February 21, 2023

**By Electronic Portal**

Honorable Michelle L. Phillips  
Secretary to the Commission  
New York State Public Service Commission  
Empire State Plaza Agency Building 3  
Albany, NY 12223-1350

Subject: Case No. 22-E-0633 — In the Matter of New York Independent System Operator, Inc.’s Proposed Public Policy Transmission Needs for Consideration for 2022

Dear Secretary Phillips:

Pursuant to the Notice of Proposed Rulemaking in “Proposed Public Policy Transmission Needs/Public Policy Requirements, As Defined Under the NYISO Tariff,” published December 21, 2022 in the State Register, the New York Independent System Operator, Inc. encloses its comments in the above-entitled proceeding.

Respectfully submitted,

/s/ Brian R. Hodgdon______________  
Brian R. Hodgdon  
10 Krey Boulevard  
Rensselaer, NY  12144  
CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Rensselaer, NY this 21st day of February 2023.

/s/ Elizabeth Rilling

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STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

Case No. 22-E-0633 – In the Matter of New York Independent System Operator, Inc.’s Proposed Public Policy Transmission Needs for Consideration for 2022

Comments of the New York Independent System Operator, Inc.

I. Introduction

The New York Independent System Operator, Inc. (“NYISO”) respectfully submits these comments in the above-captioned proceeding. These comments are prepared in response to the New York State Public Service Commission’s (“Commission” or “NYPSC”) Notice of Proposed Rulemaking in “Proposed Public Policy Transmission Needs/Public Policy Requirements, As Defined Under the NYISO Tariff” (I.D. No. PSC-51-22-00001-P) that was published in the New York State Register on December 21, 2022.

The NYISO continues to support the implementation of the Climate Leadership and Community Protection Act (“CLCPA”) of 2019\(^1\) and the Accelerated Renewable Energy Growth and Community Benefit Act (“AREGCBA”) of 2020.\(^2\) The Commission has revised the Clean Energy Standard (“CES”) to reflect these goals, which include 3,000 MW of storage by 2030 and 6,000 MW of solar PV installations, and 9,000 MW of offshore wind by 2025.\(^3\) In 2021, New York Governor, Kathy Hochul, announced the expansion of the goal of solar PV installation to

\(^1\) 2019 Laws of New York, ch. 106. The CLCPA requires that seventy percent of energy consumed in New York State be produced by renewable resources by 2030. By 2040, the CLCPA requires that energy consumed in New York State must be completely emissions free.

\(^2\) 2020 Laws of New York, ch. 58, part JJ.

10,000 MW by 2030. In addition to the increases in and changes to the resource mix, the NYISO continues to find that New York will need additional transmission capacity to achieve these objectives. For instance, the development of wind resources off the Long Island coast under the CLCPA will drive the need for bulk transmission facilities offshore and in New York City and Long Island to facilitate the injection of offshore wind resources to the New York electric grid. Additional transmission capability continues to be necessary to deliver renewable resources to consumers throughout New York.

Given the lead time necessary for transmission development in New York and the necessity to accelerate the pace of renewable resource development, the NYISO supports the Commission finding the need for transmission to achieve New York’s clean energy goals to be addressed in the NYISO’s Public Policy Transmission Planning Process (“Public Policy Process”). The NYISO continues to emphasize the need to timely develop transmission to, among other things, facilitate the delivery of offshore wind resources into New York City to effectively use available space in the waterways and corridors into New York City and cost-effectively develop offshore wind.


5 See generally, 2020 CES Order (authorizing New York State Energy Research and Development Authority to procure the necessary amount of offshore wind resources necessary to achieve the CLCPA goal with procurements between 750 MW and 1,000 MW per year through 2027); Case No. 18-E-0071, Matter of Offshore Wind Energy, Order Authorizing Offshore Wind Solicitation in 2020 (April 23, 2020) (authorizing New York State Energy Research and Development Authority to solicit additional offshore wind in 2020 for up to 2,500 MW); Case No. 18-E-0071, Matter of Offshore Wind Energy, Order Establishing Offshore Wind Standard and Framework for Phase 1 Procurement (July 12, 2018) (authorizing New York State Energy Research and Development Authority to hold initial procurement solicitations in 2018 and 2019 for 800 MW or more of offshore wind “with a preference for radial interconnections”).

6 Capitalized terms not otherwise defined in this document are defined by Attachment Y to the NYISO Open Access Transmission Tariff (“OATT”) and otherwise in the OATT and Market Administration and Control Area Services Tariff.
II. Background

A. Process for Identifying Public Policy Transmission Needs

The Public Policy Process is one of the planning components under the NYISO’s Comprehensive System Planning Process and complies with the Federal Energy Regulatory Commission’s (“FERC”) regional transmission planning requirements under Order No. 1000.\(^7\)

The first step in the Public Policy Process involves the identification of transmission needs related to the New York State Bulk Power Transmission Facilities driven by Public Policy Requirements for which the NYISO solicits and evaluates proposed solutions. In every two-year planning cycle, the NYISO solicits interested parties to submit proposed Public Policy Requirements that drive transmission needs for consideration by the Commission. The NYISO then posts all submittals on its website and submits them to the Commission, along with transmission needs and criteria proposed by the NYISO, if any.\(^8\)

In accordance with the NYISO’s tariff and its own procedures, the Commission determines whether there are Public Policy Transmission Needs for which the NYISO should solicit transmission solutions as proposed in the submittals or pursuant to the Commission’s own finding.\(^9\)

B. Previous Public Policy Process Cycles

Since the inception of the NYISO’s Public Policy Process, the Commission has identified four Public Policy Transmission Needs. The first three needs called for increased transmission

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\(^8\) See OATT § 31.4.2.

capability in Western New York ("Western New York Transmission Need") and across the Central East (Segment A) and UPNY/SENY (Segment B) interfaces in the Mohawk and Hudson Valleys (collectively, the "AC Transmission Needs"). More recently, in 2021, the Commission identified a transmission need along the Long Island-New York City interface to add at least one bulk transmission intertie cable to increase the capability of the LIPA-Con Edison interface to ensure the full output from at least 3,000 MW of offshore wind is deliverable to the New York Control Area ("NYCA") and upgrading associated local transmission facilities to accompany the expansion of proposed offshore export capability ("Long Island Offshore Wind Export Transmission Need").

For the Western New York Transmission Need and the AC Transmission Needs, the NYISO selected three significant transmission projects through its Public Policy Process, representing the more efficient or cost-effective solutions. The NYISO selected those projects through its coordinated and transparent evaluation process with the New York State Department of Public Service, state agencies, and stakeholders in the NYISO’s governance process. The selected project for the Western New York Transmission Need entered service in May 2022 with all work finalized as of October 29, 2022. The two selected transmission projects for the AC Transmission Needs are well underway with several components of the projects having already been placed into service. Both projects for the AC Transmission Needs are working towards completion by December 2023.


On August 12, 2021, the NYISO issued a solicitation for proposed solutions to the Long Island Offshore Wind Export Transmission Need and received significant interest from developers, proposing 18 Public Policy Transmission Projects and one Other Public Policy Project in response. The NYISO is currently evaluating proposed transmission solutions to the Long Island Public Policy Transmission Need, which involves the evaluation of 16 proposals that the NYISO has determined to satisfy the viability and sufficiency criteria, to determine the more efficient or cost-effective solution to the transmission need. The NYISO anticipates finalizing the evaluation and selection in 2023, which will then kick off the development process for the selected transmission solution.

C. The 2022–2023 Cycle of the Public Policy Process

On November 8, 2022, the NYISO submitted to the Long Island Power Authority nine proposals for transmission needs that, as proposed, would require a physical modification to transmission facilities in the Long Island Transmission District.

III. The NYISO’s Interest and Position in this Proceeding

The NYISO is an independent not-for-profit entity that is responsible for the reliable operation of the bulk power transmission system in New York State, planning for that bulk power transmission system’s continued reliability, and administering competitive wholesale electricity markets. Based on those responsibilities, the NYISO has a substantive and direct interest in the outcome of this proceeding. The NYISO has no financial interest in the Commission’s rulings or in the construction of new transmission infrastructure. It has no affiliation with the Commission, any transmission project sponsor, or any other interested entity.

IV. Comments

A. The NYISO Supports Identification of Needs for Additional Transmission to Fulfill New York’s Clean Energy Goals

Driven by the CLCPA, AREGCBA, and other state clean energy public policy requirements, New York’s electricity generation, transmission, and demand landscape is rapidly changing. This shift enables the rethinking of how and where electric supply and storage resources should be situated and how to efficiently enable their adoption to achieve energy policy targets. These needs are highlighted by, among other things, the NYISO’s 2021-2040

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12 The NYISO posted these submittals on its Planning Studies website under “Proposed Needs” contained within the “Public Policy Documents” folder on the NYISO’s Planning Studies website, which can be accessed at: [https://www.nyiso.com/csp](https://www.nyiso.com/csp).

System & Resource Outlook (the “Outlook”) that analyzed the system under different scenarios that meet the CLCPA goals. The NYISO conducted the Outlook in collaboration with stakeholders and state agencies. It provides a comprehensive overview of potential resource development over the next 20 years in New York and highlights opportunities for transmission investment driven by economics and public policy. The Outlook together with the NYISO’s 2021-2030 Comprehensive Reliability Plan (“CRP”) represent the marquee planning reports that provide a full New York power system outlook to stakeholders, developers, and policymakers.

There are many potential paths and combinations of resource and transmission expansion that could achieve New York’s climate change requirements. As the current power system continues to evolve, evaluating a variety of expansion scenarios will facilitate identification of the challenges to achieving the electric system mandates New York State has set for 2030 and 2040. A thorough understanding of these challenges will help build a path for stakeholders and policymakers to achieve a greener and reliable future grid efficiently and cost effectively.

Through the Outlook, the NYISO identified several key findings:

2021 – 2040 System & Resource Outlook

Key Findings

<table>
<thead>
<tr>
<th>Critical Factors for New York’s CLCPA Success</th>
<th>The NYISO’s Next Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Add New Resources</strong>&lt;br&gt; To meet policy objectives and society-wide electrification, over 95 GW of new zero-emission resources will be required by 2040, of which at least 20 GW needs to be added in the next 7 years</td>
<td><strong>Identify Needs &amp; Opportunities</strong>&lt;br&gt; Continue to assess the evolving system and identify the challenges and opportunities associated with achieving state policies in an economic and reliable manner</td>
</tr>
<tr>
<td><strong>Expand Transmission</strong>&lt;br&gt; The current New York transmission system, at both local and bulk levels, is inadequate to achieve current policy objectives</td>
<td><strong>Review its Wholesale and Reliability Rules</strong>&lt;br&gt; to facilitate the orderly transition of replacement resources</td>
</tr>
<tr>
<td><strong>Maintain Reliability</strong>&lt;br&gt; Dispatchable emission-free resources must be developed and deployed throughout New York</td>
<td><strong>Solicit Stakeholder Feedback</strong>&lt;br&gt; on Public Policy Transmission Needs</td>
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While the findings of the Outlook are extensive, the NYISO’s comments for this SAPA notice focus on the transmission challenges and opportunities. Based on these analyses, the NYISO supports the Commission finding Public Policy Transmission Needs for transmission expansion to accommodate the additional renewable generation that would be required to implement the state’s climate change goals, including 70 percent renewable energy by 2030 and a 100 percent emissions-free electric system by 2040. Specifically, the NYISO’s analysis identifies public policy-driven needs for expanding and/or upgrading the bulk transmission system to deliver renewable energy from (1) upstate renewable generation pockets and (2) offshore wind facilities to be connected to New York City.

1. Need for Additional Transmission to Address Constraints that Limit the Delivery of Renewable Energy to Consumers

As the Outlook highlights, new transmission constraints appear across the NYCA due to the significant resource additions as 2040 approaches. To better understand the impacts from these new constraints, generation pockets are identified based on their geographical locations, as shown on the following map. Each pocket depicts a geographic grouping of renewable generators, and transmission constraints in a local area, which are further highlighted in sub-pockets. The renewable generation pocket concept originated with the 70 x 30 scenario in the 2019 economic planning study, and a similar framework was used for the recent Outlook with the addition of the new energy deliverability metric.

The following renewable resource regions are identified in the Outlook—Western New York (Pocket W), North Country (Pocket X), Capital Region (Pocket Y), Southern Tier (Pocket Z), and Offshore Wind. Each renewable resource region includes constrained transmission

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pockets. The transmission constraints found in the NYISO studies are geographically diverse, but they are inter-related. Specifically, for many of the renewable pockets identified in the NYISO studies, a mix of local and bulk system upgrades may be required to solve the system constraints. Addressing only the local transmission system or only bulk power system projects may lead to inefficient or ineffective solutions.

Figure 1: New York Renewable Generation Pocket Map

The current New York transmission system, at both local and bulk levels, is inadequate to achieve currently required policy objectives. While there are many transmission needs that will arise over the next 20 years driven by public policy requirements, the Outlook highlights the following significant and urgent transmission needs driven by the CLCPA:

1. **Long Island offshore wind export.** The NYISO is currently evaluating the viable and sufficient project proposals to the Long Island Offshore Wind Export
Transmission Need. If a more efficient or cost-effective solution is selected to meet the Long Island Offshore Wind Export Transmission Need, the congestion in Long Island is expected to be reduced significantly and allow, at a minimum, 3,000 MW of offshore wind to be deliverable to the NYCA. However, the projected additions of offshore wind resources (up to 20 GW)\(^\text{16}\) may necessitate additional transmission to deliver offshore wind to New Yorkers.

2. **The Watertown/Tug Hill Plateau renewable generation pocket (X3).** The 115 kV network is expected to limit the availability of the already-contracted wind and solar generation in this area. The limitation will become more severe when more renewable resources are interconnected. Additional transmission will be necessary to provide the resources access to the bulk grid.

3. **Southern Tier renewable generation pocket (Z1, Z2).** The land and natural resource availability in this region (wind and solar) attract renewable generation buildout in this area. Transmission expansion from this pocket to the bulk grid would benefit New York consumers statewide.

Working off of the NYISO’s 2019 economic planning study and other planning studies, the Commission recently authorized certain Transmission Owners to develop and construct local transmission upgrades in “areas of concern” to address near-term CLCPA needs.\(^\text{17}\) The


authorized local transmission projects (e.g., transmission line and substation rebuilds and upgrades) appear to address near-term needs that overlap with some of the constraints that the NYISO identified above in the Watertown/Tug Hill Plateau and the Southern Tier renewable generation pockets, in addition to constraints related to the Capital Region renewable generation pockets.\textsuperscript{18} The NYISO applauds the Commission’s action in taking another significant step towards addressing the constraints in the near term to meet the CLCPA goals, as identified through the NYISO’s analysis. While it remains to be evaluated how the authorized local transmission facilities will address the identified constraints in the long term, the NYISO continues to support the Commission also identifying long-term needs as it relates to bulk transmission facilities to fully address curtailments in the Long Island Offshore Wind, Watertown/Tug Hill Plateau, and Southern Tier renewable generation pockets.

2. \textbf{Need for Timely Transmission Expansion to Deliver Offshore Wind Energy Connected to New York City}

Several proposals identify transmission needs related to the connection of offshore wind into New York City based on the CLCPA goals for 9,000 MW of offshore wind by 2035. The proposals identify not only the need for new “wet” (submarine) transmission systems but also available points of interconnection in or around New York City and the strengthening of the existing New York City “dry” (terrestrial) transmission system.

The NYISO concurs that additional transmission will be required to fully deliver the potential for offshore wind energy into New York City, as well as other parts of the NYCA. Identifying a Public Policy Transmission Need for a coordinated approach for both the “wet” and “dry” 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

\textsuperscript{18} \textit{Id.} at 33.
offshore transmission system to support the development of offshore wind in a timely and holistic fashion.

Consistent with the NYISO’s prior comments for the 2020-2021 cycle of the Public Policy Process, the Commission should act promptly if it is considering the identification of a Public Policy Transmission Need for the injection of offshore wind into New York City. The NYISO is currently participating in an Atlantic Offshore Wind Transmission Study with the National Renewable Energy Laboratory (“NREL”) and the Pacific Northwest National Laboratory and funded by the United States Department of Energy Wind Energy Technologies Office.19 The study is designed to evaluate multiple pathways to offshore wind goals through coordinated transmission solutions along the Atlantic Coast. Many of the stated objectives for the study confirm the concerns that a timely, coordinated approach to transmission buildout to deliver offshore wind off the Atlantic coast is necessary to satisfy the various clean energy goals in a cost-effective manner for ratepayers.20

Specific to connecting offshore wind to New York City, the need for a coordinated, timely approach is also driven by the lack of availability of existing points of interconnection in New York City and the constrained submarine corridors to route the offshore wind cables. First, points of interconnection to connect offshore wind projects in New York City are routinely sought after and limited, as the ability to expand existing transmission facilities is impacted by the availability of real estate. Second, the Commission has previously noted that the constrained cable corridors into New York City pose a potential issue with the continued use of radial

20 Some of the Atlantic Offshore Wind Transmission Study’s objectives seek to (i) identify transmission buildouts and sequencing to identify potential pathways for the deployment of offshore wind energy between 2030 and 2050, (ii) compare transmission technologies for the buildout based on cost and benefit trade-offs, and (iii) identifying whether there is a critical point after which the benefits of a coordinated transmission framework will outweigh the benefits of radial generator lead lines. Id.
generator lead lines to connect offshore wind facilities.21 A recent cable routing assessment performed by the New York State Energy Research and Development Authority (“NYSERDA”) further confirms that there are limited submarine corridors to lay the cables into New York City and that the routing of cables in New York waters must be optimized.22

To date, offshore wind projects in the NYISO’s interconnection queue propose to interconnect to either New York City or Long Island using their individual undersea and onshore cables (i.e., generator lead lines). As more offshore wind generators interconnect to the transmission system using radial lead lines (including potential AC cables that require more corridor space), the use of points of interconnection and the lack of routing options could quickly limit the design options and the benefits of cost-effective transmission to connect offshore wind into New York City. Identifying a transmission need that includes the “wet” (submarine) transmission facilities, “dry” (terrestrial) transmission facilities (including new points of interconnection), and modifications to the existing transmission system in New York City to accommodate the offshore wind energy is timely and necessary to achieve the CLCPA goals.

B. Timely and Coordinated Transmission Planning is Required to Achieve New York’s Climate Change Law Requirements

Meeting the CLCPA goals will require a coordinated effort on many fronts—bringing significant new renewable resources online, “local” distribution and transmission upgrades to

21 See Case No. 20-E-0197, et al., Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act, Order on Power Grid Study Recommendations, at 9-17, 40 (January 20, 2022) (finding that “[t]he OSW Study found that interconnecting between 5,000 MW and 6,000 MW of offshore wind into Zone J (which is expected to be required to meet the 9,000 MW CLCPA goal) may be difficult due to the scarce cable routing corridors” and directing NYSERDA to include eligibility criteria in its offshore wind procurements requiring “high voltage direct current transmission where appropriate to preserve maximum efficient use of constrained cable corridors”).

22 See New York State Energy Research and Development Authority, Offshore Wind Cable Corridor Constraints Assessment, available at https://www.nyserda.ny.gov/All-Programs/Offshore-Wind/Focus-Areas/Transmission-NY-Electricity-Grid (evaluating the feasibility of a cable corridor in each of the four approaches for bringing offshore wind to New York City and Long Island).
deliver renewable energy to the bulk system, and bulk system upgrades to deliver the energy to New York load. Considering that the deadline to meet the CLCPA goal of 70 percent renewable energy by 2030 is fast approaching, renewable generation development will have to continue to proceed at an unprecedented pace. Planning the local and bulk upgrades needed to deliver this energy must happen in a timely manner given the length of time that it takes to get transmission facilities permitted, engineered, procured, constructed, and in service in time for the renewable generation to interconnect. New York State and the NYISO share an interest in identifying timely and efficient expansions to the transmission system to achieve state public policy goals while maintaining the reliability of the New York transmission system.

C. The NYISO Public Policy Process is uniquely situated to identify efficient and/or cost-effective transmission solutions to achieve the CLCPA goals

Adopting a comprehensive view to transmission system needs is essential for meeting the CLCPA goals. The long lead time to build transmission and the required rate of new renewable development are competing factors that narrow the window of opportunity to address future needs in the most efficient manner. Those factors can be further exacerbated when there are physical limitations on the routing of transmission facilities that require a coordinated effort to maximize the use of those routes to limit the cost to ratepayers. The Public Policy Process can serve as a critical part of a comprehensive approach to transmission planning that will result in efficient transmission development.

The Public Policy Process is designed to evaluate Public Policy Transmission Needs by accounting for competitive transmission and non-wires projects, Transmission Owner Local Transmission Plans, and ability to plan based on reasonable assumptions for the future resource mix. Past planning cycles show that the Public Policy Process receives a wide range of innovative solutions from diverse developers. The competitive process then provides for the
identification and selection of the more efficient and/or cost-effective transmission solution across a wide range of factors, conditions, and criteria for the benefit of ratepayers and meeting New York’s clean energy goals. Furthermore, the Public Policy Process allows the Commission to specify certain scenarios and considerations in an order establishing a Public Policy Transmission Need that other planning processes cannot incorporate due to more rigid criteria.

The NYISO believes that the Commission’s finding of a Public Policy Transmission Need should specify a need that would allow the greatest potential for creative and innovative solutions and also yield the best benefits for rate-payer investment. Given the urgency to address these challenges within the time specified by state policy, the NYISO recommends establishing one or more Public Policy Transmission Needs in this planning cycle for transmission solutions. Such needs should focus on addressing the full delivery of future offshore wind energy into New York City by maximizing the existing constrained cable corridors, as well as addressing curtailment in one or more renewable generation pockets.

Additionally, the NYISO’s Public Policy Process can support the concurrent evaluation of the proposed transmission projects by relevant state and local agencies for siting and permitting approvals. Performing siting and permitting evaluations in parallel with the Public Policy Process gains potential efficiencies, such as reducing the time after selection to obtain the necessary permits and providing additional relevant information in the NYISO’s evaluation of the more efficient or cost-effective solution. The Commission should consider the benefits of the concurrent evaluation and directing developers that submit proposed Public Policy Transmission Projects as a solution to an identified Public Policy Transmission Need to begin the applicable siting and permitting processes at or near the submission of their proposals.
V. Conclusion

For the foregoing reasons, the NYISO supports the Commission identifying a Public Policy Transmission Need to supply offshore wind energy to New York City to maximize the efficient use of existing constrained cable corridors for the benefit of ratepayers. The NYISO further supports the Commission identifying Public Policy Transmission Needs to address transmission-constrained renewable generation pockets in upstate New York. In order to timely meet the state’s climate and renewable energy goals for 2030 and beyond, the NYISO encourages the Commission to act by identifying Public Policy Transmission Needs in the current cycle of the Public Policy Process, which will efficiently address New York’s Public Policy Requirements while protecting consumers’ interests.

Respectfully submitted,

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February 21, 2023