

Transmission Planning and Interconnection for Offshore Wind

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Team Lead

Grid Integration

Wind and Water Technologies Office

U.S. Department of Energy

Agenda

- Moderator:
 - **Charlton Clark**, U.S. Department of Energy
- Presentations by:
 - **John Daniel**, Executive Consultant, ABB, “*An Overview of NOWEGIS Results*”
 - **Kenneth Loparo**, Case Western Reserve University, “*Great Lakes Offshore Wind: Utility and Regional Interconnection Study*”
 - **Willett Kempton**, University of Delaware, “*Transmission and Integration into PJM*”
 - **Robert Burner**, Duke Energy, “*Carolina Offshore Wind Integration Study*”
- Question & Answer Period
 - To ask a question:
 - Click Q&A at the top of the Live Meeting Window
 - Type your question in the Q&A box
 - Click “Ask” to send question

Webinar recording and presentations posted on wind.energy.gov/windexchange

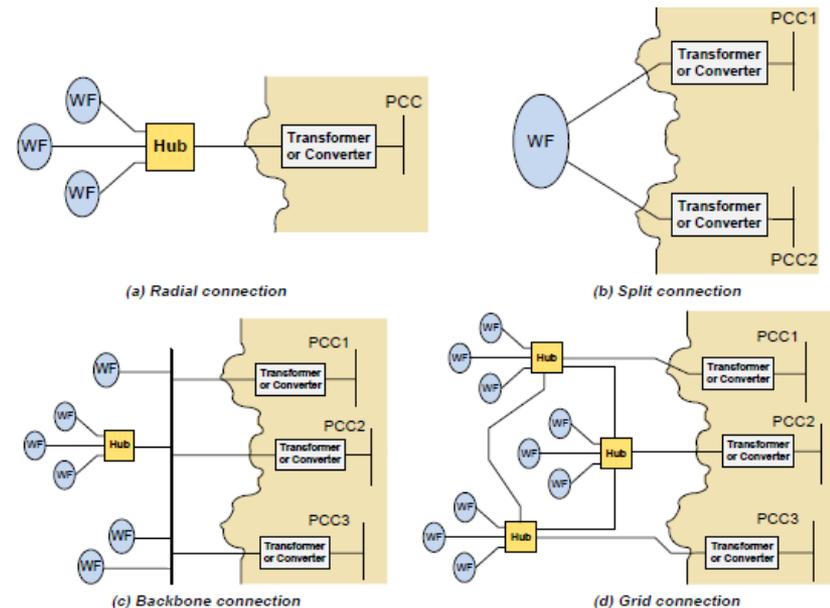


Figure ES-10. Offshore wind farm delivery system options

Upcoming WINDEXchange Webinars

Upcoming WINDEXchange Webinars

The third Wednesday of each month at **3:00 pm Eastern**

- December 17, 2014: Small and Distributed Wind Turbine Update
- January 21, 2015: Wind Turbine Recycling and Repowering
- February 18, 2015: National Development Siting Considerations
(Tentative)

Offshore Wind Webinar Series

- January 15, 2015: Design Conditions for the Hurricane Metocean Environment

U.S. Offshore Wind: Removing Market Barriers

As part of the National Offshore Wind Strategy announced by DOE and DOI in 2011 to promote and accelerate responsible commercial offshore wind development in the U.S, the DOE Wind and Water Power Program issued the “U.S. Offshore Wind: Removing Market Barriers Funding Opportunity Announcement (FOA)”.

➤ To realize these benefits, key barriers to the development and deployment of offshore wind technology must be overcome and were addressed by the topic areas:

1. Offshore Wind Market and Economic Analysis
2. Environmental Risk Reduction
3. Manufacturing and Supply Chain Development
- 4. Transmission Planning and Interconnection Studies**
5. Optimized Infrastructure and Operations
6. Resource Characterization and Design Conditions
7. Impact on Electronic Equipment in the Marine Environment

U.S. Offshore Wind: Removing Market Barriers

Topic Area 4: Transmission Planning and Interconnection Studies

Will provide long-range planning information to be used by interconnect-wide transmission planning collaborative and individual utilities in meeting offshore wind energy integration needs and technical challenges.

Subtopic 4.1: National Offshore Wind Energy Grid Interconnection Study (NOWEGIS)

Provide baseline and critical technical and economic viability information for the benefit of utility planners, system operators and other decision makers seeking to understand the electric power grid implications of offshore wind energy development.

➤ ***National Offshore Wind Energy Grid Interconnection Study*** (John Daniel, ABB)

Subtopic 4.2: Utility Interconnection and Integration Case Studies

Case studies to address technical questions and planning needs related to the potential integration of large-scale offshore wind development into the service areas of the utilities.

➤ ***Great Lakes Offshore Wind: Utility and Regional Integration Study*** (Kenneth Loparo, Case Western University)

➤ ***Carolinas Offshore Wind Integration Case Study*** (Willet Kempton, University of Delaware)

➤ ***Mid-Atlantic Offshore Wind Interconnection and Transmission*** (Bob Burner, Duke Energy)

Contact Information

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To learn more about the WINDEXchange initiative, please visit our website at: wind.energy.gov/windexchange/

Thank You!