



The
MAREC
 Minute

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The Michigan Alternative & Renewable Energy Center (MAREC) is a program of Grand Valley State University. MAREC is part of the Muskegon Lakeshore SmartZone, a joint venture with the City of Muskegon, Grand Valley State University, and the Michigan Economic Development Corporation.

A Message From The Director

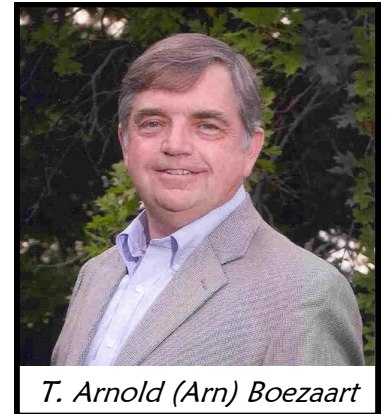
There's energy in the air at MAREC as new programs and new staff have arrived and are making their presence felt. Efforts are underway to both increase programming and strengthen the MAREC incubator program. The incubator program offers support for start-up companies that want to develop technology innovation and bring renewable energy advances to our local communities.

Collaboration is a principal value at MAREC. Program development efforts are presently underway in partnership with community colleges, Grand Valley State University's academic units and with many public and private entities both locally and throughout the region. For example; MAREC is participating in the development of a West Michigan Energy Consortium working to establish renewable energy standards and goals for Grand Rapids and the greater lakeshore region.

That same collaborative approach is being used in the development of the Off-shore Wind Assessment Project, a partnership with the University of Michigan, West Michigan Energy Consortium, state and federal agencies as well as private partners. It is a complex and challenging journey that will lead the way toward important new alternative energy business development opportunities for the region.

Watch for further activity this summer as MAREC offers renewable industry related seminars, stakeholder meetings and provides meeting opportunities that will help all of us learn more about important and emerging energy technologies. New opportunities, fresh energy, and new directions.. It's all happening on the lakeshore. Stop by for a visit and let us share the latest developments with you!

Arn Boezaart



T. Arnold (Arn) Boezaart

Recruitment Underway for Associate Director

A search is underway for an **Associate Director of Research and Technology** at MAREC. A principal focus of MAREC is technology development, technology transfer and applied research in the area of renewable and alternative energy. The associate director will focus on the development of applied research and renewable energy business opportunities designed to stimulate economic development in the Muskegon Smart Zone and across the lakeshore region.

A selection and recruitment committee has been established with senior staff participation from the GVSU Padnos College of Engineering and Computing, Chemistry Department and Annis Water Resources Institute. In addition, two members of the MAREC Advisory Board are also assisting with the selection process. Recruitment efforts will continue until the position is filled.

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New Staff at MAREC...

WELCOME to Russ Wright and Kim Walton.

Russ Wright, recently joined GVSU/MAREC as Interim Associate Director of Research and Technology. Recently retired from a 42-year career in high technology manufacturing, Russ was employed by Fuel Cell Energy, Inc. of Danbury, Connecticut and prior to that worked in the gas turbine industry with Howmet and Chromalloy. Russ brings many years of industry experience to his current position as well as formal training as a Chemical Engineer with an MBA. Russ states, "I look forward to offering technical support and input on the direction of MAREC's business and technology future during my interim stay". Russ can be contacted at: wrightru@gvsu.edu or call 616-331-6908.

Kim is the new Program Coordinator at MAREC and is a graduate of Appalachian State University in Boone NC, with a Bachelor's degree in Appropriate Technology and a Masters in Environmental Analysis from Western Michigan University. Kim lives on a 30-acre farm in Barry County (has more animals than any sane person should) and over the years has started several businesses including a pet boarding business, horse drawn carriage tours, the farm and a renewable energy installation company.

Kim will be expanding on the workshops, courses and other events now being held at MAREC and plans to add programming to increase the use of the facility. Kim says, "I am so pleased to be here, this is a dream job for me. It combines my love for environment, renewable energy and helping others".

In addition to more programming, MAREC will provide a network where students, faculty and others can learn about the field of renewable energy. There will be a student open house at MAREC in the fall so watch for details! If you would like to see any type of renewable energy or sustainable programming - a class, workshop, speaker or other event, please contact: Kim Walton at: waltonk@gvsu.edu or call 616-331-6907.

Heritage Wind Farm Tour...

On April 5, forty municipal, educational, business and economic development leaders from Muskegon and the greater lakeshore region toured the **Heritage Wind Farm** at McBain near Cadillac. For many, this was a first opportunity to observe commercial scale wind turbines in operation - "up close and personal" - as noted by MAREC Director, Arn Boezaart, who arranged and hosted the trip.



Rick Wilson, the Operations Manager for **Sustainable Energy LLC**, explained the construction process, energy power purchase agreements and other details involved in developing and deploying wind turbine technology. Rick noted that **Sustainable Energy LLC** is developing the technology, at considerable cost, with an eye toward the future when access to renewable energy will be critical from a utility business standpoint. The tour ended with a lunch period briefing by the logistics support team that keeps the nine wind turbines at McBain operational.

As onshore and offshore commercial wind energy development is becoming a reality for the region it is important for local leaders and decision makers to have a better understanding of these important technologies. With need for a diverse energy portfolio, it is of critical importance to educate the public about Renewable Portfolio Standards (RPS), and that a national discussion about the establishment of a national Renewable Energy Standard (RES) takes place.

The trip to the Heritage Wind Farm was made possible with transportation provided for the day by the **County of Muskegon, Muskegon Community College and Rockford Construction** — *Thank you!*

Energy Efficiency User Group Launched ...

Business managers and owners are becoming increasingly aware of the potential to reduce their organization's operating cost by indentifying energy waste and implementing energy savings. Organizations also realize the strategic impact of energy use and practices in the marketplace. However, most businesses and industries do not currently have the in-house expertise to lead an energy efficiency initiative.

In response, **MAREC**, in partnership with **The Right Place** (*Michigan Manufacturing Technology Center*) and the **Sustainable Research Group**, have brought an energy efficiency user group to the region. A generous sponsorship from **DTE Energy** lowered costs for participants and also allowed for scholarships to companies who otherwise would not have been able to participate - **a special Thanks to our sponsor!**

Seventeen businesses from throughout West Michigan including Ludington, Muskegon, Holland, Grand Haven and Grand Rapids, are participating in this effort to build energy management capacity in the business and manufacturing sectors. With these new skills participants will develop the in-house leadership and skills needed to become *Energy Champions* in their respective locations. It is anticipated that participants will develop a continuing user group to provide peer support and promote business-to-business communication on future energy efficiency opportunities.

Program emphasis includes teaching energy audit skills, operating system efficiency and other energy self-assessment techniques. During the final session, DTE Energy representatives will assist participants in completing a business specific energy audit. This will qualify participants to apply for a utility rebate for their company based on improved energy efficiency practices. The Energy Efficiency program will conclude on June 29, with more programming, similar to the Energy Efficiency User group, is to come...

Muskegon Community College Partnership...

Muskegon Community College course TEC 200, *Applied Alternative and Renewable Energy* is underway at MAREC. This course introduces the student to all forms of power-generating technology. It covers the operating principles, benefits and challenges of traditional as well as alternative and renewable energy fields. **Muskegon Community College** offers certifications in bio-fuels, wind and solar. To find out more about *Alternative & Renewable Energy* courses at **MCC** visit: www.muskegon.cc.mi.us

MCC's TEC 200 is just one of many educational opportunities developed by MAREC staff. Planning is underway for a Renewable Technology Fair (think science fair) for area schools. Students will be judged by grade categories and will compete for prizes. There will be categories for different technologies, as well as, some specialty categories. If you know of a school that would like to participate or if you would like to sponsor a class, please contact Kim Walton, at 616-331-6907 or waltonk@gvsu.edu.

Great Lakes Offshore Wind Council Meetings...

On May 4, MAREC hosted one of three state-wide coastal communities information meetings sponsored by the **Great Lakes Offshore Wind Council** (GLOW) chaired by Stanley (Skipp) Pruss, Director of the **Michigan Department of Energy, Labor and Economic Growth** (DELEG). Anticipating large attendance, the Muskegon Lakeshore region meeting was held at Muskegon Community College. Over 300 people came to learn about offshore wind development. Similar meetings were hosted by the GLOW Council earlier this year in Saginaw and Escanaba. The GLOW meetings provided participants with a greater understanding of this growing and important form of renewable energy technology.



Prior to the public meeting, MAREC hosted a meeting for key Lakeshore area leaders with state DELEG Director Pruss. Discussion covered emerging trends in the renewable energy sector, policy directions, and the status of pending Michigan wind energy legislation. Participants, including representatives from the Muskegon and North Ottawa region, shared their questions, concerns and ideas with the state director.

Across the Nation ...

The newly proposed American Power Act, sponsored by Senators John Kerry, D-Mass., and Joe Lieberman, I-Conn., represents an important step in the direction of a national energy policy. Reducing our reliance on fossil fuels and curbing greenhouse gas emissions will spur new investment and development of jobs in clean energy technology. Watch for further information and make your thoughts known as this and similar proposed legislation moves through congress.

In the Great Lakes Region ...

On June 8, Secretary of the Interior, Ken Salazar, and the governors of ten East Coast states signed a Memorandum of Understanding that formally establishes an Atlantic Offshore Wind Energy Consortium. This consortium will promote the efficient, orderly, and responsible development of wind resources on the outer continental shelf. Similar efforts are beginning in the Great Lakes region, with the states of New York, Ohio and Province of Ontario presently leading the way. Michigan must act quickly and decisively if it hopes to be a player in the emerging wind industry, which represents major economic development and employment opportunities for the state and West Michigan region. We will need to act boldly, cooperatively and with broad based support to make it happen – it can be done if we act together.

(Following excerpt taken from) **MSNBC By Sharon Cohen** Sun., May 23, 2010

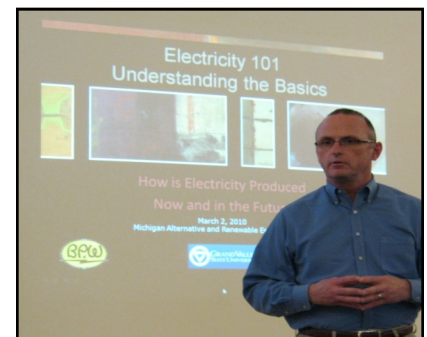
The Chevy Volt, General Motors' new electric car could help usher in a new generation of electric cars. Initially, the Volt will be available only in Michigan, California and Washington, D.C.

The Volt will largely be a Michigan production. GM is pouring \$700 million into eight operations that will create the car. The dollars and work — battery packs in one place, engine generators in another — will be spread out: Warren, Hamtramck, Bay City, Grand Blanc, Brownstown Township, along with Detroit and Flint.

Things you might have missed...

March 2, 2010—A lecture titled “Electricity 101”, was held at MAREC. It was presented by Bruce Goodman from **Varnum, LLP** and Dan Nally from the **Holland Board of Light and Power**.

May 14, 2010 - The **Great Lakes Renewable Energy Association** held a Networking event and panel presentation on Energy Efficiency.



Up Coming Events... See websites for updates and more information

Muskegon Inventors Network - Meets monthly at MAREC and welcomes new members.

Michigan Small Business & Technology Development Center (MI-SBTDC) housed at MAREC. A ten-week program called FASTTRAC® New Venture Entrepreneurial Training, and other seminars, will be offered this summer. For additional information go online to: www.misbtcd.org/training/ or call 616-331-7370.

MI-SBTDC Upcoming Events -

July 14

Fundamentals of Starting a Business

July 28

Fundamentals of Starting a Business &
FastTrac Orientation

August 4 - October 13

FastTrac Programming

Muskegon Inventors Network Next meeting

July 20 (See www.muskegoninventorsnetwork.org).

Wind Industry Stakeholders Meeting

July 22

Student Open House at MAREC

Fall Watch for details!