

# Michigan Great Lakes Wind Council

## Meeting 2 Summary

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9:30 A.M. April 23, 2009  
Kellogg Center  
East Lansing, Michigan

### NEW COUNCIL MEMBERS

The following four new members were appointed by the governor on April 21, 2009, to represent Michigan residents: Mr. T. Arnold (Arn) Boezaart, Mr. Leonard Bohmann, Mr. Wil Cwikel, and Ms. Margaret (Peg) Gale.

### ATTENDEES

All members of the council were present, except T. Arnold (Arn) Boezaart and Margaret (Peg) Gale. Leonard Bohmann and Margaret (Peg) Gale participated remotely by Web conference.

### WELCOME AND REVIEW OF AGENDA

At 9:35 A.M., Skip Pruss, director of the Department of Energy, Labor & Economic Growth, welcomed the council. He gave a brief presentation that outlined the council's current work within the context of an ongoing process to re-engineer Michigan's economy. His presentation is available online at [http://www.michianglowcouncil.org/meeting\\_materials/042309/presentations/council%20mtg%20two%20opening.pdf](http://www.michianglowcouncil.org/meeting_materials/042309/presentations/council%20mtg%20two%20opening.pdf).

Pruss spoke to the council about several recent developments that relate to the council's efforts. They were:

- On April 22, 2009, the final federal rule was released by the Minerals Management Service on offshore wind development in federal waters. He stressed the need for the council to understand the rule.
- On April 22, 2009, the State of New York released a request for statements of interest from wind developers.
- On April 22, 2009, Jon Wellinghoff, chairman of the Federal Energy Regulatory Commission, emphasized the increasingly significant role of renewable energy in the country's energy future.<sup>1</sup>
- Recently, the Michigan Economic Development Corporation announced plans for investment in Michigan by four advanced-battery manufacturing companies.<sup>2</sup>

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<sup>1</sup> Noelle Straub and Peter Behr, *Energy Regulatory Chief Says New Coal, Nuclear Plants May Be Unnecessary*, New York Times, April 22, 2009. Available online at <http://www.nytimes.com/gwire/2009/04/22/22greenwire-no-need-to-build-new-us-coal-or-nuclear-plants-10630.html> [Accessed May 1, 2009.]

<sup>2</sup> See April 14, 2009 press release available online at <http://www.themedc.org/News-Media/Press-Releases/Detail.aspx?ContentId=335cdabf-dd8c-44da-9cc6-c361347b65d3> [Accessed May 1, 2009.]

- Announcement of the promise inherent in producing wind turbine parts, including blades, in Michigan.

At 9:47 Bill Rustem of Public Sector Consultants framed the purpose of the day's meeting. He referenced the draft report outline and informed the council that portions of this meeting would be dedicated to discussion of issues related to three of the sections in the report.

Rustem informed the council and the audience that the meeting was being broadcast on the Internet through a Web conference. He asked participants on the Web conference to mute their speakers. Rustem gave instructions for members of the public to make comments at the end of the meeting.

## **ELECTRIC INTERCONNECTION AND TRANSMISSION**

At 9:50 John Rector of Black & Veatch gave a presentation on electric interconnection and transmission issues. His presentation is available online at [http://www.michiganglowcouncil.org/meeting\\_materials/042309/presentations/JSR-8-%20Connecting%20Off-Shore%20Winds%20Farms%20to%20the%20Grid.pdf](http://www.michiganglowcouncil.org/meeting_materials/042309/presentations/JSR-8-%20Connecting%20Off-Shore%20Winds%20Farms%20to%20the%20Grid.pdf).

Rector circulated samples of submarine electric cable to the council members for their examination. He answered the following questions from the council:

- How are interconnection systems designed?
  - Response: Cable temperature is the most important design component, as it relates to the lake bottom temperature and the presence and amount of organic material which has an insulating effect on the cables.
- How are cables brought up on land?
  - Response: The cables can be brought up individually from each wind turbine, or they can be combined at an offshore substation and then brought onshore. Often the cables are pulled from the lakebed through a directionally drilled shaft that places them deep under the beach.
- How far can a cable be run?
  - Response: That depends on the voltage of the cable, but the maximum is about 26 miles.
- What is the lead time required to manufacture submarine cable for an offshore wind development?
  - Response: 34,500 kV cable can be manufactured in Canada and the United States and requires less lead time than high-voltage cable, which is manufactured overseas in Europe and Asia.
- In an offshore wind development, does a cable come from each turbine?
  - Response: Yes, although they may be combined at an offshore substation before being brought to shore.
- Can the barges used to install the wind turbines move through the St. Lawrence Seaway?
  - Response: Yes.

## **ENVIRONMENTAL ISSUES, MONITORING AND ASSESSMENT: EUROPEAN APPROACHES**

Jonny Lewis of RPS Group Plc gave a presentation to the group on work his firm has conducted siting wind turbines in the offshore area around the United Kingdom. His presentation is available online at [http://www.michiganglowcouncil.org/meeting\\_materials/042309/presentations/RPS%20GLOW%20Presentation%2023.04.pdf](http://www.michiganglowcouncil.org/meeting_materials/042309/presentations/RPS%20GLOW%20Presentation%2023.04.pdf).

Lewis stressed the importance of continued monitoring and adaptive management as a means of ensuring that the developments are managed in the public's best interest for the long term.

## **LAKEBED ALTERATION DECISION SUPPORT TOOL**

Christine Geddes of the Institute for Fisheries Research presented the Geographic Information Systems (GIS)-based decision support tool and explained the data that have already been included. Her presentation is available online at [http://www.michiganglowcouncil.org/meeting\\_materials/042309/presentations/Geddes\\_lakebed\\_alteration\\_DST\\_042409.pdf](http://www.michiganglowcouncil.org/meeting_materials/042309/presentations/Geddes_lakebed_alteration_DST_042409.pdf). Geddes addressed the following questions and comments from the council:

- One of the limitations of the tool appears to be the data for ice cover, ice migration, and ice scour.
- Has the Institute for Fisheries Research been coordinating with the Great Lakes Commission (GLC) on the development of the Great Lakes Wind Atlas?
  - Response: Yes. Though the GLC effort is regional there is some overlap of data. Geddes has been in contact with GLC staff working on the Great Lakes Wind Atlas.
- Should the Institute for Fisheries Research consider adding data layers related to integrated resource planning and the Midwest Independent Transmission Systems Operator (MISO) interconnection?
  - Response: Working with the GLC, the data have been collected for the Great Lakes Wind Atlas. The land-based and offshore GIS tools would need to be integrated to make those linkages.
- Can the tool be converted from metric measures to English measures?
  - Response: The outputs can be converted.
- Can a GIS representation of power flow or a real-time demand model be included in the tool?
  - Response: That is unclear based on the availability of data and the reliability of adding model outputs as data layers.

Rustem recapped the mission for the day's discussion. He asked the council for suggestions on additional data that may be included in the tool and/or considered for mapping criteria. Suggestions included:

- Tribal fishing areas
- Cultural/heritage sites including sacred sites
- Endangered species

- Interconnection and cabling costs
- Economic impacts
- Prehistoric archaeology

The group discussed the challenges inherent to integrating multiple sources of data when some data are private or proprietary. The group agreed that there should be a process to address this issue and maintain the security of sensitive data. It was concluded that the publicly available tool will likely have different data layers than the one used by state decision makers.

The group also discussed the potential impacts of offshore wind development on shipwrecks. Shipwrecks are considered to have inherent historic value, but some are considered potential environmental dangers due to oil and gas fuels that are still held in aging and increasingly unstable tanks. There are at least 1,500 wrecks in Michigan waters, but less than half of those have been located. Site surveys should be able to prevent this potential danger from becoming reality.

## **COUNCIL DISCUSSION: GENERAL SITE SUITABILITY CRITERIA**

At 1:15, DELEG Deputy Director Liesl Clark, on behalf of Skip Pruss, welcomed the council back from lunch and continued the discussion.

Rustem asked the council to review Issue Paper One (available online at [http://www.michiganlowcouncil.org/meeting\\_materials/042309/issue\\_papers/IssuePaper1\\_CriteriaDevelopment.pdf](http://www.michiganlowcouncil.org/meeting_materials/042309/issue_papers/IssuePaper1_CriteriaDevelopment.pdf)) and asked for comments and suggestions on the criteria outlined on page five of the document. The following comments and suggestions were provided:

- Ms. Douglas stressed the need to improve the economy through the development of wind energy. She urged the council to consider the current window of opportunity and take best advantage of it.
- Mr. VanderVeen commented on the state's budget problems, job losses, and auto industry instability. He asked that the discussion include the need to develop and protect Michigan's energy security. He advocated for leases that provide income to the state. He urged participation in aggressive renewable energy plans and looking ahead to advanced technologies to lower energy costs.
- Mr. Russell suggested identifying the best sites based on potential to produce that make the most economic sense for development right now.
- Mr. Clift suggested that priority zones should be identified for Michigan similar to the strategy used in the United Kingdom.
- Mr. Knapp advocated for a system of weighting mechanisms, similar to that used in the Ohio model, to compare criteria in order to identify the best locations for development
- Mr. Adelaja commented that the economy and environment are not always in conflict, and that there may be sites in the Great Lakes that may accommodate wind energy development without environmental harm. He urged the development of decision factors that will help Michigan achieve its goals to develop wind energy. He

suggested there was no point in developing criteria for locations where industry will not invest, and he advocated clustering developments for efficiency.

- Tom Hickner suggested the criteria identified in the issue paper are fine and that a work group should be formed to finalize the list.

### **Discussion**

The council agreed not to limit mapping criteria based on technical or economic arguments; it agreed to let industry decide these issues. The council decided to focus on the criteria that will allow offshore wind development to advance in the near term while leaving opportunity for technological advancements and development of additional data sources. The council agreed that a work group of the council should determine recommendations for the mapping criteria and a relative weighting process for the criteria. Volunteers for that work group<sup>3</sup> were:

- Joe Welch
- Denny Grinold
- Dennis Knapp
- Soji Adelaja
- Leonard Bohmann

### **PUBLIC ACCEPTANCE**

At 1:55 Jeremy Firestone of the University of Delaware gave a presentation to the council on the public acceptance of offshore wind developments in Cape Cod and Delaware. His presentation is available online at [http://www.michiganglowcouncil.org/meeting\\_materials/042309/presentations/Great%20Lakes%20Wind%20Council%2023%20April%202009%20final.pdf](http://www.michiganglowcouncil.org/meeting_materials/042309/presentations/Great%20Lakes%20Wind%20Council%2023%20April%202009%20final.pdf).

He addressed comments and questions from the council, including the following:

- How was trust with the residents of Delaware established?
  - Response: It was a multifaceted approach spearheaded by Blue Water (the developer). Blue Water reached out to environmental organizations early in the process, and it held community information meetings frequently with a broad range of interest groups. The developer suggested three potential sites and took one out of consideration after concerns were expressed by the Audubon Society. Blue Water also committed to union labor. The efforts were successful as a result of the investment in public outreach and the inclusive company culture.
- Was there an opportunity for community investment in the Delaware project?
  - Response: No. This project was sited in federal waters. There was a purchase power agreement in place to provide stability in power prices to the rate payers and establish long-term security for the developers.
- Has a similar survey of public opinion about offshore wind development been done in Michigan?

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<sup>3</sup> Mr. Marty Lagina initially volunteered for this work group but will be serving on the permit criteria work group.

- Response: No, but this could be included in the council’s discussion and recommendations.

## **COUNCIL DISCUSSION: PUBLIC ENGAGEMENT**

Rustem reviewed the council’s charge with respect to developing recommendations for a public engagement process and then asked for comments and questions. He asked the council to review Issue Paper 2, available online at [http://www.michiganlowcouncil.org/meeting\\_materials/042309/issue\\_papers/IssuePaper2\\_PublicEngagement.pdf](http://www.michiganlowcouncil.org/meeting_materials/042309/issue_papers/IssuePaper2_PublicEngagement.pdf).

Council members agreed that the public is currently demanding information about potential offshore wind development; some areas, including the Saginaw Bay, have populations that are very positive about the economic impacts that could result from offshore wind development. It was discussed that the 2010 election cycle has already started and the legislature needs to be informed by public opinion on this topic; there is a need for a process to collect data on public attitudes and then conduct open meetings to exchange information and take questions from the public. The importance of conducting informational workshops early and often in order to engage the public and define the message was agreed upon by the council members. One suggested it may be time for the Legislative Services Bureau to draft proposed legislation in order to begin the education of the public as soon as possible, and identify and approach key legislative leaders on the issue.

Other discussion centered around the idea that an end use for the energy produced by potential offshore wind developments should be established at the beginning of the process through a request for proposals, purchase power agreements, or feed-in tariffs.

One council member suggested that the public notice and engagement process under Part 325 may not be the right vehicle for addressing offshore wind development. Rustem proposed a work group to investigate the details of the public engagement process and report back to the council. The following council members volunteered to serve on the public engagement work group:

- Will Cwikiel
- John Russell
- Ken DeBeaussaert
- Bobbi Tisdale
- Tom Hickner
- Orjiakor Isiogu
- Jim MacInnes
- Margaret (Peg) Gale

## **COUNCIL DISCUSSION: BOTTOMLAND LEASING AND PERMITTING CRITERIA**

Rustem reviewed the council’s charge regarding developing recommendations on the bottomlands leasing process including compensation, and the site-specific permitting criteria. He drew the council’s attention to Issue Paper 3, available online at

*[http://www.michiganglowcouncil.org/meeting\\_materials/042309/issue\\_papers/IssuePaper3\\_Bottomlands.pdf](http://www.michiganglowcouncil.org/meeting_materials/042309/issue_papers/IssuePaper3_Bottomlands.pdf)*. He asked the council to consider how the state will be expected to make decisions on individual sites, and questioned what statutory and rule-related changes will be required.

Mr. Clift suggested that the scope should be broadened to include all the laws that will be required to establish the demand for offshore wind power, at least to mention them in an outline.

Mr. Pruss commented that the Attorney General's office and Chris Shafer at Cooley Law School had discussed the changes to legal requirements a few years ago. He urged the council to seek to create clarity through the recommended legislation and rule-making changes.

Mr. Adelaja urged the council to consider the revenue that offshore wind may produce for the state. He encouraged it to make recommendations that optimize compensation and industry incentives, as well as consider how revenue could be applied to the state's strategic objectives. Jeremy Firestone commented that there was a lack of support in Delaware for allowing the wind revenues to go to the general fund. The Delaware public preferred a green energy fund, and beachfront landowners supported a beach nourishment fund. Regarding incentives, council members recognized that the initial outlay for the high cost of development may warrant a phased approach to royalty recovery to assist developers.

The group discussed the relative prices of energy from offshore wind and conventional sources and concluded the cost of wind energy now, while high, must not be compared against existing sources, but against conventional new sources that rely on resource inputs subject to significant price instability. Additionally, conventional sources will likely be subject to federal regulation and additional taxes.

Mr. Ettawageshik reminded the council that they were not charged to promote offshore wind, but to establish a process to review how and when it is done. Rustem then asked for volunteers for a work group to develop draft recommendations on bottomlands leasing and compensation and site-specific permitting criteria. The following members agreed to serve:

- Jack Knowles
- James Clift
- Jon Halsey
- Jim Sygo
- Frank Ettawageshik
- Marty Lagina

## **MINERAL MANAGEMENT SERVICE FINAL RULE**

Mr. Pruss asked for volunteers to review and analyze the MMS rule for its potential application to Michigan or its potential use as a model process. This group would seek assistance from the Attorney General's office. The following members agreed to serve:

- Rich VanderVeen
- Orjiakor Isiogu
- Steve Kurmas

## **REVIEW AND APPROVAL OF WORK PLAN**

Rustem asked for objections to the proposed work plan. None were presented. The work must be completed by the July 29 council meeting, and the final report must be delivered by September 1, 2009.

## **NEXT STEPS**

Bill asked for council members to share feedback with Christine Geddes on the mapping tool. Council members asked for a copy of the tool and were told they could obtain one from Christine on compact disc.

## **PUBLIC INPUT**

Two members of the public asked to speak.

Michael Brian urged the council and the state to be proactive, to be on the leading edge. He doesn't mind seeing the turbines, and he is a believer in the marriage of government and industry. He suggested that renewable energy is becoming mainstream and is the future; it gets a lot of press. He hopes for his children that Michigan can establish a new economy and a healthy environment in which his children would like to continue living. He urged the council to create the best possible regulatory environment that will encourage manufacturing of wind turbine components as well as their placement in Michigan. He suggested that developers know most data layers when they are proposing a development, and suggested it was not the council's role to examine the economic viability of these projects because the market demand will evolve and address this issue. He thanked the council and the administration for their efforts; he praised the transparency of the council's website and process.

Chuck Bauer commented that the council's discussion was fabulous, that the council's work is critical, and that the need for enabling legislation to clear a path for development of Lake Michigan's class seven winds is clear. He explained that he is working with business interests that have the potential to bring turbine component manufacturing to the state in which a new generation of turbine that operates at 40 percent increased efficiency. This company wants to begin its work in Michigan this year.