



Great Lakes Wind Collaborative

# Great Lakes Wind Collaborative Overview & Update

Columbus, OH  
February 24, 2009

# Great Lakes Wind Jeopardy

- ✔ Great Lakes Energy Development Task Force
- ✔ Great Lakes Wind Collaborative
- ✔ Great Lakes Wind Council
- ✔ Great Lakes Wind Network
- ✔ Great Lakes Regional Wind Energy Institute
- ✔ Great Lake Renewable Energy Association
- ✔ Great Lakes Wind on the Water
- ✔ Great Lakes Wind Research Institute

**\*\* NEWS FLASH \*\***

**Great Lakes Wind Collaborative  
2<sup>nd</sup> Annual Meeting**

**June 10-11**

**We Energies, Milwaukee, WI**

**Mark Your Calendars!!!**

# GLWC 2<sup>nd</sup> Annual Mtg.

## Draft Agenda Topics

- ☛ State/Provincial Wind Updates
- ☛ Offshore Case Studies
  - OH, WI, MI
  - Toronto Hydro
  - Wolf Island
  - Galloo Island
  - Trillium Power – Lake Ontario
- ☛ Specifications and Limitations of the Maritime Industry for Transportation of Wind Components

# GLWC 2<sup>nd</sup> Annual Mtg.

## Draft Agenda Topics

- ✓ **The Great Lakes as a Leading Wind Region:**
  - DOE/AWEA 20% by 2030 Vision
  - CANWEA WindVision 2025
- ✓ **Latest Research on Avian and Wildlife Issues: 2 Case Studies**
- ✓ **Transmission: Integrating Wind Power into the Grid**
- ✓ **Joint meeting of the GLWC Advisory & Steering Committees – open to all participants**

# 20% Wind by 2030 for the Great Lakes Region



*Former brownfield on the Buffalo River is home to Steel Winds, the largest urban wind farm in the United States. 8 turbines enough pollution-free electricity annually to power more than 7,000 homes.*

Economic Development Benefits <i>(in \$ millions)</i>	
construction period jobs	.18
operations jobs	.29
lifetime jobs	.76
land and lease payments (\$/yr)	156.2
property tax payments (\$/yr)	639.4
construction period economic output	21,286
operations economic output	2,888
lifetime economic output	79,052

Environmental Benefits <i>(cumulative reductions: 2008-2030)</i>	
water savings	616,601 gallons
CO2 emissions reductions	1.260 million tons

# Purpose

- Build consensus on issues affecting wind power planning, development and operation
- Provide a forum for dialogue and information exchange among diverse interests
- Facilitate sustainable wind power development

# Funding

## • Mix of Sources

- Federal: DOE–NREL (Base Funds)
- State/Provincial Funds
  - NY Power Authority (Transmission)
  - MI Sea Grant Integrated Assessment
  - MI, OH, MN, Ontario Energy Funds
- Private Sector (Offshore)
- Potential Foundation Funding



# GLWC Charter

Who We Are

How We Work



# Operating Principles

- **Strive for a broad, balanced membership**
- **Operate by consensus to achieve the stated purpose**
- **Collective decision-making**

# Structure

- **Wind Stakeholders**
- **Advisory  
Committee**
- **Steering  
Committee**
- **Workgroups**

# Advisory Committee Membership

- 7 Federal agencies (U.S. and Canadian)
- 8 States
- 2 Provinces
- Tribes/First Nations
- Municipal Interests
- Trade and not for profit assoc./orgs
- Environmental NGOs/associations
- Electric Utilities
- Wind Industry
- Academic interests
- At-Large
- Observers

**Co-Chairs**

# Steering Committee Membership

- ✓ 3 federal agencies (U.S. and Can)
- ✓ 2 state/provincial (1 each)
- ✓ 1 tribal/First Nation
- ✓ 1 municipal
- ✓ 1 wind trade assoc.
- ✓ 1 Env. NGO
- ✓ 1 wind industry
- ✓ 1 utility/trade assoc.
- ✓ 1 professional assoc. (non industry)
- ✓ 1 at-large

**2 Co-Chairs**

# Workgroups

- Formed by Advisory or Steering Committees
- Address specific priorities (e.g. workplan elements)
- Develop products
- Make recommendations
  - To Advisory Committee
  - Steering Committee has final approval

# Role of Great Lakes Commission

- ✓ secretariat
- ✓ project administration
- ✓ membership recruitment
- ✓ Workgroup support
- ✓ financial management
- ✓ meeting facilitation
- ✓ data management and web site design
- ✓ communication and information services
- ✓ research, report production, and public liaison

# GLWC Workplan

1. Leadership, Regional Coordination and Policy Support
2. Communication and Outreach
3. Research and Data Management (i.e. Wind Atlas)
4. Environmental Planning, Siting and Permitting
5. Off Shore
6. Transmission and Power System Integration
7. Economic Development



# Leadership, Regional Coordination and Policy Support

- ✓ Charter established the GLWC governance structure for internal/external operations & communications
- ✓ Coordinate with other regional efforts:
  - MGA Energy Security and Climate Stewardship Platform; Other GL groups
- ✓ Coordinate with national and state/provincial wind stakeholder groups (AWEA, CanWEA, NWCC, WWGs, CESA, etc.)

# Leadership, Regional Coordination and Policy Support



- Identify and procure funding sources for operation of the GLWC
- Identify and recruit new members to the GLWC
- Example of policy support: GLC PTC resolution

# Communication & Outreach

- Host the GLWC Annual Meetings
  - [www.glc.org/energy/wind/conf2008.html](http://www.glc.org/energy/wind/conf2008.html)
- Establish and maintain an Internet-based communications infrastructure
- Publicize the GLWC's work activities and develop information materials as appropriate
  - [www.glc.org/energy/wind](http://www.glc.org/energy/wind)



# 5 GLWC Workgroups

- Environmental Siting and Permitting
- Offshore
- Great Lakes Wind Atlas
- Transmission
- Economic Development



# Environmental Siting & Permitting Workgroup

- ✔ Documentation of GL State and Provincial regulations that affect wind facility siting/permitting
- ✔ Next steps: analysis of GL policies
  - Look at states outside GL
  - Identify and promote best practices

# Offshore Workgroup

Picture this:



# Offshore Workgroup

Cross-cutting with all other GLWC work (e.g., offshore elements of GL Wind Atlas)

- Examination of regional challenges/opportunities for GL states and provinces
  - Preliminary Research Findings
    - Little policy development in the Great Lakes region and nation
    - Much of the regulatory framework in place is at the federal level (MMS for Outer Continental Shelf)
    - Active discussion in several state wind working groups
- Liaison to USOWC

# Offshore Workgroup – nearly complete tasks

- ✔ List of key issues and characterizing state of knowledge/gaps → research opportunities
- ✔ Recommended offshore data layers for the Great Lakes Wind Atlas
- ✔ Memo to decision makers supporting comp environmental review process for offshore wind siting & permitting



# Offshore Workgroup – in the hopper

- ✔ Drafting recommendations for offshore siting principles/policies/practices
- ✔ Inventory/list of publicly available information on proposed GL offshore wind projects
- ✔ Developing criteria for endorsement of offshore pilot-demonstration projects in GL waters

# Wind Atlas Workgroup

- ✓ GIS-based
- ✓ Same data layers:
  - Natural features (shorelines, rivers, wildlife areas (e.g., migratory bird flyways and bat habitat) , and viewsheds)
  - Urban footprint (roads, cities, transmission infrastructure),
  - GL Wind Facilities
    - Date Online
    - Number of Turbines
    - Generating Capacity
    - Blade Length
    - Height
    - Owner & Contact Information
    - Turbine Info (kind, manufacturer)
  - Economic Data
    - Cost (capital and O&M)
    - Other
- ✓ NREL has much of the base data; Ontario; Michigan; TNC



# Transmission Workgroup

- ✓ Receiving NYPA Funding to facilitate work in this area, including:
  - Inventory on transmission in the region – who is doing what? Lots of players – will reach out to experts
  - Populate a transmission section of our online wind bibliography wiki
  - Data layers to feed into GL Wind Atlas relevant to transmission decision making

# Transmission Workgroup

- ✓ **Basic need for more transmission infrastructure**
  - Eye out for advocacy opportunities
- ✓ **Work in tandem with other groups:**
  - MGA's Transmission Adequacy Workgroup
  - NWCC's Transmission Workgroup
  - Wind on the Wires
  - Independent System Operators (ISOs)
  - Regional Reliability Councils

# Economic Development Workgroup

- ✓ Priority: examine economic benefits and costs of wind: green jobs; moving wind to market, etc.
- ✓ Likely overlay with environmental issues
- ✓ Database of wind ED ideas and approaches
- ✓ Success stories
- ✓ Web-based tools or workshop

# Stakeholders Input

- What are Great Lakes windpower issues of concern to you?
- You can join – it's free!!! (see GLWC web page or email me)
- Become as involved as you wish – join a workgroup

# More Information

[www.glc.org/energy/wind](http://www.glc.org/energy/wind)

- ✦ [vpebbles@glc.org](mailto:vpebbles@glc.org)
- ✦ [jhummer@glc.org](mailto:jhummer@glc.org)
- ✦ [bpearson@glc.org](mailto:bpearson@glc.org)
- ✦ [kdonnelly@glc.org](mailto:kdonnelly@glc.org)



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