

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

At a session of the Public Service
Commission held in the City of
Albany on June 22, 2023

COMMISSIONERS PRESENT:

Rory M. Christian, Chair
Diane X. Burman
James S. Alesi
Tracey A. Edwards
John B. Howard
David J. Valesky
John B. Maggiore

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

ORDER ADDRESSING PUBLIC POLICY REQUIREMENTS
FOR TRANSMISSION PLANNING PURPOSES

(Issued and Effective June 22, 2023)

BY THE COMMISSION:

INTRODUCTION

On August 31, 2022, the New York Independent System Operator, Inc. (NYISO) commenced a new round of the biennial Public Policy Transmission Planning Process specified under Attachment Y of its Open Access Transmission Tariff (OATT) by requesting interested entities to identify Public Policy Requirements that may "drive the need" for transmission development in the State.¹ Under the NYISO's process, the Public Service Commission (Commission) considers the input provided in response to the NYISO's request and may then determine whether

¹ Unless otherwise defined in this Order, capitalized terms used herein have the same meanings given to them under the OATT.

any suggested Public Policy Requirement requires such development.

Upon reviewing the proposals, the Commission finds that the Climate Leadership and Community Protection Act (CLCPA), which requires the Commission to develop a program for at least 9,000 megawatts (MW) of offshore wind (also referred to as OSW) energy by 2035, constitutes a Public Policy Requirement driving the need for additional transmission facilities to deliver the output of offshore wind generating resources to New York City interconnection points.² Through this Order, we refer the Public Policy Requirement we have identified here to the NYISO for the solicitation and evaluation of potential solutions. As contemplated under the OATT, this Order also provides additional criteria for the NYISO to use in its evaluation of transmission solutions.³ We decline to identify any other proposed Public Policy Requirements as driving the need for transmission facilities at this time.

BACKGROUND

The Public Policy Transmission Planning Process

The NYISO's Public Policy Transmission Planning Process, as approved by the Federal Energy Regulatory Commission (FERC), provides for the consideration of public policy-driven transmission needs on a two-year cycle. Each cycle commences with a 60-day solicitation period during which any interested entities may propose transmission needs that they believe are driven by Public Policy Requirements.⁴ The NYISO posts all submittals on its website and forwards them for the Commission's

² See L. 2019, Ch. 106, §4 (codified, in part, in Public Service Law (PSL) §66-p(2) and (5)).

³ NYISO OATT, Attachment Y, §31.4.2.1.

⁴ NYISO OATT, Attachment Y, §31.4.2.

consideration. Under the OATT, the Commission has the role of identifying any Public Policy Requirements that may be driving the need for transmission facilities, while the Long Island Power Authority (LIPA) is responsible for identifying transmission needs driven by Public Policy Requirements within the Long Island Transmission District.⁵ The NYISO OATT defines a Public Policy Requirement as:

[a] federal or New York State statute or regulation, including [an order issued by the Commission] adopting a rule or regulation subject to and in accordance with the State Administrative Procedure Act, any successor statute, or any duly enacted law or regulation passed by a local governmental entity in New York State, that may relate to transmission planning on the [Bulk Power Transmission Facilities].⁶

The Commission's August 2014 Policy Statement established procedures for identifying any Public Policy Requirements that warrant the NYISO soliciting solutions for evaluation.⁷ These procedures, which coordinate with the NYISO's process, include:

- 1) the NYISO submitting the proposed Public Policy Requirements that interested entities have identified regarding potential transmission needs, which the Commission will post on its website;
- 2) the Commission issuing a notice in the State Register, pursuant to SAPA, inviting comments on any proposals posted in Step 1, along with any subsequent additions identified by the Commission, and any proposed evaluation criteria the NYISO should apply and analyses it should perform;

⁵ The NYISO OATT also provides for the Commission to act "out-of-cycle" with the biennial process.

⁶ NYISO OATT, Attachment Y, §31.1.1.

⁷ Case 14-E-0068, Policies and Procedures Regarding Transmission Planning for Public Policy Purposes, Policy Statement on Transmission Planning for Public Policy Purposes (issued August 15, 2014) (August 2014 Policy Statement).

- 3) Department of Public Service Staff (Staff) posting, when deemed appropriate, preliminary comments for interested parties to review and comment upon, addressing why any proposed Public Policy Requirements warrant, or do not warrant, the NYISO soliciting projects for evaluation;
- 4) the Commission issuing an order identifying the potential transmission needs, based on Public Policy Requirements, that warrant the NYISO soliciting solutions (along with an explanation of proposed Public Policy Requirements that do not warrant referral to the NYISO), and an identification of any proposed evaluation criteria the NYISO should apply and analyses it should perform;⁸ and,
- 5) the Commission posting the Order, issued under Step 4, on its website and providing it to the NYISO.⁹

Following these steps, the NYISO holds a technical conference and then undertakes a second 60-day solicitation for proposed solutions to any Commission-identified Public Policy Requirements (referred to as Public Policy Transmission Needs (PPTNs)). The NYISO then conducts a preliminary analysis regarding whether each proposed solution is viable and sufficient to meet the PPTN. When evaluating proposed solutions to the PPTN, the NYISO considers, on a comparable basis, all resource types, including generation, transmission, demand response, or a combination of these resource types. The NYISO presents the results of its Viability and Sufficiency Assessment

⁸ The Commission may also find that none of the suggested policies constitute Public Policy Requirements, or that transmission is not needed to address them.

⁹ The NYISO's OATT indicates that the Commission's procedures should "ensure that such process is open and transparent, provide the [NY]ISO and interested parties a meaningful opportunity to participate in such process, provide input regarding the [Commission's] considerations, and result in the development of a written determination as required by law, inclusive of the input provided by the [NY]ISO and interested parties." NYISO OATT, Attachment Y, §31.4.2.1.

to stakeholders, interested parties, and Department of Public Service (DPS) Staff for review and comment.

The NYISO also files the final Viability and Sufficiency Assessment with the Commission. While the sixth and final step identified in the August 2014 Policy Statement requires the Commission to confirm that a transmission solution should continue to be pursued before the NYISO proceeds to prepare further analyses, the NYISO tariff was subsequently amended to allow the NYISO to proceed directly to a full evaluation of transmission solutions deemed viable and sufficient. However, the NYISO tariff continues to acknowledge that the Commission may determine that a transmission need should no longer be evaluated or selected by the NYISO, so long as the Commission acts prior to the NYISO Board of Directors' (Board) selection of a more efficient or cost-effective transmission solution.

Absent Commission action terminating the Public Policy Transmission Planning Process, the NYISO proceeds to the evaluation phase and provides its analyses of the competing solutions in a Public Policy Transmission Planning Report. The NYISO evaluates proposals on several metrics, including: cost, cost per MW ratio, expandability of the project, flexibility in operating the system (such as generation dispatch, access to operating reserves and ancillary services, or ability to remove transmission for maintenance), utilization of the system (such as interface flows or percent loading of facilities), a developer's property rights, potential construction delays, and impacts on NYISO-administered markets. The NYISO's assessment includes, to the extent feasible, any criteria or analyses specified by the Commission or contained within the Public Policy Requirement.

After reviewing the report, the NYISO Board may select the more efficient or cost-effective transmission solution to the identified PPTN.¹⁰ Transmission projects selected by the NYISO Board are eligible for cost allocation and recovery under the NYISO's OATT, which includes a default statewide load ratio share allocation of costs.

THE 2022 NYISO FILING

As noted above, the NYISO commenced a new round of its biennial Public Policy Transmission Planning Process by soliciting, on August 31, 2022, proposed Public Policy Requirements from interested entities. The 2022 NYISO Filing, which was submitted to the Commission on November 7, 2022, identified various proposed Public Policy Requirements received from 17 entities: Alliance for Clean Energy New York (ACENY) and the New York Offshore Wind Alliance (together, ACENY-NYOWA); AES Clean Energy (AES); Avangrid Networks, Inc. (Avangrid); City of New York (NYC); Con Edison Transmission, Inc. (CET); H.Q. Energy Services (U.S.) Inc. (HQUS); Indicated New York Transmission Owners (NYTOS);¹¹ Invenergy LLC (Invenergy); LS Power Grid New York Corporation I (LS Power); National Grid Ventures (NGV); NextEra Energy Transmission New York (NEETNY); New York Transco LLC (NY Transco); the New York Power Authority (NYPA); Orsted Wind Power North America LLC (Orsted); PSEG Long Island (PSEG-LI); Rise Light & Power, LLC (Rise); and Transource Energy, LLC and Transource New York, LLC (collectively, Transource). Each of these parties' responses is summarized next.

¹⁰ NYISO OATT, Attachment Y, §31.4.5.1.

¹¹ The Indicated NYTOS are Central Hudson Gas & Electric Corp.; Consolidated Edison Company of New York, Inc.; Niagara Mohawk Power Corporation d/b/a/ National Grid; New York State Electric & Gas Corp.; Orange & Rockland Utilities; and Rochester Gas and Electric Corporation.

ACENY-NYOWA

ACENY-NYOWA recommends that the Commission designate PPTNs for three areas: downstate, to accommodate a significant amount of offshore wind energy, the Southern Tier, and the North Country. ACENY-NYOWA advocates for the 2022 PPTN cycle to prioritize new transmission in Zone J to facilitate integration of at least 6,000 MW of fully deliverable offshore wind. ACENY-NYOWA notes that the potential selection of a viable and cost-effective solution for offshore wind interconnecting to Zone K through the Long Island OSW PPTN process is a necessary but not sufficient step.¹² ACENY-NYOWA points to the NYISO's 2021-2040 System & Resource Outlook (Outlook)¹³ findings regarding deliverability constraints in the "X3" renewable generation pocket in the North Country and the local transmission upgrades proposed in the Watertown Area of Concern (AOC).¹⁴ ACENY-NYOWA expresses support for the proposed Watertown AOC projects but emphasizes that there are substantially more MWs in the interconnection queue for the Watertown AOC than are supported by the proposed upgrades and recommends that the Commission designate a PPTN for the North Country. In addition, ACENY-

¹² See Case 20-E-0497, et al., Proposed Public Policy Transmission Needs, Order Addressing Public Policy Requirements for Transmission Planning Purposes (issued March 19, 2021) (finding a need to deliver OSW from Long Island to the rest of State) (Long Island OSW PPTN Order).

¹³ <https://www.nyiso.com/documents/20142/33384099/2021-2040-Outlook-Report.pdf/a6ed272a-bc16-110b-c3f8-0e0910129ade> (issued September 22, 2022).

¹⁴ Case 20-E-0197, Transmission Planning Pursuant to the Accelerated Renewables Act, Petition of Central Hudson Gas & Electric Corporation, New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, and Rochester Gas and Electric Corporation Identifying Area of Concern Needs and Recommended Solutions (filed March 8, 2022).

NYOWA suggests that a PPTN be designated for the Southern Tier region, which it characterizes as an important west-to-east highway with the potential to deliver clean energy resources eastwards to loads and thereby reduce the strain on the main Central East interfaces.

AES

AES identifies Public Policy Requirements driving the need for transmission in the North Country, Southern Tier, and New York City renewable resource pockets based on the asserted need to address curtailments and constraints on renewable energy generation, system reliability, potentially inadequate transmission to meet CLCPA goals, and the public health, safety, and welfare of New Yorkers. AES suggests that increased renewable energy generation can provide air quality and economic benefits to disadvantaged communities and, consequently, should be prioritized as a Public Policy Requirement. AES asserts that the evaluation criteria for the North Country and Southern Tier pockets should ensure that 100% of resources needed to meet CLCPA targets are fully deliverable across all mature projects in the NYISO interconnection process. For the New York City pocket, AES recommends that the evaluation criteria be based on the extent to which each transmission project achieves CLCPA goals, the reliability and transmission security concerns identified in the NYISO's Draft 2022 Reliability Needs Assessment (RNA),¹⁵ and its ability to facilitate a diverse supply portfolio for the largest load center in the State.

¹⁵ https://www.nyiso.com/documents/20142/32940528/2022RNA_Draft1Report_forAug23ESPG_v2.pdf/6289c7ab-ad8b-5531-a050-37a00c8024f0

Avangrid

Avangrid believes that additional bulk transmission system upgrades may be required to efficiently integrate and deliver new renewable generation without a significant risk of congestion and curtailment. Avangrid indicates that, to meet the State's renewable energy goals, potential bulk transmission upgrades are needed to provide either additional transmission capacity into New York City (Zone J) or additional transfer capacity between other existing interfaces.

NYC

NYC recommends that a PPTN be designated for additional transmission in New York City to serve increasing demand driven by electrification of heating and transportation. NYC also highlights a need to strengthen the transmission backbone in NYC against the effects of climate change. NYC reiterates its statements in the 2020 Long Island PPTN process, expressing support for establishing a new transmission path through New York City, which it characterizes as the "third ring." NYC recommends that the Commission designate the third ring as a PPTN. In addition, NYC identifies a statewide PPTN for more transmission throughout the State and suggests that the Commission could either find a general PPTN for new transmission, based on the findings of the Power Grid Study,¹⁶ the Outlook findings, and RNA, then allow the marketplace to identify solutions in response to a NYISO solicitation, or the Commission could identify areas in the State where there are already identified PPTNs.

NYC proposes that the Commission identify the following criteria for the evaluation of potential transmission solutions:

¹⁶ Case 20-E-0197, Initial Report on the New York Power Grid Study (Power Grid Study) (issued January 19, 2021).

- the extent to which a proposed solution to an identified PPTN reduces curtailment risk in one or more of the areas identified in the NYISO's Outlook findings or such solution serves the goal of completing a third transmission ring in New York City;
- the benefits to and impacts on environmental justice communities; and
- the nature and extent of the resiliency and/or reliability benefits provided by the proposed solution, including, but not limited to, the project's ability to provide ancillary services.

CET

CET proposes that the Commission declare a PPTN driven by the CLCPA's offshore wind capacity target as a mechanism by which a coordinated high-voltage direct current (HVDC)-to-alternating current (AC) transmission grid would be built to facilitate the development of offshore wind generation. CET suggests that a transmission solution could result from such a PPTN that includes multiple offshore and onshore transmission-related facilities resulting in the interconnection of offshore wind energy to the local grid. According to CET, such a transmission solution would allow multiple offshore wind generation projects to interconnect more easily, lower risk, and facilitate delivery of clean energy through the interconnected bulk power grid. Specifically, CET recommends that consideration be given to offshore collector stations capable of accommodating multiple lease areas, with a particular focus on the New York Bight, development of a meshed offshore network, and robust multi-cable transmission corridors. CET also suggests that transmission be procured in coordination with local upgrades to develop injection points into the local high-voltage grid to improve deliverability across the State.

CET offers the following evaluation criteria in addition to the criteria defined in the NYISO tariff:

- optimal use of limited routes for transmission siting and mitigation of impacts 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;
- flexible, cost-effective siting of offshore transmission mesh-network connections to improve reliability and resiliency of offshore generation; and
- optimal siting of offshore converter stations to minimize interconnection costs of multiple offshore wind generation projects from multiple New York Bight development areas.

HQUS

HQUS recommends that a PPTN be identified for transmission that increases access to clean energy to advance achievement of the State's CLCPA objectives. In particular, HQUS advocates for expanding interconnection capacity between Quebec and New York State to provide additional clean energy to serve growing demand in New York and reliably and cost-effectively meet CLCPA targets.

NYTOs

The NYTOs highlight several recent and ongoing developments for Commission consideration of PPTNs, including the Long Island OSW PPTN in Case 20-E-0497,¹⁷ the New York State Energy Research and Development Authority's (NYSERDA) third offshore wind solicitation, the awarded Tier 4 Renewable Energy Certificate (REC) transmission projects, the Coordinated Grid Planning Process (CGPP) proposed in Case 20-E-0197, the local transmission and distribution upgrades also under consideration

¹⁷ Long Island OSW PPTN Order.

in Case 20-E-0197, and the Notice of Proposed Rulemaking on transmission planning and cost allocation issued by the FERC.¹⁸

Invenergy

Invenergy recommends that the Commission designate a PPTN for the Southern Tier to address what it asserts are significant transmission constraints bottling renewable energy generation. Invenergy identifies the CLCPA, Clean Energy Standard,¹⁹ and Accelerated Renewable Energy Growth and Community Benefit Act (Accelerated Renewables Act)²⁰ as potential Public Policy Requirements driving the need for additional transmission. Invenergy indicates that its analysis shows that there is additional need beyond the AOC projects in the Southern Tier that were previously approved by the Commission.²¹

LS Power

LS Power identifies the CLCPA and Accelerated Renewables Act as Public Policy Requirements driving the need to integrate onshore renewable energy generation. In addition, LS Power recommends that the Commission declare a PPTN to review the Brooklyn Clean Energy Hub proposed by Consolidated Edison

¹⁸ Building for the Future Through Electric Transmission Planning and Cost Allocation and Generator Interconnection, Notice of Proposed Rulemaking, 179 FERC ¶61,028 (2022).

¹⁹ Case 15-E-0302, Large-Scale Renewable Program and a Clean Energy Standard, Order Adopting a Clean Energy Standard (issued August 1, 2016).

²⁰ Chapter 58 (Part JJJ) of the Laws of 2020.

²¹ Case 20-E-0197, Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act, Order Approving Phase 2 Areas of Concern Transmission Upgrades (issued February 16, 2023) (AOC Order).

Company of New York, Inc. (Con Edison),²² and allow any additional developers to participate to ensure that the most cost-effective and technologically advanced project is implemented. LS Power suggests that a PPTN be declared in the renewable generation pockets of Long Island offshore wind export, Watertown/Tug Hill Plateau (X3), and Southern Tier (Z1 and Z2) as the most urgent transmission needs.

NGV

NGV requests that the Commission designate a PPTN for transmission of up to 20 gigawatts (GW) of offshore wind energy, driven by CLCPA clean energy targets. NGV suggests that the PPTN include both onshore and offshore transmission elements, including a potential offshore meshed network, which NGV indicates would result in the most cost effective and efficient transmission for the State's offshore wind resources.

NEETNY

NEETNY asserts that the NYISO's Outlook findings together with the New York State Climate Action Council's Draft Scoping Plan²³ establish the need for transmission to achieve the State's CLCPA goals. NEETNY advises that a coordinated transmission approach that identifies optimal local and bulk upgrades would best support achievement of the State's clean

²² Con Edison filed its Petition for Approval to Recover Costs of Brooklyn Clean Energy Hub (Hub) on April 15, 2022, and its Petition Supplement to Propose an Alternative Brooklyn Clean Energy Hub on December 13, 2022, in Case 20-E-0197. On April 20, 2023, the Commission granted the petition, as modified by the supplement, in so far as agreeing that the Scalable Reliability version of the Hub proposed in the supplement is primarily needed to meet local reliability requirements. Case 20-E-0197, supra, Order Approving Cost Recovery for Clean Energy Hub (issued April 20, 2023) (Clean Energy Hub Order).

²³ New York State Climate Action Council Draft Scoping Plan (December 30, 2021).

energy goals in a cost effective and efficient manner. Specifically, NEETNY recommends that a PPTN be declared to enable at least 2,000 MW of additional renewable energy capacity into Watertown and the Southern Tier, respectively, and at least 2,400 MW of offshore wind capacity on Long Island.

NY Transco

NY Transco identifies the CLCPA as a Public Policy Requirement driving transmission needs in Western New York, the North Country, the Southern Tier, and Long Island. NY Transco indicates that it is necessary to address the asserted needs with both bulk and local transmission solutions to alleviate the constraints. In addition, NY Transco offers the following evaluation criteria, some of which it notes are already contemplated in the NYISO tariff:

- reduced system constraints in both summer and winter periods;
- resiliency benefits with additional transmission pathways using new or existing rights-of-ways;
- expandability to allow for the phasing of transmission development to meet continuing future needs;
- economic benefits, including reduction in system-wide production costs;
- ability to unbottle existing and expected renewable and carbon-free generation resources; and
- use of innovation allowing for increased transfer capability over proposed system solutions.

NYPA

NYPA identifies a number of Public Policy Requirements driving transmission needs, including the CLCPA, Accelerated Renewables Act, New York State Department of Environmental Conservation (NYSDEC) Regulation Subpart 227-3 - Ozone Season Oxides of Nitrogen (NO_x) Emission Limits for Simple Cycle and Regenerative Combustion Turbines (Peaker Rule), the Clean Energy

Standard, federal laws, including the Infrastructure Investment and Jobs Act of 2021 (IIJA) and the Inflation Reduction Act of 2022 (IRA), and New York City's Climate Mobilization Act/NYC Local Law 97. NYPA recommends that the Commission establish specific PPTNs in the Southern Tier, the North Country, and the Capital and Southeast New York regions. NYPA also proposes the following criteria for evaluation of projects offered to satisfy the transmission needs:

- ability to increase renewable generation development and decrease renewable curtailment to meet CLCPA targets and other Public Policy Requirements;
- ability of proposed developers to deliver the recommended solution(s);
- ability to utilize existing carbon-free generation resources to the maximum extent, including the Niagara Hydropower facility;
- economic benefits, including reduction in demand/congestion and system-wide production costs;
- contribution to meeting resource adequacy requirements;
- contribution to increasing transmission security;
- contribution to increasing bulk power system resilience; and
- future expandability and NYISO flexible operation given increase of weather-dependent intermittent generation resources (more efficient as bulk project than local - e.g., integration across multiple service territories).

Orsted

Orsted identifies the CLCPA, Accelerated Renewables Act, IRA, and IIJA as Public Policy Requirements driving substantial offshore wind-related bulk transmission needs. In addition, Orsted proposes the following criteria for evaluation of transmission solutions to meet the transmission needs:

- allow for at least 9 GW of offshore wind injection capacity, with the flexibility to expand to the 20 GW that is estimated to be required to meet CLCPA targets;
- include sufficient physical onshore space for which site control has been secured or for which a viable pathway to attaining site control has been demonstrated to accommodate the construction of HVDC converter stations;
- optimize the utilization of limited cable routes into and through the New York Harbor that have been studied and identified in the NYSERDA Offshore Wind Cable Corridor Constraints Assessment Report;²⁴
- demonstrate resiliency benefits to the grid, including the increased ability for the grid to withstand extreme weather events and other generation and transmission contingencies;
- reduce congestion, increase system reliability, and apply preferences to projects that possess the ability to add or later be upgraded to enable the use of storage systems and flexible interregional transmission networks while injecting new offshore wind power;
- increase the transfer capability between Zones J and I, H, G, E, and F;
- facilitate the implementation of a meshed offshore grid through effective planning and the use of advanced grid technologies;
- demonstrate that the developers have the requisite experience, financial resources, and access to state-of-the-art technology to complete and deliver these projects; and
- avoid disproportionately harming disadvantaged communities.

PSEG-LI

PSEG-LI indicates that the CLCPA and Offshore Wind Standard continue to drive the need for transmission connecting

²⁴ Offshore Wind Cable Corridor Constraints Assessment Report (January 2023) (Cable Corridor Assessment), available at: <https://www.nysesda.ny.gov/All-Programs/Offshore-Wind/Focus-Areas/Transmission-NY-Electricity-Grid>

Long Island to neighboring zones.²⁵ However, it notes that the extent of that need will not be clear until a project(s) is selected in the current Long Island PPTN process and additional transmission may be necessary to avoid curtailment of energy procured through NYSERDA's third offshore wind energy solicitation. PSEG-LI recommends that the Commission incorporate the results of the Long Island OSW PPTN process and any results from the CGPP into the current planning cycle.

Rise

Rise indicates that the CLCPA, Accelerated Renewables Act, the NYSDEC Peaker Rule, the 2022 NYSERDA offshore wind energy solicitation, and the NYC Climate Mobilization Act are Public Policy Requirements driving additional transmission needs between upstate zones and Zone J. Rise offers the following potential criteria to evaluate proposed responses to such need:

- cost effectiveness on a dollar per megawatt-hour basis;
- ability/likelihood to facilitate orderly fossil plant retirement/site repurposing;
- ability to minimize environmental impacts;
- demonstration of site control;
- financial viability of the project and developer;
- ability to improve system reliability and resiliency;
- disadvantaged community benefits; and
- anticipated commercial operation date.

²⁵ The Offshore Wind Standard, established by the Commission in 2018 and modified in 2020, authorizes NYSERDA to procure up to 9 GW of offshore wind energy to meet the CLCPA target by 2035. Case 18-E-0071, In the Matter of Offshore Wind Energy, Order Establishing Offshore Wind Standard and Framework for Phase 1 Procurement (issued July 12, 2018). Case 15-E-0302, Large-Scale Renewable Program and a Clean Energy Standard, Order Adopting Modifications to the Clean Energy Standard (issued October 15, 2020) (CES Modification Order).

Transource

Transource points to the CLCPA and Accelerated Renewables Act as Public Policy Requirements driving the need for transmission, particularly in renewable generation pocket Z in the Southern Tier. Transource urges the Commission to direct the NYISO to consider advanced transmission technologies in its Viability and Sufficiency Assessment of proposed transmission solutions and require that developers demonstrate that they have evaluated transmission technologies that use existing rights of way, increase system efficiency by reducing line losses, avoid expensive series compensation equipment, provide streamlined operation and maintenance, and minimize visual, environmental, and electromagnetic field impacts.

NOTICE OF PROPOSED RULE MAKING

In accordance with the State Administrative Procedure Act (SAPA) §202(1) and the Commission's August 2014 Policy Statement, a Notice of Proposed Rule Making regarding the 2022 NYISO Filing was published in the State Register on December 21, 2022 [SAPA No. 22-E-0633SP1]. The time for submission of comments pursuant to the SAPA notice expired on February 21, 2023. The comments received in response to this notice are summarized and discussed below.

COMMENTS

ACENY and Advanced Energy United (together, ACENY-United)

ACENY-United requests that the Commission declare a PPTN in the North Country. According to ACENY-United, there are many more queued MWs in the Watertown area than are supported by the upgrades approved in the AOC Order. ACENY-United suggests that a PPTN process may reveal that bulk power solutions could

provide greater transmission capacity at lower cost for some transmission needed in the area.

ACENY-United also requests that the Commission declare a PPTN in the Southern Tier region, noting that there are many more renewables in the queue that could be developed if a bulk transmission solution is deployed in the region. ACENY-United also states that the region is an important "west-to-east highway with the potential to also enable additional Western NY clean energy resources for delivery eastwards to loads, which in turn will reduce the strain on the main Central East interface."²⁶

ACENY-United notes that the upgrades approved by the Commission in its AOC Order do not provide the complete needs required to meet the State's climate targets. ACENY-United characterizes the PPTNs that it advocates for as complementary to the CGPP proposed in Case 20-E-0197, which it explains would take at least three years to result in a decision on a potential PPTN. ACENY-United cautions that renewable generation projects that are contracted for or in an advanced stage of development could be cancelled if transmission congestion is not timely addressed.

Anbaric Development Partners, LLC (Anbaric)

Anbaric recommends that PPTNs be declared in three upstate regions and Long Island to meet the transmission needs that the NYISO identified in its Outlook. Anbaric notes that the Commission's recent AOC Order and pending PPTN solicitation for 3,000 MW of transmission upgrades in Long Island and New York City may resolve some of the needs identified in the Outlook. Anbaric also advocates for a PPTN solicitation to be issued one year later for the next-most urgent transmission

²⁶ ACENY-United comments, pp. 7-8.

needs, which it believes are one (or more) bi-directional transmission lines(s) from upstate to Zones J and/or K and/or a transmission system linking meshed ready projects delivering offshore wind power into Zones J and K. In addition, Anbaric recommends that the NYISO, supported by the Commission, undertake a holistic transmission planning initiative to identify transmission needed over the next two decades for New York State to achieve its climate, renewable, and economic development goals.

BMT Energy Transmission Development LLC (BMT)

BMT expresses strong agreement with the PPTNs proposed in response to the NYISO's solicitation. It emphasizes that new transmission is needed to (1) export a large amount of offshore wind power out of Zones J and K to limit curtailments, (2) address upstate renewable congestion and penetration, and (3) enable long-duration energy storage to balance a system that will rely upon intermittent power sources.

BMT recommends that the following evaluation criteria should be considered in any future PPTN proposal: (1) ability of transmission solutions to increase import/export capacity of Zones J and K; (2) evaluation of regional solutions for the Southern Tier region to connect Western NY renewables with regional projects to reduce curtailment and secure the injection of power in Zones J, K, G, H, and I; (3) ability of transmission solutions to reduce congestion and increase reliability with the possibility to be scalable for future interregional interconnection; (4) ability of solutions to offer controllable power flows; (5) ability of solutions to use existing rights-of-way and/or guarantee expedited permitting processes; (6) ability of solutions to integrate energy storage; (7) ability of HVDC proposals to accommodate future expansions into multi-terminal solutions; (8) experience of project proponents of HVDC

solutions specifically in HVDC technology design, procurement, deployment, and management; and (9) deployment schedules with feasible procurement processes and the ability to mitigate the risk of delays.

Consolidated Edison Company of New York, Inc., and Orange and Rockland Utilities, Inc. (together, Con Edison)

Con Edison urges the Commission not to declare a PPTN for Con Edison's proposed Hub and/or other similar projects seeking to establish points of interconnection (POIs) for offshore wind. Con Edison explains that its proposed Hub is necessary to meet a near-term reliability need and should also provide clean energy benefits in the future. Con Edison urges the Commission to reject suggestions that the Hub be evaluated against alternatives through the PPTN process because the near-term reliability needs of the local system are Con Edison's responsibility and cannot wait for the outcome of the Public Policy Transmission Planning process. Con Edison indicates that the Hub must be in service by Summer 2028 for its networks in southeast Brooklyn and southwest Queens to have adequate transmission supply and avoid widespread customer outages during peak conditions. Con Edison characterizes its Hub as a multi-value project that also has reliability, resilience, and CLCPA benefits.

More broadly, Con Edison opposes a PPTN declaration for downstate interconnection points for offshore wind generation. While Con Edison agrees with other commenters that the need for an offshore grid is an appropriate subject for a Public Policy Requirement, it recommends that developers be directed or encouraged to collaborate with the local utility to identify the best possible on-land interconnection solution for their bid. Con Edison asks the Commission to consider the unique attributes of its system where 345 kilovolt facilities

are relied upon to serve local load due to high population density and limited space. According to Con Edison, it is the only planning entity that regularly and comprehensively assesses both the bulk transmission system and customer impacts of resource, load, and transmission system changes, and is therefore "singularly positioned to propose and implement optimal interconnection substations within its service territory for the benefit of all New Yorkers."²⁷ It notes that the NYISO does not evaluate impacts outside of the bulk system.

Con Edison contends that enabling developers to build single-use substations under a PPTN would result in inefficiency and lose flexibility necessary to develop multi-value solutions to reliably serve customers while considering opportunities to cost-effectively interconnect clean energy. Con Edison suggests that a more productive approach would be to allow the local utility's expertise associated with its own system to serve as the foundation of any on-land interconnection point while the proposed CGPP would provide coordination between the utilities, NYISO, DPS Staff, NYSERDA, and stakeholders to identify a potential PPTN for offshore grid components or for the local utility to coordinate with offshore wind developer bids into future NYSERDA solicitations.

EDF Renewables New York (EDFR)

While EDFR acknowledges that the recent AOC Order is a critical step to address short-term transmission needs in the Watertown and Southern Tier areas, EDFR believes that more transmission upgrades are required in those areas because of grid characteristics and CLCPA resource potential. EDFR highlights that there are many more clean generation resources requesting to interconnect in the Watertown Area and that there

²⁷ Con Edison comments, p. 6.

is a risk of curtailment and congestions for large scale renewables if further upgrades are not constructed. In addition, EDFR explains that the Southern Tier is an important west-to-east gateway for delivery of Western clean energy resources to eastern load centers. EDFR also cautions that there are large amounts of distributed energy resources that are existing or under development in both regions and cannot be curtailed. Noting that there is already significant clean energy development in the Watertown and Southern Tier regions, EDFR indicates that the broad availability of land and community support make the regions prime targets for additional clean energy resources needed to meet CLCPA goals. EDFR does not believe that declaring a PPTN necessarily requires the approval of bulk solutions, but nevertheless would provide an opportunity for cost-effective and robust bulk solutions to be proposed and considered.

NYISO

The NYISO indicates that additional transmission capacity is needed to achieve the State's clean energy goals and deliver renewable resources to consumers throughout New York. The NYISO expresses support for the Commission finding PPTNs for transmission expansion to accommodate additional renewable generation that is necessary to achieve the State's climate targets. The NYISO states that its analysis identifies public policy-driven needs for upgrading and/or expanding the bulk transmission system to deliver renewable energy from upstate generation pockets and offshore wind facilities to load centers. It notes that a mix of local and bulk system upgrades may be necessary to solve the system constraints for many of the renewable generation pockets identified in the NYISO studies and

cautions that addressing only local or bulk system projects may lead to ineffective or inefficient solutions.²⁸

The NYISO highlights three significant and urgent transmission needs driven by the CLCPA, which were identified in its Outlook: (1) additional bulk transmission to deliver offshore wind may be necessary to deliver offshore wind energy to the State; (2) additional transmission must be developed to ensure the deliverability of energy from wind and solar facilities to be sited in northern New York to the bulk transmission grid located in the Watertown/Tug Hill Plateau pocket; and (3) transmission needs to be expanded in the Southern Tier pocket to ensure the deliverability of renewable energy statewide.

The NYISO concurs with several PPTN proposals that additional transmission is required to fully deliver offshore wind energy potential into New York City and other parts of the New York Control Area. The NYISO notes that identifying a PPTN for a coordinated approach for both onshore and offshore transmission facilities "to solicit solutions through the NYISO's competitive Public Policy Process can establish a means to identify the more efficient and/or cost-effective buildout of an offshore transmission system to support the development of offshore wind in a timely and holistic fashion."²⁹

²⁸ The NYISO references its 2021-2040 System & Resource Outlook (Outlook).

<https://www.nyiso.com/documents/20142/33384099/2021-2040-Outlook-Report.pdf/a6ed272a-bc16-110b-c3f8-0e0910129ade>

The NYISO also references its 2021-2030 Comprehensive Reliability Plan.

<https://www.nyiso.com/documents/20142/2248481/2021-2030-Comprehensive-Reliability-Plan.pdf>

²⁹ NYISO comments, pp. 11-12.

New York State Energy Research and Development Authority

NYSERDA recommends that the Commission identify a PPTN for offshore wind transmission into New York City to ensure that the State can stay on track with prospective offshore wind solicitations in a cost-effective manner. NYSERDA believes that additional transmission is necessary to meet the CLCPA target of integrating at least 9 GW of offshore wind energy by 2035.

Absent a PPTN for offshore wind transmission, NYSERDA cautions that the necessary upgrades to connect offshore wind projects would be determined through the NYISO interconnection process, which NYSERDA indicates does not provide sufficient cost certainty for ratepayers and offshore wind developers. NYSERDA explains that, under the NYISO interconnection process, there is a lengthy time period between a developer's interconnection request and when cost allocations and reallocations are made. According to NYSERDA, that time lag likely results in offshore wind developers incorporating a significant risk premium into their pricing and the interconnection uncertainty also renders the project more difficult to finance. By contrast, NYSERDA believes that more proactive transmission planning through the PPTN process would reduce or eliminate the risk premiums and decrease ratepayer costs to meet New York State's offshore wind energy goals.

NYSERDA indicates that a PPTN for offshore wind would support its procurement schedule by identifying POIs that developers could be directed toward in future procurements and offer existing awardees an opportunity to achieve greater cost savings for ratepayers by interconnecting to facilities selected through a PPTN. To maximize the opportunity for efficiencies and ratepayer savings, NYSERDA recommends that the Commission and the NYISO set a schedule that would include completion of the Viability and Sufficiency Assessment by the second quarter

of 2024. NYSERDA indicates that such a schedule would help to keep New York on good footing among neighboring states that are competing for offshore wind lease areas and increase competition among developers, which serves ratepayer interests. In addition, NYSERDA notes that a consistent offshore wind procurement cadence sends a key signal to the offshore wind workforce and supply chain manufacturers, which could yield economic and environmental justice benefits for decades into the future.

NYSERDA recommends that the Commission declare a PPTN for offshore and onshore components of offshore wind transmission solutions that can serve more than one generation project. It highlights the importance of maximizing the use of limited resources, such as cable routes, land for cable fall, converter stations, and the onshore transmission system. NYSERDA notes that underwater corridors for cables are extremely limited and recommends that its recent Cable Corridor Assessment and Cable Working Group³⁰ be leveraged by the NYISO in evaluating the viability of cable routes and other siting issues among transmission solutions. NYSERDA emphasizes that transmission solutions should preserve expandability and optionality for offshore transmission and onshore integration through a PPTN process that is informed and augmented by expertise from State and New York City agencies and parallel State processes.

Potomac Economics (Potomac)

Potomac cautions against including specific quantities or project characteristics in any PPTN to allow developers sufficient flexibility to compete and put forward creative

³⁰ The Cable Working Group includes NYSERDA, the New York State Department of Environmental Conservation (NYSDEC), Department of State, Department of Transportation, Office of General Services, and DPS.

solutions at lower costs to achieve CLCPA targets. Potomac recommends that the Commission require capacity expansion modeling techniques be used in a project evaluation approach for any PPTN that is declared. Potomac explains that the approach would adjust the mix of generation and storage investments in response to the proposed transmission project under evaluation.

Potomac also recommends that the Commission require evaluations to estimate a project's Implied Net REC Cost to facilitate a comparison of projects' cost-effectiveness at advancing state goals. Potomac expresses disagreement with certain comments made by AES in its PPTN proposal suggesting that the transmission network should be designed to deliver all generated energy. Potomac states that it is inefficient and costly to plan a system to avoid any congestion or curtailment. The Implied Net REC Cost described by Potomac would be denominated in dollars per megawatt-hour and refer to "the net cost of making incremental renewable energy available to load through an investment in renewable generation, storage, or transmission."³¹ Potomac explains that the Implied Net REC Cost methodology it describes would allow evaluation of a transmission project in comparison to other transmission projects and technologies to aid in the selection of projects that advance CLCPA goals at costs that are lower than other transmission, generation, and storage alternatives.

New York State Offshore Wind Maritime Working Group (M-TWG)

The M-TWG filed a summary of feedback from 46 stakeholders, which it indicates was developed during its March 2, 2023 Offshore Wind Cabling Workshop on Advanced Cable Routing Coordination. The M-TWG characterizes itself as "an independent and non-decisional advisory entity made up of

³¹ Potomac comments, p. 11.

representatives from the maritime transportation sector, navigation community, and offshore wind developers who provide guidance and advice on how to responsibly advance New York State's offshore wind energy development."³² The M-TWG highlights the opportunities that could be advanced through the transmission planning processes, including coordination of offshore wind cable routing and potential designation of regional cable corridors, future-proofing cable routes to minimize maritime industry impacts, minimization of constraints identified in the Cable Corridor Assessment and consideration of navigation and safety risks, and coordination with maritime organizations such as the U.S. Coast Guard and the Harbor Safety, Navigation, and Operations Committee.

LIPA

LIPA believes that it is premature to declare a PPTN on Long Island. LIPA explains that the NYISO is still evaluating the solutions proposed to address the 2020 Long Island OSW PPTN. LIPA expects that any solution selected to address the Long Island OSW PPTN would add transmission capacity on Long Island and between Long Island and other load zones to enable the potential addition of at least 3,000 MW of offshore wind interconnecting in Long Island. While LIPA acknowledges that the CLCPA and Offshore Wind Standard continue to drive the need for transmission connecting Long Island to neighboring load zones, LIPA believes that the extent of that need will not be clear until the selection(s) occurs in the Long Island OSW PPTN process and the future transmission needs prompted by NYSERDA's third offshore wind solicitation are known. LIPA recommends that the Commission incorporate the results of the Long Island OSW PPTN solicitation and any downstate bulk system needs

³² M-TWG cover letter, p. 1.

identified through the CGPP in 2023 prior to making any decision regarding Public Policy Requirements driving additional transmission needs on Long Island.

Other Comments

The remaining comments were filed by parties that provided responses to the NYISO's 2022 solicitation - ACENY-NYOWA, AES, NGV, NYC, Orsted, NY Transco, and Transource. The parties reiterate their proposals filed in response to the NYISO solicitation, which are summarized above.

LEGAL AUTHORITY

The transmission planning matters addressed in this Order are carried out pursuant to the Commission's August 2014 Policy Statement and the NYISO OATT. Authority to undertake transmission planning is also derived from the PSL, through which numerous legislative powers are delegated to the Commission. Pursuant to PSL §5(1), the "jurisdiction, supervision, powers and duties" of the Commission extend to the "manufacture, conveying, transportation, sale or distribution of ... electricity." PSL §5(2) requires the Commission to "encourage all persons and corporations subject to its jurisdiction to formulate and carry out long-range programs, individually or cooperatively, for the performance of their public service responsibilities with economy, efficiency, and care for the public safety, the preservation of environmental values and the conservation of natural resources." In addition, PSL §66(2) provides that the Commission shall "examine or investigate the methods employed by [] persons, corporations and municipalities in manufacturing, distributing and supplying ... electricity ... and have power to order such reasonable improvements as will best promote the public

interest, preserve the public health and protect those using such ... electricity." Further, PSL §65(1) provides the Commission with authority to ensure that "every electric corporation and every municipality shall furnish and provide such service, instrumentalities and facilities as shall be safe and adequate and, in all respects, just and reasonable." The Commission has further authority under PSL §66(5) to prescribe the "safe, efficient and adequate property, equipment and appliances thereafter to be used, maintained and operated for the security and accommodation of the public" whenever the Commission determines that the utility's existing equipment is "unsafe, inefficient or inadequate." Moreover, PSL §66(2) provides that the Commission shall "examine or investigate the methods employed by ... persons, corporations and municipalities in manufacturing, distributing and supplying ... electricity ... and have power to order such reasonable improvements as will best promote the public interest, preserve the public health and protect those using such ... electricity." PSL §4(1) also expressly provides the Commission with "all powers necessary or proper to enable [the Commission] to carry out the purposes of [the PSL]" including, without limitation, a guarantee to the public of safe and adequate service at just and reasonable rates,³³ environmental stewardship, and the conservation of resources.³⁴

³³ See, *International R. Co. v Public Service Com.*, 264 AD 506, 510 (1942).

³⁴ PSL §5(2); see also, *Consolidated Edison Co. v Public Service Commission*, 47 NY2d 94 (1979) (overturned on other grounds) (describing the broad delegation of authority to the Commission and the Legislature's unqualified recognition of the importance of environmental stewardship and resource conservation in amending the PSL to include §5).

The CLCPA amended the PSL by adding PSL §66-p(2), which directs the Commission to “establish a program to require that: (a) a minimum of seventy percent of the state wide electric generation secured by jurisdictional load serving entities to meet the electrical energy requirements of all end-use customers in New York state in two thousand thirty shall be generated by renewable energy systems; and (b) that by the year two thousand forty (collectively, the ‘targets’) the statewide electrical demand system will be zero emissions.” In establishing such renewable program, PSL §66-p(5) requires the Commission to require the procurement “of at least [9,000 MW] of offshore wind electricity generation by [2035]”

The Accelerated Renewables Energy Growth and Community Benefit Act (Accelerated Renewables Act) directs the Commission and Department of Public Service Staff (Staff) to take actions to ensure that renewable energy can be efficiently and cost-effectively injected into the State’s Transmission and Distribution (T&D) system.³⁵ The Accelerated Renewables Act specifically directs Staff, in consultation with state authorities,³⁶ the Joint Utilities,³⁷ and the NYISO, to conduct a “power grid study” to identify T&D infrastructure needed to enable the state to meet CLCPA targets related to renewable

³⁵ Chapter 58 (Part JJJ) of the laws of 2020.

³⁶ Section 7 of the Accelerated Renewable Act identifies the state authorities for consultation as New York State Energy Research and Development Authority (NYSERDA), the New York Power Authority (NYPA), and LIPA.

³⁷ The Joint Utilities include Consolidated Edison Company of New York, Inc.; Orange and Rockland Utilities, Inc.; New York State Electric and Gas Corporation; Rochester Gas and Electric Corporation; Central Hudson Gas & Electric Corporation; and Niagara Mohawk Power Corporation d/b/a National Grid.

energy and energy storage.³⁸ The Act further directs the Commission to use the results of such study to: (1) develop plans to enable timely upgrades to the local T&D system; (2) identify bulk transmission investments that should be made, including projects that should be pursued on an expedited basis to meet CLCPA goals; and (3) otherwise advance the policies of the Act.

DISCUSSION

The Commission's role in the NYISO's Public Policy Transmission Planning Process is to "issue a written statement that identifies the relevant Public Policy Requirements driving transmission needs and explains why it has identified the [PPTNs] for which transmission solutions will be requested by the [NY]ISO."³⁹ The Commission's statement shall also "explain why transmission solutions to other transmission needs should not be requested."⁴⁰ Finally, as noted, the Commission's statement may also provide additional criteria for the evaluation of transmission solutions, and the type of analyses that it will request from the NYISO.⁴¹ In accordance with the NYISO OATT, this Order addresses the proposed Public Policy Requirements submitted in the 2022 NYISO Filing.

Finding of Public Policy Transmission Needs

We start by examining whether to identify the mandates specified under the CLCPA as Public Policy Requirements driving the need for additional transmission facilities. Several

³⁸ Staff, working with NYSERDA, filed the Initial Report on the Power Grid Study, including the Power Grid Study, on January 19, 2021 in Case 20-E-0197.

³⁹ NYISO OATT, Attachment Y, §31.4.2.1.

⁴⁰ Id.

⁴¹ Id.

responses to the 2022 NYISO Filing proposed that the Commission make such a finding. The Commission previously discussed the CLCPA as a driver of transmission needs in response to the 2018 and 2020 NYISO Public Policy Transmission Planning Process cycles. There, the Commission determined that the CLCPA's provisions relating to offshore wind resources qualified as a Public Policy Requirement driving the need for additional transmission facilities, within the scope of the NYISO's tariff.⁴² In particular, the Commission found that the progress of NYSERDA's offshore wind resource procurements showed "an impending need for upgrades to onshore transmission facilities to assure that the offshore wind energy expected to be injected into New York City and Long Island can be distributed to the State at large." Based on those findings, the Commission referred the Public Policy Requirement to the NYISO to solicit proposals for new transmission from Long Island to the mainland.⁴³

Since the Commission made that determination, NYSERDA has continued to procure Offshore Wind Renewable Energy Certificates (ORECs) from offshore wind resources. Through solicitations held in 2018 and 2020, NYSERDA has entered into contracts for ORECs from four projects totaling 4,230 MW of capacity. NYSERDA initiated its third ORECs procurement (NY3) on July 27, 2022, and is currently in the process of considering bids responsive to that procurement. We note that in the CES Modification Order, this Commission limited NYSERDA's authority to procure offshore wind generation "up to" 9 GW of capacity. Given NYSERDA's evident progress toward this limit, we refine our prior determination to better align this Public Policy

⁴² Long Island OSW PPTN Order.

⁴³ Long Island OSW PPTN Order.

Requirement, and the transmission need, with the requirements and limitations established in the CES Modification Order. With that refinement, we confirm the determination made in the Long Island OSW PPTN Order that the CLCPA - specifically the 9,000 MW offshore wind target - "squarely fits within the definition of a Public Policy Requirement as a duly authorized State statute."⁴⁴

In addition, while the Commission's overall objective in this Order is the same as it was in March 2021 - that is, the integration of offshore wind with the rest of State grid - the specifics of this transmission need are different. The Long Island OSW PPTN Order seeking new transmission between Long Island and the rest of State implemented one of several recommendations submitted to the Commission in the Power Grid Study. The same report also recommends exploring cost-effective options for routing "up to 6,000 MW" of offshore generation into New York City.⁴⁵ Thus, consistent with the Power Grid Study recommendations, our focus here is the need for infrastructure to support New York City interconnections for the balance of the offshore wind resources authorized in the CES Modification Order.

We note that several participants in this proceeding suggest that we take this approach. We agree with the comments from various parties, including BMT, the NYISO, NYSERDA, and M-TWG, that additional transmission is needed to deliver offshore wind energy into New York City. We note the NYISO's concurrence with several PPTN proposals that additional transmission is needed to fully deliver offshore wind energy into New York City, pointing to its Outlook, which highlighted a significant and

⁴⁴ Id., p. 21.

⁴⁵ Power Grid Study, p. 97.

urgent need, driven by the CLCPA, for additional bulk transmission. As the NYISO explains in its comments, a coordinated approach for both onshore and offshore transmission facilities solicited through the competitive Public Policy Transmission Planning Process can identify a more efficient and cost-effective buildout of the offshore transmission system to support timely and holistic development of offshore wind. We also agree with NYSERDA that using the Public Policy Transmission Planning Process to identify offshore wind transmission into New York City will help ensure that the State stays on track with the offshore wind generation solicitations in a cost-effective manner.

We further emphasize that the problem we are asking the NYISO and transmission developers to solve is even more complex than the problem addressed in the Long Island OSW PPTN Order. One reason for that complexity is the fact that offshore wind development activities are already taking place; we are introducing an infrastructure proposal into an evolving situation. Our determination of the need here must take account of both existing commitments to offshore developers and the future needs of the program. To date, NYSERDA has contracted for ORECs associated with approximately 4.23 GW of offshore generation projects, a significant fraction of the 9 GW authorization. The developers of these projects have identified how and where they will interconnect with the onshore grid, and some have filed licensing applications for the necessary transmission facilities. Some propose to interconnect at points on the Long Island system; others propose to interconnect with points in Zone J. The table below lists the contracted projects

and their designated POIs, which are the subject of PSL Article VII applications to construct related transmission facilities.⁴⁶

Project Name	Capacity	Cable Landfall	POI
Sunrise Wind	924 MW	Smith Point County Park, Brookhaven Town	Holbrook (LIPA) - 138kV
Empire Wind 1	816 MW	South Brooklyn Marine Terminal (Proposed)	Gowanus (Con Edison) - 345kV
Empire Wind 2	1,260 MW	Long Beach (Proposed)	Barrett (LIPA) - 138kV
Beacon Wind	1,230 MW	Astoria Queens (Proposed)	Astoria (Con Edison) - 138 kV
Total	4,230 MW		

This circumstance requires the Commission to size the transmission need identified here carefully. Recognizing that two contracted projects having a total capacity of 2,046 MW have already identified Zone J POIs, we seek the most efficient approach to delivering and interconnecting a minimum of 4,770 MW with the Con Edison system, thus supporting the 6 GW recommended in the Power Grid Study. At this scale, the transmission infrastructure would both accommodate future NYSERDA procurements and make capacity available to participants in the

⁴⁶ Case 20-T-0617, Application of Sunrise Wind LLC for a Certificate of Environmental Compatibility and Public Need. Case 21-T-0366, Application of Empire Offshore Wind LLC for a Certificate of Environmental Compatibility and Public Need. Case 22-T-0346, Application of Empire Offshore Wind LLC for a Certificate of Environmental Compatibility and Public Need. Case 22-T-0294, Application of Beacon Wind LLC for a Certificate of Environmental Compatibility and Public Need.

NY3 procurement, which may help lower the overall costs of those projects to ratepayers.⁴⁷

Our concern for ratepayer impacts also requires us to specify that solutions should reduce interconnection-related risk as much as reasonably possible. Therefore, to meet these objectives, we seek complete transmission solutions: the NYISO should solicit proposals for transmission facilities that will deliver power collected from offshore wind resources to one or more interconnection points with the onshore local transmission system owned and operated by Con Edison in Zone J. To be considered complete, proposals must include all the facilities and equipment necessary to deliver the energy, such as offshore transmission facilities to interconnect the offshore wind generation, submarine cables, onshore HVDC convertor stations, cables from onshore HVDC convertor stations to Con Edison's transmission system's points of interconnection, and also local transmission upgrades and new or upgraded substations to reliably accommodate the full output of the offshore generation onto the Con Edison local transmission system.

In addition, we anticipate that the need for this additional transmission capacity from offshore wind resources into Zone J will likely require sufficient local system reinforcements, including upgraded or new substations for POIs, to support the output of the OSW energy and to reduce curtailment risk for the connected offshore generators. As the local transmission owner and operator, we expect Con Edison will make these necessary reinforcements and substation upgrades or construct new ones. Should the construction of OSW related system reinforcements or upgrades, including new substations also facilitate resolution of a Con Edison local load-serving

⁴⁷ NYSERDA indicates in its comments that NY3 developers have the option of changing their originally designated POIs.

reliability need, not directly related to delivering OSW, we expect Con Edison will make the necessary filings with this Commission for cost recovery of those non-OSW related portions directly from its customers.

Our technical requirements and evaluation criteria for the NYISO to use in this solicitation are further developed in Appendix A, which is incorporated in this Order. These include directions concerning the details of the need, metrics for expandability and deliverability, and cable corridor constraints, among other things.

Lastly, we find that proposals submitted in response to the NYISO's solicitation based on this Order must demonstrate the ability to meet an in-service date of January 1, 2033, in order to support the CLCPA's 2035 timeframe.

Based on the Power Grid Study and the comments received in this proceeding, including the NYISO's and NYSERDA's comments, we find the CLCPA, as implemented in the CES Modification Order, constitutes a Public Policy Requirement driving the need for transmission to support the injection of at least 4.77 GW of offshore wind energy with the Con Edison system, including interconnection facilities and necessary local system upgrades, subject to the more detailed criteria and specifications listed in Appendix A. Accordingly, the Commission refers this need to the NYISO for the solicitation of solutions pursuant to the requirements of the OATT.

Zone J Points of Interconnection

As the local transmission owner and operator, Con Edison has a substantial responsibility for facilitating cost-effective interconnections for offshore wind resources, in the context of its other service responsibilities for providing safe and reliable service. We note the Company's comments concerning its role in planning and maintaining a complex and evolving

system, and concur with Con Edison's statement that it is "singularly positioned to propose and implement optimal interconnection substations within its service territory for the benefit of all New Yorkers."⁴⁸ We agree that the circumstances of this solicitation require close coordination between Con Edison and developers preparing proposals for offshore wind transmission. We encourage Con Edison to identify any locations on its system that it believes present cost-effective options for interconnecting such transmission infrastructure, and to establish a process to make information about those locations available to interested transmission developers. We expect that, given an understanding of the options, transmission developers may elect to pursue in-depth exploration of the alternatives with Con Edison, and that the Company will work with all interested developers in preparing this aspect of their bids and the related interconnection and local system upgrade cost estimates, with appropriate protections for the confidentiality of the solicitation process. We also ask the NYISO to develop a solicitation schedule that allows adequate time for these interconnection discussions to take place prior to the deadline for submitting proposals.

We anticipate that, if a project is selected by the NYISO Board in the future, Con Edison will proceed diligently to construct any new facilities needed to accommodate the interconnections and to make any necessary reinforcements and substation upgrades and to build new substations, if required, in time for the in-service date of January 1, 2033. We acknowledge Con Edison's comment concerning the possibility that new facilities needed to manage offshore wind injections might constitute a component of a multi-value project, and that such

⁴⁸ Con Edison Comments, p. 6.

an approach might be protective of ratepayer interests. As noted above, should existing mechanisms not be adequate to address this possibility, we invite Con Edison, at the appropriate time, to make any filings with this Commission that are needed to address cost recovery and/or cost allocation issues.

Supplemental Evaluation Criteria

New York City and its waterways pose unique challenges for building new electric infrastructure. These challenges include physical constraints, sensitive natural resources, and limitations imposed by the region's multiple and sometimes overlapping land and water uses, among other things. Some of these constraints are discussed in the Power Grid Study; many more are identified in the recent Cable Corridor Assessment conducted by a group of State agencies coordinated by NYSERDA. The Commission also discussed these challenges in its Clean Energy Hub Order.

We share NYSERDA's concern, expressed in its comments, for maximizing the use of limited resources, such as cable routes and land for onshore facilities, and recognize the opportunities highlighted by the M-TWG to coordinate offshore wind cable routing, designate regional cable corridors, and minimize constraints identified in the Cable Corridor Assessment.

We further note that NYSERDA's commitment to maintaining a regular cadence of procurements and the looming 2035 deadline to meet the 9 GW target suggest that there is little room for error in this effort. To meet the State's various objectives, the project selected through the NYISO process must have a high degree of constructability and must present a timely and realistic construction schedule. For these reasons, we conclude that developers' proposals should address

several supplemental criteria, and that the NYISO should consider these additional factors in its evaluation of proposals responding to the solicitation.

Among the supplemental criteria are the siting principles listed in Appendix B to this Order. Proposers should consider these as guidelines for the development of their submissions to the NYISO. Many of them relate to the particular siting constraints in New York Harbor and related permit requirements and standards. For example, the siting criteria require proposals for underwater cables to show how the routes and installation techniques are consistent with the findings and recommendations of the Cable Corridor Assessment in either avoiding impacts or mitigating unavoidable impacts. Proposals for land-side facilities will be similarly required to demonstrate impact avoidance and appropriate impact mitigation measures. The objective here is not to reproduce the permitting processes, such as the review conducted pursuant to Public Service Law Article VII, that will ultimately apply to the selected project but to ensure that proposers understand the siting constraints they are likely to encounter when constructing transmission in this region and have factored them in to their designs and cost estimates, as far as is reasonably possible at this stage. Our aim is to enable the NYISO Board, at the end of the evaluation, to select among projects that do not present substantial permitting risk.

We direct Staff to work with key State, federal, and local authorities with jurisdiction over aspects of the siting and construction of transmission in New York City to assist proposers and the NYISO on questions of permitting risk.⁴⁹ This

⁴⁹ We understand that aspects of the proposals may include confidential information. We direct Staff to work with the NYISO, the participating agencies, and transmission developers

work should be conducted on a schedule that parallels and supports the solution development phase and the NYISO's evaluation; i.e. that facilitates and does not delay that schedule. As NYSERDA suggests in its comments, the existing Cable Working Group could continue to work together for this purpose; we encourage Staff to consider this option. Staff should also consider whether other jurisdictional entities, such as the United States Army Corps of Engineers, should be included in this effort. The collective expertise of such a group will allow for a better-informed evaluation of proposal designs and construction schedules.

We are also concerned that the complexity of the siting issues involved here may result in higher costs than transmission development would entail in a less constrained environment. We acknowledge that in transmission construction, even after a detailed siting process, conditions encountered in the field influence the final costs of a project in ways that are not entirely predictable. Nevertheless, we expect that highlighting these challenges here and requiring proposers to address them is likely to improve the quality of the cost estimates submitted to the NYISO and the NYISO's ability to independently estimate costs, insofar as they relate to the permitting challenges that can be anticipated. At the very least, this process should allow permitting agencies to flag estimates that they believe understate or overlook known challenges associated with siting transmission facilities in New York City and its waterways.

We also find that some broader stakeholder engagement is necessary to inform the parallel agency review described in this Order. We direct Staff to create one or more opportunities

to ensure any such information is protected in accordance with applicable law.

in the evaluation stage, as Staff determines is helpful, to inform stakeholders of progress and gather stakeholder input.

We emphasize that the NYISO's selection of a project does not supplant the need for the successful developer to obtain necessary permits and approvals, such as siting approvals under Public Service Law Article VII.⁵⁰ However, developers do not need to await the outcome of the NYISO's process to start seeking such approvals. It is possible that developers could take advantage of the multi-agency siting working group contemplated in this Order to begin preparing their siting applications, and we encourage proposers to use this opportunity to explore the agencies' concerns and requirements.

Site Control

Another critical factor in building infrastructure in New York City is the limited availability of appropriate real estate. Thus, site control becomes a significant execution risk. The projects presented to the NYISO Board following the evaluation should have reached a level of certainty with respect to this factor. The selected project must be in a position to move forward promptly in order to meet the 2033 in-service date and cannot assume access to real estate that the developer does not have a reasonable and timely prospect of securing. To address this problem, we include site control as an evaluation criterion for the NYISO to apply. We note that the NYISO tariff already requires proposals to include a plan for obtaining necessary rights to real estate. We suggest that the NYISO require proposers that pass the Viability and Sufficiency Assessment to provide updates on their progress toward obtaining the real estate rights identified in those plans, in order to

⁵⁰ Developers' interactions with the multi-agency working group suggested here could provide some benefits in streamlining future regulatory processes.

provide the NYISO Board with current information on this key risk prior to its selection of a project.

Other Requested Public Policy Transmission Needs

The NYISO's 2022 solicitation resulted in a range of proposed Public Policy Requirements in addition to the CLCPA, including the Accelerated Renewables Act, the Commission's CES Modification Order, the NYSDEC's Peaker Rule, and the City of New York's Climate Mobilization Act and Local Law 97. To the extent these proposed Public Policy Requirements relate to the need for additional transmission to deliver OSW generation, identifying them as the basis for such a need is redundant and unnecessary. The CLCPA establishes the broadest framework of Statewide clean energy requirements compared to other statutes and regulations noted in responses to the NYISO solicitation. For these reasons, we defer to the mandates established pursuant to the CLCPA in establishing the requisite basis for the transmission needs identified herein.

Furthermore, we note that this Commission has instituted a proceeding to develop and implement a statewide transmission planning process pursuant to the directives in the Accelerated Renewable Energy Growth Act.⁵¹ In that proceeding, the Commission articulated its expectation that the new planning process will provide a coordinated overview of investment needs at all levels of the grid.⁵² We anticipate that the other potential needs identified here will be examined in that process, and that the Commission will have the benefit of a coordinated and prioritized assessment of possible solutions,

⁵¹ Case 20-E-0197, supra, Order on Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act (issued May 14, 2020).

⁵² Case 20-E-0197, supra, Order on Local Transmission and Distribution Planning Process and Phase 2 Project Proposals (issued September 9, 2021), pp. 18-20.

including bulk solutions, in the future. Therefore, the Commission declines to take any action at this time with respect to other proposed Public Policy Requirements identified in the 2022 NYISO Filing.

CONCLUSION

As discussed herein, the Commission identifies the CLCPA as a Public Policy Requirement driving the need for additional transmission facilities to deliver OSW generation into Zone J. In so doing, the Commission has met the requirements of the NYISO's Public Policy Transmission Planning Process, and accordingly refers the PPTN, and the criteria specified in this Order, to the NYISO to solicit and evaluate potential solutions and to ultimately select the more cost effective or efficient solution(s). No other transmission needs are referred to the NYISO at this time.

The Commission orders:

1. The Climate Leadership and Community Protection Act constitutes a Public Policy Requirement driving the need for additional transmission facilities to deliver the output of offshore wind generating resources to New York City interconnection points, and this Public Policy Transmission Need shall be referred to the New York Independent System Operator, Inc. to consider solutions to that need, as discussed in the body of this Order.

2. The New York Independent System Operator, Inc. shall evaluate the Public Policy Requirement identified in Ordering Clause No. 1 utilizing the evaluation criteria discussed in the body of this Order and the requirements of Appendices A and B attached to this Order.

3. Consolidated Edison Company of New York, Inc. is directed, after consultation with Staff, to undertake a process to make information available to transmission proposers concerning existing or potential points of interconnection on its system.

4. Department of Public Service Staff is directed to work with the State, federal, and local authorities with jurisdiction over aspects of the siting and construction of transmission in New York City to assist proposers and the NYISO on questions of permitting risk, as discussed in the body of this Order.

5. Department of Public Service Staff is directed to inform stakeholders of progress and gather stakeholder input during the evaluation stage, as discussed in the body of this Order.

6. This proceeding is closed.

By the Commission,

(SIGNED)

MICHELLE L. PHILLIPS
Secretary

APPENDIX A: TECHNICAL REQUIREMENTSSpecifications

As noted in the body of this Order, the Commission finds that the CLCPA constitutes a Public Policy Requirement driving the need for transmission to support the injection of offshore wind generation into New York City (NYISO Zone J). Solutions to that need shall:

- 1) Accommodate the full output of at least 4,770 MW of incremental offshore wind generation injected into New York City (Zone J),⁵³ under applicable reliability standards, without reducing the overall output of other renewable resources interconnected in Zones J and K.
- 2) Consist of complete end-to-end proposals comprised of both offshore and onshore components to enable power injection into Zone J. The components should include:
 - a. One or more offshore interconnection point(s);
 - b. Offshore transmission (i.e., submarine cables);
 - c. Sites for cable landing points;
 - d. Onshore transmission path(s) (i.e., terrestrial cables) from cable landing points to points of interconnection (POIs) in Zone J, including sites for converter stations, if necessary; and
 - e. Necessary improvements to and/or expansion of the existing onshore transmission system.
- 3) Include plans for how offshore wind generation would interconnect to the end-to-end transmission proposal at the offshore interconnection points. Examples may include, but are not limited to, individual standalone DC connectors, each for a single offshore wind project; or an offshore substation for HVDC cable(s) and offshore wind project export line(s).
- 4) Demonstrate plans to complete all permitting and construction activities necessary to achieve an in-service date no later than January 1, 2033.

⁵³ Incremental to the 2,046 MW of offshore wind generation interconnecting into Zone J with existing OREC contracts resulting from NYSERDA's first and second offshore wind solicitations. Information on offshore wind projects with OREC contracts can be found on NYSERDA's offshore wind program webpage (<https://www.nyserda.ny.gov/All-Programs/Offshore-Wind/Focus-Areas/NY-Offshore-Wind-Projects>).

Evaluation Criteria

In accordance with the NYISO OATT, the Commission also prescribes the following criteria to assist the NYISO in its solicitation and evaluation of proposed solutions to the identified Public Policy Transmission Need:

- 1) The ability of a proposed solution to enable the injection of incremental offshore wind generation into New York City exceeding the minimum specification established above should be valued in the evaluation process. Scenarios representing up to 8,000 MW of incremental offshore wind generation injected into New York City should be used to evaluate the performance of proposed solutions with respect to expandability, renewable energy delivery, and other metrics as defined in the NYISO OATT.
- 2) Proposed solutions that minimize, to the extent possible, the use of AC submarine cables in constrained areas identified in NYSERDA's 2022 offshore wind solicitation (ORECRFP22-1)⁵⁴, pursuant to the Order on Power Grid Study Recommendations,⁵⁵ shall be valued in the evaluation process. Constrained areas include the Lower Bay, Raritan Bay, Arthur Kill, the Narrows, the Upper Bay (New York Harbor), the East River, the Hudson River, the Block Island Sound, and the Long Island Sound.
- 3) Proposed solutions that demonstrate that they do not preclude or foreclose on the ability to expand and/or integrate into a future offshore transmission network shall be valued in the evaluation process.
- 4) Solutions are not required to relieve bulk export constraints on the interface from Zone J to the rest of the New York Control Area during light load conditions.
- 5) Proposed solutions that optimize the use of intended corridors to achieve the intended level of offshore wind integration and account for the findings of NYSERDA's

⁵⁴ See NYSERDA's 2022 Offshore Wind Solicitation webpage (<https://www.nyserda.ny.gov/All-Programs/Offshore-Wind/Focus-Areas/Offshore-Wind-Solicitations/2022-Solicitation>).

⁵⁵ See Cases 20-E-0197 et al., Order on Power Grid Study Recommendations (issued January 20, 2022).

Cable Corridor Assessment shall be valued in the evaluation process.

- 6) Proposed solutions should take into consideration potential interference and/or synergy with the Long Island Offshore Wind Export PPTN.

APPENDIX B: SUPPLEMENTAL CRITERIA**1. Evaluation and Ranking**

The proposals that meet threshold design requirements will be evaluated on their recognition of and consistency with the siting principles identified in this document, which are drawn from the principles developed in the Cable Corridor Assessment to optimize routing of multiple offshore wind (OSW) cables in New York waters. <https://www.nyserda.ny.gov/All-Programs/Offshore-Wind/Focus-Areas/Transmission-NY-Electricity-Grid>

Proposers should use the publicly available GIS data from Appendix A of the Cable Corridor Assessment, DOS Gateway Portal, or reference other data to describe their approach to meeting the siting principles. In all cases, these principles require avoiding and minimizing likely impacts to identified resources to the maximum extent practicable.

For purposes of these proposals, the phrase "to the maximum extent practicable" should be read in the context of publicly available information concerning the identified resources, currently available construction technologies, impact avoidance and minimization techniques applied to similar projects, and any site-specific information the proposer may have developed.

Proposal designs should reflect understanding of these principles and their application in the chosen route or routes. Where the siting principles express values that can only be reconciled through a site-specific weighting and balancing exercise, proposers should acknowledge such potential conflicts, discuss why these principles may not be met, and discuss how they intend to balance the competing values. Proposers must explain why and how any necessary deviation from a siting principle will affect cost, schedule, or permitting risk. *Cost estimates should include the costs of any anticipated resource mitigation.*

A. The principles to optimize routing of multiple OSW cables in the marine environment include:

1. Apply parallel routing with existing linear infrastructure. *Proposers must demonstrate adherence to this principle for existing linear infrastructure and for proposed transmission projects currently in the planning process,*

Article VII application review, or projects with an Article VII Certificate, to the maximum extent practicable. Proposers must describe how adherence with this principle considers the limitation of space between cables in constrained areas, and how the design considers future maintenance of cables particularly with respect to available technologies and within space constrained areas.

2. Avoid sensitive resources to the maximum extent practicable, including, but not limited to, hard bottom habitat, cold water corals, submerged aquatic vegetation, emergent aquatic vegetation/ marshlands, Coastal Erosion Hazard Areas, Electromagnetic field-sensitive species aggregation areas and migration routes, clam beds, historic areas, Threatened and Endangered species habitat, and areas of potentially significant archaeological resources. *Proposers must consider other significant resources discussed in the Cable Corridor Assessment and not listed here as relevant to the proposed route, including Significant Coastal Fish and Wildlife Habitats, shipwrecks, and cultural resources. Where the proposed design does not avoid these sensitive resources, provide a narrative regarding how impacts would be minimized and mitigated with specific measures identified in the Cable Corridor Assessment or other innovative measures.*
3. Limit footprint of combined linear infrastructure to minimize resource fragmentation in zones without space limitations. *Proposers must describe how the design complies with this siting principle, and why and how any necessary deviation will affect cost, schedule, or permitting risk.*
4. Bundle cables to minimize number of routes. *Proposers must describe evaluation of opportunities to bundle cables with existing or proposed cables.*
5. Limit crossings of other infrastructure and cross at right angles. *Proposers must describe whether crossings will occur at right angles, and why and how any necessary deviation will affect cost, schedule, or permitting risk.*
6. Avoid anchorage areas and navigation channels. *Proposers must describe avoidance of anchorage and navigation channels, including designated, common practice, and Recommended Vessel Routes using NOAA nautical charts;*

Federal civil works and resilience projects, and Aids to Navigation. Proposers must describe the process for minimizing navigation risks through avoidance or adequate burial depths, or where project activities would impact areas with existing vessel restrictions (e.g., air draft, slack water). Proposers must explain how they will identify and coordinate with the relevant maritime stakeholders.

7. Minimize in-water transmission cable length to the extent that other environmental and anthropogenic resources and uses are not impacted disproportionately. *Proposers must describe the balance of in-water and anthropogenic resources of the proposed project, including cost, schedule, and impacts.*

B. The principles to optimize routing of multiple OSW cables at landfalls and overland include:

1. Where possible, installation at landfall should be one horizontal directional drill (HDD) per bundled High Voltage Direct Current cable. *Proposers must describe evaluation of how the design complies with this siting principle, and why and how any necessary deviation will affect cost, schedule, or permitting risk.*
2. Where possible, use public Rights of Way, transmission corridors, railroad corridors, and/or local, county, and/or State roads or highways that meet permitting requirements and FHWA approval, where applicable. *Proposers must describe how the design maximizes the use of existing corridors to the maximum extent practicable. For each use of public Rights of Way (ROW), proposers must demonstrate an understanding of the cost, schedule, and approval process, including the standards of review and robust alternatives analysis required for proposed installations within a controlled access state highway ROW, including NYSDOT and FHWA regulatory requirements.*
3. Minimize crossings of active infrastructure and when crossings are necessary, use specialized crossing methods, including trenchless methods like HDD and jack-and-bore, at bridge crossings over water, other roadways, or railroads; existing utility crossings; and intersections with a major arterial roadway. *Proposers must identify whether infrastructure crossings are currently active or in service. Where proposals depend on attaching to existing*

infrastructure, proposers must demonstrate an understanding of the cost, schedule, and issues relevant to the approval and installation process.

4. Avoid impacts to residential neighborhoods, environmental justice areas, disadvantaged communities, and underserved communities. *Proposers must identify residential neighborhoods, environmental justice areas, disadvantaged communities, and underserved communities using publicly available information, including disadvantaged communities potentially <https://climate.ny.gov/resources/disadvantaged-communities-criteria/>.*

Proposers should address this principle in terms of avoiding long-term impacts and minimizing short-term impacts.

5. Avoid sensitive resources to the maximum extent practicable, including, but not limited to, state and federally regulated wetlands, Federally- or state-listed endangered or threatened species or associated habitat, designated critical habitat, Important Bird Areas, New York City Waterfront Revitalization Program designations, Significant Coastal Fish and Wildlife Habitat, Natural Heritage Communities, conservation and mitigation sites, and areas of potentially significant archaeological resources. *Proposers must consider other significant resources discussed in the Cable Corridor Assessment and not listed here as relevant to the proposed route, including Significant Coastal Fish and Wildlife Habitats and cultural resources. Where the proposed design does not avoid these sensitive resources, provide a narrative regarding how impacts would be minimized and mitigated with specific measures identified in the Cable Corridor Assessment or other innovative measures.*