

FRESHWATER WIND 2010

Offshore Wind in the Great Lakes Region

July 19-21, 2010 | Cleveland, OH

Freshwater Wind 2010

Building the Successful Business Case for
Offshore Wind Development in the Great Lakes

Post-Summit Great Lakes-Specific Offshore Wind Technology Showcase Agenda

Wednesday, July 21, 2010
9:00 AM - 5:00 PM

This offshore wind technology showcase will feature emerging technologies from companies and organizations working to harness the available energy resources and address the concerns unique to the Great Lakes region. This series of presentations will spotlight newly developed and cutting edge technology developments in turbines, foundations, vessels, and condition monitoring.

This technology showcase allows attendees to interact directly with representatives from these leading companies and academic institutions.

8:00 - 9:00 AM
Breakfast and Registration

Welcoming Remarks by Showcase Chair
Charles G. Carter, *Partner*, Foley & Lardner LLP

9:00 - 10:30 AM

Part I: Turbine Technologies

The unique wind direction, speed and icing conditions of the Great Lakes region require a uniquely designed wind turbine. This session will examine the advanced designs that specifically meet the challenges of this new offshore environment.

Robert Kozar, *Interim Director of Research Development*, University of Toledo
Ole Olesen, *Technical Project Manager*, Vestas Offshore
Eric Thompson, *Regional Account Manager*, Nordic Windpower
Dr. Larry A. Viterna, *Technical Director*, CWRU Great Lakes Energy Institute

10:30 - 11:00 AM
Networking break

11:00 AM - 12:30 PM

Part II: Foundation Technologies

Current foundation technology suggests the maximum practical water depth for the deployment of offshore wind turbines is roughly 150 feet. Yet, at this depth, extreme icing must be taken into consideration. Foundational designs which reduce ice loading, some modeled after existing designs in bridge construction, will be examined.

Des FitzGerald, *Vice President, Business Development*, Principle Power

Dr. David Zeng, *Civil Engineer, Wind Foundation Center*, CWRU Great Lakes Energy Institute

12:30 - 2:00 PM

Group luncheon

2:00 - 3:00 PM

Part III: Vessel Technologies

Since jack up barges are logistically barred from the Great Lakes, uniquely-designed vessels must be built. A unique hybrid of technologies found in existing construction and O&M vessels must allow safe passage in shallow waters, locks, and extreme weather conditions. This series of presentations will discuss the latest vessel technologies created to meet the challenges of the Great Lakes region.

3:00 - 3:15 PM

Networking break

3:15 - 4:15 PM

Part IV: Other Technologies

This session will cover all other technologies related to offshore wind in the Great Lakes, including condition monitoring (used to measure wind speeds, water depth, wave height, and ice accumulation).

Iwan Alexander, *Chair of Mechanical and Aerospace Engineering*, Case School of Engineering, Case Western Reserve University

Servicing Offshore Turbines

This session will address the additional safety training requirements as well as technological considerations in the operation and maintenance of off shore turbines.

Thomas Sutton, *Instructional Manager*, Kalamazoo Valley Community College, Wind Turbine Technician Academy

4:15 - 5:00 PM

Part V: Offshore Wind Assessment

Lake Michigan Offshore Wind Assessment Study

The Lake Michigan Offshore Wind Assessment Study is a partnership between Grand Valley State University's Michigan Alternative and Renewable Energy Center (MAREC) and

University of Michigan's Michigan Memorial Phoenix Energy Institute. The project is a first ever attempt to study offshore wind conditions and conduct related research on a year-around basis on a research platform in the Great Lakes. This session will provide an overview of the project, critical issues encountered to date, and will examine in detail the process underway to move the project toward implementation.

T. Arnold (Arn) Boezaart, *Director, Michigan Alternative and Renewable Energy Center (MAREC), Grand Valley State University*

Mining the Data for Lake Erie's Annual Wind Energy Output

Carole Womeldorf, Ph.D., *Director, Wind Energy Assessment and Visualization (WEAV) Laboratory, Ohio University*

Remote Sensing for Avian Interaction Assessment

Peter Gorsevski, *Associate Professor of Geology, Bowling Green State University*

5:00 Technology Showcase Adjourns