

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Offshore Wind Integration in RTOs/ISOs

Docket No. AD20-18-000

SUPPLEMENTAL NOTICE OF TECHNICAL CONFERENCE

(October 14, 2020)

As first announced in the Notice of Technical Conference issued in this proceeding on June 17, 2020, the Federal Energy Regulatory Commission (Commission) will convene a staff-led technical conference in the above referenced proceeding on Tuesday, October 27, 2020, from 9:00 am to 4:30 pm (ET).<sup>1</sup> The conference will be held virtually and will be webcast. Commissioners may attend and participate. This conference will consider whether and how existing regional transmission organization (RTO) and independent system operator (ISO) interconnection, merchant transmission and transmission planning frameworks can accommodate anticipated growth in offshore wind generation in an efficient or cost-effective manner that safeguards open access transmission principles. The conference also will provide an opportunity for participants to discuss possible changes or improvements to the current regulatory frameworks that may accommodate such growth. Attached to this Supplemental Notice is an agenda for the technical conference, which includes the final conference program and speakers.

We note that discussions at the conference may involve issues raised in proceedings that are currently pending before the Commission. These proceedings include, but are not limited to:

Constellation Mystic Power, LLC v. ISO New England Inc.	Docket Nos. EL20-52-000 and EL20-52-001
Midcontinent Independent System Operator, Inc.	Docket No. ER20-940-002
Midcontinent Independent System Operator, Inc. and Southwest Power Pool, Inc.	Docket No. ER20-943-002
Midcontinent Independent System Operator, Inc.	Docket No. ER20-942-002
Midcontinent Independent System Operator, Inc.	Docket No. ER20-2788-000
New York Independent System Operator Inc.	Docket No. EL20-65-000
PJM Interconnection, L.L.C.	Docket No. ER20-939-001

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<sup>1</sup> 18 CFR 2.1(a)(1)(xi) (2020).

PJM Interconnection, L.L.C.. and Midcontinent Independent System Operator, Inc.	Docket No. ER20-944-002
PJM Interconnection, L.L.C.	Docket No. ER20-2308-000
Southwest Power Pool, Inc.	Docket No. ER20-945-001
Vineyard Wind LLC	Docket No. ER19-570-000

There is no fee for attendance, and the conference is open for the public to attend via webcast. Information on this technical conference, including a link to the webcast, will be posted on the conference's event page on the Commission's website (<https://www.ferc.gov/news-events/events/technical-conference-regarding-offshore-wind-integration-rto-sis-docket-no-ad20>) prior to the event. The conference will be transcribed. Transcripts of the conference will be available for a fee from Ace-Federal Reporters, Inc. (202-347-3700). For more information about this technical conference, please contact:

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Kimberly D. Bose,  
Secretary.

# Staff-Led Technical Conference on Offshore Wind Integration in RTOs/ISOs

**Docket No. AD20-18-000**

**October 27, 2020**

## **Agenda and Speakers**

**9:00 am – 9:15 am:**      **Welcome and Opening Remarks**

**9:15 am – 10:45 am:**      **Panel 1: Background on the U.S. Offshore Wind Industry in RTO/ISO Markets**

*Judy Chang, Undersecretary of Energy, State of Massachusetts, Massachusetts Executive Office of Energy and Environmental Affairs*

*Carrie Cullen Hitt, Executive Director, National Offshore Wind Research and Development Consortium*

*Johannes Pfeifenberger, Principal, The Brattle Group*

*Casey Reeves, Project Coordinator, U.S. Department of Interior, Bureau of Ocean Energy Management*

*Gabe Tabak, Counsel, American Wind Energy Association*

This panel will provide an overview of factors driving interest in the development and integration of offshore wind generation in the RTO/ISO regions, and will outline potential models for grid integration to meet anticipated growth in offshore wind generation. The panel will include a discussion of the following topics and questions:

1. What factors are driving interest in the development and integration of offshore wind generation in the RTO/ISO regions?
2. What is the status of state policy targets regarding the procurement of offshore wind generation? How do state procurement processes for offshore wind generation account for Commission rules and RTO/ISO processes for interconnection, merchant transmission and transmission planning? Are there any state-level regulatory challenges surrounding offshore wind generator interconnection, merchant transmission and transmission planning that Commission staff should be aware of?

3. There are likely many challenges and opportunities facing efficient or cost-effective integration of offshore wind generation. Where do interconnection, merchant transmission and transmission planning rank among these?
4. What are the various conceptual models being considered in the short and long terms for the interconnection of, and transmission for, offshore wind generation? What are the major challenges and opportunities associated with these various conceptual models, and which of these may be viable paths forward to developing sufficient transmission infrastructure in RTOs/ISOs to accommodate anticipated growth in offshore wind generation? Are these various conceptual models consistent with existing Commission regulatory frameworks? If not, what are the impediments?
5. What is the current procedure for obtaining offshore wind leases from the Bureau of Ocean Energy Management (BOEM), and how does the wind leasing process influence interconnection and transmission development needs? Is BOEM considering any changes to that process going forward? How do BOEM's processes interact with the Commission's regulatory frameworks or RTO/ISO processes for interconnection, merchant transmission and transmission planning? Do the Commission's regulatory frameworks and/or RTO/ISO processes present any impediments in these areas? If so, what are the impediments?
6. What is the current state of development of various transmission technologies related to offshore wind generation, including AC and DC technologies?
7. How might innovations in offshore wind generation impact the amount of generation additions expected in the future? Similarly, how might innovations in transmission technologies impact RTO/ISO approaches to integrating anticipated offshore wind generation?

**10:45 am – 11:00 am:**      **Break**

**11:00 am – 1:00 pm:**      **Panel 2: Transmission Planning and Coordination for Integration of Offshore Wind Generation**

*Robert Ethier, Director, System Planning, ISO-New England*

*Larry Gasteiger, Executive Director, WIRES*

*Sebastian Libonatti, Vice President, Business Development, Avangrid Networks*

*Anne Marie McShea, Head of Offshore Wind Business Development: New York – MidAtlantic Region, OW Ocean Winds*

*Stuart Nachmias, President and CEO, Con Edison Transmission, Inc.*

*Zachary Smith, Vice President, System and Resource Planning, New York Independent System Operator*

*Robert Snook, Assistant Attorney General, Connecticut Office of the Attorney General*

This panel will explore whether and how existing transmission planning processes consider onshore and offshore transmission projects to integrate anticipated generation resources, whether these transmission projects should be considered through another mechanism, and whether the Order No. 1000 interregional coordination provisions facilitate development of transmission projects to integrate remote generation that can potentially serve multiple RTOs/ISOs. The panel will include a discussion of the following topics and questions:

1. Do existing RTO/ISO transmission planning and cost allocation processes—including public policy planning requirements, interregional coordination, and other approaches—accommodate the anticipated need for transmission to integrate offshore wind generation? If not, why not? Are there existing impediments? If so, what are they? How does the answer differ, if at all, in the short term (e.g., by 2030) and long term (e.g., after 2030)?
2. Staff is aware of various transmission development options for integrating offshore wind generation. Among others, these include: (1) the conventional approach in which Interconnection Customer Interconnection Facilities and Network Upgrades are developed in tandem with new generator interconnection requests, and either sized to accommodate a single generation facility or sized to maximize the export capability on a radial line given the anticipated development of additional generation in the same area; and (2) a “transmission first” approach in which large-scale transmission facilities, including an extension of the transmission system and/or expansion of capacity within existing facilities, are constructed onshore and/or offshore for anticipated generation in order to realize economies of scale. The Commission’s regulatory frameworks, except perhaps the merchant transmission framework, do not include a “transmission first” approach. Do the Commission’s regulatory frameworks and/or RTO/ISO processes present any impediments to these options? If so, what are the impediments? What opportunities or potential efficiencies, if any, do these or other approaches offer?

3. Should “transmission first” facilities be considered through a dedicated planning process designed for offshore wind generation? If so, how would that process work and relate to existing interconnection, merchant transmission and transmission planning processes? Are there any impediments or advantages/disadvantages to using a dedicated process?
4. When considering proposed transmission projects to integrate anticipated growth in offshore wind generation pursuant to RTO/ISO transmission planning and cost allocation processes, how would the benefits be considered? Are potential co-benefits, such as improved reliability or greater capacity to integrate other resources, of the proposed transmission projects, considered? If not, why not? What are the impediments to such consideration?

**1:00 pm – 2:00 pm:**            **Lunch**

**2:00 pm – 3:30 pm:**            **Panel 3: Interconnection of Offshore Wind via Generator and Merchant Transmission Interconnection Processes**

*Jessica Lau, Senior Technical Project Manager, Grid Systems, National Renewable Energy Laboratory*

*Alan McBride, Director, Transmission Services and Resource Qualification, ISO-NE*

*Theodore Paradise, Senior Vice President, Transmission Strategy & Counsel, Anbaric Development Partners, LLC*

*Kenneth Seiler, Vice President—Planning, PJM Interconnection*

*Abraham Silverman, General Counsel, New Jersey Board of Public Utilities*

*Jon Wellinghoff, CEO, Grid Policy, Inc.*

*Eric Wilkinson, Energy Policy Analyst, North America, Orsted*

This panel will explore whether and how existing RTO/ISO generator interconnection and transmission interconnection frameworks could accommodate anticipated growth in offshore wind generation in the short and long terms and, if not, consider the nature of any impediments. The panel will include a discussion of the following topics and questions:

1. To what extent do existing RTO/ISO merchant transmission rules accommodate a “transmission first” approach for the development of onshore and/or offshore transmission facilities that may be needed to integrate offshore wind generation?
2. What are the potential advantages or disadvantages of using a merchant transmission approach—in which the developer assumes all risks associated with the transmission project and charges negotiated transmission rates—to develop transmission for anticipated offshore wind generation? How do these potential advantages or disadvantages compare to those of the conventional interconnection, merchant transmission and/or transmission planning? Is one approach more likely to lead to integrated offshore wind generation development?
3. Are there any challenges associated with using the merchant transmission model where subscribing generation has not yet been identified? What types of injection rights may be appropriate for merchant transmission projects that have not yet identified all interconnecting offshore wind generation?
4. If RTO/ISO merchant transmission frameworks were to be used, what milestones currently exist or should be established if such a framework were to apply to transmission facilities for offshore wind generation? At what point in the merchant transmission interconnection process should an offshore transmission project be required to demonstrate that it has contracted with offshore wind generation?
5. What steps must an offshore or onshore merchant transmission developer complete to meet site control requirements? Does a merchant transmission developer need full site control of onshore connections as well as the offshore lease area? Are the existing merchant transmission rules pertaining to partial vs. full site control creating any impediments for offshore wind generation? If so, what are the impediments? Do the requirements for site control in RTO/ISO processes for generator interconnection and merchant transmission interconnection differ? If so, how? If so, does that difference create impediments for offshore wind generation?
6. Should the current criteria for granting negotiated rate authority to merchant transmission developers be adjusted to consider potential market power concerns that may emerge from unique attributes of offshore wind generation (e.g., a limited number of points of interconnection)?
7. When merchant transmission developers select and interconnect offshore wind generation, what factors do they consider, and which are most important (e.g., available landing points, existing interconnection infrastructure, existing system capacity for injections, etc.)? What are the benefits of being a first mover with regards to merchant transmission interconnection? Are there any impediments

under the merchant transmission framework to the development of offshore wind generation? If so, what are the impediments? What are the best ways to reduce or eliminate the impediments?

8. Are existing dynamic modeling data requirements adequate for increased penetration of inverter-based wind generation and offshore transmission projects, under either conventional transmission planning processes or merchant transmission frameworks? Are there specific improvements that would have to be made to data requirements or transmission planning assumptions regarding dynamic modeling to accommodate a “transmission first” approach?

**3:30 pm – 3:45 pm:**            **Break**

**3:45 pm – 4:45 pm:**            **Panel 4: Alternative Models for Offshore Wind Transmission**

*Jeff Billinton, Director, Transmission Infrastructure Planning, California ISO*

*James Cotter, General Manager, American Offshore Wind, Shell New Energies*

*Beth Garza, Senior Fellow, Electricity Policy, R Street Institute*

*Michael Goggin, Business Network for Offshore Wind and Vice President, Grid Strategies, LLC*

*Kim Hanemann, SVP & Chief Operating Officer, Public Service Electric & Gas Company*

*Jan Papsch: Team Lead Electricity, European Commission, Directorate General for Energy*

This panel will explore potential alternative models for building transmission that may be needed to accommodate anticipated growth in offshore wind generation. The panel will include a discussion of the following topics and questions:

1. In an ideal world, what would a model for transmission development that could accommodate anticipated growth in offshore wind generation look like? Could this be achieved under existing RTO/ISO approaches? If not, what are the impediments?



2. Are there examples of existing interconnection, merchant transmission, and/or transmission planning processes for accessing remote onshore generation resources that could be adapted to the offshore wind context? If so, how?
3. What reforms would you recommend that the Commission consider pursuing to facilitate the efficient or cost-effective integration of anticipated offshore wind generation in RTOs/ISOs, including potential modifications of the existing interconnection, merchant transmission, and/or transmission planning processes, or other potential changes?
4. Are there existing or anticipated state legislative efforts related to transmission development for offshore wind generation? Are these efforts consistent with existing RTO/ISO tariffs and the Commission's existing regulatory frameworks?
5. Which aspects of the interconnection, merchant transmission, and/or transmission planning and cost allocation processes related to offshore wind generation used in European markets could be adapted to or inform the U.S. framework?

**4:45 pm – 5:00 pm:**

**Closing Remarks**