Miller Coors to witness business grants in action

This business grant program has resulted in an estimated $578,000 annual energy savings in aggregate. That's a 1.3 year payback on the grant dollars invested, and more importantly helps Milwaukee's manufacturers remain competitive.

Companies competed via project submissions for these dollars and MEDC's hard work is ensuring a good return on investment for the City and the companies. Companies receiving grant funds include MillerCoors, Oilgear, Wisconsin Paperboard, Maynard Steel Castings, Vector Technologies, and Micor Company among others.

Mayor Barrett launches Me² program in Alderman Murphy's district.

Residential Me2

Me²
Milwaukee Energy Efficiency
Smart energy pays.

Thousands of Milwaukee's older homes have air gaps and little to no insulation in the walls, creating uncomfortable drafts and wasting energy. Me² can help homeowners make cost-saving improvements customized for individual homes, such as insulation and new heating and cooling systems.

Me², Milwaukee's Energy Efficiency program, makes home improvements affordable by providing Cash-Back Rewards and an attractive financing option through Summit Credit Union. Plus, Me² provides FREE Energy Advocates to provide step-by-step assistance. OES raised $30 million in capital from Summit Credit Union to finance residential energy efficiency projects through this program. OES would like to thank the Mayor for his leadership on this program and also thank Aldermen Hines and Murphy for supporting various Me² related resolutions. OES recognizes all the input and feedback received from the Common Council that helped craft a stronger Me² program.

When homeowners make energy improvements they can have peace of mind that the work is done thoroughly and correctly. It's easy, affordable, and quality-inspected. Me² approved contractors use City of Milwaukee workers to strengthen our local economy. It's a win-win for homes, homeowners' pocketbooks, our community, and the environment.

Limited Time Incentive
Me² is offering up to $1,000 in bonus cash to homeowners who complete energy efficiency improvements by September 30, 2011.

Home energy improvements made easy!

Step 1: Learn
Set up a FREE, no-obligation visit with an Energy Advocate. Together, you'll learn simple steps for saving energy in your home. Your advocate will guide you through the program, making it simple and easy. **Call (877) 399-1203 to get started.**

Step 2: Assess
An Me² approved Energy Consultant will test your home to identify areas of missing insulation, air leaks and other ways to save energy. You'll receive a customized report with estimated costs of energy improvements, as well as estimated energy saving.

Step 3: Upgrade
Your Advocate will help you choose upgrades and select contractors, vetted by Me², to implement them. When completed, your work is inspected by your Consultant. We make sure you get quality work.

Step 4: Enjoy
Enjoy a more comfortable home, quality assurance and savings on your energy bills for years to come!

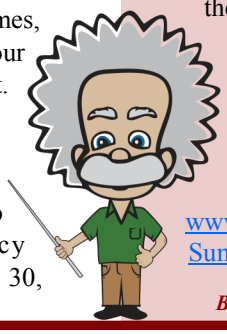
Easy and Affordable

www.smartenergypays.com
(877) 399-1203

Financing

Me² is Partnering with Summit Credit Union to provide eligible customers the opportunity to finance their home energy efficiency improvements with special low interest rates and terms. Apply online to be pre-approved: it's quick and easy

www.summitcreditunion.com/SummitMe2/



Become an Energy Einstein

Milwaukee Shines

Milwaukee SHINES
FOR A SUSTAINABLE SOLAR FUTURE

The City of Milwaukee's solar program, *Milwaukee Shines,* works to increase interest and investment in solar energy. Milwaukee was designated a Solar America City by the U.S. Department of Energy in 2008. Through this grant program, the City helps create cleaner air for our community while reducing energy costs for the City and Milwaukeeans.

Milwaukee Shines brings together expertise and support from educational institutions, private businesses, non-profits, and our state energy program to build a strong solar industry and solar market in southeast Wisconsin.

Solar Training and Installation at Milwaukee Engine House #23

Milwaukee Shines has seen a dramatic increase in the number of solar installations. At the beginning of 2008, there were 17 solar installations in the city, and by the end of 2010, Milwaukeeans can see over 100 solar installations throughout the city. In addition, since the inception of *Milwaukee Shines,* solar capacity has increased from 100 kilowatts in 2008 to just under 1 megawatt of solar electric power being generated in the City of Milwaukee.

www.MilwaukeeShines.com

Solar for City Facilities

Milwaukee Shines has coordinated and funded several solar installations on City properties. The projects help reduce the City's energy bills, save taxpayer dollars, and reduce the need for energy from non-renewable sources.

Installations include solar hot water system installations at four fire department engine houses (13, 23, 35, and 36) and a 31kW solar electric system as part of the green roof at Milwaukee's Central Library.

Solar Hot Water at HACM Olga Village

The Housing Authority of the City of Milwaukee (HACM) received funding for a large solar hot water system as part of its new, green housing project - Olga Village. *Milwaukee Shines* is also providing funding for solar hot water and solar electric installations for various public entities and community organizations including Bay View High School, Riverside High School, MSOE, Boys and Girls Club, Walnut Way Conservation Corporation and Layton Boulevard West Neighbors.

Solar for Residents

Financing: *Milwaukee Shines* offers a new option to help city residents finance a solar installation. The *Milwaukee Shines Solar Financing* program is a partnership with Summit Credit Union to offer $2 million in low-interest solar financing for city homeowners, with a $1,000 incentive for the first 20 participants in the program. This program is the first of its kind in the country that utilizes a partnership between a municipality and a private financial institution. The goals are to both increase solar on Milwaukee homes, and also demonstrate that solar is a stable and viable investment for financial institutions.

Education: *Milwaukee Shines* works to introduce solar technology to the general public through educational workshops and seminars. *Milwaukee Shines,* with the Midwest Renewable Energy Association (MREA), offers free sessions about solar technology. For a list of upcoming events visit www.milwaukeeshines.com

Solar for Businesses

Expanding Solar Industry: *Milwaukee Shines* is working to increase skilled and qualified installers and site assessors in the Milwaukee area. With partners such as MATC, MREA, IBEW, UW-Milwaukee and MSOE, *Milwaukee Shines* is able to connect professionals interested in various aspects of the solar industry (from research to installing) with quality level training and instruction. Since 2008, *Milwaukee Shines* tripled number of solar installers and doubled the number of solar site assessors in Milwaukee area.

milwaukee metro
SOLAR HOT WATER
BUSINESS COUNCIL

Connecting to Solar Supply Chain: In 2010, *Milwaukee Shines* launched an initiative to help expand manufacturers' involvement in the solar supply chain. The **Milwaukee Metro Solar Hot Water Business Council (SHWBC)**, a public-private collaborative, works to *support*, *attract* and *retain* manufacturers and distributors in the solar hot water market and provide an *opportunity to collaborate* among industry stakeholders in the Milwaukee seven-county region. For Milwaukee area manufacturers, the SHWBC offers an opportunity to build on existing manufacturing expertise while tapping into a booming market. For details visit www.shwbc.org.

Next 6 Months

Green Team 2.0

OES Director Matt Howard sent a memo out to the Mayor's appointees to the Green Team Steering Committee requesting to meet in order to discuss Matt's proposal to 1) report back to the Steering Committee and Green Team Members on actions and results OES has accomplished since appointment of its first director in 2006; and 2) re-engage the Green Team (*Green Team 2.0*) in some format in order to assist OES in developing a Sustainability Plan for the City of Milwaukee. The goal is to have the Steering Committee meet sometime this summer with the possibility of re-engaging some version of the Green Team this fall.

Green Building Task Force 2.0

One outgrowth of the Green Team Report (2005) was the formation of an internal Green Building Task force. The Task force consisted of City staffers and was headed by former OES Director Ann Beier. In 2007, the Task force issued a set of recommendations on how to promote green building practices in the City. DCD alerted current OES Director Matt Howard to the 2007 recommendations and report and as result Matt has instituted once quarterly meetings of a reformed Green Building Task force 2.0. After the initial meeting, the Taskforce agreed to focus in the next six months on developing outreach strategies on the benefits of green building practices to the public while looking internally to determine ways the City could incentivize green building practices. For more information on the Task force or to see the 2007 recommendations and report, please email sustainability@milwaukee.gov.

Electric Vehicles

OES is working to put Milwaukee on the map with new public electric vehicle charging stations. OES is working with the DCD and DPW to locate four to five charging stations in the City as part of a pilot program. OES is also working with Wisconsin Clean Cities and other partners to secure a competitive electric vehicle infrastructure planning grant through the U.S. Department of Energy. With this grant, the City and Southeastern Wisconsin would develop a strategic plan for implementing electric vehicle charging infrastructure throughout the region. Auto manufacturers of electric vehicles are expected to make them available to regional markets as public infrastructure is developed. If widely adopted, electric vehicles with no tailpipe emissions help reduce our dependence on foreign oil and can improve local air quality. Aldermen Murphy, Witkowski, Bauman, and Kovac are sponsoring a resolution to enact OES's pilot EV charging station program.

Solar Thermal Industry at the Forefront

Milwaukee Shines and the Milwaukee Metro Solar Hot Water Business Council will bring the solar thermal industry to the forefront with WI School of Business CleanTech Community Forums. Slated to run through July and August, the forums will highlight businesses currently involved with, and opportunities in the solar thermal industry. In addition, the Milwaukee Metro Solar Hot Water Business Council will co-host Midwest Renewable Energy Association's national SOLAR THERMAL '11 conference to be held in Milwaukee, December 1-2, 2011. Visit www.shwbc.org for details on all these programs.

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Visit our website at www.milwaukee.gov/sustainability