conEdison Transmission
a conEdison, inc. company

October 31, 2022

VIA ELECTRONIC MAIL:
PublicPolicyPlanningMailbox@nyiso.com

Mr. Zachary G. Smith
Vice President of System & Resource
Planning New York Independent System
Operator, Inc. 10 Krey Boulevard
Rensselaer, New York 12144

RE: Con Edison Transmission, Inc.'s Response to the New York Independent System Operator, Inc.'s Request for Proposed Transmission Needs Driven by Public Policy Requirements for the 2022-2023 Transmission Planning Cycle

Dear Mr. Smith:

On August 31, 2022, the New York Independent System Operator ("NYISO") issued a request for proposals of transmission needs driven by Public Policy Requirements for which the New York State Public Service Commission ("PSC") should consider declaring a Public Policy Transmission Need ("PPTN"). Con Edison Transmission, Inc. ("CET") submits these comments in response to the solicitation. CET requests that the NYISO forward its suggestions to the New York Public Service Commission ("Commission"), pursuant to its Public Policy Planning Process, for its consideration. Our proposed Public Policy Transmission Need ("PPTN"), outlined below, is that *coordinated offshore wind transmission grid*, driven by the State's ambitious Climate Leadership and Community Protection Act ("CLCPA") requirements, be identified as a PPTN and pursued for development.

I. Overview

CET recommends that the Commission declare a PPTN to build a coordinated HVDC-to-AC transmission grid that facilitates the development of offshore wind generation to

meet the State's offshore wind goals. The grid would encompass (1) offshore collector stations where offshore wind would interconnect, (2) offshore converter stations to convert to DC power, (3) DC cables and corridors that make landfall, (4) onshore converter stations where the power is converted back to AC electricity, and (5) underground cables to connect to the local grid. This would allow multiple offshore wind generation projects to interconnect with more ease and lower risk and facilitate the delivery of clean energy throughout the interconnected bulk power grid. Consideration should be given to development of offshore collector stations that may accommodate multiple lease areas (with a particular focus on the NY Bight), development of a meshed offshore network, and development of robust, multi-cable transmission corridors. This approach is necessary to develop a reliable grid, to make use of the limited, physically constrained routes and real estate available, to mitigate the impact to the environment and community, and to provide cost effective transmission solutions that can be recovered over the longer useful life of the assets. Procurement of transmission resources should be done in coordination with local upgrades to develop the injection points into the local high voltage grid (e.g., Brooklyn Clean Energy Hub), as well as associated transmission projects to improve the deliverability of offshore wind across NY State (e.g., LIPA PPTN solution). The development of the offshore transmission grid, including coordinated transmission corridors and an offshore meshed grid, is important to catalyze the remaining development to meet the State's 9 GW goal, and especially critical if the State is considering expanding the offshore wind goal above 9 GW[1].

[1] "Wind, water, and sunlight will power most of New York's economy in 2050 in all pathways ... with offshore wind of around 20 gigawatts (GW),.." New York State Climate Action Council Draft Scoping Plan, p. 75. Issued December 30, 2021.

II. Discussion

a. Public Policy Requirement driven by CLCPA Offshore Wind Targets

New York State's Offshore Wind goal for 9 GW by 2035, as codified in the CLCPA, is the most ambitious in the nation. As described in NYSERDA's Power Grid Study, it is expected that at least 6 GW of offshore wind is required to interconnect to Zone J, given the higher customer demand and stronger high voltage system in that area. This volume is likely to grow as New York State's Offshore Wind targets increase to meet the CLCPA 100% renewable by 2040 requirement.

Given the unprecedented volume of new power flowing into Zone J, continuing to interconnect offshore wind via uncoordinated generation radial lead lines is not optimal from a siting or community impact perspective, nor is it beneficial for reliable operation of the overall electricity grid. As more projects interconnect, fewer practicable routes will be available and transmission costs will rapidly increase. Project developers will have to price prohibitively high interconnection costs, as well as including the risk of siting, routing, and curtailment, into their OREC bids.

When developed in isolation, individual generator lead lines do not maximize the use of the physical space available for transmission cables under the region's bridges, through its waterways, and in its substations. Rather, they solely prioritize moving the amount of energy bid in each individual generator's RFP response. In addition, a networked offshore power grid could provide additional delivery flexibility that the NYISO will need to balance system loads and provide reliable electricity supplies. Shared offshore transmission is needed for New York State to meet its offshore wind and other renewable energy goals, cost-effectively, while also

maintaining or improving reliability and resiliency.

b. Evaluation Criteria

In addition to the evaluation criteria currently defined in the NYISO tariff, CET proposes that the following criteria apply to the evaluation of projects proposed to satisfy the offshore transmission corridor need described in these comments.

- Optimal use of limited routes for transmission siting and mitigation of impact to the surrounding community and environment,
- Optimal use of limited real estate for HVDC converter stations,
- Expandability to allow for the phasing of offshore transmission development to meet continuing future needs,
- Complementary and cost-effective coordination with local transmission upgrades and expansions of substations to host multiple interconnections (e.g., Brooklyn Clean Energy Hub)
- Flexible, cost-effective siting of offshore transmission mesh-network connections to improve reliability and resiliency of offshore generation,
- Optimal siting of offshore converter stations to minimize interconnection cost of multiple offshore wind generation projects from multiple New York Bight development areas.

c. The Need for Coordinated Offshore Transmission Grid Solutions

The Commission should declare a Public Policy Need for underwater / underground transmission line development to serve more than one offshore generation project along a single,

or multiple, corridors for delivery to Zone J. This would be inclusive of the offshore collector station, offshore converter station, offshore HVDC cables, landfall, onshore HVDC cables, onshore converter station, and HVAC lines to interconnect into local high voltage injection points or hubs (e.g., Brooklyn Clean Energy Hub). CET recommends prioritizing a transmission corridor procurement from the NY Bight offshore wind lease areas into Zone J for interconnection to the proposed Brooklyn Clean Energy Hub and potentially other key injection points. This approach would have the following benefits:

- ***Efficient build-out of transmission to support multiple projects and reduce environmental impact and disruption***

  The footprint of a multi-cable corridor would be reduced compared to the use of the same underwater space for radial interconnection lines from many offshore wind facilities and strategically located to reduce environmental impact and maximize the use of these constrained corridors. Construction along this corridor would be done once, as opposed to multiple times, which would further reduce community disruption and impact.

- ***Lower annual costs to customers since transmission can be recovered over longer time-period, with longer useful life***

  The cost of transmission assets can be recovered over a longer life, typically 40 or 50 years, under regulated rate structures as opposed to merchant models where cost recovery spans a shorter tenure, such as 20 or 30 years. The regulated transmission model provides customers with an option to spread the cost over a longer time-period, resulting in annual lower bill impact.

- ***Provide opportunity for environmentally friendly growth with a streamlined siting process***

The siting process for offshore transmission solutions will be resource and time intensive. Conducting this comprehensive process once for a key corridor will facilitate a more efficient permitting process for this aspect of the energy transition. Co-locating multiple cables in a route under a single permitting process will expedite future offshore wind growth.

- ***Facilitate the development of the offshore grid, building on the technical progress made by NYSERDA, NYPSC and NYISO***

  Between the Power Grid Study, various NYISO Studies, this Cable Corridor Assessment, and the current NYSERDA OREC RFP, New York State has never been so technically prepared to take on this transmission challenge. This knowledge and expertise should be deployed now to solicit and select a cost-effective transmission solution among a robust set of offshore transmission developers active on the East Coast.

- ***Tie into local transmission development efforts to facilitate CLCPA, such as Brooklyn Energy Hub***

  NYPSC has taken a big step toward solving a key challenge of interconnecting offshore wind by requesting the Phase 2 project proposal made by Con Edison, the Brooklyn Clean Energy Hub. Approving this strategic local interconnection project, and possibly other future hubs, will provide a foundation for the development of the offshore grid, including robust transmission corridors, to be developed from offshore lease areas to a key injection point on the existing bulk power system, ready for growth of renewable energy. Coordination of local transmission owner efforts (such as the construction of needed new interconnection points for offshore wind) with a shared offshore wind corridor will also substantially reduce the complexity of offshore wind generation

development for individual projects. Under the current process individual projects compete to deliver the least-cost-per-MWh project but have no incentive to reduce *overall* offshore wind program costs. A shared offshore wind transmission corridor effort would simplify offshore wind generation project development parameters, allowing individual projects to focus on the still-considerable challenges associated with constructing massive offshore wind turbines dozens of miles from land, secure in the knowledge that the transmission infrastructure needed to deliver their output to customers will be available.

Conclusion

New York has an opportunity to prioritize coordinated offshore transmission to improve the State's overall cost-efficient build out of offshore wind to meet CLCPA targets. Declaring this Public Policy Transmission Need, and moving forward with a solicitation, will initiate much-needed transmission infrastructure in advance of significant additional offshore wind generation development and will improve resiliency, reliability, and overall cost-effective access to renewables at a more favorable annual customer bill impact.

Dated: October 31, 2022

Respectfully submitted,

CON EDISON TRANSMISSION, INC.

By: */s/ Marie Berninger*

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