

October 2, 2020

VIA ELECTRONIC DELIVERY

Zachary G. Smith
Vice President, System & Resource Planning
New York Independent System Operator
10 Krey Boulevard
Rensselaer, NY 12144
PublicPolicyPlanningMailbox@nyiso.com

RE: Request for Proposed Transmission Needs Being Driven by Public Policy Requirements for the 2020-2021 Transmission Planning Cycle

Dear Mr. Smith:

On August 3, 2020, the New York Independent System Operator (“NYISO”) issued a solicitation of transmission needs driven by Public Policy Requirements for which the NYISO should solicit and evaluate transmission solutions. Con Edison Transmission, Inc. (“CET”) submits these comments in response to the solicitation. CET requests that the NYISO forward to the New York Public Service Commission (“Commission”), pursuant to its Public Policy Planning Process, our proposed Public Policy Transmission Needs (“PPTNs”), outlined below.

CET recommends the following transmission needs, driven by the State’s aggressive Climate Leadership and Community Protection Act (“CLCPA”) requirements, be identified and pursued:

- 1. A need for new transmission to bring renewables from upstate New York into downstate New York**

2. **A need to improve power flow between Zones I, J and K to allow offshore wind to meet customer demand throughout the state.**
3. **A need for a shared offshore wind transmission grid to provide better access to integrate offshore wind from the New York Bight into Zone J and K, providing improved resilience, reliability and cost effectiveness.**

By addressing these needs, New York will position itself to bring much needed renewables into southern New York, and from southern New York to areas further upstate, to reach its aggressive renewable energy goals. Downstate New York continues to lag behind the rest of the State in renewable energy consumption. Addressing these needs can realize the greatest environmental and economic benefit from transmission investment to advance the State's policies. Considering these needs will also allow DPS Staff and NYISO to plan a holistic future that will integrate renewable generation into the region.

PPTN driven by CLCPA Goals

1. *A need for new transmission to bring renewables from upstate New York into downstate New York.*

In 2019, downstate New York represented approximately 60% of the State's overall electricity demand.¹ Due to long-standing transmission constraints, downstate New York continues to be underserved for renewable energy compared to the rest of the state.

Additional transmission connections between upstate and downstate New York are needed if CLCPA goals are to be achieved on time. Moreover, downstate New York has its own capacity and renewable energy requirements that should be considered.

¹ Downstate load is Zones G-K; New York Independent System Operator (April 2020) *Load & Capacity Data Report*. <https://www.nyiso.com/documents/20142/2226333/2020-Gold-Book-Final-Public.pdf/>.

Incremental transmission into downstate New York will benefit the grid overall and allow renewable energy, including wind, solar and dispatchable hydro power, to flow further south, thereby reducing the hours that fossil-fuel generation will need to operate. Bringing renewables into downstate New York is a state and local priority, as evidenced by New York City's Local Law 97, the Sustainable Westchester Initiative, and the State's recently proposed Tier 4 Renewable Energy Credits. In order to be effective, these initiatives require new transmission to be built into the region as expeditiously as possible and set the State on a path to realizing its target of achieving 70% electricity by 2030. Moreover, renewable energy usage in downstate New York will provide the highest economic and environmental benefit to the entire State, including to disadvantaged communities, by reducing fossil-fueled power generation.

Transmission from upstate to downstate New York will reduce constraints over the State's most congested transmission interfaces, further reducing the potential for the curtailment of existing and new upstate renewables. Depending on the technical specifics of the project, it can either bring more electric generating capacity to be counted toward local reliability requirements, or it can reduce those requirements outright.² Additional transmission will also reduce the number of hours that remaining fossil units must run to meet customer energy demand, and could also allow for the possible retirement of older fossil units. It would also reduce electricity costs throughout the state, allowing for more efficient dispatch of the overall system and lowering total energy costs across the state.

² According to the NYISO tariff, if a controllable AC or DC transmission line is developed, the project may either reduce the locational capacity requirement or count as an in-City capacity resource. If an AC project is developed, it would be included in the study to set the locational capacity requirement, likely lowering that requirement.

PPTNs driven by New York's Offshore Wind Goals

New York State's offshore wind target of 9 GW is the most ambitious in the nation. Interconnecting 9 GW of offshore wind into the state while maintaining reliability will require significant changes to a transmission system topology that currently pushes power south – from upstate New York into downstate New York. In the future, power will flow more dynamically both upstate to downstate and downstate to upstate, in response to the intermittent nature of renewable resources.

Potential interconnection points for large-scale offshore projects in Zones J and K are limited, and offshore wind is not the only resource that must connect in this region in order to meet CLCPA goals. Given the unprecedented volume of new power flowing into downstate New York, continuing to interconnect offshore wind via uncoordinated generation lead lines is not sustainable, nor beneficial for reliable operation of the overall electricity grid. As more projects interconnect, fewer practicable interconnection points will be available and transmission costs will rapidly increase. Project developers will have to price prohibitively high interconnection costs, as well as the risk of curtailment, into their OREC bids.

Further, when developed in isolation, individual generator lead lines do not maximize the limited physical space available for transmission cables under the region's bridges, through its waterways, and in its substations. In addition, a networked offshore system could provide additional delivery flexibility that the NYISO and local transmission owner ("TO") operators will need to balance system loads and provide reliable electricity supplies.

Shared offshore transmission is needed for New York State to successfully and cost-effectively meet its offshore wind and other renewables goals, while also maintaining or

improving reliability and resiliency. Together, the Commission in conjunction with local TOs and NYISO are the entities best suited to manage offshore wind transmission development going forward. As grid manager for the State, NYISO should evaluate the multi-billion-dollar transmission investment associated with the successful interconnection of 9 GW of offshore wind. The Commission and NYISO have the expertise and long-term view of the State's bulk transmission system needed to set the framework to develop a transmission grid that meets the state's clean energy and economic growth objectives.

2. *A need to improve power flow between Zones I, J, and K to allow offshore wind to meet customer demands both downstate and further upstate.*

The Commission should seek projects with the ability to improve power flow between Zone K and Zone I and/or Zone J, including subsea solutions. Long Island is well suited to receive offshore wind but does not have sufficient customer demand or transmission backbone to allow that energy to flow through Zone J and further upstate. Such a limitation, if not appropriately planned, will result in offshore wind curtailments as the state progresses toward its 9 GW goal.

Improving power flows between Zones I, J, and K will allow the State to get the most out of its offshore wind investment with improving reliability and support for intermittent resources in the region. This need is further evidenced by Long Island Power Authority's July 30th letter to Chair Rhodes, which states that "there is a need to increase the export

capability of the LIPA-Con Edison interface, which connects Zone K to Zones I and J.”³

3. *A need for a shared offshore wind transmission grid to provide better access to integrate offshore wind from the New York Bight into Zone J and K, providing improved resilience, reliability and cost effectiveness.*

The Commission should declare a public policy transmission need to build an integrated offshore wind transmission grid, and associated infrastructure, to connect offshore wind from the New York Bight into Zones J, K, and I. The proposal should include: infrastructure capable of carrying up to 4 GW of offshore wind;⁴ single passage through the most constrained spots of the entry into Zone J; and the potential for interconnection into multiple points in Zone J. Such development should also consider the needs identified and being developed between downstate Zones (need (2) above) and how offshore connections to Zone K can support exports to the rest of the State.

Following NYSERDA’s 2020 offshore wind procurement, there will likely be limited additional capacity for OREC contracts with New England leaseholders. Most future procurements will be from projects located in the proposed New York Bight leaseholds, as well as the existing New Jersey leaseholds. New York State will be competing with New Jersey for contracts with these developers. Continued bundled generation and transmission procurement will not allow for the large-scale infrastructure that is required for large volumes of offshore wind to access the existing grid from the New York Bight.

³ Shansky, Rick (Senior Vice President of Operations and Oversight, Long Island Power Authority). Letter to: John Rhodes (Chair, New York Public Service Commission). 30 July 2020.

⁴ Individual interconnections should be sized according to the system’s ability to accommodate the injection and impacts to reserve requirements.

An offshore wind transmission grid interconnected with the State's overall grid can resolve the challenges of entering New York Harbor and interconnecting into the state's grid for future offshore wind projects. Currently, interconnecting in New Jersey is comparatively easy. Projects can directly interconnect to the grid along the coast, and real estate costs are comparatively low. Interconnecting in New York is complex in part due to the technical, permitting, and construction challenges associated with routing cables from the Bight into potential interconnection points in New York.

Moreover, if designed properly, shared offshore transmission would allow energy to flow to a variety of interconnection points, which would provide significant flexibility to operators to move variable renewable energy supplies from production to consuming areas with ease. Doing so will allow better reliability and resilience of the grid and would accommodate planned and unexpected outages, production limitations, and other events.

Shared offshore transmission will be more cost effective than a continued series of non-coordinated radial interconnections. It will maximize the use of limited infrastructure and real estate, for both cable routing and onshore equipment. Many substations in Zone J are limited in nearby real estate, physical space within substations, and electric capacity. When an open bay in a substation is used to interconnect less than the maximum megawatt potential, the ability to interconnect additional volumes without expanding the substation may be lost. Real estate for converter stations and other onshore equipment near potential interconnection points is expensive and difficult to acquire. Like available space in substations, available real estate should be used to interconnect the maximum possible volume of offshore wind. Shared offshore transmission will allow for the maximization of these limited resources.

An integrated offshore transmission grid will also give developers the opportunity to use technology and construction techniques that are not practical for individual radial connections. For example: bi-pole high-voltage direct-current systems can provide twice the transmission capacity as monopole connections with similar right-of-way and space requirements, reduced losses, and at a lower cost; tunnels can maximize the number of cables that can pass through extreme pinch points; and shared transmission may allow for multiple projects to use the same offshore platforms.

NYSERDA has pursued radial lines in its initial procurements with good reason, including to minimize the risk to offshore wind developers that offshore transmission would not be available in time. The state should act now to develop an offshore wind grid, so that its development will be underway during NYSERDA's next offshore wind procurement. With the certainty of an offshore grid being in place, timing risk to generators would be reduced, improving future procurement processes. Leaseholders would be able to offer competitive bids for offshore wind generation into New York without concerns over interconnection location and associated cost. Instead, generators would be able to bid to a platform where projects can interconnect to the offshore transmission grid. This would greatly reduce the risk associated with siting, permitting, and constructing transmission, thereby making New York a more attractive market for offshore wind generators. This will increase the number and quality of bids, decrease OREC costs, and allow NYSERDA to focus its evaluation on procuring the most competitive generation solutions available.

Conclusion

New York has the opportunity to use the integration of new renewables to improve the State's overall transmission grid, reducing long-standing system constraints between upstate and downstate and better integrating Long Island with the rest of the State. New York has access to a range of varied, potentially complementary, renewable resources. Addressing the Public Policy Transmission Needs identified above will allow the State to integrate these resources while improving resiliency, reliability, and overall access to renewables.

Dated: October 2, 2020

Respectfully submitted,

CON EDISON TRANSMISSION, INC.

By: /s/ Timothy Frost

Timothy Frost
Vice President, Electric Transmission
Con Edison Transmission, Inc.
4 Irving Place
New York, New York 10003
Tel.: 212-460-6918
Email: FrostT@conedtransmission.com