UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Offshore Wind Integration in RTOs/ISOs Docket No. AD20-18-000

Opening Statement of Abraham Silverman
on Behalf of the
New Jersey Board of Public Utilities

My name is Abraham Silverman, and I serve as the General Counsel for the New Jersey Board of Public Utilities ("NJBPU"), the lead energy regulatory agency for the State of New Jersey. I want to thank the Chairman and the Commissioners for inviting me to speak at this technical conference on the important topic of how to modernize transmission planning and interconnection processes to support the burgeoning offshore wind industry. New Jersey is positioning itself as a world leader on promoting offshore wind development, with an ambitious schedule of 7,500 MW of offshore wind spinning in the water by 2035, with a series of solicitations every 18-months to 2-years scheduled between now and 2028. In 2019, the State selected its first 1,100 MW project, with a solicitation for an additional 1,200 MW to 2,400 MW currently pending.

The concept of expanding our Nation's transmission system to "reach out and touch" location-constrained sources of clean energy is not a novel one. Such large transmission infrastructure projects have traditionally received bipartisan support, as evidenced by the Competitive Renewable Energy Zone ("CREZ") project in Texas, and the Tehachapi transmission expansion in California. Today, we need a similarly bold vision to connect the wind-rich coastal areas to load centers up and down the East and West Coasts.

New Jersey has spent significant time exploring the benefits and potential drawbacks of an organized transmission solution, including holding a technical conference and receiving

several rounds of comments on the topic.[1] Several stakeholders at the Technical Conference noted that a planned transmission solution could potentially minimize the environmental footprint of bringing power ashore, particularly by coordinating the number of times transmission facilities would need to cross environmentally-sensitive beach and ocean habitats. Stakeholders also noted the benefits of coordinated transmission upgrades in facilitating the on-shore delivery of the power into the PJM system, including the potential for decreased curtailment risk. However, others highlighted the potential risks associated with requiring offshore wind generation resources to depend on third-parties to construct open access transmission facilities and, in particular, the commercial risks to offshore wind generation developers of delays in transmission facility construction that is outside the generator's direct control.

In thinking about the challenge of connecting offshore wind generation facilities to our electric grid, it's useful to think of the task as three related "jigsaw" pieces that have to fit together to facilitate the delivery of offshore wind power to customers in an economically efficient manner, while minimizing the risk of environmental impacts and permitting delays:

a. How to reinforce the on-shore portion of the transmission system to handle large injections over the next 15 years;

b. Whether a coordinated approach to getting power from offshore collector stations onto shore (i.e., the "beach crossing") results in better outcomes than each project constructing its own generator lead lines; and

c. Whether an optional ocean grid that "networks" offshore collector stations and coordinates delivery to shore is part of an optimal solution for consumers.

[1] *See* New Jersey Offshore Wind Transmission Stakeholder Meeting, BPU Docket No. QO19010068 (Nov. 12, 2019).

These three efforts potentially require different finance models and entail markedly different risks and opportunities, particularly as we think about the allocation of commercial risk to transmission developers and offshore wind generation developers.

There are several questions that I spend a lot of time worrying about that have implications for the merchant model for long-term transmission build-outs for offshore wind.

1. **The On-shore Upgrade Issues are At Least as Significant as the "Wet" Portions of the Grid.**

It's worth spending a moment to talk about the need to address the on-shore portion of the jigsaw puzzle. I heard someone say that there is a "perishable opportunity" to reinforce the on-shore portion of the grid; and I certainly agree with that. On-shore upgrades can take years of planning and execution. The consequences of failing to address onshore needs can be highly problematic; and we saw in Europe what happens if a planned transmission solution is not prepared to take the injections from offshore wind facilities.[2]

As we think about the onshore portion of the grid, we have to remember that transmission planning over the last century (at least, in PJM) has generally assumed predominantly West-to-East flows of power. As a consequence, the near-shore transmission grid in New Jersey is typically not as strongly reinforced as more inland areas. Indeed, New Jersey's 500 kV transmission backbone generally runs in a North-South line, about 40 miles inland. The fact is that large portions of the existing grid along the coast are not designed to accommodate injections associated with a large amount of offshore wind and so we need to find a way to efficiently get the power from shore to the backbone of the PJM system.

[2] Germany's initial foray into planned transmission highlights the potential for misalignment of on-shore and off-shore upgrades. The German Transmission System Operator, TenneT GmbH, was responsible for providing the offshore wind developer with an offshore connection to the transmission grid. Technical issues, driven by a misalignment of risks and incentives between the two parties, led to long grid delays and increased costs that were ultimately borne by German ratepayers.

2. Who is the Customer for Offshore Wind Transmission Projects and Will Merchant Funding Models Work?

It remains an open question whether traditional merchant funding models work for offshore wind facilities. Even questions as simple as "who is the transmission customer?" for an offshore wind transmission facility seem to break with the Commission's existing precedent for "merchant" or "participant-funded" projects, as envisioned in the *Final Policy Statement on Allocation of Capacity on New Merchant Transmission Projects and New Cost-Based, Participant-Funded Transmission Projects*, 142 FERC ¶ 61,038 at P 16 (2013) ("Policy Statement").[3]

Offshore wind generation is likely to be built under State-sponsored contracts for the foreseeable future, and there is unlikely to be a large amount of unexpected competition from uncontracted offshore wind farms (or, in the future, other types of hydrokinetic or other ocean-based generation technologies that may also benefit from an ocean grid concept). Thus it is not going to be clear who the transmission customer is going to be at the time a merchant transmission project is proposed.

The Policy Statement, 142 FERC ¶ 61,038 at P 16 (2013), however, is premised on establishing fair and transparent rules for merchant transmission developers to contract with anchor tenants as part of a robust open season. Specifically, it allows developers to enter into negotiated rates and precedent agreements so long as it:

> … select[s] a subset of customers, based on not unduly discriminatory or preferential criteria, and negotiate directly with those customers to reach agreement on the key rates, terms, and conditions for procuring up to the full amount of transmission capacity, when the developer (1) broadly solicits interest in the project from potential customers and (2) demonstrates to the Commission

[3] Among other things, the Policy Statement also requires that merchant projects address: (1) the justness and reasonableness of the rates; (2) the potential for undue discrimination; (3) the potential for undue preference, including affiliate preference; and (4) regional reliability and operational efficiency requirements.

> that the developer has satisfied the solicitation, selection and negotiation process[.]

Remember, leading offshore wind states like New Jersey typically have phased procurements taking place every 18-months to 2 years between now and 2030, with the final turbines not scheduled to start spinning until 2035. So it is effectively impossible to "broadly solicit interest in the project from potential customers" or conduct a meaningful open season. *Id.* Nor would an open season capture potential interest from other not-yet commercialized ocean-based energy technologies. These long lead-times mean either that the transmission developer will need to put extensive capital into the merchant transmission project without an "anchor tenant" or long-term offtake agreement in place (with a credit-worthy counter-party), which entails significant commercial risk; or we need a new paradigm.

I suggest that we may need a new definition of "hybrid merchant" investment that moves past the Commission's existing policies, while encouraging business models that include "merchant" features such as absorbing cost overruns, building facilities on a fixed-fee basis, taking commercial risk associated with delivering facilities on schedule, or otherwise deviating from the traditional cost-of-service transmission model. The Commission's decade-long fight to bring competition to the transmission sector has yielded enormous savings for consumers in the places where competition has been allowed and we should not surrender the benefits of transmission competition in the offshore wind context. Indeed, it's notable that the first phase of the CREZ project was initially budgeted for $4.7 billion, but ran to almost $7 billion by the time it was completed, so there is clearly a role for competition to reduce costs and prevent transfer of risk onto captive consumers.[4]

[4] *See* https://www.texastribune.org/2013/10/14/7-billion-crez-project-nears-finish-aiding-wind-po/; *see also* "Summary of Transmission Project Cost Control Mechanisms in Select U.S. Markets," by Johannes P. Pfeifenberger and Delphine Hou (October 2011), *available at*

Order No. 1000 has already introduced several of these concepts into the transmission planning process when it required that private transmission developers be allowed to compete with incumbent utilities, and many of those concepts may be applicable here as well. Would a better competitive structure have limited those overruns? It's hard to say for sure, but consumers can only benefit if we apply core competitive principles and transfer as much commercial risk from captive ratepayers to investors, and it's certainly too soon to declare the merchant transmission model dead.

3. The Realities of Building Transmission in the Marine Environment Challenge the Existing Open Access Paradigm.

Both environmental and financial considerations generally make it prohibitive to expand an offshore transmission facility once the cable is laid. So there is a strong imperative for transmission developers to do as much of the offshore transmission cable work up-front. With this physical and commercial reality in mind, we need to carefully examine how future parties should be allowed to access available transmission capacity.

ISO and RTO rules must allow a State sponsoring an offshore ocean grid to reserve transmission rights to accommodate future solicitation winners. It would be a mistake to rigidly apply existing Commission precedents applicable to on-shore facilities, which are more capable of being upgraded to accommodate new customers, to transmission projects in the marine environment. Instead, we must build in reasonable protections against the risk that future generation developers will seek access to facilities paid for, and developed to benefit the consumers of, a given state or states, without bearing their fair share of both capital and going-forward costs.

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https://brattlefiles.blob.core.windows.net/files/6222_summary_of_transmission_project_cost_control_mechanisms_in_selected_us_power_markets_pfeifenberger_hou_oct_2011.pdf.

It is not all clear that current merchant transmission negotiated rate agreements give potential funders of an offshore grid the necessary assurances that the transmission capacity they are funding would remain available for their own projects. Thus, we need a clear-eyed approach towards minimizing the risk to a State's consumers of any coordinated transmission solution, with clear, up front rules about the availability of offshore wind facilities that develop outside of a State process. Questions we need to address include:

- What happens to State-funded transmission capacity if a contracted wind farm is delayed?
- What happens if another developer outside of the State process seeks to interconnect? Can they be required to share in the capital costs and going-forward costs of constructing the line, to ensure that ratepayers are not left holding the bag?
- What happens if another State or RTO/ISO seeks to interconnect with the offshore facilities voluntarily funded by one State on behalf of its consumers?
- How do we maximize sharing of transmission and interconnection facilities where feasible to minimize the environmental and permitting risk, while carefully ensuring that financial rights of existing projects are not damaged?

There are no easy answers to these questions, but clearly the unique challenges of building offshore potentially require longer-term reservations and rights that are typically available to open access facilities. However, evolution of open access principles to meet the needs of this unique environment is not an undesirable quality, since, without appropriate assurances, many states may be reluctant to embrace the benefits of a coordinated transmission approach at all.

4. Equitable Allocation of Interconnection Rights.

The current interconnection queue system is extremely fragmented and not at all well-suited to achieving large public policy objectives. In particular, the ISO/RTO administered queueing processes have an extremely difficult time addressing mutually-exclusive outcomes. For example, in the first solicitation, New Jersey had three separate developers vying for an

award. Each developer put in its own queue reservations into the PJM system (as well as multiple potential purchasers of Capacity Injection Rights, or CIRs, from existing power plants looking to retire, which in many cases represents the least-cost, least-risk solution to interconnection.) Thus, if you look in the PJM queue, there may be three-times as many interconnection service requests as there are potential awardees.

One thing that would **not** work is for merchant transmission developers to simply add to the chaos by putting in yet another set of redundant interconnection requests. Instead, the Commission should direct ISOs and RTOs to work with their State colleagues to develop a means of recognizing a particular transmission developer or reserving interconnection rights for projects that eventually win a state-authorized solicitation. For example, it may be desirable to set up a queuing process where projects could all participate in the interconnection queue on a mutually-exclusive basis, recognizing that only some of those projects are likely to move forward. Such a process could also incorporate a transparent process for allowing retiring generation facilities to sell their CIRs to compete against pure transmission solutions. This type of multi-channel competition could, in the right circumstances, provide consumers with a less expensive/risky alternative to going through the traditional interconnection queue.

As I noted above, one entity that could oversee such a process is the appropriate state regulator, potentially through the Order No. 1000 process discussed on another panel.

This concludes my testimony. Thank you for the opportunity to participate in this proceeding.