

# Offshore Wind Farm Regulation in the Great Lakes

## Background

There has been little policy development in the Great Lakes Basin and across the nation dealing with siting of offshore wind facilities. Much of the regulatory framework in place today is at a federal level. This is due to the fact that most offshore wind development has been proposed in saltwater coastal areas where there is less state jurisdiction than in the Great Lakes. The Submerged Lands Act affirmed that along America's coasts state jurisdiction extends 3nm except off of Texas and in the Gulf of Florida where state jurisdiction extends 9nm. While in the Great Lakes, states have jurisdiction to international boundaries. (Ram, 2004)

## Federal Regulation

The U.S. Federal Government has significant regulatory authority over the development of offshore wind facilities through a variety of regulatory structures. Statutes that come into play in the development of an offshore wind farm include the National Environmental Policy Act, the Rivers and Harbors Act, the Migratory Bird Treaty Act, the National Historic Preservation Act, and the Submerged Lands Act. A list of Federal regulations involved is included as an Appendix to this document. The Energy Policy Act of 2005 gave lead jurisdiction to the Minerals Management Service for permitting, competitive leasing, and royalty payments for offshore wind development on the Outer Continental Shelf. However, this does not apply to the Great Lakes, so the lead permitting agency for development in the Great Lakes is the Army Corps of Engineers. (Associated Press, 2008)

The Canadian government, similarly to the U.S. government, has not developed regulation specific to offshore wind farms, but there are existing statutes in place that will be triggered by the development of an offshore wind farm. These regulations are detailed in the second appendix to this document.

## State and Provincial Efforts

There has been no formal development of state policy governing the regulation of offshore wind development. Most discussion of offshore wind has occurred within state Wind Working Groups. However, while there has not been state policy development governing offshore wind, other state policy and laws, developed without consideration of offshore wind, will come into play.

One of these areas is the Public Trust Mandate for the Great Lakes. In *Martin v. Waddell* the Supreme Court of the United States held that states owned navigable and tidal waters and their underlying land for the common use of the people of the state. And in *Illinois Central Railway Co. v. State of Illinois* the Supreme Court decided that states cannot relinquish this trust.

The Coastal Zone Management Act of 1972 states that state coastal zone management programs should include, “each of the following required program elements... (H) A planning process for energy facilities likely to be located in, or which may significantly affect, the coastal zone, including a process for anticipating the management of the impacts resulting from such facilities.” (16 U.S.C. § 1455, (d), (2)) The coastal zone extends, in Great Lakes waters, to the international boundary between the United States and Canada. Seven of the Great Lakes states have Coastal Management programs in place, and Illinois is anticipated to have a program adopted in 2008.

## **Ohio**

In August 2006, the Cuyahoga County Commissioners created the Great Lakes Energy Development Task Force to explore the legal, technical, environmental, economic, and financial aspects of developing and implementing advanced energy technologies in Cuyahoga County. The initial focus of this taskforce is to explore wind energy, more specifically, offshore wind energy in Lake Erie. In February 2007, the taskforce issued a report that called for the creation of what is called the “Great Lakes Wind Research Center” which includes an offshore wind demonstration project of between 5MW and 20MW ([http://development.cuyahogacounty.us/pdf\\_development/en-US/windenergy\\_report.pdf](http://development.cuyahogacounty.us/pdf_development/en-US/windenergy_report.pdf)). Cuyahoga County is taking steps to follow the recommendations of the task force’s report and the taskforce is currently conducting a feasibility study for the demonstration project. (Cuyahoga County Department of Development, 2008)

## **Wisconsin**

The Governor created a task force on global warming that was instructed to assess the potential of Wisconsin for offshore wind energy development. To fulfill this task the Wisconsin Public Service Commission has established a “Wind on the Water” (WOW) group to look at offshore wind issues (<http://psc.wi.gov/globalWarming/05EI144/index-WindonWater.htm>). The group has four workgroups: (1) Legal/Regulatory; (2) Human Environment; (3) Engineering and Economics; and (4) Community Outreach. The legal/regulatory workgroup is establishing a draft document detailing the expected legal and regulatory framework that an offshore development would encounter in the state of Wisconsin.

## **Ontario**

Ontario issued a moratorium on offshore wind developments in November 2006, following local resistance to an offshore wind development in Leamington, Ontario. The moratorium was lifted in early 2008 and an environmental assessment process for offshore wind farms has been set up by the Ministry of Natural Resources. (Berger, 2008) This process is the same as for wind farms developed on Crown land, however, the environmental considerations taken into account in the environmental assessment process are different. The Ontario Ministry of Natural Resources has developed a document to help in the review of offshore wind projects titled, “Guideline to Assist MNR Staff in the

Review of Wind Power Proposals in or Near Water”

([http://publicdocs.mnr.gov.on.ca/View.asp?Document\\_ID=12213&Attachment\\_ID=24363](http://publicdocs.mnr.gov.on.ca/View.asp?Document_ID=12213&Attachment_ID=24363)).

## **Michigan**

The Michigan Economic Development Corporation sponsored an offshore permitting “dry run” in early 2008 to explore the regulatory and jurisdictional issues surrounding the permitting of offshore wind facilities in the Great Lakes. The “dry run” brought together all of the federal and state agency personnel with jurisdictional authority in a meeting to determine how a permitting process would proceed for two site-specific hypothetical developments of 500 MW. The result was an Annotated List of Offshore Great Lakes Wind-Siting Authorities for the state. This document is available here:

[http://greatlakeswiki.org/index.php/Image:Authorities\\_for\\_Siting\\_Offshore\\_Great\\_Lakes\\_Wind\\_%28MI%29.pdf](http://greatlakeswiki.org/index.php/Image:Authorities_for_Siting_Offshore_Great_Lakes_Wind_%28MI%29.pdf)

## **New York**

New York is the site of one of two offshore wind farms in the U.S. that proceeded to the phase of final decision making, the Long Island Offshore Wind Park. Ultimately, however, the project was abandoned because the final estimate for construction and interconnection was significantly higher than what had been originally projected.

The Hounsfield Wind Farm, which is currently being permitted, will be located on an island in Lake Ontario. While this farm will not encounter the same regulatory framework that an offshore wind farm would face, the transmission infrastructure needed to send electricity to the mainland should encounter the same regulatory requirements that transmission infrastructure that would carry electricity from an offshore farm to the mainland would. The permitting process for this transmission is currently underway.

## **International Efforts**

It should be noted that most of the early offshore wind development in Europe occurred as public-private collaborations with before-after-control-impact studies to determine how offshore wind farms alter the migration patterns of birds, as well as if they damaged the population. (Ram, 2004)

In the United Kingdom the government has created a clear legal framework for the development of offshore wind farms. There are a number of factors that the regulations cover including: effect on navigability of waters, the placing of materials in a marine environment during construction, the disposal of waste material at sea (primarily dredge material), introduction of tracers and biocides into a marine environment, initialization of meteorological masts, rock armoring and burial of cables, hydrological effects, risk to fish and marine life, and many others. There are numerous permits required for the development but the permit process is guided by the Electricity Act of 1989. This allows for Offshore Renewables Consents Unit of the Department of Trade and Industry to

coordinate all the permitting. A guide to the permit process in the United Kingdom can be found here: ( <http://www.berr.gov.uk/files/file22990.pdf> ). (Offshore Renewables Consents Unit, 2004)

## Appendix I

| Legislative Authority                                  | Major Program/Permit  | Lead Agencies   |
|--|---|---|
| Rivers and Harbors Act – Section 10                    | Prohibits the obstruction or alteration of navigable water of the U.S without a permit  | U.S. Army Corps of Engineers (District Office)  |
| National Environmental Policy Act (NEPA)               | Requires submission of an environmental review for all major federal actions that may significantly affect the quality of the human environment | U.S. Army Corps of Engineers (District)<br><br>President's Council on Environmental Quality |
| Coastal Zone Management Act                            | Requires determination of consistency with the coastal program of the affected state  | NOAA<br><br>State Coastal Zone Management Agencies  |
| Navigation and Navigable Waters                        | Navigation aid permit<br>(markings and lighting)  | U.S. Coast Guard  |
| Navigational Hazard to Air Traffic                     | Determination of the safe use of airspace from construction start (lighting)  | U.S. Federal Aviation Administration<br><br>(Regional Administrator)                        |
| Migratory Bird Treaty Act                              | Requires determination of no “taking” or harming of birds   | Fish and Wildlife Service<br><br>Migratory Bird Conservation Commission                     |
| National Historic Preservation Act                     | Consultation on the protection of historic resources — places, properties, shipwrecks   | Department of the Interior<br><br>State Historic Preservation Offices                       |
| Magnuson-Stevens Fishery Conservation & Management Act | Conserves & manages fish stocks to a 200-mile fishery conservation zone & designates essential fish habitat                                     | National Marine Fisheries Service   |
| National Marine Sanctuary Act (Title III)              | Designates marine protected areas   | National Ocean Service (NOAA)   |
| Endangered Species Act                                 | Consultation on action that may jeopardize threatened & endangered (listed) species or adversely modify critical habitat                        | Fish & Wildlife Service<br><br>National Marine Fisheries Service                            |
| Marine Mammal Protection Act                           | Prohibits or strictly limits the direct or indirect taking or harassment<br><br>(Permits may be sought for “incidental take”)                   | Fish & Wildlife<br><br>National Marine Fisheries Service                                    |
| Submerged Lands Act                                    | Grants a lease for public lands held in trust by the government   | Minerals Management Service<br><br>(Does not apply in Great Lakes)                          |

|   |   |  |
|---|---|--|
| Outer Continental Shelf Lands Act   | Manages the OCS with leasing rights for minerals production. Also covers artificial islands, installations, and other devices located on the seabed | Minerals Management Service<br><br>(Does not apply in Great Lakes) |
| Clean Water Act   | Regulates discharges of pollutants into the waters of the United States   | U.S. Environmental Protection Agency                               |
| Estuary Protection Act  | Conserves estuarine areas   | Fish and Wildlife Service  |
| Fish and Wildlife Coordination Act  | Consultation with FWS when bodies of water are controlled or modified   | Fish and Wildlife Service  |
| Bald and Golden Eagle Protection Act  | Requires determination of no "taking" or harming of birds   | Fish and Wildlife Service  |
| Sources:<br>Ram, Bonnie, Energetics Corp. (2004, October 5). <i>Offshore Wind Developments</i> , Presentation to MREP and Michigan Wind Working Group. See <a href="http://www.michigan.gov/eoworkshops">www.michigan.gov/eoworkshops</a> .<br>Hingtgen, John, University of Wisconsin. (2003). <i>Offshore Wind Farms in the Western Great Lakes: An Interdisciplinary Analysis of Their Potential</i> , A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science (Land Resources). |   |  |

## Appendix II

| Federal Agency   | Involvement / CEEA Trigger  |
|--|---|
| Natural Resources Canada   | Potential federal funding through the Government of Canada's Wind Power Production Incentive (WPPI). CEEA is triggered where federal money may be provided.   |
| Fisheries and Oceans Canada  | Habitat Authorization required under the <i>Fisheries Act</i> for the harmful alteration, disruption or destruction of fish habitat (trigger under the Law List Regulations)  |
| Transport Canada (TC)  | Authorization required under the <i>Navigable Waters Protection Act</i> for a potential impact on the navigability of a waterbody (trigger under the Law List Regulations). TC would also provide input on effects on air transportation.   |
| Environment Canada (EC)<br>including Canadian Wildlife Service (CWS) | EC will be involved to provide regulatory guidance related to the <i>Species At Risk Act</i> , <i>Migratory Birds Convention Act</i> , other wildlife, <i>Canadian Environmental Protection Act (CEPA)</i> , soil, water and air quality, and climate issues. EC would regulate a CEEA-triggering authorization under CEPA if the project proposes to use ocean disposal (under consideration). |
| Indian and Northern Affairs Canada                                   | Regulatory interest through the involvement of a First Nation corporation (Haida Power Authority).  |

|                 |  |
|-----------------|--|
| Industry Canada | Regulatory role under the <i>Radiocommunication Act</i> related to potential interference with radio-communication and the installation of radio-communication antenna structures. |
| Health Canada   | Regulatory interest in potential noise, air quality, electromagnetic, and socio-community impacts.   |

## Sources Consulted

Berger, Robert S., and Dwight Kanyuck. Creating a Public Plan for New York's Great Lakes Offshore Wind Power. University At Buffalo Law School Environment and Development Clinic. Buffalo: Buffalo Wind Action Group, 2008.

<<http://www.greengold.org/wind/documents/113.pdf>>.

Ram, Bonnie. Offshore Wind Developments in the United States: Institutional Issues, Environmental Regulations, and Jurisdictions. Energetics. Denver: World Renewable Energy Congress VIII, 2004.

<[http://www.energetics.com/pdfs/renewables/wind\\_analysis.pdf](http://www.energetics.com/pdfs/renewables/wind_analysis.pdf)>.

United Kingdom. Offshore Renewables Consents Unit. Department for Trade & Industry. Offshore Wind Farm Consents Process. Aug. 2004.

<<http://www.berr.gov.uk/files/file22990.pdf>>.

"Wind Energy." Cuyahoga County Department of Development. 12 June 2008

<<http://development.cuyahogacounty.us/en-US/wind-energy.aspx>>.

"Wisconsin Developers Have Plans for Wind Turbines in Lake Michigan." Associated Press 25 Apr. 2008. 13 June 2008

<[http://www.mlive.com/environment/index.ssf/2008/04/wisconsin\\_developers\\_have\\_pla\\_n.html](http://www.mlive.com/environment/index.ssf/2008/04/wisconsin_developers_have_pla_n.html)>.

