

The MAREC Minute

Summer 2011: Volume 3, Number 2



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.



From The Director

It's a "hot" summer at MAREC. The temperature outside is near record levels, and the activity inside reflects a pace that matches the season. The July 25 meeting of the MAREC Advisory Board included a briefing on all those activities by MAREC staff working in collaboration and partnership with a host of local and regional resources and many talented people.

One of our summer highlights is the arrival of Dr. Suresh Mani, our new Associate Director of Research and Technology (see adjacent story). Suresh brings a refreshing new perspective, much talent and a great sense of humor. Within days of his arrival we joined a Lakeshore Advantage exploratory day trip to Argonne National Laboratories, met with representatives of West Michigan battery companies, and began a number of conversations with others on how to best advance renewable energy interests and technology in the region.

The range of activities worked on over the past few months is striking. We have sold roof top solar energy credits (S-REC's) to the State of Ohio, hosted a student Renewable Energy Fair in May, hired a part-time MAREC Incubator Manager, completed a new incubator tenant handbook and marketing literature to support new incubator recruitment, collaborated on the development of two major grant opportunities and helped launch the SERC renewable energy project in partnership with MOCAP (see page 2).

Hold on, there's more...

(Continued on page 2)

New Associate Director Brings Energy Storage Expertise

Dr. Suresh Mani, a chemical engineer with extensive experience in the battery industry, has been appointed as the associate director of research and technology for MAREC. Dr. Mani joined MAREC on July 15.

Mani most recently was employed by A123 Systems in Ann Arbor, where he served as technical director and conducted research and development work in battery technology. While there he served as principal investigator on a NASA project to develop advanced batteries for space.

Mani has also served as a research specialist at Michigan State University and as technical director of Flint Ink Corporation where he developed fluid ink products.

At MAREC, Mani will lead projects in advanced energy storage, smart grid development and other renewable energy technologies. He will serve as a technical liaison with regional manufacturers including the emerging battery industry in West Michigan.

"Dr. Mani joins us as the advanced energy storage (AES) industry is rapidly developing in West Michigan,"

notes Arn Boezaart, director of MAREC. "His technical skills and industry experience with innovative companies will allow MAREC and GVSU to assist with the acceleration of the AES industry throughout the region."



Dr. Suresh Mani

Mani will also have a formal working relationship with the GVSU Padnos College of Engineering and Computing.

Born in India, Mani received his bachelor's degree in chemical engineering from the Indian Institute of Technology. He earned master's and doctoral degrees at the University of Massachusetts, Amherst, in chemical engineering.

"I'm pleased to take on this role in a region with momentum in battery technology, commercial scale wind development, and other renewable energy innovation," said Mani. "Advanced energy storage systems will be a critical component as other renewable energy systems such as wind and solar are further developed."



Lake Michigan Wind Project Moving Toward Launch Date

The AXYS WindSentinel research buoy shown under construction is scheduled to arrive in Muskegon late September.

For more about the Lake Michigan Offshore Wind Assessment Project, visit www.gvsu.edu/marec.

Continued from page 1

- The Lake Michigan Offshore Wind Assessment Project continues to move toward a fall launch date.
- A 50 meter wind measurement tower to support a 30-month lakeshore wind assessment project was recently installed on nearby Verplank Dock Co.

property. Thank you, Joe Burns and staff!

- MAREC staff supported the Teen Entrepreneurship Summer Academy in Grand Rapids and Holland earlier this summer.

We're having fun, making a difference and advancing renewable energy opportunities for all.

Please join us for the September 26 MAREC Annual Meeting at 3:30 p.m. (public invited) with an open house following the meeting from 4:30 to 6:00 p.m.

We look forward to seeing you there!

Arn Boezaart, Director

MAREC Assists Community Action Agencies with Sustainable Energy Implementation

Two Michigan community action agencies have been selected by the U.S. Department of Energy to receive nearly \$7 million in Sustainable Energy Resources for Consumers (SERC) Grants. The SERC grant recipients are Muskegon-Oceana Community Action Partnership, Inc. (MOCAP), headquartered in Muskegon, and Oakland-Livingston Human Services Agency, located in Pontiac.

MAREC will assist the agencies with the development of programs for the installation of renewable energy technologies for income-eligible households and residential care



shelters. The SERC program will bring the benefit of renewable energy to groups who historically have not benefitted from green technology.

MOCAP will install a variety of renewable energy technologies on 200-plus income-eligible residential units throughout Muskegon and Oceana Counties. Included will be the

installation of renewable energy technology at residential care facilities including the Muskegon Rescue Mission and Every Woman's Place. MAREC is providing staff and training facilities to assist the two Michigan agencies with project implementation. Kim Walton, MAREC Program Coordinator, is contracted by MOCAP to provide staff training, site assessments, equipment recommendations, development of program specifications, and reviewing vendor proposals.

The program began in January and continues through March 31, 2012.

Wind Education Outreach Project — Making the Case

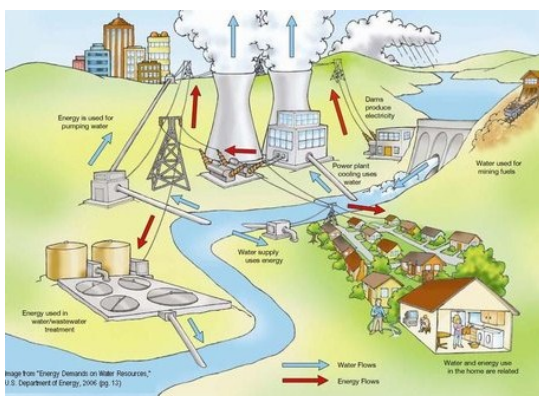
Wind can contribute to Michigan's renewable energy goals, reduce pollution, and enhance economic development. The Great Lakes surrounding Michigan have outstanding offshore wind resources, yet technical and social barriers must be addressed if this energy resource is to be tapped to power Michigan communities and industries. Through a grant provided by the Michigan Department of Licensing and Regulatory Affairs (LARA, formerly DELEG), a program is underway to support outreach and

education activities designed to help the public examine how offshore wind energy generation could enhance the Great Lakes region and the quality of life in our coastal communities.

The GVSU project partners include Erik Nordman, Ph.D. (Biology Department), Kim Walton (MAREC) and Jon VanderMolen (Annis Water Resources Institute). They along with John Hummer and Victoria Pebbles from the Great Lakes Commission make up the project Outreach Education Team.

By offering displays and presentations at statewide summer festivals and public events, these wind education partners are highlighting the connections between offshore wind energy generation, water quality, and overall quality of life for Michigan residents. The team is using visualization tools, fact sheets and informal, small group interactions at public events.

The project's goal is to expand the public perspective of Great Lakes preservation to include recognition of the benefits of renewable energy generation from sources such as wind.



Connect with MAREC!

- Sign up for our **email newsletter**.
- Check out our **website** at www.gvsu.edu/marec
- And check us out on **Facebook!**

Contact Us

MAREC

200 Viridian Drive
Muskegon, Michigan 49440

Phone: 616-331-6900
Local Phone: 231-722-4371
E-mail : marecinfo@gvsu.edu

Business Incubation Program Available to Assist Entrepreneurs

Developing forward-looking business or technology opportunities can be challenging, whether for established companies or for entrepreneurs with a dream, a garage, and a small savings account. Thanks to some new funding resources, MAREC has increased its incubator activities and stepped up its Business and Technology Incubator Program (B-TIP) efforts.

With new staff and technology resources, MAREC is able to assist aspiring alternative and renewable energy entrepreneurs and business startups throughout the business development cycle. To help entrepreneurs gain the knowledge, expertise and strategies needed for the marketplace, MAREC offers:

Consulting

A range of business and consulting services are available to both incubator clients and those seeking only consultation or referrals. Contact MAREC's incubator manager to learn more.

Business & Technology Incubator Program (B-TIP)

MAREC's customized incubator program includes training, consultation and limited financial assistance. The program draws on technology and business specialists through the Michigan Small Business and Technology Development Center (MI-SBTDC™).

The space to turn vision into reality

Clients can pursue their dreams and create their business by leasing space in MAREC's 6,000-square-foot of lab and office area. A range of low-cost space options are available, from single modular work stations to multi-employee work station clusters, enclosed offices, dry lab "R & D" space, and light manufacturing possibilities.

Business development education and training

Through an active partnership with MI-SBTDC, MAREC provides regular



onsite conferences, workshops, and training, along with a Business Resource Center offering resource texts and online resources.

Access to university resources

The knowledge assets of a major public university are available through MAREC's parent organization and SmartZone partner, Grand Valley State University. Incubator tenants have access to resources including:

- Padnos College of Engineering and Computing
- Center for Entrepreneurship and Innovation

- Van Andel Global Trade Center
- Seidman College of Business
- Sustainable Community Development Initiative
- Other educational linkages.

Networking and peer support

Entrepreneurs benefit from both informal and organized onsite networking and collaborative opportunities with other incubator tenants as well as local and regional resources.

Local to Global Business Development Assistance

MAREC facilitates connections with business and community leaders as well as economic development groups, ranging from the local Chamber of Commerce to international business connections.

For more info, contact Doug Huesdash, MAREC incubator manager at 616-331-6914 or marecincubator@gvsu.edu.

INCUBATOR PROFILE: Michigan PACE Energy Program, L3C

Michigan PACE Energy Program, L3C, a business start-up founded by Gregory Truex, CPA, is ready to serve Michigan municipalities and businesses interested in using a new state regulation available to communities to help advance the use of renewable energy technology — the Property Assessed Clean Energy (PACE) law.

Michigan PACE (MPEP), a MAREC incubator client, provides technical, educational and financial training services that will benefit users of the new statute including municipalities, local developers, and financial institutions with emphasis on renewable energy finance.

"The PACE law has lowered some cost and risk barriers that have discouraged municipalities and developers from including and financing renewable technology in their projects. However, the law is little known and our goal is to change that. We will promote awareness, educate, and train municipalities in preparing for PACE, and we'll provide expert analysis, accounting and monitoring to comply with the law," said Greg Truex, president of MPEP. Truex has 26 years of experience as a technology entrepreneur and financial institution executive.



Among its early activities, MPEP will be offering free online introductions to PACE. It is also approaching private foundations to obtain grants that may enable municipalities to receive MPEP services at no charge. Another of MPEP's immediate goals is to provide a publicly available centralized registry of developers and installers who are ready to use Michigan's PACE law. For more, visit: www.michpace.org.



CALENDAR AT A GLANCE



MAREC and MI-SBTDC: Business Services for Muskegon and the Lakeshore

MAREC is pleased to collaborate with the Michigan Small Business & Technology Development Center™ (MI-SBTDC™). This agency provides counseling, training, research and advocacy for new ventures, existing small businesses, and innovative tech firms. MI-SBTDC™ offers:

- Individual business counseling
- Small business education workshops
- Market research
- Biz Resource Center
- Link to small business resources

For more information call: 231-722-4371
email: marecincubator@gvsu.edu

Fundamentals of Starting a Business (GV Holland Campus)
September 1: Business Start-up
October 6: Business Start-up

Other courses at Newaygo, Big Rapids, Greenville, Grand Rapids.
Register online at misbtcd.org/training or call 616-331-7370.

Closing the Loop and Creating New Opportunity



Dean H. James Williams of GVSU's Seidman College of Business (third from right) visited MAREC on July 5 to meet with Advisory Board members and MI-SBTDC consultants. The group discussed ways in which Seidman and MAREC can collaborate on joint opportunities and shared interests.

Questions? Visit www.gvsu.edu/marec/

Upcoming Events

August 25 & 26, 2011

NABCEP® Photovoltaic (PV) Installer Certification Exam Preparatory Class. Training provided by ONTILITY. Cost \$595. Reservation required by August 22, 2011. Please see www.gvsu.edu/marec for registration information

September 8, 2011

Michigan Citizen Planner:
Small Scale Renewable Energy and Zoning

September 27, 2011

SBIR/STTR R&D Grant Funding:
A workshop for Commercially Viable
Renewable Energy Innovations
Presenter: **Mark H. Clevey**, Michigan Energy Office

September 30, 2011

Muskegon Area Solar Tour
Come and see all the exciting new solar installations in the area!

Please visit www.gvsu.edu/marec for cost, reservations and other information. Details to follow soon.

Students Showcase Alternative Energy at RE-Fair

On May 23, MAREC held its first Renewable Energy Science Fair (RE-Fair) for junior and senior high school students. Two dozen students showed a total of 14 projects, shared their ideas with community members and judges, and had the chance to win cash prizes.

Students presented projects that demonstrated an innovation in RE technology or in a sustainability application, such as an energy efficiency concept. In addition, each project included a business component to show how the technology could be applied. The judges included entrepreneurs as well as energy and business professionals.

"The projects were incredible," said Shannon Morrow from the Michigan Bureau of Energy Systems. "I was so impressed with the caliber of the project, and these students did a great job!"

The students also heard Kirk Wyers, the director of Career and Technical Education in Newaygo County, explain a program developed by Newaygo students that tells about the world of recycling. Both students and instructors enjoyed gift bags with items donated by local businesses.

"Taking part in RE-Fair offers many benefits", said Kim Walton, MAREC program coordinator. "Students learn so much through the challenge of integrating science and business, and making a case for their project."



Questions? Visit www.gvsu.edu/marec/