

Ocean Research & Resources Panel

Offshore Renewable Energy:

Accelerating the Decision Making Process

Panel 4: Coordination and Information Sharing

Presented by

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Great Lakes Wind Collaborative

May 24, 2011

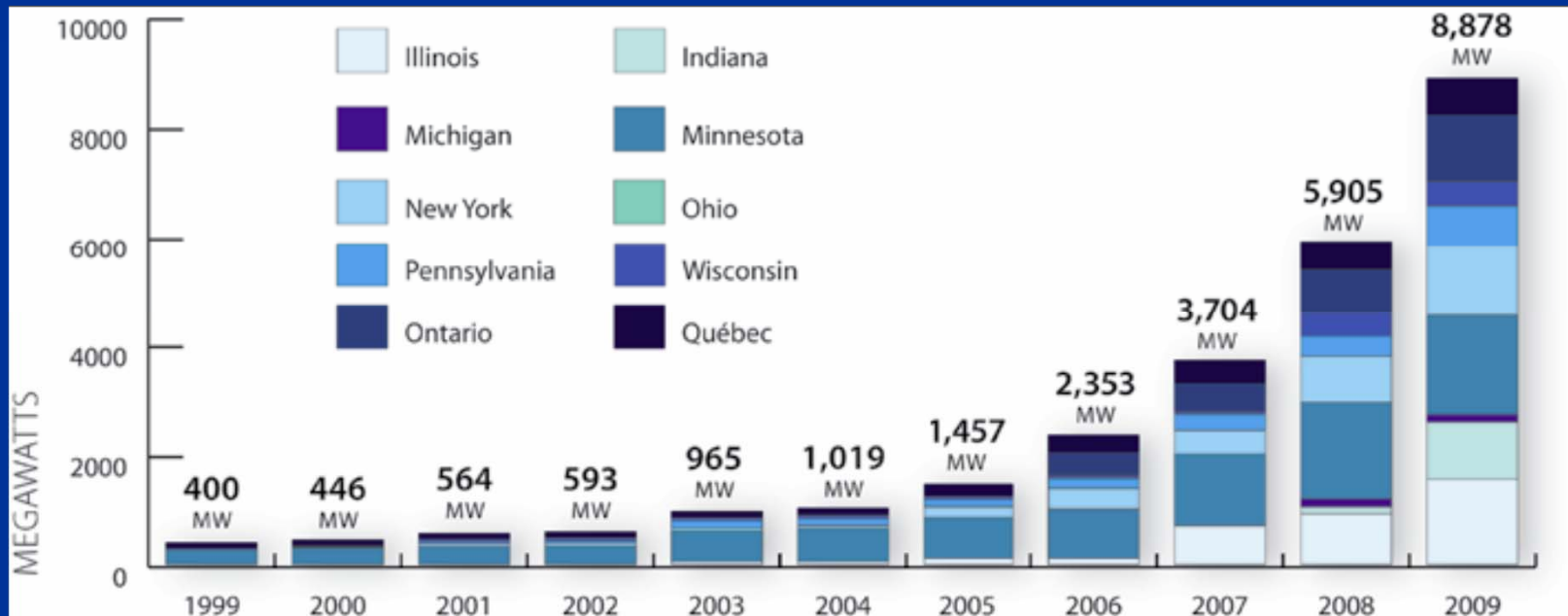


The Great Lakes Region

Watershed of the Great Lakes

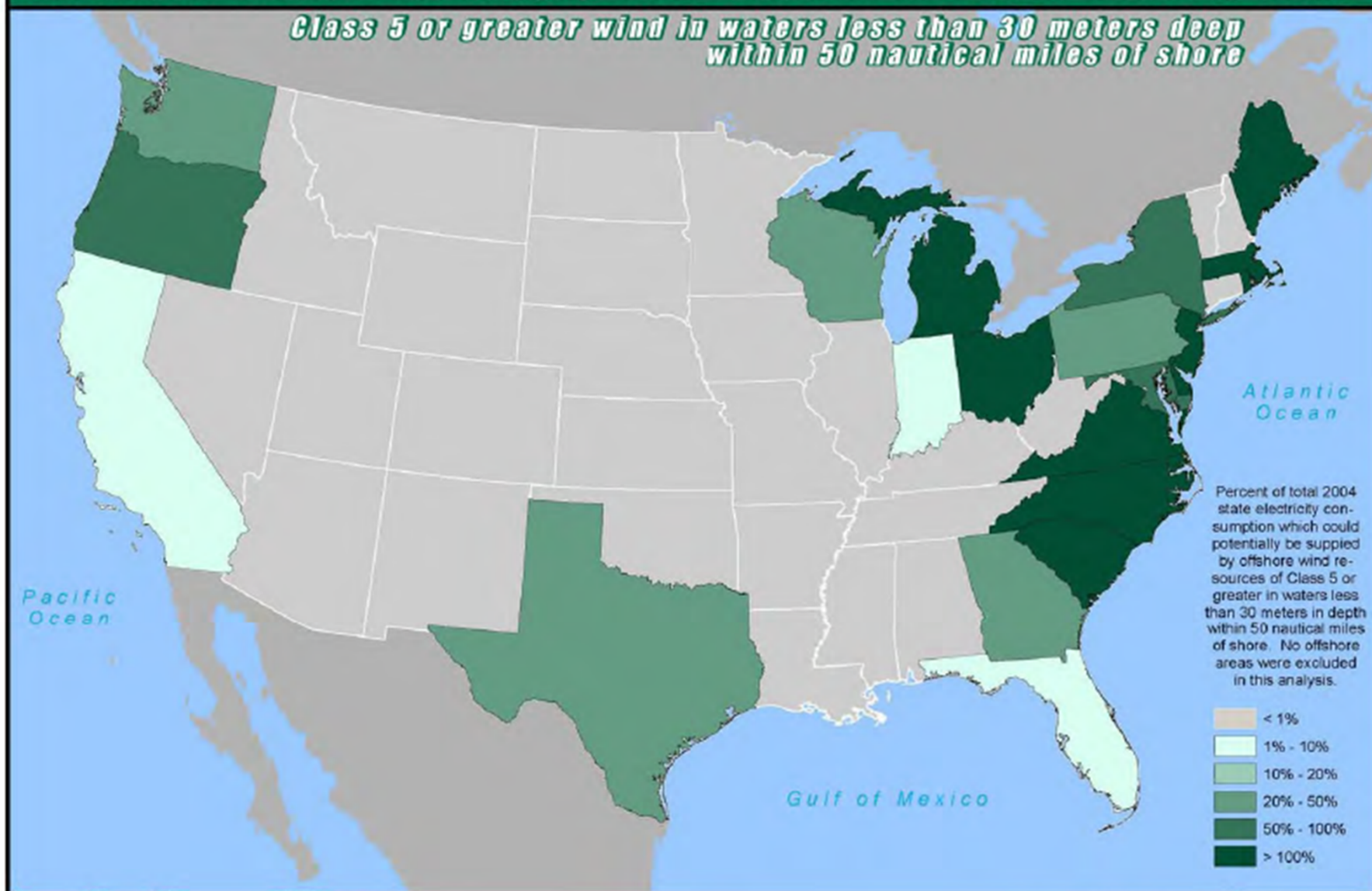
- Two Nations, 8 States, 2 Provinces
- 42 Million People
- 4th Largest Economy in the World
- 100 Giga watts of Current Generating Capacity
- 1000 Giga watts of Wind Potential Offshore

Current Land-Based Wind Generating Capacity Within the Great Lakes Region



Potential Electricity Supply from Shallow Offshore Wind by State

Class 5 or greater wind in waters less than 30 meters deep within 50 nautical miles of shore



0 250 500 1,000
Kilometers
0 150 300 600
Miles

February 12, 2007
Data Source: 200702musial_osbystate_rev3.xls

Map produced by
U.S. Department of Energy
National Renewable Energy Laboratory



A Wave of Wind Power Development Was About to Break Across the Great Lakes Region

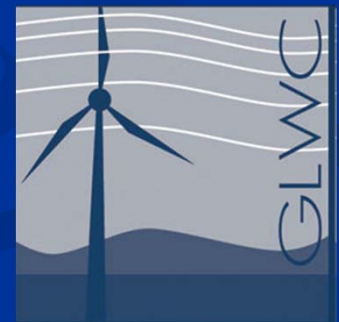
- In 2006 Representative Marci Kaptur (Ohio), the US Fish and Wildlife Service, Environmental Protection Agency and Others Organized a Conference in Toledo entitled: *Toward Wildlife-Friendly Wind Power*
- In 2007 NREL and the National Wind Coordinating Collaborative Convened a Meeting of 45 Great Lakes Wind Stakeholders in Chicago
- US and Canadian Stakeholders Formed the Great Lakes Wind Collaborative in Buffalo in 2008

Great Lakes Wind Collaborative

The Great Lakes Wind Collaborative is a multi-sector coalition of wind energy stakeholders working to facilitate the development of economically and environmentally sustainable wind power in the **binational** Great Lakes region.

Administrative Support Provided by the Great Lakes Commission

www.glc.org/energy/wind



GLWC is governed by a Steering Committee and is organized around the efforts of five Workgroups:

1. Transmission

- o Transmission-Related Policy Options to Facilitate Offshore Wind in the Great Lakes-University of Michigan School of Natural Resources 2011

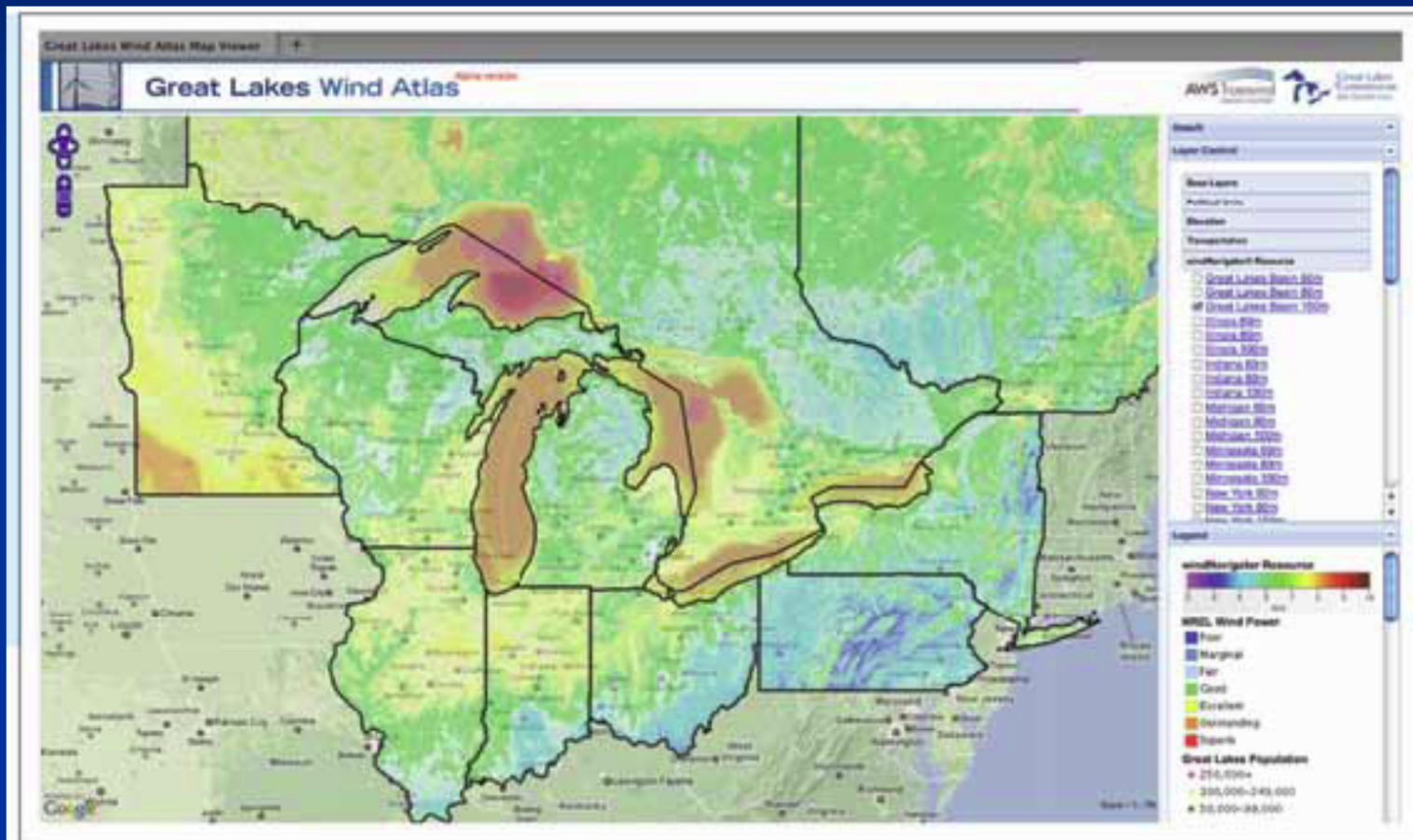
2. Economic Development

- o The Role of the Great Lakes-St. Lawrence Seaway Ports in the Advancement of the Wind Energy Industry 2010

3. Environmental Planning, Siting, and Permitting

- o State and Provincial Land-Based Wind Farm Siting Policy in the Great Lakes Region: Summary and Analysis 2009
- o Best Practices to Accelerate Wind Power in the Great Lakes Region and Beyond 2011

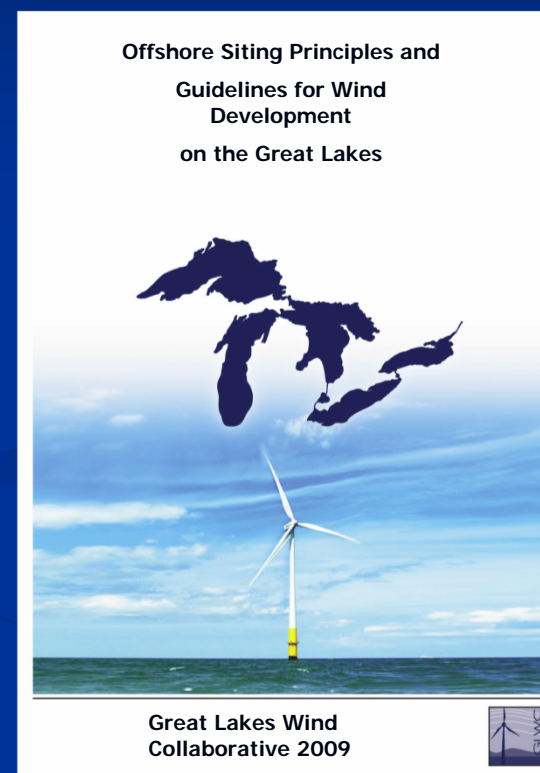
4. Wind Atlas



www.glc.org/energy/wind

5. Offshore

- o Background Papers on Current Offshore Regulations, Water Dependency (State and Federal Regulations), Public Trust Doctrine-University of New York at Buffalo 2009
- o Offshore Siting Principles and Guidelines for Wind Development on the Great Lakes-GLWC 2009



Environmental Issues Tend to Drive the Approval Process

- Bird & Bat Mortality
- Fisheries Impacts
- Lakebed Alterations
- Habitat Alterations
- Noise
- Public Health
- Other (Social, View shed, Etc.)



So-o-o-o Who Will Be First to Get Their Wet Feet?

- Ontario Moratorium-Four Gig watts Offshore Wind Planned Under the Green Energy Act Feed in Tariff Program
- New York Power Authority-100 Megawatts Planned
- Ohio's LEEDco-20 Megawatts Planned Offshore of Cleveland
- **Technical, Social Acceptance, and Environmental Issues**
- **Regulatory Uncertainty at the Federal and State Levels**



Legislative Authority	Lead Agencies/Office	Major Program/Permit
National Historic Preservation Act	DOI, State Historic Preservation Offices	Consultation on the protection of historic resources — places, properties, shipwrecks
Estuary Protection Act	FWS	Conserves estuarine areas
Fish and Wildlife Coordination Act	FWS	Consultation with FWS when bodies of water are controlled or modified
Migratory Bird Treaty Act & Bald and Golden Eagle Protection Act	FWS, Migratory Bird Conservation Commission	Requires determination of no “taking” or harming of birds
Endangered Species Act	FWS, NOAA National Marine Fisheries Service	Consultation on action that may jeopardize threatened & endangered (listed) species or adversely modify critical habitat
Magnuson-Stevens Fishery Conservation & Management Act	NOAA National Marine Fisheries Service	Conserves & manages fish stocks to a 200-mile fishery conservation zone & designates essential fish habitat
National Marine Sanctuary Act (Title III)	NOAA, National Ocean Service	Designates marine protected areas
Coastal Zone Management Act	NOAA State Coastal Zone Management Agencies	Requires determination of consistency with the coastal program of the affected state
Clean Water Act	USACE, EPA	Regulates discharges of pollutants into the waters of the United States
Rivers and Harbors Act – Section 10	USACE District Office (FAA and Coast Guard Input)	Prohibits the obstruction or alteration of navigable water of the U.S without a permit
National Environmental Policy Act (NEPA)	President’s Council on Environmental Quality	Requires submission of an environmental review for all major federal actions that may significantly affect the quality of the human environment

Ohio Criteria

- Shipping lanes, fairways, harbors
- Distance from shore
- Raptor nests
- Important bird areas
- Natural heritage observances
- Fish habitat and bathymetry
- Reefs and shoals
- Substrates
- Sand and gravel mining
- Military zones
- Confirmed shipwrecks
- Sport fishery effort
- Commercial fishery trap net lifts

Ontario Criteria

- National/Provincial Park
- Protected area
- Water depth 5 m $<X<$ 30 m
- Wind speed > 8.0 m/s
- Airports
- Radio communication Systems
- Population density
- Distance from shore
- Commercial waterway and ferry route
- Protected shipwreck
- Submerged utility line
- Shoreline
- Great Lakes coastal wetland
- Conservation reserve
- Environmental Area of Concern
- Important Birding Areas

Michigan Great Lakes Offshore Wind Council

- Recommend a process for engaging stakeholders
- Summarize lessons learned from American and international offshore experience
- **Identify options for compensating the public for bottomland leasing and wind rights for wind energy systems**
- Make recommendations for legislation and for changes in administrative rules and policies related to the siting and development of offshore wind energy systems
- **Make a recommendation as to whether Michigan should support the preparation of a programmatic environmental impact statement by the federal government for permitting offshore wind development in the Great Lakes basin**
- Provide an estimate of the costs and description of the benefits of continuing the work of the council, if the council deems it advisable

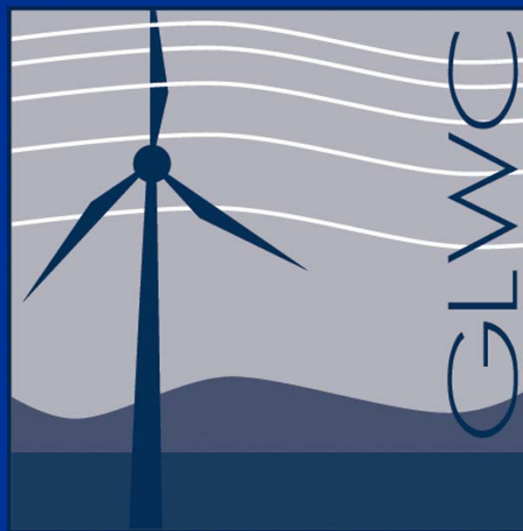
Great Lakes Offshore Wind Workshop

Co-Sponsored by the Great Lakes Wind Collaborative, Department of Energy, and the Council on Environmental Quality

Chicago, October 2010

- Clarify Federal and State Offshore Wind Approval Processes
- Identify a Path Forward to Clarify Approval Processes Without Compromising Existing State and Federal Rules and Regulation
- Make Recommendations on Which Federal Agency Should be the Lead Agency Under NEPA-----Case by Case or Programmatic EIS Approach----Should It be the Corps of Engineers?
- Foster Further Cooperation Between Canada, United States, States and Provinces in the Environmental Assessment Process
- **Memorandum of Understanding Between and Among Federal Agencies and the States to Establish a Straightforward Process for Approving Wind Power Projects**

Thank You



Great Lakes Wind Collaborative

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