COMMENTS OF THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.

On the Department of Energy's Preliminary List of Potential National Interest Electric Transmission Corridors from the 2023 Needs Study

June 24, 2024

I. Introduction

The New York Independent System Operator, Inc. ("NYISO") is an independent not-for-profit corporation responsible for operating the power grid in New York, planning for the future of the power grid, providing non-discriminatory access to transmission service, and administering wholesale markets for electricity and transmission products in New York. The NYISO manages the flow of electricity across more than 11,000 miles of high-voltage transmission lines and the dispatch of more than 700 electric power generators serving New York on a minute-to-minute basis, balancing supply and demand throughout the state. The NYISO's mission is to serve the public interest and provide benefit to consumers by maintaining and enhancing regional reliability; operating open, fair and competitive wholesale electricity markets; planning the power system for the future; and providing factual information to policymakers, stakeholders, and investors in the power system.

On October 30, 2023, the Department of Energy ("DOE") released the National Transmission Needs Study ("Needs Study") identifying potential National Interest Electric Transmission Corridors ("NIETC"). On May 8, 2024, the DOE released a preliminary list of potential NIETCs and invited public comments on them. The NYISO appreciates this opportunity to comment on the potential NIETCs that the DOE has preliminarily identified.

In considering whether to identify NIETCs, DOE must consider the current and future efforts of regional transmission operators ("RTOs")/independent system operators ("ISOs") and states to plan for and facilitate transmission investment in their respective regions. As such, the NYISO submits these comments to encourage the DOE to consider the ongoing efforts by the NYISO and New York State to address transmission needs driven by a multitude of factors.

II. Planning for the Future Electric System

New Yorkers have long enjoyed reliable electric service. New York also maintains strong interregional transmission connections with ISO New England ("ISO-NE"), PJM Interconnection LLC ("PJM"), Independent Electric System Operator of Ontario ("IESO"), and Hydro-Québec ("HQ") that have been mutually leveraged to support the economic and reliable exchange of the electric energy. New York has been a historic importer of electric energy from PJM, IESO, and HQ, while it has typically exported to ISO-NE on a net-annual basis.

A dramatic shift based on climate policies, however, is changing how electricity is produced, stored, transmitted, and consumed in the regions. For instance, New York State laws, led by the Climate Leadership and Community Protection Act ("CLCPA") passed in 2019, are driving investment in renewable generation, storage, and transmission, while also driving adoption of electrification for transportation, residential, commercial, and industrial uses as an alternative to fossil fuel usage, resulting in increased electric demand. The CLCPA, and other

New York State and local laws and policies, are also driving the deactivation or reduced operation of emitting generation (i.e., largely fossil-fuel generators). The NYISO understands that neighboring regions are likewise working to address climate policies specific to their localities.

As each system independently pursues different climate policies, the availability of energy for interregional exchange will fundamentally change. In times of excess generation of solar, wind, and/or hydro production, New York has the potential to export renewable energy to adjoining markets to meet their regional demand. As neighboring systems approach full achievement of the various carbon-free policy mandates, the availability of excess generation for exchange will be highly dependent upon the generation types adopted. Solar, land-based wind, and offshore wind production is relatively coincident across the NYISO and its neighboring systems. This, however, may limit the ability of neighboring systems to absorb excess energy from New York or vice-versa. Alternatively, when weather driven renewable resource production is low in one system, it is probable that renewable production will also be relatively low in surrounding locations.

The NYISO's robust planning processes are structured to identify the more efficient or cost-effective solutions to transmission needs and to collaborate with its neighboring control areas regarding solutions that may serve interregional transmission needs. To the extent that additional interregional transmission may improve the efficient delivery of energy between neighboring regions, multiple corridors should be evaluated in consideration of electrical and physical benefits and constraints. For example, the voltage class and interconnection points of two comparable physical corridors may have a far greater impact on interchange capability. The NYISO encourages the DOE to consider broader definitions of the proposed interregional corridors in order to provide for effective and efficient projects.

III. NYISO's Ongoing Transmission Planning and Expansion Efforts

The NYISO plans for the New York bulk electric system through its Comprehensive System Planning Process ("CSPP"). The NYISO's CSPP is comprised of the Local Transmission Owner Planning Process, Reliability Planning Process, Economic Planning Process, Public Policy Transmission Planning Process ("Public Policy Process"), and interregional transmission planning, which is conducted with neighboring control areas in the United States and Canada. Through the CSPP, the NYISO issues reports informing policymakers and investors on the state of the New York transmission system and, when necessary, takes action to address needs on the system.

These forward-looking assessments, evaluations, and plans are developed and relied upon by the NYISO and others to reliably serve forecasted New York demand, address transmission needs driven by public policies, and identify economic opportunities for an array of possible future system conditions. The efforts discussed below highlight the recent developments that are most relevant to aid the DOE's evaluation of potential NIETCs and to encourage the DOE to consider the ongoing efforts by the NYISO and other control areas to address congestion and transmission needs.

a. Reliability Planning

The NYISO's planning process functions in compliance with FERC-regulated tariffs and reliability standards established by the North American Electric Reliability Company ("NERC"), Northeast Power Coordinating Council, Inc. ("NPCC"), and the New York State Reliability Council ("NYSRC"). The NYISO's Reliability Planning Process includes biennial reliability planning reports focused on identifying and resolving reliability needs over a ten-year time horizon through the Reliability Needs Assessment ("RNA") and the Comprehensive Reliability Plan ("CRP").

The NYISO released the *2023-2032 CRP* in November 2023. The report highlights growing risks to electric system reliability, including projected increases in peak demand due to electrification of the transportation and building sectors; additional generator deactivations; delayed implementation of planned infrastructure projects; and extreme weather. The *2023-2032 CRP* finds that if demand on the grid grows at a rate greater than the buildout of new generation and transmission, reliability deficiencies could arise within the CRP's ten-year planning period. Finally, the CRP sets forth a plan to maintain a reliable bulk electric grid based on expected changes and forecasted conditions over the ten-year planning period. The potential risks and resource needs identified in the CRP may be resolved by new capacity resources coming into service, construction of additional transmission facilities, increased energy efficiency, integration of distributed energy resources (DERs) and/or growth in demand response participation. The CRP emphasizes the need for additional transmission infrastructure to move renewable electricity from where we expect it will be sited to where it will be needed to serve demand.

Additionally, the CRP identifies that the increased frequency of extreme weather events poses risks to reliability. The dangers of severe weather impacting the grid have been exemplified around the country in recent years, with Texas experiencing a brutal polar vortex in winter and California facing problems from extreme heat in summer. The report underscores that New York is not immune from such extreme weather, which could lead to greater electrical demand and more forced generator outages than previously accounted for in the NYISO's baseline forecasts.

The 2024 RNA, which is expected to be published by the end of 2024, will evaluate grid reliability from 2028 to 2034 and will closely evaluate risk factors, such as winter system conditions, large industrial and other energy-intensive loads, and anticipated generator deactivations that could potentially lead to deficiencies in reliable electric service over the planning horizon. Based on preliminary data, the upcoming RNA may identify actionable reliability needs driven by planned generator retirements outpacing new supply and growing demand from large microchip fabrication and data center loads. New assumptions regarding the unavailability of non-firm gas generation in the winter could compound the potential deficiencies. Scenario analyses, such as resource and load variations, will be conducted to identify reliability risk factors as well as to inform potential solutions to any identified reliability needs. If reliability needs are identified, a solicitation for solutions must be issued in early 2025, and the NYISO will also coordinate with transmission owners to identify potential backstop solutions.

b. Economic Planning

The NYISO's 2023-2042 System & Resource Outlook (the "Outlook"), which is expected to be published in July 2024, provides a comprehensive overview of potential resource development over the next 20 years from 2023 through 2042. The Outlook, conducted in collaboration with stakeholders and state agencies, highlights opportunities for transmission investment driven by economics and public policy in New York State. Several key drivers are predicted to dictate how transmission flows will evolve with neighboring systems over the next two-to-three decades.

- *Renewable Energy Production* – increasing amounts of weather driven renewable energy production will impact both internal and external transmission flows. Renewable projects in close electrical proximity to external tie lines will impact flow patterns on those specific lines. When net load approaches levels near or below 0 MW, all excess supply is transacted across neighboring interties unless curtailed.

- *Dispatchable Generation Cost* – the relative cost of dispatchable generation resources between systems will generally determine the willingness to import and export energy. Because the adjoining power markets in the Northeast can freely exchange energy based on economics, systems with excess lower cost dispatchable energy will generally transact to higher cost systems with energy needs. The cost and availability of dispatchable generation is expected to change at a different pace state-to-state due to differing state-driven climate policies. The opportunity for policy arbitrage between states will likely increase in the future and could greatly impact how interchange transactions occur.

- *Emergency Assistance* – with such a high correlation in renewable energy production among the Northeast states and the increased reliance on these resources, it is likely that neighboring systems will experience shortfalls simultaneously. The coordination of capacity and energy availability between systems will be a very important factor in determining transmission flows during these times.

c. Public Policy Planning

The NYISO's Public Policy Process plans the transmission system to address transmission needs that are driven by the state's public policy requirements. The Public Policy Process commences when the New York Public Service Commission ("NYPSC") issues an order identifying a transmission need driven by a public policy requirement. The Public Policy Process has demonstrated success in advancing the development of transmission throughout the State of New York. For example, three major projects in New York have been placed into service—the Empire State Line in western New York and the AC Transmission Projects in the Mohawk-Hudson Valley. Most recently, the NYISO selected a major transmission project to deliver offshore wind interconnected to Long Island and improve reliability of the Long Island transmission system. While not interregional in nature, these projects were proposed and

identified through a strong collaboration between the NYISO, the state, public utilities, and stakeholders.

On June 22, 2023, the NYPSC issued an order identifying a New York City Offshore Wind Public Policy Transmission Need ("NYC PPTN").[1] The NYPSC called for a complete end-to-end solution that will accommodate the full output of at least 4,770 MW, and up to 8,000 MW, of incremental offshore wind generation injected into New York City. The solution must also contain plans to complete all permitting and construction activities necessary to achieve an in-service date no later than January 1, 2033, to support the CLCPA's timeframe for offshore wind. A complete end-to-end solution for offshore wind injection encompasses both offshore and onshore components that include: (a) 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 in Zone J, and (e) necessary improvements to and/or expansion of the existing onshore transmission system.

The solution solicitation window recently closed on June 17, 2024. The NYISO expects to complete its evaluation and identify the more efficient or cost-effective solution in 2025. A solution to the NYC PPTN is expected to change the electric system in and around New York City dramatically in the upcoming decades. The NYISO will also open a new cycle of the Public Policy Process where it will seek input on other transmission needs driven by public policy requirements—at which time, interested parties can leverage NYISO planning reports, such as the Outlook, to propose such needs for consideration.

The NYISO requests that the DOE take into consideration the NYISO's ongoing efforts in the Reliability Planning, Economic Planning, and Public Policy Process when considering the benefits of the proposed projects in Phase 2 of NIETC.

d. Interregional Collaboration

The NYISO collaborates with its regional neighbors, PJM, ISO-NE, and Canada through its Northeastern ISO/RTO Planning Coordination Protocol ("Northeast Protocol").[2] The Northeast Protocol includes the following requirements:

- Exchanging data and information,

[1] Case No. 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 (June 22, 2023), *available at* https://www.nyiso.com/documents/20142/38447513/PSC-Order-Addressing-Public-Policy-Requirements-for-Transmission-Planning-Purposes-2023-06-22.pdf/.

[2] The amended and restated Northeastern ISO/RTO Planning Coordination Protocol ("Northeast Protocol") can be accessed on the NYISO's website: https://www.nyiso.com/documents/20142/1406358/Northeast_Planning_Protocol_FINAL_SIGNED_VERSION.pdf/8471488b-2e9e-5060-7c04-4168e86e69b4 . IESO and HQ participate in the Northeast Protocol on a limited basis to share data and information.

- Coordinating interconnection requests and transmission requests with cross-border impacts,

- Developing a Northeastern Coordinated System Plan,[3]

- Performing planning studies through an open stakeholder process, and

- Allocating the costs associated with interregional projects having a cross-border impact consistent with each party's tariff and applicable federal regulatory policy.[4]

Under the Northeast Protocol, the Joint ISO/RTO Planning Committee ("JIPC") was formed to address interregional transmission planning issues, including system needs and proposed system improvements that reflect, among other things, resource diversity, environmental compliance obligations, and resource retirements. This allows consideration of the impact of interconnections with neighboring systems, such as opportunities for the exchange of capacity and energy, and tie lines facilitate access to a diversity of resources and potential economic opportunities for energy exchange.

The most recent Northeastern Coordinated System Plan, NCSP23, documents planning activities during 2022 and 2023 under the provisions of the amended protocol and other documents FERC accepted in response to the interregional requirements of its Order No. 1000. NCSP23 builds on the interregional planning activities summarized in the 2021 Northeastern Coordinated System Plan, emphasizing interregional planning activities under the Amended Planning Protocol and summarizing several of the planning issues the three ISOs/RTOs are addressing. The key findings and conclusions of NCSP23 are as follows:

- Regional and interregional stakeholders provide the ISO/RTOs with key input for system planning activities through an open process.
- The ISO/RTO regional and interregional planning activities conducted during 2022 and 2023 reviewed regional needs and solutions and did not identify any need for new interregional transmission projects for cost allocation that would be more efficient or cost effective in meeting the transmission system needs of multiple regions than proposed regional system improvements included in the ISOs/RTOs' respective regional plans.
- Queue interconnection studies remain well coordinated across ISO/RTO boundaries, including studies of additional generating and transmission facilities that could affect interregional system performance.
- The ISOs/RTOs demonstrate compliance with all planning criteria and regulatory requirements.

In March 2023, ISO-NE requested that the JIPC perform coordinated evaluations to determine the feasibility of raising the minimum loss of source value for New England from an existing level of 1,200 MW to a proposed level of 2,000 MW. On June 27, 2023, the NYISO, PJM, and ISO-NE responded to a separate, but related letter, dated June 16, 2023, from several

[3] *See* 2021 Northeastern Coordinated System Plan (July 22, 2022), *available at* https://www.nyiso.com/documents/20142/1406358/Northeast-Coordinated-System-Plan-2021.pdf/.

[4] *See generally*, Northeast Protocol.

states requesting assistance in developing a "Northeast States Collaborative on Interregional Transmission" to help "enhance system reliability and transition to a clean energy future more quickly and affordably."[5] In the response, the NYISO, PJM, and ISO-NE declared that the three regions have "publicly committed to undertake an analysis of interregional transfer capability throughout the Eastern Connection" and also asked that "this work be coordinated with the other efforts . . . to ensure consistency and avoid duplicative efforts."

The potential increase of the minimum loss of source value for New England from an existing level of 1,200 MW to a proposed level of 2,000 MW could not only impact the future resources interconnecting to New England but also influence the design and performance of the wholesale markets in the neighboring regions. The NYISO requests that the DOE take into consideration this interregional effort already underway when evaluating the benefits of the proposed projects in Phase 2 of NIETC.

IV. Conclusion

The NYISO appreciates this opportunity to comment on the DOE's potential NIETC designations. Accordingly, the NYISO respectfully requests that the DOE consider the NYISO's and JIPC's ongoing studies/efforts discussed herein in its consideration of NIETC designations and consider broader definitions of the proposed interregional corridors in order to provide for effective and efficient projects.

Respectfully submitted,

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[5] *See* Joint Response Letter, dated June 27, 2023, *available at* https://www.nyiso.com/documents/20142/1402310/northeast-collaborative-doe-june-letters-combined-.pdf/. The joint response of ISO-NE, NYISO, and PJM was sent to Director Maria Robinson of the DOE's Grid Deployment Office and signed by officials from Connecticut, Maine, Massachusetts, New Jersey, New Hampshire, New York, Rhode Island, and Vermont.

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