State Role in Offshore Wind & State Agreement Approach

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*The perspectives in this presentation are solely the author’s, and do not represent the views of New Jersey, NJBPU, or NJBPU Staff
Perspectives from State Regulatory Staff

• The Board of Public Utilities is charged with the regulation of public utilities and their facilities.
  • Other states have Public Service Commissions that share generally the same responsibilities

• In New Jersey, the Board is both the State Energy Office and the Public Utility Commission.
  • Shared Policy and Adjudicatory role – The Board developed the NJ 2019 Energy Master Plan
  • Other States may separate these functions

• Functions of the Board:
  • Rate Cases
  • Division of Clean Energy
    • Offshore Wind
  • Rule-Makings
  • Legislative Affairs
  • Serves as the State Energy Policy Office, developing energy policy documents such as the Energy Master Plan, Offshore Wind Strategic Plan, Investigation of Resource Adequacy Alternatives and others.
  • Federal and Regional Interface
PJM Regional Transmission Expansion Plan ("RTEP")

• Transmission Planning is one of key functions of the Regional Transmission Organization, PJM.
• Transmission Planning is conducted through the RTEP.
  • Reliability Violations, PJM and Transmission Owner
  • Supplemental Projects
  • FERC requires the RTEP to be "transparent."
  • Costs are recovered from customers, but customers are not required to agree to any solution.

• Today’s RTEP is limited to solving Reliability Violations
  • Currently, Public Policy assumptions are not considered in the RTEP.

• State Agreement Approach
  • States can propose Public Policy considerations (either “projects” or “requirements”) that PJM can solve through its RTEP.
  • A State or states have the right to agree to any particular project, and in exchange, must fund the cost of the project.
New Jersey OSW Policy Goals

• New Jersey has a goal of 7,500 MW of offshore wind before 2035
  • Executive Order 92

• Brattle spoke to the last webinar about the potential benefits of an optimally planned shared transmission approach to Offshore Wind.

• New Jersey Legislation also found potential benefits of shared approach to transmission & authorizes ‘transmission first’ approach:
  • Allows approval of an “open access offshore wind transmission facility … located either in the Atlantic Ocean or onshore, used to facilitate the collection of offshore wind energy or its delivery to the electric transmission system in this State.” N.J.S.A. 48:3-51(e)
  • See also Energy Master Plan Goal 2.2.1, NJ OSW Strategic Plan, and November, 2019 BPU Offshore Wind technical conference.
PJM State Agreement Approach (“SAA”) Collaboration

• New Jersey is the first state to take advantage of the PJM SAA process.

• On November 18, the Board formally requested that PJM incorporate New Jersey’s offshore wind goals – as Public Policy Requirements – into PJM’s RTEP.

• November 18 Order is not authorization to proceed with any particular project, but to incorporate Public Policy Requirements into an RTEP planning window.
  • Any future authorization stemming out of this SAA window would occur consistent with PJM’s RTEP approval milestones around 4q 2021.

• BPU Staff collaborated with PJM on preliminary analyses
  • Screening Analysis
    • Provided information to rank potential injection locations.
  • Scenario Analysis
    • Comprehensive evaluation of scenarios created resulting from Phase 1 Screening Analysis.
General Scope

Charts are for illustration only and not intended to suggest specific outcomes or designs.

- At the injection locations recommended, the Order contemplates that the Public Policy Requirement include three inter-related components of an open access offshore wind transmission facility.

- Detailed scoping discussions will occur as competitive window preparations continue, as directed by the Nov. 18 Order.

**Green:**
- Option 1 – Upgrade PJM Transmission system to Shore substations
- Black Outline indicates substations targeted for injections as described below.

**Yellow:**
- Option 2 – From Upgraded Shore Substations over Beach crossing to New (wet) collector Stations.

**Blue:**
- Option 3 – Interconnecting collector stations in a “network” or “backbone” to facilitate network delivery of Offshore Wind.
Injection Locations

• Based on PJM and Staff initial analysis, the Board has approved the following injection locations to underlie the SAA window:

  • 900 MW at the Cardiff 230 kV substation in Southern New Jersey;
  • 1,200 MW at the Larrabee 230 kV substation in Central New Jersey;
  • 1,200 MW at the Smithburg 500 kV substation in Central New Jersey; and
  • 3,100 MW at the Deans 500 kV substation in Northern New Jersey

• Developers are invited to “propose particularly cost-effective alternatives that may still meet the State’s immediate policy goals, while deferring less cost-effective elements of the transmission expansion until a future transmission solicitation.” (Order at 8)
Onshore Scope – Option 1

• Upgrade the onshore PJM regional transmission system to accommodate the increased power flows from the offshore wind facilities.

• Under this option, offshore wind developers would continue to be responsible for getting the power from the lease areas to the newly constructed or existing on-shore substations.

• Solutions may include coordinated on-shore “power corridors” that would bring electricity to already-existing high-voltage transmission facilities.
Beach Crossing Scope – Option 2

• This option would involve soliciting bids from transmission developers to permit and construct the beach crossings and connect the (new or existing) on-shore substations to new (wet) offshore collector stations.

• If selected, it would be possible that this option could be selected in addition to Option #1, and offshore wind developers would be responsible for interconnection to the offshore collector platforms.
Offshore Backbone Scope – Option 3

• Connect different collector stations, serving various lease areas, in an effort to network the offshore wind lease areas.

• This option could result in network interties between offshore wind collector stations, potentially improving availability, and could also involve bids that include Options #1 or #2.
Next Steps

• Order directed Staff to continue collaboration with PJM.
• Transmission Study Agreement, Filed at FERC, ER21-689
• Problem Statement for SAA Window, timeline TBD, 1Q 2021
  • Environmental Requirements / Constructability
  • Standardization requirements for future expansion.
  • Cost Cap request.
• Opening of Competitive SAA Window, timeline TBD, 1Q 2021
• Term Sheet.
  • Cost of future use and expansion.
  • Assignment of capacity rights.
  • Transparent price signal for other states seeking to utilize SAA project.
  • Protection of New Jersey against free-riders.
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