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*Federal/State Memorandum of Understanding  
(MOU) on offshore wind in the Great Lakes*

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**Mark H. Clevey, Manager**  
**Michigan Economic Development Corporation,**  
*Michigan Energy Office*

**Co-Chair, Great Lakes Wind Collaborative**

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*“Energy concerns are at the center of our economic future, whether we are talking about its cost and availability or job creation and new business potential in green energy manufacturing.”*

**Michael Finney**  
**President and CEO, MEDC**  
**August 19 2011**

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Offshore wind can contribute to meeting Michigan's renewable energy goals.

Each gigawatt of offshore wind installed could produce enough electricity to power 300,000 homes, eliminating 2.7 million metric tons of carbon emissions.

The development of even a small portion of the Great Lakes' offshore wind potential could create tens of thousands of clean energy jobs and generate revenue for local businesses.

**U.S. Department of Energy**

**For Information Please See:**

**A National Offshore Wind Strategy: Creating  
an Offshore Wind Energy Industry in the  
United States.**

**U.S. Department of Energy  
February 2011**

## Great Lakes Commission

The *Great Lakes Commission* is a public agency established by the Great Lakes Basin Compact in 1955 to help its eight Member states...

... speak with a unified voice to promote the orderly, integrated and comprehensive development, use and conservation of the water and related natural resources and...

... collectively fulfill their vision for a healthy, vibrant Great Lakes - St. Lawrence River region.

## Great Lakes Wind Collaborative (GLWC)

Housed and administered by the Great Lakes Commission, the *Great Lakes Wind Collaborative*, is a multi-sector coalition of wind energy stakeholders working to *facilitate the sustainable development of wind power in the bi-national Great Lakes region.*

- Mark H. Clevey, Manager, Consumer Education and Renewable Energy Programs, Michigan Energy Office, serves as the *Co-Chair of the GLWC Steering Committee.*

*March 30 2012, Washington, D.C.*

A **Memorandum of Understanding (MOU)** on offshore wind in the Great Lakes was signed by the heads of 10 federal agencies and the governors of Illinois, *Michigan*, Minnesota, New York and Pennsylvania and the Canadian provinces of Ontario and Québec.

The purpose of the MOU is to promote the **efficient, orderly and responsible evaluation of offshore wind proposals** for the Great Lakes.

The MOU identifies **Patty Birkholz, Director, Office of the Great Lakes, Michigan Department of Natural Resources** as the Michigan Point of Contact for purposes of MOU implementation.

The MOU establishes a *Great Lakes Offshore Wind Energy Consortium* that will make the regulatory and permit review processes transparent and provide insight into potential improvements to ensure that proposal reviews are clear and expeditious.

- With so many agencies involved, there is high potential for duplication and protracted review times that can be unnecessarily costly to both prospective developers and relevant state and federal government agencies.

The MOU **does NOT create any new laws, call for new regulations or change existing authorities...**

... Rather, it *empowers* the state and federal agency signatories to *coordinate and share information* concerning how offshore wind proposals are reviewed and evaluated with the goal of *improving coordination* among all of the relevant agencies and ultimately the efficiency of such reviews.

The cooperation produced by the MOU is aimed at improving *efficiencies in the review* of proposed offshore wind projects by enabling simultaneous and complementary reviews, and avoiding duplicative reviews.

It is expected that the MOU will...

... Send a *positive market signal* to prospective developers and investors...

... Shore up existing investments in offshore wind technologies by ensuring a regulatory environment that inspires *innovation* and helps to bring *clean energy solutions* to market.

Victoria Pebbles, *Great Lakes Commission* program director and staff liaison for the *Great Lakes Wind Collaborative*, noted the importance of the federal-state collaboration.

**“It’s gratifying to see cooperation among our state and federal partners that will hopefully improve the regulatory process and benefit all involved.”**

## What the Memorandum of Understanding (MOU) on offshore wind in the Great Lakes means for Michigan...

- An *opportunity* to leverage our collective investments in Renewable Energy in the state...
- An *opportunity* to capitalize on our Natural Gas Advantage...
- An *opportunity* to innovate (research, develop and commercialize breakthrough wind-related technology innovations)...

## ***An opportunity to leverage our collective investments in Renewable Energy...***

- ... Michigan has made *outstanding progress* in implementing its Renewable Energy Portfolio Standard.
- ... Michigan businesses have become “players” in the global wind industry.
- ... Michigan communities have embraced Renewable Energy as an element of Sense of Place (See MML Green Communities Program).

## ***An opportunity to capitalize on our Natural Gas Advantage...***

... Michigan has a significant *competitive advantage* in Natural Gas.

... Lower/stable priced and abundant Natural Gas means *lower energy costs* for Wind-related manufacturers in Michigan...

See: Jim Motavalli, *Natural Gas Signals a “Manufacturing Renaissance”*, in the New York Times, April 11 2012, pp F6

## ***An opportunity to innovate...***

“Sustained economic growth requires innovation. Innovation cannot be decoupled from creative destruction, which replaces old with new in the economic realm.”

**Daron Acemoglu (M.I.T. Economist) and James A. Robinson  
(Harvard Political Scientist), *Why Nations Fail*, 2012**

Michigan Governor Rick Snyder said the key effort in the state now is *development of new technology* to bring down the cost of placing turbines in the lakes.

**"The technical and cost barriers to offshore wind are still very significant. We need the *research efforts to bear more fruit...*"**

## *Example of Research Efforts:*

In February, 2011, Philip Totaro ([Totaro & Associates](#)) published a new study which found that new wind-related research will likely be directed towards *five core areas*:

1. Reducing Component Weight and Manufacturing Costs
2. Facilitating Component Transport and Assembly
3. Monitoring and Controlling Wind Turbines
4. Integrating Into the Utility Grid
5. Optimizing Performance

***Example of Research Funding Opportunities...***

**... for Michigan Businesses...**

**.... to fund the development of New Offshore-related Technology...**

**... that will bring down the cost of placing turbines in the lakes ...**

## Development of New Technology

**The U.S. Department of Energy has called for a...**

**... “world class research and development effort” to...**

**... “propel the United States to the leading edge of offshore wind technology”...**

**... in three broad categories:**

- **Computational Tools and Test Data**
- **Innovative Technology**
- **Marine Systems Engineering**

## **EXAMPLE: SBIR/STTR R&D Grant Program**

The **Small Business Innovation Research Program (SBIR)** & **Small Business Technology Transfer Program (STTR)** are federal government-sponsored R&D grant funding programs for companies under 500 employees.

- Grants range from **\$100,000 (Phase I)** to **\$1,000,000 (Phase II)**.

The 12 Federal Departments/Agencies with R&D budgets all have SBIR/STTR programs.

- **SOME – *but not all* - of the Departments/Agencies provide Supplemental Funding for Commercially Viable SBIR/STTR projects.**

**The National Science Foundation (NSF) SBIR/STTR program is the leading SBIR/STTR program in the nation for funding COMMERCIALY-VIABLE (Phase IB & IIB) SBIR/STTR projects.**

**The following are and example of Wind-related NSF SBIR/STTR Funding Opportunities for Michigan small businesses:**

**AM5 – Structural Materials** - Material innovations to improve the performance of materials in structural applications and related new processing techniques

**AM6 – Coatings and Surface Modification**: Material and process innovations in surface modifications and coatings. etc.

**AM8 – Materials for Sustainability** - Material innovations designed for improved sustainability

**Manufacturing Processes** - Innovative processes for molding, forging, casting, joining of dissimilar materials, with an emphasis on environmentally benign manufacturing techniques.

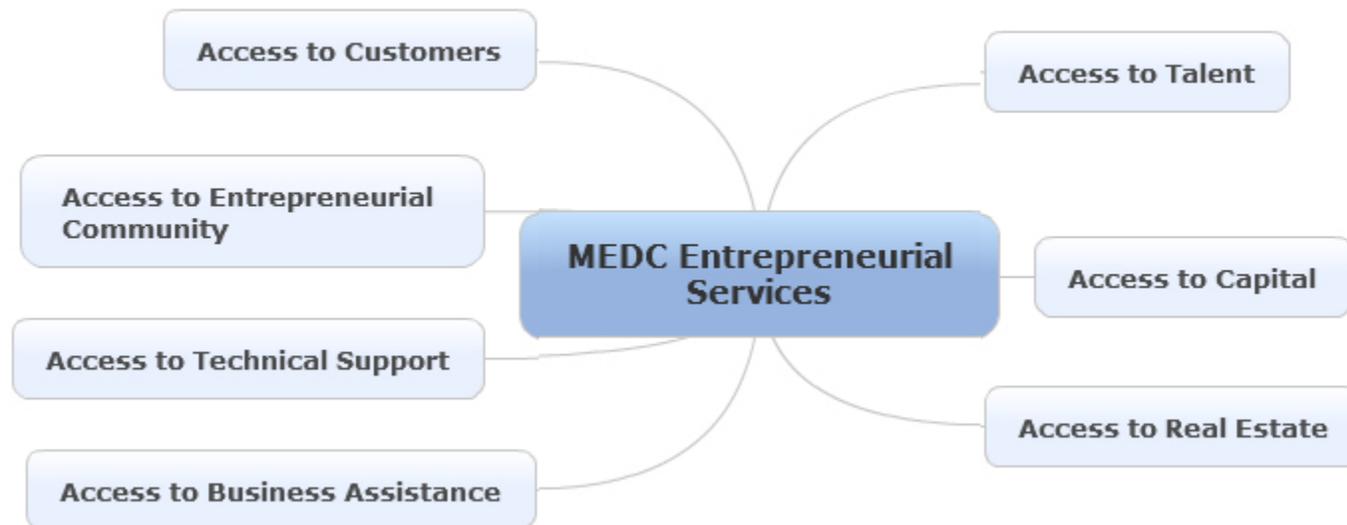
**Machines and Equipment** - Innovations in machine and control system design that will produce improved efficiency and/or reduced cost.

**Modeling and Simulation** - Innovations in modeling and simulation of enterprise operations, manufacturing processes, machines and equipment.

The Michigan Economic Development Corporation (MEDC) provides an eco-system for *technology led companies*, including access to training, funding, and technical support, through a coordinated group of programs, service providers, universities, funders, and more.

<http://www.michiganadvantage.org/Entrepreneurs-and-Innovators>

## Entrepreneurs and Innovators



## In Summary...

A **Memorandum of Understanding (MOU)** on offshore wind in the Great Lakes was signed in March 2012 by the heads of 10 federal agencies, the Great Lakes Governors and two Canadian Provinces.

The MOU establishes a *Great Lakes Offshore Wind Energy Consortium* that will make the regulatory and permit review processes transparent and provide insight into potential improvements to ensure that proposal reviews are clear and expeditious.

It is expected that the MOU will establish a framework to spur the research, development and commercialization of new technology that will bring down the cost of placing turbines in the lakes.

- Michigan businesses and universities are well positioned to procure federal R&D grants to fund such research.

The Great Lakes Commission – *Great Lakes Wind Collaborative*, is expected to play a key role in the implementation of the MOU.



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**In Closing,**

**"The technical and cost barriers to offshore wind are still very significant. We need the research efforts to bear more fruit."**

**Michigan Governor Rick Snyder**

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**THANK YOU**

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