UNITED STATES OF AMERICA

BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

Offshore Wind Integration in RTOs/ISOs	**)**	**Docket No. AD20-18-000**

POST-TECHNICAL CONFERENCE COMMENTS OF THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.

On October 27, 2020, the New York Independent System Operator, Inc. ("NYISO") appeared and offered initial comments at the technical conference held by the Federal Energy Regulatory Commission ("Commission" or "FERC") in this proceeding on offshore wind integration in RTOs/ISOs.[1] In accordance with the *Notice Inviting Post-Technical Conference Comments* issued by the Federal Energy Regulatory Commission ("Commission" or "FERC") on March 11, 2021 in the above referenced proceeding ("Notice"),[2] the NYISO hereby submits these comments to supplement its remarks at the technical conference on the Commission's efforts to examine the anticipated growth in offshore wind generation and accommodating these resources in an efficient and cost-effective manner that safeguards open access transmission principles.

[1] *See* Offshore Wind Integration in RTOs/ISOs, Notice of Technical Conference, Docket No. AD20-18-000 (June 17, 2020); *id.*, Supplemental Notice of Technical Conference (June 17, 2020); *id.*, Supplemental Notice of Technical Conference (October 14, 2020). The NYISO appeared by its Vice President of System and Resource Planning, Zach G. Smith.

[2] Offshore Wind Integration in RTOs/ISOs, *Notice Inviting Post-Technical Conference Comments*, Docket No. AD20-18-000 (March 11, 2021).

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II. COMMENTS

A. The NYISO's Current Large Generator Interconnection Procedures, Transmission Interconnection Procedures and Public Policy Transmission Planning Process Facilitate Economically Efficient Arrangements for Integration of Offshore Wind.

The Commission asks whether ISOs and RTOs should amend their existing large generator interconnection procedures to facilitate more economically efficient transmission expansion and network upgrades to integrate offshore wind generation.[3] The NYISO's current interconnection processes are sufficient to address individual interconnection requests for offshore wind, and flexible enough to address potential projects proposing stand-alone transmission to support offshore wind. Developers have the option of proposing the project under the NYISO's Large Facility Interconnection Procedures ("LFIP")[4] or through the NYISO's Transmission Interconnection Procedures ("TIP"), depending on the specific

[3] Notice, Q.1.a.

[4] Capitalized terms that are not otherwise defined in this filing letter shall have the meaning specified the NYISO's Open Access Transmission Tariff ("OATT") and Market Administration and Control Area Services Tariff.

characteristics of the project, whether it is in a competitive process, such as the Public Policy Transmission Planning Process ("Public Policy Process"), and whether it wishes to request Capacity Resource Interconnection Service ("CRIS").

The Public Policy Process will work in concert with the NYISO's TIP. Through tariff changes approved by the Commission, the NYISO has enhanced coordination between its TIP and the Public Policy Process. The TIP conducts studies to determine network upgrade facilities needed to interconnect projects reliably. In parallel, the NYISO evaluates projects using information from the TIP along with other inputs and selects the more efficient or cost effective project to satisfy the transmission need.

To date, no offshore wind projects have completed the entire interconnection process and executed interconnection agreements in the NYISO. However, several projects have completed the final interconnection study, which is the Class Year Study, and are proceeding to or in the process of negotiating an interconnection agreement. The NYISO expects that several offshore wind projects will be eligible to become members of Class Year 2021. Based on the NYISO interconnection queue as of March 31, 2021, there are 25 proposed offshore projects, most of which are sized between 800 to 1,200 MW.[5] Of these 25 projects, two of them are Class Year Transmission Projects where the Developer has proposed offshore "backbone" transmission projects to enable proposed offshore wind farm(s) to interconnect.

The NYISO's current processes do not provide an explicit forward-planning model to build backbone transmission first, as a platform to which future wind generation projects could interconnect. The NYISO's Public Policy Process, however, does provide an opportunity to evaluate potential transmission expansion to achieve public policies. In that process, following

[5] Given that certain listed projects are alternative proposals that are mutually exclusive, there is a certain amount of overlap in the projects listed in the NYISO interconnection queue. *See* https://www.nyiso.com/interconnections.

the New York Public Service Commission's identification of a Public Policy Requirement that is driving the need for transmission[6], the NYISO evaluates and may select the more efficient and cost effective transmission project to meet a public policy need.[7] This evaluation includes consideration of the comparative economic efficiency of competing proposals.[8] In combination, therefore, the NYISO's interconnection and public policy processes do provide an opportunity for evaluating economic interconnections and transmission expansion in New York.

As discussed further in Point B1 below, the Public Policy Process is currently being implemented by the NYISO to solicit, evaluate and select, and provide cost allocation and recovery for transmission projects to enable energy delivery of offshore wind in response to a Public Policy Requirement identified by the New York State Public Service Commission ("NYPSC"). On March 19, 2021, the NYPSC identified the need for transmission to strengthen the interties between Long Island and the rest of New York State to enable the export of a minimum of 3,000 MW of offshore wind to be connected to Long Island.

Planning for a potential offshore backbone transmission system presents unique challenges. For example, evaluating transmission-only projects in the interconnection process requires making assumptions about the future generation that would connect to the transmission facility. To the extent that the offshore backbone is considered as providing open access transmission service, a number of questions arise. These issues include whether the transmission developer would become its own Reliability Coordinator, and how to address capacity deliverability rights for generation connecting to offshore transmission. As discussed in Point B.3, the NYISO has also encouraged the New York Public Service Commission to consider

[6] NYISO OATT §31.4.2.1.

[7] *Id.*, § 31.4.8, 31.4.8.3.

[8] *Id.*, § 31.4.8.1.

whether a meshed transmission network would be appropriate to meet the 9,000 MW offshore transmission requirement in the New York State Climate Leadership and Community Protection Act ("CLCPA").

The Commission inquires about the pros and cons of allowing a state to submit a single interconnection request as a placeholder for the winner of a specific offshore wind generating solution as compared to every developer participating in a state solicitation entering the queue individually.[9] To date, proposed Public Policy Transmission Projects have entered the NYISO's interconnection queue under the NYISO's TIP, and large scale renewable generation projects have proceeded through the NYISO's LFIP, on an individual, project-specific basis. However, an approach for identifying interconnection points in advance could be accommodated in the New York interconnection process if the ultimate project developer is the entity that executes the interconnection agreement, among other requirements.

For example, the New York State Energy Research and Development Authority ("NYSERDA") is implementing a "Build Ready Program" that will identify sites for large-scale renewable energy projects that are consistent with New York State's standards and are made available to renewable energy developers.[10] In conjunction with identifying build-ready sites, the state could submit related Interconnection Requests. The type of information that the state would need to include in its Interconnection Request to satisfy the requirements of the NYISO's interconnection procedures include the point of interconnection, size in megawatts, a transmission model that provides line impedances, line ratings and, if applicable, any HVDC

[9] Notice, Q.1.b.

[10] *See* https://www.nyserda.ny.gov/All-Programs/Programs/Clean-Energy-Standard/Landowners-and-Local-Governments/Build-Ready-Program

model of the line. The NYISO would also need a generic generation model, such as the generic wind turbine type (*e.g.,* turbine type 1, 2, 3 or 4) and the collector system model.

With respect to the Commission's questions regarding changes to turbine technology and size, and changes to offshore collector systems,[11] the NYISO's LFIP and TIP can accommodate project modifications depending on whether such changes are deemed material, which is largely dependent on when in the process the modifications are proposed. The NYISO has accommodated changes to land-based wind projects based on the evolution of turbine technologies, and would apply the same processes to changes in offshore wind technologies.

B. The NYISO's Public Policy Transmission Planning Process and Economic Planning Process Provide for the Identification of Transmission Needs for Offshore Wind and Enable a Thorough Quantification of the Benefits of Offshore Wind Transmission and Generation Projects.

1. The NYISO's Streamlined Public Policy Transmission Planning Process Enables the Thorough Identification and Satisfaction of Transmission Needs for Offshore Wind Integration in New York.

The Commission asks whether a separate, dedicated transmission planning process for anticipated offshore wind generation should be established on a regional or interregional basis, and inquires as to the tradeoffs between regional versus interregional approaches.[12] As described in this section, in New York and in the northeastern United States, the current regional and interregional planning processes together accommodate transmission planning for offshore wind. Accordingly, the NYISO does not believe that a dedicated planning process exclusively for offshore wind is necessary at this time. Moreover, establishing a separate transmission planning process just for offshore wind would needlessly bifurcate planning for offshore wind resources and transmission from region-wide planning for all transmission needs. For example, under the

[11] Notice, Q.1.e.

[12] Notice, Q.4.e.

CLCPA and Accelerated Renewable Energy Growth and Community Benefit Act ("AREA") laws, the state is planning for a system that provides for 70% renewable energy statewide by 2030 and a zero-emission grid by 2040. While the state has a separate goal for 9,000 MW of offshore wind, planning the transmission system in New York will involve an integrated evaluation of the entire system and available renewable resources, both offshore and land-based, to meet the full complement of the statewide renewable energy requirements.

Among the elements of Order No. 1000, the Commission required that transmission planning processes address needs driven by Public Policy Requirements.[13] Public Policy Requirements are defined in the NYISO's tariffs as a federal, state or local law or regulation, including an NYPSC rulemaking order, that may relate to planning on the New York Bulk Power Transmission Facilities and drive Public Policy Transmission Needs.[14] The Public Policy Process consists of three main steps; (1) identification of Public Policy Transmission Needs, (2) requests for proposed Public Policy Transmission Projects and Other Public Policy Projects and the evaluation of the viability and sufficiency of proposed transmission and non-transmission projects to address the Public Policy Transmission Needs, and (3) evaluation and selection of the more efficient or cost-effective Public Policy Transmission Project, if any, to satisfy each Public Policy Transmission Need , which project is eligible for cost allocation and cost recovery under the ISO OATT.

In the identification step, the NYISO solicits proposals for transmission needs driven by Public Policy Requirements, and submits those proposed needs to the NYPSC and, for the Long

[13] *See Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000, 136 FERC ¶ 61,051 (2011) ("Order No. 1000"), *order on reh'g and clarification*, Order No. 1000-A, 139 FERC ¶ 61,132 (2012) ("Order No. 1000-A"), *order on reh'g and clarification*, 141 FERC ¶ 61,044 (2012) ("Order No. 1000-B"). For convenience, unless otherwise specified, references these comments to "Order No. 1000" should be understood to encompass Order Nos. 1000, 1000-A, and 1000-B.

[14] OATT § 31.1.1.

Island Transmission District, to the Long Island Power Authority ("LIPA").[15] The NYPSC determines Public Policy Transmission Needs that are driven by Public Policy Requirements, including needs on Long Island for which LIPA seeks cost allocation and cost recovery outside of Long Island.[16] The NYPSC may also provide: (i) additional criteria for the evaluation of transmission solutions and non-transmission projects,
(ii) the required timeframe, if any, for completion of the proposed solutions, and (iii) the types of analyses that it will request from the NYISO.[17]

The NYISO solicits proposed solutions[18], and qualified Developers[19] submit detailed Public Policy Transmission Projects and Other Public Policy Projects to satisfy the identified Public Policy Transmission Needs.[20] All submissions, regardless of project type, are evaluated for their viability and sufficiency to meet the Public Policy Transmission Needs.[21] The NYISO then evaluates the proposed Public Policy Transmission Projects seeking regulated cost recovery that have satisfied the viability and sufficiency requirements and ranks them based on the quality of their satisfaction of numerous metrics.[22] The NYISO engages independent consultants to assist in its comprehensive analyses.[23] Based on its evaluations, the NYISO ranks projects in

[15] OATT § 31.4.2.1.

[16] OATT § 31.4.2.3. If the NYPSC does not identify any transmission needs driven by Public Policy Requirements, it will provide confirmation of that conclusion to the ISO, and the ISO shall not request solutions. OATT § 31.4.2.1.

[17] OATT § 31.4.2.1.

[18] OATT § 31.4.3. The NYPSC and LIPA may also request the appropriate Transmission Owners or Other Developers to propose a Public Policy Transmission Project. OATT § 31.4.3.2.

[19] The NYISO conducts a Developer qualification process that is based upon Developers' prior experience completing transmission projects, financial resources and technical expertise. OATT § 31.4.4.1.

[20] OATT §§ 31.4.4.3., 31.4.5.

[21] OATT §§ 31.4.6.3 – 31.4.6.5.

[22] OATT § 31.4.8.

[23] OATT § 31.4.8. The NYISO and its independent market monitoring unit also evaluate the impact of proposed transmission projects on its competitive wholesale electric markets. OATT §§ 31.4.10, 31.4.11.2.

accordance with their satisfaction of the criteria,[24] and the Board of Directors may select the more efficient or cost effective regulated Public Policy Transmission Project to satisfy the Public Policy Transmission Need(s).[25] The NYISO issues its findings through a Public Policy Transmission Planning Report that is thoroughly vetted with stakeholders, policymakers, and all interested parties.[26]

The Commission asks whether the existing metrics in transmission planning processes are sufficient to capture the benefits of offshore wind, and what those metrics should be.[27] The NYISO's metrics for evaluating the benefits of transmission projects comprehensively cover the benefits of land-based and offshore renewable resources, such as project capital cost, capital cost containment, performance, operability, and expandability.[28] As discussed in more detail in Section B.4, the NYISO has also added energy deliverability as a key metric in its Economic Planning Process that it will employ to determine the performance and economic benefits of transmission expansion for delivering energy from offshore wind and other renewable resources.[29]

The Commission asks whether the time horizons for the evaluation of benefits of transmission for offshore wind projects are sufficient or should be amended.[30] For evaluations in its Public Policy Process, the NYISO starts with its most recent 10-year Reliability Planning Process base case updated in accordance with its procedures. The NYISO then extends its

[24] OATT § 31.4.8.1.

[25] OATT § 31.4.11, 31.4.11.2. If the NYISO's Board of Directors determines not to select a Public Policy Transmission Project, the Board shall state the reasons for its determination. OATT § 31.4.11.2.

[26] OATT § 31.4.11.

[27] Notice, Q.3.a.

[28] OATT §§ 31.4.8.1. – 31.4.8.2.

[29] OATT §31.3.1.3.5.7.

[30] Notice, Q.3.b.

reliability and its economic planning models "by up to an additional twenty years following the Study Period, as appropriate based upon the Public Policy Requirement and the identified Public Policy Transmission Need."[31] The NYISO believes that the evaluation of a thirty-year period is sufficient to quantify the benefits of transmission proposed for offshore wind.

As depicted on the map below, the NYISO has implemented its Public Policy Process to satisfy two Public Policy Needs identified by the NYPSC with transmission projects that are underway. In October 2017, the NYISO's Board of Directors selected a proposal from NextEra to address the public policy need for new transmission in Western New York.[32] The Commission identified this need to support the state's goal more fully to utilize renewable energy from the Robert Moses Niagara Hydroelectric Power Station as well as imports from Ontario.[33] In April 2019, the NYISO's Board of Directors selected a joint proposal by North American Transmission and the New York Power Authority for Segment A, and the joint proposal by National Grid and New York Transco for Segment B.[34] The NYPSC identified a Public Policy Transmission Need to relieve congestion on the Central East (Segment A) and the

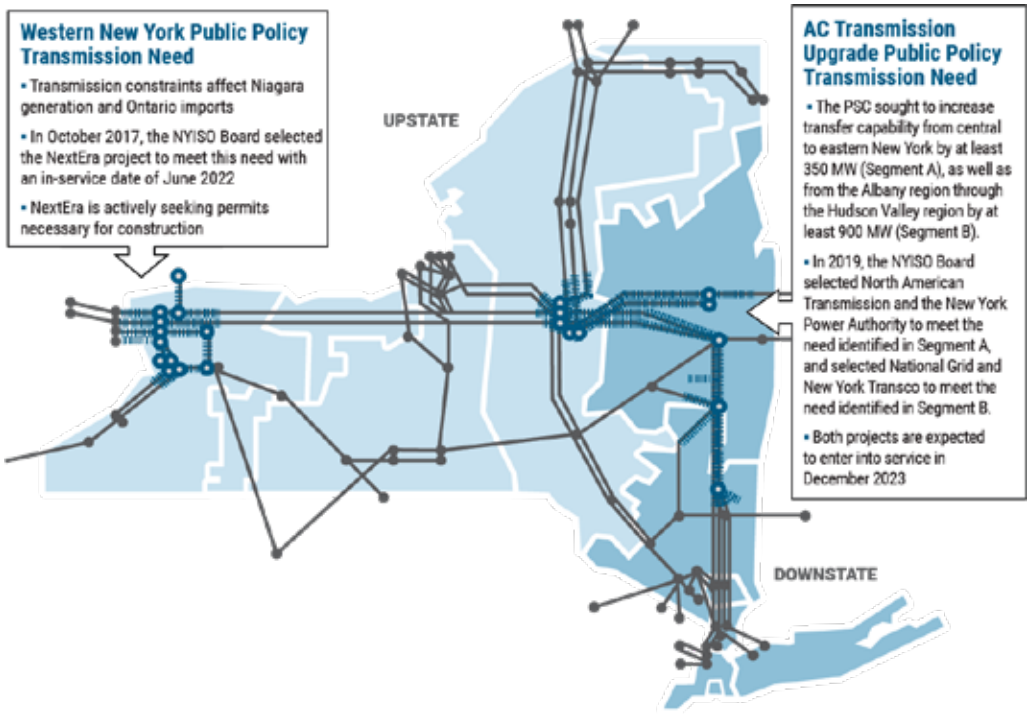
[31] OATT §31.4.6.1.

[32] The Western New York Public Policy Transmission Planning Report can be obtained at the following link: https://www.nyiso.com/documents/20142/2892590/Western-New-York-Public-Policy-Transmission-Planning-Report.pdf/d3f62964-2e2d-588c-2da4-9aa33bb5470b?t=1541702788476

[33] NYPSC Case No. 14-E-0454, In the Matter of the New York Independent System Operator, Inc.'s Proposed Public Policy Transmission Needs for Consideration, *Order Addressing Public Policy Requirements for Transmission Planning Purposes* (issued July 15, 2015); *id.*, *Order Addressing Public Policy Transmission Need for Western New York* (October 13, 2016).

[34] The Board of Directors' decision can be found at the following link: https://www.nyiso.com/documents/20142/1390750/Board-Decision-AC-Transmission-2019-04-08.pdf/32323d32-f534-a790-1b03-2cb110033320
The AC Transmission report can be obtained at the following link: https://www.nyiso.com/documents/20142/5990605/AC-Transmission-Public-Policy-Transmission-Plan-2019-04-08.pdf/0f5c4a04-79f4-5289-8d78-32c4197bcdf2

interfaces between upstate and southeastern New York (Segment B), which run from central New York, through the Capital Region, to the lower Hudson Valley. [35]



Public Policy Transmission Needs on the New York Transmission System

These projects are currently under construction. When completed, the projects will add the largest amount of free-flowing transmission capacity to the New York bulk power system in more than 30 years.

The NYISO's existing Public Policy Process is well suited to addressing transmission needed for offshore wind in New York. Since 2018, the NYISO has undertaken an initiative to examine how to improve its Comprehensive System Planning Process to be more responsive to evolving reliability, economic, and public policy needs. Over the last two years, the FERC has approved tariff revisions to streamline the NYISO's evaluation and selection process for

[35] NYPSC Case No. 12-T-0502, *et al.*, Proceeding on Motion of the Commission to Examine Alternative Current Transmission Upgrades, *Order Finding Transmission Needs driven by Public Policy Requirements* (December 17, 2015); *id.*, *Order Addressing Public Policy Transmission Need for AC Transmission Upgrades* (January 24, 2017).

competing transmission projects.[36] To provide Developers a clear understanding of the transmission need and the manner in which the NYISO will apply its criteria for selection of transmission projects, the NYISO included hosting a technical conference in the process preceding its solicitation of solutions.[37] The NYISO further aligned the project information requirements of the Public Policy Process and its interconnection processes to expedite consideration of proposed projects in both processes.[38] Finally, the NYISO adopted tariff amendments allowing transmission developers to propose, and enabling the NYISO to consider, binding cost containment commitments for the capital costs of transmission projects.[39]

Following adoption of these changes, the NYISO outlined an estimated timeline (shown in the table below) to complete the Public Policy Process within approximately 18 months following the NYPSC's identification of a Public Policy Transmission Need as the responsible entity under the OATT.

[36] *New York Indep. Sys. Operator, Inc.*, Order Accepting Tariff Filing, 166 FERC ¶ 61,099 (February 8, 2019).

[37] OATT § 31.4.4.3.1.

[38] OATT § 31.4.4.3.4.

[39] *See* OATT §§ 31.1.1 (definition of "Cost Cap"); 31.4.5.1.8 (Developer proposal of Cost Cap); 31.4.8.2 (NYISO consideration of Cost Cap); 31.4.8.3 (Developer must abide by Cost Cap and put it in Development Agreement); 6.10.6 (Developer must include Cost Cap in rate filing), *available at* https://nyisoviewer.etariff.biz/ViewerDocLibrary//Filing/Filing1650/Attachments/20200818-NYISOPttnDclrtryOrdr.pdf.

Illustrative Timeline Following Need Identification

Major Steps	Process Steps	Estimated Months by NYISO
Solicitation of Solutions	Prepare baseline analysis	3
	Hold technical conference	
	Issue solicitation for solutions	2
	Solutions due in 60 days	
Viability and Sufficiency Assessment	Perform Viability & Sufficiency Assessment	4
	Stakeholder review	
	Final Viability & Sufficiency Assessment filed with NYPSC	
Evaluation and Selection	Evaluate transmission solutions and issue draft report	6
	Stakeholder review	3
	Board review and action	

The NYISO is committed to meeting these estimated timeframes to the extent practicable.[40]

2. The Public Policy Process in New York is Addressing the Need for Transmission for Offshore Wind in Response to an Identified Need.

New York State enacted the CLCPA in 2019[41] and the AREA in 2020[42] that include among their goals the integration of 9,000 MW of offshore wind into the New York power system by 2035. Many commenters have noted that Long Island is well suited for connection to offshore wind farms, but does not have sufficient load or export capability, which would result in

[40] The actual timeline to complete the NYISO process for a specific Public Policy Transmission Need depends on many factors, including the NYPSC process, complexity of the needs and proposals, number of needs identified, number of proposals submitted, and review by stakeholders and the NYISO's Board of Directors.

[41] Chapter 106 of the Laws of New York of 2019; N.Y. Env. Cons. Law Article 75, §75-0103(13).

[42] Chapter 58 (Part JJJ) of the Laws of New York of 2020.

periods of wind curtailment to avoid overloading transmission facilities. To date, NYSERDA and LIPA have procured 4,316 MW toward the 9,000 MW minimum target.[43]

The NYISO initiated its 2020-2021 cycle of the Public Policy Process in August 2020 by issuing a new solicitation for proposed transmission needs driven by Public Policy Requirements.[44] Responses were received from 15 entities in October 2020, 11 of which highlighted the need for transmission to accommodate the delivery of offshore wind to Long Island and New York City.[45] The NYISO filed the proposed transmission needs with the NYPSC,[46] submitted proposed transmission needs on Long Island to the Long Island Power Authority,[47] and commented in support of Public Policy Transmission Needs, including additional transmission to integrate offshore wind in New York State.[48] On March 19, 2021, the NYPSC issued an Order[49] identifying a public policy transmission need declaring that CLCPA constitutes a Public Policy Requirement driving the need for:

- Adding at least one bulk transmission intertie cable to increase the export capability of the LIPA-Con Edison interface, that connects NYISO's Zone K to Zones I and J to

[43] *See* https://www.nyserda.ny.gov/All-Programs/Programs/Offshore-Wind/Focus-Areas/NY-Offshore-Wind-Projects

[44] *See* Notice, posted at: https://www.nyiso.com/documents/20142/1406936/2020-2021-Notice-Requesting-Proposed-PPTNs-20200731.pdf/fe90e0d5-3bdc-4fea-bbc4-fe27ccef8b65. The NYPSC may also request that the NYISOP conduct the Public Policy Process outside the regular biennial process cycle. OATT § 31.4.2.

[45] *See* https://www.nyiso.com/en/cspp; Public Policy Documents, Proposed Needs, 2020.

[46] https://www.nyiso.com/documents/20142/10601510/2020-10-09-Flng-Ltr-PSC-Prpsd-PPTNS.pdf/efb60bfe-de29-3a12-b8ec-995d84633523

[47] https://www.nyiso.com/documents/20142/10601510/2020-10-09-NYISO-Lttr-to-LIPA-re-PPTNs-20-E-0497.pdf/71ff7345-4114-42bb-f5a1-bc5698115ff9

[48] https://www.nyiso.com/documents/20142/18663846/20210119-NYISOCmmntsCase20E0497-cmplt.pdf/0d6d7a86-4435-7770-2a51-330bf7806bb1. In February 2021, the Long Island Power Authority filed with the NYPSC its determination that a Public Policy Requirement exists in Long Island Transmission District. *See* NYPSC Case 20-E-0497.

[49] *Order Addressing Public Policy Requirements for Transmission Planning Purposes* available at: http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={8C8F3D7A-4FEB-4B18-88F5-82CF587895C9}

ensure the full output from at least 3,000 MW of offshore wind is deliverable from Long Island to the rest of the State; and

- Upgrading associated local transmission facilities to accompany the expansion of the proposed offshore export capability.[50]

The NYISO is currently conducting initial baseline analysis, and will hold one or more technical conferences with Developers and other interested parties. Thereafter, the NYISO will issue a solicitation for Public Policy Transmission Projects and Other Public Policy Projects for evaluation in its competitive process.

3. The NYISO has Encouraged Consideration of the Design and Benefits of a Meshed Transmission System for Offshore Wind in New York.

Under the 2020 AREA law, the New York State Department of Public Service, NYSERDA, and the New York Transmission Owners are conducting a State Power Grid Study to determine the transmission and distribution plans necessary to achieve the requirements of the CLCPA.[51] The Initial Report of the State Power Grid Study determined that a networked or "meshed" system to connect offshore wind farms would offer reliability and economic benefits. The report stated that a meshed system could be implemented retroactively after offshore wind farms come into service, which would allow for greater flexibility in developing different offshore sites.[52]

In its comments on the Initial Report, the NYISO encouraged the state to consider whether a meshed transmission system would best address transmission needs for offshore wind,

[50] Case 20-E-0497, *et al.*, Matter of New York Independent System Operator, Inc.'s Proposed Public Policy Transmission Needs for Consideration for 2020, *Order Addressing Public Policy Requirements for Transmission Planning Purposes* (March 19, 2021), available at: http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={8C8F3D7A-4FEB-4B18-88F5-82CF587895C9}

[51] NYPSC Case 20-E-0197, Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit.

[52] Initial Report on the New York Power Grid Study, at p. 75, available in NYPSC Case 20-E-0197.

and to undertake that evaluation expeditiously. The NYISO commented that although other operational challenges could be further identified and studied as additional renewables integrate into New York, a meshed network to connect offshore wind farms, if desirable, is best pursued as soon as possible before opportunities for an efficient design are foreclosed. While designing with expandability in mind would likely cost more upfront, the NYISO suggested that it would likely still be cheaper than replacing interconnection facilities later, and could maximize the use of limited available transmission cable routing options approaching New York City.[53] The NYISO's Public Policy Process is one way that a meshed network for offshore wind can be accomplished in New York.

4. The NYISO's Enhanced Economic Planning Process Provides Additional Studies and Tools to Quantify the Benefits of Offshore Wind Projects.

In January 2021, the NYISO proposed revisions to its Economic Planning Process to provide more analysis and greater insights into New York's transmission needs and the energy deliverability of future generation resources. On April 9, 2021, the Commission accepted for filing tariff changes proposed by the NYISO.[54] Starting this year, the NYISO will conduct a statewide analysis of transmission system congestion and performance over a 20-year period, known as the System and Resource Outlook ("Outlook"), with new metrics to measure the energy deliverability of the output of proposed generation projects.[55] The Outlook will inform policymakers and developers to identify new transmission needs that could be met by proposed

[53] Comments of the NYISO on Initial Report on the Power Grid Study, available at: https://www.nyiso.com/documents/20142/18663846/20210322-NYISOCmmntsDPSRprtQstns-20E0197-complete.pdf/35e905d6-988f-4fb5-5e86-0bd39b74ad3d

[54] New York Independent System Operator, Inc., Docket No. ER21-1074-000, Order Accepting Tariff Revisions, 175 FERC ¶ 61,010 (April 9, 202), available at: https://nyisoviewer.etariff.biz/ViewerDocLibrary/FercOrders/20210409%20FERC%20Ordr%20Accptd%20EPP%20Flng_27566.pdf

[55] OATT § 31.3.

Regulated Economic Transmission Projects[56] or by identifying new Public Policy Transmission Needs in the Public Policy Process.[57]

The updated Economic Planning Process incorporates revised and new metrics, enabling Developers and policymakers to analyze the benefits of generation and transmission projects. Limited by natural resource availability and siting constraints, renewable generation build-out tends to concentrate in certain geographic areas where expansion of the transmission system will be necessary to avoid curtailments and deliver the energy to customers. Traditional system upgrade analysis only examines "snapshots in time" of system conditions, and such analysis must be supplemented to assess temporal issues that should drive the extensive buildout expected in the next few decades. The new energy deliverability metric provides insights into the ability of resources to deliver their full energy capability to the system and the conditions that lead to any curtailment. Using production cost simulation tools, an 8,760-hour assessment can be performed to look into the amount of energy that can actually be produced and consumed over a given year, rather than a snapshot in time. This energy deliverability metric will include quantification of the energy that would be produced by each resource considering the impact of transmission constraints as compared to the total amount of energy that such resource is capable of producing in the absence of transmission constraints, while accounting for fuel availability of each resource type including wind, solar, and water. Resources can be reported in groupings (*e.g.*, within constrained renewable generation pockets) or individually to the appropriate stakeholders. The metric may be expressed as a percentage of such total amount of energy or as the amount of curtailed energy. Applying the assessment to offshore wind generators, the

[56] OATT § 31.3.2.

[57] OATT § 31.4.2.

transmission constraints and the need for transmission expansion can be identified efficiently by analyzing the congestion and curtailments associated with these generators. In addition, an updated Installed Capacity saving metric will be calculated consistent with the methodology prescribed in the NYISO's tariff to calculate minimum locational capacity requirements. The NYISO will apply these metrics in new economic planning studies starting this year.

5. The Additional Studies Available in the NYISO's Reliability and Economic Processes Enable Developers and Policymakers to Obtain NYISO Analyses to Assist their Planning and Development Efforts for Offshore Wind.

The NYISO's reliability, economic and public policy processes provide for any interested party to request additional studies to inform their planning and development efforts, some of which are on a confidential basis. Below is a summary of some of the studies and potential uses in helping shape policy:

- In the Reliability Planning Process, interested parties can request that the NYISO conduct an Additional Reliability Study to determine how a proposed resource or transmission project would affect a local or bulk power system Reliability Need.[58]

- The enhanced Economic Planning Process enables Developers to obtain from the NYISO Requested Economic Planning Studies ("REPS") that analyze the impacts of proposed generation projects, including offshore wind, on transmission system congestion and energy deliverability, over a 20-year period.[59] Such REPS will allow Developers to proactively explore optimum interconnection points and configurations for their projects.

- The transmission expansion process allows for an exploratory Transmission Service Study to identify conceptual transmission options to, among other things, create incremental transfer capability or address the reliability or operational concerns of a specific area on the transmission system without formally proposing a project under the Transmission Interconnection Procedures.[60] For example, a requestor can assess

[58] *See* Reliability Planning Process Manual (NYISO Manual 26), Request for Additional Reliability Study (Attachment D), and Agreements for Additional Reliability Studies (Attachment E), available at: https://www.nyiso.com/documents/20142/2924447/rpp_mnl.pdf/67e1c2ea-46bc-f094-0bc7-7a29f82771de

[59] The NYISO proposed to incorporate the study requirement for the Requested Economic Planning Study into a new § 31.3.3 of the OATT and to incorporate the request and agreement forms into the tariff into new §§ 31.13 and 31.14. The NYISO's proposed tariff changes are available at: https://www.nyiso.com/regulatory-viewer

[60] *See* Transmission Expansion and Interconnection Manual, Transmission Service Study, available at https://www.nyiso.com/documents/20142/2924447/tei_mnl.pdf/b2f926e9-2faa-2c42-5a09-2402cdb8bacc.

transmission options for connecting to and expanding certain substations prior to submitting an Interconnection Request.

These additional planning studies can also provide useful information to developers, transmission owners, and other interested parties on the reliability, economic, and emissions impacts of potential offshore wind transmission projects.

6. The Interregional Planning Process Shared by the NYISO, ISO-NE and PJM Provides a Mechanism for Consideration of Interregional Transmission Planning Projects for Consideration for Inclusion in Regional Transmission Plans.

The NYISO, PJM Interconnection (PJM), and ISO New England (ISO-NE), coordinate planning under the Amended and Restated Northeastern ISO/RTO Planning Coordination Protocol and other joint agreements.[61] The protocol includes the following requirements:

- Exchanging data and information,
- Coordinating interconnection requests and transmission requests with cross-border impacts,
- Developing a Northeastern Coordinated System Plan,
- 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.

The ISO/RTOs implement the protocol consistent with interregional planning requirements of the Federal Energy Regulatory Commission (FERC) Order No. 1000, including the following:

- The sharing of information about the respective needs of each region and potential solutions to these needs, and
- The identification and joint evaluation of interregional transmission facilities that may be more efficient or cost-effective solutions to these regional needs.

However, the Transmission Service Study identifies a concept that a developer wishes to pursue, then it can submit a formal Transmission Interconnection Application or Interconnection Request for the proposed project in the respective process.

[61] The protocol is posted at the following link on the ISO-NE website: https://www.iso-ne.com/static-assets/documents/committees/comm_wkgrps/othr/ipsac/rto_plan_prot/planning_protocol.pdf

The NYISO's tariff provides for cost allocation and cost recovery of an Interregional Transmission Project that is included in one of its regional planning processes.[62] The three ISO/RTOs conduct semiannual meetings of the Joint Interregional Planning Committee and of the Interregional Planning Stakeholder Advisory Subcommittee, to discuss the progress of joint planning activities, such as the Northeast Coordinated System Plan, and to receive and consider inputs on potential interregional planning projects. The protocol and the committees provide a ready forum for discussion of potential interregional transmission projects for offshore wind.

III. CONCLUSION

WHEREFORE, for the foregoing reasons, the NYISO respectfully requests that the Commission consider these comments in addressing the integration of new offshore wind resources in the transmission systems of ISOs and RTOs.

Respectfully submitted,

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Dated: May 10, 2021

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[62] OATT §§31.5.6.4, 31.5.7.

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 in accordance with the requirements of Rule 2010 of the Rules of Practice and Procedure, 18 C.F.R. §385.2010.

Dated at Rensselaer, NY this 10th day of May 2021.

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