Preparation for Offshore Wind in Lake Michigan: Information Solicitation Options for Michigan and Wisconsin

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Introduction

The Great Lakes region is well-positioned to take advantage of offshore wind resources on the Great Lakes and bring that energy to market affordably. Depending on the individual state's strategy, the sequence of events leading up to project development can vary greatly. Precedents set by the offshore wind industry at large and specific east coast states - in particular New York, New Jersey, and Rhode Island - have proven that the efficient execution of offshore wind projects stems from broad coordination from a variety of key stakeholders. This coordination allows decision-makers to bring information to the table that is instrumental to successful project planning and completion. The various information solicitation tools that have been used within the industry have been instrumental in gauging each location's suitability for offshore wind development. Thus far, there have not been formal interstate collaboration efforts to build offshore wind projects. However, in the summer of 2009, a dialogue began between the states of Michigan and Wisconsin in order to plan the best way to go about realizing the offshore wind assets of Lake Michigan. The benefits of interstate collaboration in this type of development are numerous. Offshore wind in the Great Lakes will utilize regional industrial capacity to construct and maintain these projects and the energy produced may be distributed to more than one state, creating the need for interstate transmission cooperation. For these reasons and more, it would behoove the Great Lakes states and provinces to begin a collaborative approach to offshore wind development in order to maximize the economic, environmental, and social benefits for each state and across the region. This paper will explore the tools available for soliciting information on offshore wind development and provide an analysis of the next steps that Michigan and Wisconsin may take toward offshore wind development in Lake Michigan.

Strategic Information and Data Gathering

The participation of Michigan and Wisconsin in such a nascent industry as offshore wind energy requires the examination of the Great Lakes region's qualifications and existing capabilities that can be deployed to serve it. Often, one of the biggest challenges facing developers and jurisdictions when considering offshore wind development is the assessment of regional capabilities that can support such an effort. For example, there need to be companies capable of conducting wind resource and lake bottom studies at a project site. Turbine components need to be transported and installed in the lakes meaning that ports must be prepared with adequate staging area to support these efforts at the appropriate time. Firms need to be capable of building pricing mechanisms for both the electricity and the Renewable Energy Credits (RECs) generated by the project. An effective way to gather this information is to develop a market survey tool that both assesses these capabilities and integrates the results in a way that contributes to the state's long-term development goals. The state may choose among a few existing and vetted information solicitation frameworks that would serve this purpose or pioneer a new framework.

The first existing option is a Request for Information (RFI) or similarly, a Request for Expressions of Interest (RFEI). An RFI or an RFEI tends to be issued by an entity as a broader scoping effort that acknowledges areas in which voids of information and understanding exist. It attempts to address those voids by asking targeted questions to industry, academia, and the general public. The goal is to ask a wide range of stakeholders the same set of questions in order to get as many relevant answers as possible.

For example, an RFI may ask about the effects of ice loading on wind turbine infrastructure in the Great Lakes with the hope that organizations doing research on this issue would clarify progress on the topic by responding to the RFI with a statement based on sound research. Another example may be an RFEI that includes questions asking private sector companies about their experience in any type of offshore construction in order to gain a better understanding of the capabilities that other industries, such as oil and gas, may be able to adapt to the offshore wind industry framework.

By soliciting information regarding specific topical areas, the issuer of the RFI or RFEI is gathering knowledge and experience within the region that may be applied to the offshore wind industry in a specific geographic location. This information serves to build confidence in both the technological feasibility of offshore wind projects as well as broaden understanding upon which to make informed industry development decisions. An RFI or RFEI generally does not contain language about a commitment to subsequent projects. Rather, it often frames the solicitation as purely an information-gathering process, which may serve to enhance future project developments.

The second option is a Request for Proposals (RFP). An RFP tends to be a more narrowed effort than the latter approach and can often be predicated on the information gathered by a previous RFI or RFEI. An RFP will solicit competitive bids from the offshore wind industry, and the issuer will then choose the most qualified bidder. An RFP can be very well-informed and targeted by drawing upon the issuer's previous development experiences or information solicitations. The more information at hand that helps guide the project development process, the more targeted an RFP can be by including critical project

specifications to which bidders must adhere. Depending on the quality and number of responses, an RFP is generally followed by a concrete project that may be monitored, supported, subsidized, or wholly financed by the issuer.

Offshore Wind Information Solicitations

Multiple coastal states have already taken the first steps toward introducing offshore wind into their energy portfolio, thus setting precedents and creating best practices that may be examined by Great Lakes states that are seeking information for prospective project development. Although their approaches differ, the following states and industry actors initiated the process by releasing an information solicitation to gather data and/or competitive bids.

New Jersey

The state of New Jersey issued a *Solicitation for Proposals to Develop Offshore Wind Renewable Energy Facilities Supplying Electricity to the Distribution System Serving New Jersey* on October 5, 2007. The solicitation, issued by the NJ Board of Public Utilities (NJBPU), came in response to the state's Blue Ribbon Panel on Offshore Wind report announcing that there are 2,500 MW of potential wind resources available for development within the state's coastal waters. The solicitation offered a competitive bidding process in which winner(s) would be selected to build an offshore pilot project of up to 350 MW and would be eligible for $19 million of grant money from the state to be used toward attaining project goals. The objectives of the program are to develop cost effective offshore wind facilities, gain experience in permitting and installing offshore wind infrastructure, diversify the state's renewable energy portfolio, quantify environmental benefits, and provide an arena in which this technology is given the

opportunity to prove itself as a viable alternative to traditional electricity supply (NJBPU 2008). All bids were due by January 16, 2008. The state announced Garden State Offshore Energy, a joint venture between NJ utility PSE&G and offshore wind developer Deepwater Wind, as the winner on October 3, 2008.

Delaware

In compliance with the "Electric Utility Retail Customer Supply Act of 2006" created by the Delaware state legislature, Delmarva Power, a private utility, issued an RFP soliciting proposals for long-term electric power supply, which would serve to stabilize electricity rates. The RFP did not contain any language singling out renewable energy projects versus conventional power generation. Bids were received on December 22, 2006 from NRG, Conectiv, and Bluewater Wind proposing a natural gas-fired facility, coal-fired facility, and an offshore wind facility respectively. On May 22, 2007, the Delaware Public Service Commission (DE PSC) directed Delmarva Power to negotiate a long-term power purchase agreement (PPA) with Bluewater Wind (DE PSC).

Rhode Island

The Rhode Island Department of Administration (RI DOA) on behalf of the Office of Energy Resources issued an RFP on April 3, 2008, "soliciting proposals for a private partner to move forward with the Rhode Island Energy Independence 1 wind power project" and (2), which would produce 15% of the state's electricity needs, thus satisfying the renewable energy goals stated in their RPS. In September of 2008, Rhode Island Governor Carcieri chose Deepwater Wind to plan and develop the project.

New York – East Coast Project

The Long Island-New York City Offshore Wind Collaborative issued an RFI on June 30, 2009 to support the preparation of an RFP for an offshore wind farm. The Collaborative is a coalition of utilities as well as State and New York City agencies that are working to develop a 350-700 MW offshore wind farm to provide electricity to the heavily-congested New York City area. Based on prior research done by Collaborative members, a proposed location for a project is identified in the RFI as well as feasible grid interconnection points. The RFI asks respondents to provide thoughts and information on necessary environmental studies, operational specifics, and stakeholder engagement programs among other critical aspects of project development.

New York – Great Lakes Project

On April 22, 2009, the New York Power Authority (NYPA) issued a Request for Expressions of Interest (RFEI) to initiate efforts in developing offshore wind projects in the Great Lakes. The RFEI emphasized that the information gathered would be used to assess whether or not it would be feasible for NYPA to continue to pursue an offshore wind project by subsequently releasing an RFP. Responses to the RFEI were collected on June 15, 2009.

Wisconsin

We Energies, a private utility, issued an RFI on June 12, 2009 stating that the utility was seeking a 'Provider of Services' who has the capability to collect offshore wind data in Lake Michigan. The RFI was intended to support the proposed "Lake Michigan Wind Data Collection Project" that would further the objectives of the Wisconsin Public Service

Commission's *Wind on the Water* report, docket # 05-EI-144. The result of this RFI had not yet been determined at the time of this writing.

Structure and Procurement of Information Request Tools

The structure of an RFI, RFEI, or RFP should be designed to provide the reader with a clear understanding of project needs and goals so that the majority of responses will address the critical questions and be relevant to project objectives. The above-mentioned solicitation tools all include a formal introduction that provides some background information on the entity issuing the solicitation, any events leading to the solicitation, and the evaluation process for all responses. The Delaware, Rhode Island, and New Jersey RFPs were designed to attract respondents who would then develop a specific project. The New York and We Energies RFEI/RFI solicitations ask for information to continue the planning efforts of developing an offshore wind project, mostly by supporting the creation of a subsequent well-informed RFP.

These information solicitation tools also generally include a project description or scope of work. This section outlines all the information that the issuer has already obtained as well as information needs for the proposed project. In some cases the issuer already completed previous research on offshore wind feasibility, thereby laying a foundation of information the issuer could use in development planning. The Rhode Island RFP gave the desired project size and location that were determined primarily through research conducted in the report entitled *RIWINDS, Phase I: Wind Energy Siting Study* (5). Similarly, the Lake Michigan Wind Data Collection Project was a follow up to the Wisconsin PSC's *Wind on the Water* report which provided preliminary information on the Lake Michigan environment.

However, the NYPA RFEI sought information related to Great Lakes offshore wind development, which is still largely uncharted territory. Acknowledging that there is still much to be learned, NYPA provided a list of "Key Areas for Respondent Feedback" ranging from Technical Aspects and Pricing to Construction Issues. The project description or scope of work section in a solicitation may also include minimum requirements that respondents must include in their proposals in order to be considered for subsequent awards, if applicable.

In addition to an introduction and project description, solicitations should include disclaimers regarding the future involvement of project proponents and their partners. The issuer of the solicitation has the authority (as the creator) to define the level of commitment to which the organization will have to subsequent project developments and the costs incurred during the information gathering process. Although this is more important for an RFP than an RFI or RFEI, the level of responsibility for subsequent projects and related costs is completely determined by the issuing entity. Whether the issuer is a state or private entity, this commitment should be explicitly characterized in a specific section of the solicitation. A disclaimer allows the bidders to accurately invest time and effort into their responses while also estimating future costs that may be needed to follow up on their responses. The Long Island RFI clearly states that, "this RFI is for information and planning purposes only and should not be construed as a solicitation or obligation on the part of the Collaborative" (2). This statement may also be accompanied by a disclaimer acknowledging that, "all costs associated with developing or submitting a proposal in response to this Request, or to provide oral or written clarification of its content shall be borne by the respondent" (NYPA 2). Although the solicitation may be designed to make the costs associated with responding the sole responsibility of the respondent, there are valuable

benefits to be gained by the respondent during the process. During the solicitation process, opportunities may arise for respondents to establish important contacts with state agencies and/or private companies. In addition, the knowledge gained about the proposed project and location will provide credibility with the state agency or issuer of the RFI, RFEI or RFP.

Project finance is the most important aspect of project development; therefore, if applicable, the structure of financing mechanisms should be included in the solicitation. For competitive bidding solicitations the bidder(s) may be, "contractually committed to deliver energy, capacity and ancillary services (and, if applicable, RECs) under [a] PPA" (Delmarva 3). In this case, a template or proposed structure of the PPA can be included in the solicitation as a reference for bidders. The New Jersey project provided grant funds to qualified bidders that could ultimately be put toward installation costs of critical project components such as a meteorological tower for wind data collection. For strictly informational solicitations, language may include, "recommendations on terms of service" (NYPA 8) or, "preferences for pricing structures" (LI-NYC RFI 8) to be considered in a PPA design.

The main goal of an information solicitation tool is to reach a large community of stakeholders in an effort to gather information; therefore, adequate public announcements and accessibility to the document should be considered when crafting a solicitation program. Often solicitations are announced via press release or associated media coverage and then posted on a free public website for download. There is usually a primary contact person from within the issuing organization who is knowledgeable about the solicitation and manages inquiries and responses. The more accessible the solicitation is to the public, the more interest and resources it can gather to the benefit of the issuer. The website for the

Long Island-New York City Offshore Wind Collaborative serves as an excellent example of an interface that provides both accessibility and user-friendly information exchange.

Great Lakes Solicitation Content Considerations

When drafting a solicitation tool, Great Lakes states should identify both the information already in hand and the information that is needed in order to assess the potential for offshore wind development in their part of the region. Michigan and Wisconsin have already begun the offshore dialogue by completing various feasibility and assessment studies related to offshore development. The Michigan Great Lakes Wind Council will present a report to Governor Granholm on September 1, 2009. This report will contain critical findings in the offshore sector pertaining to Lake Michigan and could be used to develop a solicitation tool in the future. Specific items from the report that may be used in a solicitation include data regarding favorable development zones, public engagement guidelines, and cost estimates tailored to the state of Michigan. Similarly, the Public Service Commission of Wisconsin released the *Wind on the Water* report in January of 2009, which identified both strengths and needs within the state in order to develop a robust industry for offshore wind development in Lake Michigan. In addition to outlining the potential strengths that Wisconsin can leverage in offshore wind development, the report also covered some key items for further research and development. These findings can all be used in crafting a broader information solicitation that addresses the specific needs of the offshore wind development effort in Wisconsin.

Solicitations from various states have also served as a benchmark for a state's interest, readiness, and ability to host future development projects. The east coast has positioned itself as the frontier for offshore wind energy development in the U.S. as a result of the

myriad of public efforts and solicitations, which indicate interest and capabilities within the industry. Michigan and Wisconsin could use an offshore wind RFI for Lake Michigan as a way to showcase their renewable energy development progress and goals to the rest of the country and to the wind industry at large. Offshore wind energy in Lake Michigan stands to attract serious economic development and new businesses to Michigan and Wisconsin; however, developers need to get a signal from the state that the business environment is well positioned to receive their efforts. An RFI would serve as an effective tool within which to illustrate prior efforts the states have performed regarding offshore wind as well as sell the area's potential for new investment.

The Great Lakes region has an additional advantage in the form of a strong industrial infrastructure that is able to support the offshore industry. The auto and steel industries have come upon hard times in a changing economy but also have the ability to diversify their skills and adapt to the new clean energy economy. Although most solicitations invite national response, it is important for Michigan and Wisconsin to recognize the opportunity for regional growth in the offshore wind industry and provide region-specific language in a solicitation. For example, the states may want to consider including language that favors local producers. Surveying the region's capacity to support the offshore wind industry through manufacturing, installation, and maintenance services will result in identifying regional businesses and accompanying skills that will develop a vertically integrated system that retains economic benefits locally. This focus will send a clear message to potential respondents that a successful bidder is one who works within the regional framework of the Great Lakes industrial economy.

Funding to support a solicitation effort may come from multiple sources, to be determined by the issuing state or entity. The majority of financial expenditures would most likely be

directed into staff that would be creating and monitoring the solicitation. Therefore, the extent to which a state can utilize a self-sustaining mechanism such as an online interface, which collects data automatically would be a huge cost-saver. For example, Michigan may consider how its State Energy Plan (SEP) funds could come into play and support an information solicitation for offshore wind development. The Wisconsin Energy Independence Fund also provides a resource pool from which the state may draw to support a solicitation effort. Funding sources that align with clean energy, energy independence, and public health improvement agendas are all possible sources to consider for a wind energy project.

Conclusion

A joint offshore wind project between Michigan and Wisconsin makes sense both logistically and politically. The resources and capabilities are available in order for a successful project dialogue to begin. These first steps will also help the region to begin developing industry-supporting sectors that may need improvement and upgrades. Today, both Michigan and Wisconsin have the opportunity to engage with one another in a ground-breaking industry; an industry with the potential to refuel latent workforces and grow the Midwest's economic development agenda upon a foundation of energy diversity, resource security, and social responsibility.

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