State of New York
Public Service Commission

Case 22-E-0633: In the Matter of New York Independent System Operator, Inc. Proposed Public Policy Transmission Needs for Consideration for 2022.

New York State Energy Research and Development Authority Comments

The New York State Energy Research and Development Authority ("NYSERDA") hereby submits these comments in response to the New York State Public Service Commission's ("Commission") December 21, 2022, notice seeking comments on whether any of the seventeen proposals submitted by the New York Independent System Operator ("NYISO") should be identified as Public Policy Requirements that may drive the need for transmission and should be referred to the NYISO to solicit and evaluate potential solutions. While these comments do not address specific proposals submitted by the NYISO, NYSERDA recommends that the Commission identify a Public Policy Transmission Need ("PPTN") for Offshore Wind ("OSW") transmission development into New York City and highlights the benefits of a PPTN process for end-to-end onshore and offshore transmission expansion informed and augmented by expertise from State and New York City agencies and parallel State processes.

I. BACKGROUND

The New York Climate Leadership and Community Protection Act ("Climate Act")[1] establishes specific greenhouse gas emissions ("GHG") reduction targets for all sectors of the economy and for removing carbon produced by electric generation. Specifically, the Climate Act requires: (1) a 40% reduction in GHG emissions from 1990 levels by 2030 and an 85% reduction by 2050; (2) achieving a renewable electric generation target of 70% by 2030 and 100% emissions-free electric supply by 2040; and (3) the addition of, among other resources, at least 9 GW of OSW to the renewable energy portfolio by 2035.

The Commission's and NYSERDA's efforts to support OSW resources predate the Climate Act. NYSERDA issued the first solicitation for attributes associated with the delivery of OSW generation to the State of New York in 2018. To date, NYSERDA has procured approximately 4.3

[1] Chapter 106 of the laws of 2019.

GW of OSW under two procurements. NYSERDA's third OSW solicitation ("NY3") is presently underway. By design, NYSERDA's OSW procurement schedule aims to maintain a steady cadence to foster efficient and predictable commercial activities, such as the development of relevant supply chains. That schedule requires NYSERDA to issue a fourth OSW solicitation ("NY4") by end of year 2024.

As explained in these comments, New York's specific OSW goals to achieve GHG emission reductions commitments together with NYSERDA's past, ongoing, and upcoming procurement solicitations for Offshore Wind Renewable Energy Certificates ("OREC") support the need for OSW transmission solutions at this time.

II. DISCUSSION

A. NYSERDA recommends that the Commission identify a Public Policy Need for OSW transmission.

The NYISO submitted seventeen proposals it received from various entities to its Request for Proposed Transmission Needs Driven by Public Policy Requirements for the 2022-2023 Transmission Planning Cycle. A number of the proposed transmission needs submitted address the need for integrating OSW. NYSERDA agrees that there exists a transmission need related to OSW.

A cost-effective path to selecting and building OSW transmission solutions requires more coordination between OSW procurement and transmission development. The Initial Report on the New York Power Grid Study (the "Power Grid Study"), for example, concluded that coordinated planning of cable routes and Points of Interconnection ("POIs") is necessary.[2] This PPTN process gives the Commission an opportunity to achieve the objectives and recommendations set forth in the Power Grid Study. Proactively planned transmission can also preserve expandability to accommodate goals beyond 9 GW, such as the 16-19 GW of OSW resources by 2050 projected as part of the Climate Action Council's Final Scoping Plan.[3]

NYSERDA requests the Commission to identify a PPTN for OSW transmission and to incorporate into that PPTN provisions to ensure New York State's ability to stay on track with prospective OSW solicitations in a cost-effective manner.

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[2] *See* Power Grid Study at p 74.

[3] *See* New York State Climate Action Council Scoping Plan at p. 221.

1. **The Public Policy Transmission Planning Process allows for consideration of transmission needs driven by public policy requirements established by state or federal laws or regulations.**

The NYISO's Open Access Transmission Tariff ("OATT") defines a Public Policy Requirement as "[a] federal or New York State statute or regulation, including a NYPSC order adopting a rule or regulation subject to and in accordance with the State Administrative Procedure Act . . . that may relate to transmission planning …" The OATT further provides for a Public Policy Transmission Planning Process ("PPTPP") that allows stakeholders or interested parties to submit to NYISO, or for NYISO on its own initiative to identify, a proposed transmission need that it believes is driven by Public Policy Requirements and for which transmission solutions should be requested and evaluated.[4] The OATT requires NYISO to post all proposals submitted by stakeholders on its website after the end of the solicitation period, and to submit them to the Commission together with any additional transmission needs and criteria identified by NYISO.[5] The Commission considers the proposals in order to identify the PPTN and determines for which of those the NYISO should consider solutions. The Commission is currently engaging in review of the seventeen proposals submitted by the NYISO on November 7, 2022.

In its March 19, 2021 Order Addressing Public Policy Requirements for Transmission Planning Purposes,[6] the Commission found that, the Climate Act constitutes a Public Policy Requirement driving the need for additional transmission facilities to deliver the output of OSW generating resources and shall be referred to the NYISO to consider solutions to that need.[7] The Commission directed NYISO to evaluate potential solutions to address the Public Policy Requirement in Long Island and enable the interconnection of at least 3,000 MW of OSW to LIPA's system."[8] Within that proceeding, NYISO is currently evaluating potential solutions. While NYSERDA agrees that the Long Island Public PPTN is a necessary step, NYSERDA believes that additional transmission will be necessary to effectively achieve the Climate Act's goal of integrating at least 9 GW of OSW by 2035.

2. **Planning for OSW transmission has benefits over the "status quo."**

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4 NYISO OATT § 31.4.2.

5 *Id.*

6 Case 20-E-0497 and Case 18-E-0623, Order Addressing Public Policy Requirements for Transmission Planning Purposes (March 19, 2021).

7 *Id*. at p. 27.

8 *Id.* at p. 23.

Absent a PPTN for OSW transmission, necessary upgrades to connect OSW projects would be determined through the NYISO interconnection process. The NYISO interconnection process, however, does not provide sufficient certainty with respect to the Class Year ("CY") costs that are allocated to customers because of changes to required transmission system upgrades and other risk factors affecting final allocations.[9] Years pass between a developer's interconnection request for the Feasibility Study phase to the CY phase where cost allocation for requisite upgrades is conducted over several rounds. The process does not conclude until all developers wishing to proceed to the next phase have accepted their cost allocations, including reallocations resulting from project withdrawals. NYSERDA is concerned that this uncertainty is detrimental to ratepayers and OSW developers alike. Ratepayers are adversely impacted because OSW developers are likely to incorporate a significant risk premium into their OREC offer price. The interconnection uncertainty is also detrimental to OSW developers because projects become more difficult to finance.

Relying on the NYISO's interconnection process to identify piecemeal upgrades needed to connect OSW projects to a transmission system with significantly constrained POIs is not sustainable or cost-effective. Proactive transmission planning, such as that provided by the PPTN process, is necessary to achieve New York's OSW goals and protect ratepayers while reducing or conceivably eliminating a risk premium in the OREC offer price. Proactive planning for POI development and related transmission infrastructure will enhance economic and environmental outcomes relative to the "status quo," and also support NYSERDA's OSW procurement schedule while lessening the risk premiums that OSW developers build into OREC offer prices and thereby decreasing ratepayer costs.

Continued OSW development without proactive transmission planning through a PPTN is likely to result in inefficient use of limited cable routes into New York City and may foreclose on options for future development. NYSERDA developed an OSW Cable Corridor Constraints Assessment ("Cables Assessment") to better understand the constraints of siting cables in New York State waters, at landfall, and along overland routes to existing POIs.[10] The Cables Assessment describes existing POI constraints impacting OSW development and offers various preliminary findings on routing solutions for transmission taking into account limited cable routes into New York City. OSW transmission planned through a PPTN can account for the findings of

[9] For example, several transmission system upgrade cost estimates doubled or tripled in the 2019 CY study compared to the System Reliability Impact Study.

[10] *See* the Cables Assessment at https://www.nyserda.ny.gov/All-Programs/Offshore-Wind/Focus-Areas/Transmission-NY-Electricity-Grid

the Cables Assessment, ensuring the efficient use of limited cable routes and preserving optionality for future development.

NYSERDA recommends that the Commission identify a PPTN for OSW transmission into New York City and lists the following benefits for evaluation of OSW transmission solutions through a coordinated transmission planning process:

- Development of transmission to integrate OSW through a PPTN process would provide cost clarity to developers bidding in the NYSERDA solicitations, allowing them to reduce or eliminate the risk premium ascribable to interconnection cost uncertainty.

- Planned end-to-end offshore and onshore transmission expansion will ensure efficient use of limited cable routes into New York City, while preserving optionality for future development of offshore transmission and the integration of OSW beyond the 9+ GW goal.

- Continued OSW development in the absence of transmission solutions identified through the PPTN process will likely undermine critical options for future OSW development.

- Continuing to interconnect OSW generation via uncoordinated generation radial lines is not sustainable.

B. A PPTN for OSW transmission solutions is necessary to support the OSW procurement cadence.

A PPTN for OSW transmission would provide critical information to inform future OSW solicitations, particularly by identifying POIs that OSW developers competing in NY4 should be directed to. Additionally, under certain circumstances, one or more awardees in NY3 may be able to achieve efficiencies over their currently-proposed interconnections by interconnecting to facilities selected through a PPTN. To this end, NYSERDA has incorporated language into its Offshore Wind Renewable Energy Certificate Standard Form Purchase and Sale Agreement allowing prospective awardee(s) to change POI(s) if it is commercially advantageous and there are associated savings for ratepayers.[11]

[11] ORECRFP22-1, Appendix I – Offshore Wind Renewable Energy Certificate Standard Form Purchase and Sale Agreement, Section 5.04(a) requires the developer to "make commercially reasonable efforts to cause

NYSERDA anticipates that the PPTN process can support the NY3 and NY4 procurements (and future expansion beyond the current 9+ GW target) if key information is available to bidders and awardees in time for them to leverage the benefits of the selected project or projects. To achieve this goal, if the Commission decides to initiate a transmission solicitation, NYSERDA believes that the NYISO viability and sufficiency assessment is an important milestone in the process. This step will establish which potential projects are in contention, by narrowing the group of initial applications, and provide information to OSW developers and other stakeholders about the most likely future interconnection scenarios. NYSERDA suggests that the Commission work with the NYISO to set a solicitation and evaluation schedule that contemplates completing the viability and sufficiency analysis no later than the second quarter of 2024 in order to maintain forward progress in the OSW procurements.

It is critical that NYSERDA maintain an OSW procurement cadence and issue the next OSW solicitation by late 2024 to meet New York State's 9+ GW OSW goal by 2035. OSW development cycles are long and subject to uncertainty. A new lease area may require 8 years to develop, perhaps more. Like New York, other states in New England, New Jersey, and the mid-Atlantic have accelerated carbon reduction goals through commitments to OSW. Planned transmission for OSW through a PPTN helps place New York in good footing among neighboring states competing for lease areas in the New York Bight and southern New England. Maintaining the 2024 solicitation schedule positions New York to succeed in the regional competition for leaseholder commitments, thereby heightening competition among rival OSW developers which serves ratepayer interests.

Maintaining a procurement cadence also sends important signals to New York State's developing OSW workforce and supply chain manufacturing capability. As more OSW projects enter construction in New York, neighboring states, and overseas, supply chain constraints could impact the availability of cables and other key components. HVDC systems are currently supplied globally by a limited number of manufacturers primarily based overseas. With many OSW and onshore long-haul transmission projects seeking to use HVDC technology, New York State has remained stalwart in its pledge to supply chain and workforce development investments. Workforce and supply chain investments have the potential to yield diverse economic and environmental justice benefits for decades to come. Realization of these benefits, however,

Interconnection Net Savings to occur, including but not limited to changing its Injection Point where appropriate."

hinges on orderly development of OSW through a regular procurement cadence, avoiding under- or over-utilization of New York's supply chain.

C. A PPTN process for OSW transmission planning will maximize planning and project benefits.

A PPTN for OSW transmission should be designed to select solutions that account for the many physical and environmental constraints impacting routing choices and siting. For example, the Cables Assessment indicates that cabling routes may be limited to approximately 10 GW.[12] This fact dictates the need for transmission solutions that include offshore and onshore facilities in order to maximize the use of limited resources including cable routes, land for cable fall, converter stations, and the onshore transmission system. NYSERDA encourages the Commission to declare a Public Policy Need for both offshore and onshore components of OSW transmission solutions, which can serve more than one OSW generation project. This approach will include offshore interconnection points, offshore HVDC cables, onshore cable landing points, sites for converter stations, and onshore cabling to interconnect the OSW generation to the POIs on the New York grid. The OSW transmission should be developed to serve more than one OSW generation project along a single, or multiple corridors for delivery to the mainland grid.

Rigorous assessment of cable routing is also critical. Underwater corridors for cables are severely limited. The viability of cable routes will need to be demonstrated and tested against alternative cable route options. In this regard, the Cables Assessment can be leveraged to inform evaluation of viability. HVAC undersea cables should be avoided through the Verrazano Narrows, in the East River, through Hell Gate, in Long Island Sound and other constrained areas identified in NY3 (ORECRFP22-1).[13]

Because the timeline to the State's OSW goals is short, it will be critical that this PPTN process place greater focus on siting issues than in past NYISO public policy solicitations. NYISO's evaluation of competing solutions in this PPTN cycle will benefit from the engagement of and feedback from the various governmental authorities and entities that will be responsible for ultimate siting decisions. Permitting authorities may also be able to provide useful feedback on

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[12] Cables Assessment at p. 4-2.

[13] In responses to written questions ORECRFP22-1 clarified that any radial export cable that passes through the Lower Bay, Raritan Bay, Arthur Kill, the Narrows, the Upper Bay (New York Harbor), the East or Hudson Rivers, Block Island Sound or the Long Island Sound must utilize HVDC technology. In addition, to be eligible in the solicitation, Proposals must not include any HVAC cables (including cables connecting a converter station to a point of interconnection) whatsoever through the Narrows or the East or Hudson Rivers. *See*: https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Programs/Offshore-Wind/ORECRFP22-1-Responses-to-Written-Questions-12-23.pdf

project timelines and approaches to mitigate environmental and other impacts. The Cables Working Group is one the sources that the NYISO can leverage to help evaluate the viability of cable routes among OSW transmission solutions.

Thorough consideration of permits and siting issues through collaboration with City and State agencies will: (1) help ensure confidence in the feasibility of the project that is ultimately selected and (2) improve the probability that the selected project(s) will be constructed on time to meet the New York State's OSW goals.

III. CONCLUSIONS AND RECOMMENDATIONS

NYSERDA recommends that the Commission identify a PPTN for OSW transmission into New York City. In addition, NYSERDA recommends that the Commission instruct NYISO to evaluate OSW transmission solutions using a coordinated planning approach informed and augmented by expertise from State and New York City agencies and parallel state processes. As described in these comments NYSERDA's conclusions regarding the advantages of this coordinated planning approach are five-fold.

First, piecemeal transmission planning through NYISO's interconnection process to connect OSW projects to constrained POIs through radial export cables is not sustainable or cost-effective. Development of POIs through a coordinated transmission planning process like the PPTN process would provide cost clarity to developers bidding in the NYSERDA's solicitations, allowing them to reduce or even eliminate the risk premium ascribable to interconnection cost uncertainty and reduce costs to ratepayers.

Second, transmission solutions selected in the PPTN process should preserve both expandability and optionality for both offshore transmission and OSW integration. Planned end-to-end offshore and onshore transmission expansion through the PPTN process will ensure efficient use of limited cable routes into New York City, which preserves optionality for future development of offshore transmission and the integration of OSW beyond the 9+ GW goal.

Third, without major transmission upgrades planned to specifically address the unprecedented influx of OSW projects, transmission congestion will invariably increase on the NYISO system and imperil timely investment in new OSW facilities. The magnitude and spatial distribution of the congestion effects will be likely to undermine project development success, thereby weakening New York State's ability to meet its Climate Act goals. Identifying a PPTN for OSW transmission will go a long way in addressing most of the congestion impacts.

Fourth, a coordinated planning approach will ensure that transmission solutions are identified in time to inform the NY4 OSW solicitation. Maintaining a procurement cadence is critical to New York's ability to send appropriate and regular market signals to developers and manufacturers, compete for lease areas, and reduce ratepayer costs.

Fifth, the transmission solutions identified through this PPTN process should include both offshore and onshore components of OSW transmission to serve more than one OSW generation project. This will include offshore collector stations, offshore converter stations, offshore HVDC cables, onshore landing, onshore HVDC cables, onshore converter stations, and HVAC lines to interconnect the OSW generation to the POIs on the NYISO grid.

Respectfully Submitted,

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