UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection	**)** **)** **)**	**Docket No. RM21-17-000**

COMMENTS OF THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.

Pursuant to Rules 212 and 214 of the Federal Energy Regulatory Commission's ("FERC" or the "Commission") Rules of Practice and Procedure,[1] the New York Independent System Operator, Inc. ("NYISO") respectfully submits initial comments in this proceeding.[2]

I. BACKGROUND

On July 15, 2021, the Commission issued the Advance Notice of Proposed Rulemaking ("ANOPR") in the above-captioned proceeding, which presented potential reforms to improve electric regional transmission planning and cost allocation and generator interconnection processes. The Commission invited all interested persons to submit comments on the potential reforms and in response to specific questions. The NYISO appreciates this opportunity to submit comments and respectfully requests that the Commission consider these comments as it proceeds with this rulemaking proceeding.

[1] 18 C.F.R. Sections 385.212, 385.2008 (2021).

[2] *See Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection*, 176 FERC ¶ 61,024 at P 183 (2021) ("ANOPR").

II. COMMENTS

A. Overview

The NYISO welcomes the opportunity to consider enhancements to existing transmission planning processes. This is a critical step needed to meet anticipated future generation needs[3] and New York's ambitious state statutory requirements and goals to accommodate large amounts of new renewable resources to address climate change.[4] The ANOPR contemplates proposals that could, if carefully tailored to a region's specific needs, help transmission providers find more efficient and cost-effective ways to build out the transmission system for the benefit of future generators as well as the loads being served by the transmission system. In these comments, the NYISO offers input on the questions raised in the ANOPR and context for how these issues can be considered in New York.

Notably, the ANOPR highlights the potential benefits of a more holistic approach to transmission planning. The NYISO sees an opportunity to build on the existing successes of its processes and to evolve them to address current conditions. The NYISO urges the Commission to consider that in New York, incremental, yet significant, reforms can meaningfully address many of the issues raised in the ANOPR. Adoption of targeted reforms can have a more immediate impact than a complete overhaul of the existing processes, which would take considerable time to develop, implement and, ultimately, to result in new transmission. Moreover, attempting to address all transmission needs and issues simultaneously through a single, unified process may be overly complex, slow and inflexible.

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[3] ANOPR, at ¶¶ 31-36.

[4] The New York Climate Leadership and Community Protection Act ("CLCPA") requires that seventy percent of energy consumed in New York State be produced by renewable resources by 2030. By 2040 energy consumed must be completely emissions free. New York must also incorporate 9,000 MW of offshore wind, 6,000 MW of solar generation, and 3,000 MW of storage. 2019 Laws of New York, ch. 106.

The NYISO agrees with the Commission that there are benefits in preparing for future system needs, including planning for transmission upgrades required to accommodate future generation. In particular, as discussed below, increasing the breadth of considerations and objectives that guide the identification of transmission upgrades can foster a more proactive rather than reactive transmission planning process. Such an approach could lead to a broader identification of transmission needs and solutions by enhancing the NYISO's existing approved reliability, economic and public policy planning processes. Three key areas for the Commission to consider in this regard are: (1) reforms to promote the build-out of transmission to support future generation (based on, *e.g.*, pre-planned renewable generator pockets), to accommodate further interconnections beyond the minimum upgrades required for a reliable interconnection; (2) reforms to create actionable scenario planning through which the NYISO could consider, and act on, needs identified using alternative assumptions in the base cases used for reliability planning (including, e.g., generator availability and system resiliency); and (3) reforms to expand the metrics and the time horizons used to select transmission under the reliability, economic and public policy processes without requiring a consolidated approach to all aspects of the regional transmission planning process. These additional planning considerations could help prepare the transmission system not only for future anticipated generation, but also the increasing number of generator retirements and other factors driving the need for increased transmission capabilities.

Through its shared governance process, the NYISO has a demonstrated history of actively seeking to improve its processes and has implemented a number of reforms to its transmission and interconnection planning processes in recent years. Through its ongoing "lessons learned" process conducted with stakeholders, the NYISO has continuously made significant improvements to these processes – reforms carefully tailored to circumstances unique

to New York, a single-state ISO. The NYISO looks forward to the opportunity to consider further reforms in response to concerns expressed by the Commission in this proceeding.

To best implement reforms to the existing process, the NYISO encourages the Commission to recognize the need for regional variations so that each ISO/RTO can improve its process in light of its regional needs and existing interconnection and transmission planning paradigm. If the Commission decides to proceed with a rulemaking at this time, the NYISO urges the Commission to not limit parties to specific tariff language and mechanisms through which such reforms are to be addressed. Due to regional characteristics and the significant Commission-approved variations among the regions, the Commission should allow parties to tailor appropriate tariff revisions and/or demonstrate to the Commission how they are addressing, or plan to address, the Commission's concerns in a manner consistent with or superior to any proposed reforms.

The NYISO respectfully requests that the Commission continue to permit ISO/RTOs to seek "independent entity variations" from any revisions to the *pro forma* interconnection procedures to enable them to customize the proposed revisions as necessary to fit regional needs. Absent such variations, the NYISO would be required to significantly alter the framework of its interconnection process. This would have the unfortunate effect of overturning long-settled and understood expectations and disrupting the careful balancing of interests in the process that already have been broadly agreed upon by NYISO stakeholders and accepted by the Commission.

B. Hallmarks of Existing NYISO Transmission Planning and Interconnection Processes

The NYISO describes, below, the general construct of its transmission planning and interconnection processes to highlight what has been successful in New York and to frame a discussion of potential reforms that could help accomplish the goals emphasized in the ANOPR. The NYISO's processes are significantly different than those of other Independent System Operators ("ISOs") and Regional Transmission Organizations ("RTOs"),[5] most notably with regard to the NYISO's Public Policy Transmission Planning Process ("Public Policy Process"), the interconnection process for transmission projects, and the NYISO's Class Year Study process. The NYISO's transmission planning processes fall into two high-level categories, comprehensive system planning and interconnection, described below.

1. The NYISO's Comprehensive System Planning Processes ("CSPP")

The NYISO's Comprehensive System Planning Process establishes the rules by which the NYISO solicits, evaluates, and selects more efficient or cost-effective solutions to address reliability, economic, and public policy driven transmission needs in New York for inclusion in the NYISO's regional transmission plan for the purpose of cost allocation.[6] The NYISO's CSPP

[5] A report prepared by Concentric Energy Advisors, Inc. for the American Council on Renewable Energy ("ACORE") in coordination with the American Clean Power Association ("ACP") and the Solar Energy Industries Association ("SEIA") laid the foundation for the Commission's ANOPR in this rulemaking proceeding. *See* Concentric Energy Advisors, Inc., *How Transmission Planning & Cost Allocation Processes Are Inhibiting Wind & Solar Development In SPP, MISO, & PJM,* (March 2021). That report was "based on interviews with industry stakeholders to investigate the extent to which transmission planning processes in the Midcontinent Independent System Operator ("MISO"), the Southwest Power Pool ("SPP"), and the PJM Interconnection ("PJM") have deficiencies that are resulting in the under-development of cost-competitive renewable energy projects." Importantly, that report presented insights into those particular transmission planning processes and did not investigate or report on the NYISO's transmission planning processes.

[6] The CSPP originally took form with the NYISO's Reliability Planning Process, first approved by FERC in 2004, and, thereafter, went through several revisions primarily in response to FERC Order No. 890 (adding local transmission and economic planning) and Order No. 1000 (adding public policy planning, interregional planning, and a competitive selection process to reliability planning). *See New York Independent System Operator, Inc.,* Order on Compliance, 143 FERC ¶ 61,059 (2013); *New York Independent System Operator, Inc.,* Order on Rehearing and Compliance, 148 FERC ¶ 61,044 (2014); *New York Independent System Operator, Inc.,* Order on Rehearing and

has four components—the Local Transmission Planning Process, the Reliability Planning Process/Short-Term Reliability Process, the Economic Planning Process, and the Public Policy Transmission Planning Process.[7]

The NYISO conducts all of its transmission planning processes over a regular two-year cycle based on a common set of assumptions, data and findings to align its need and selection determinations. The Local Transmission Planning Process starts first and feeds into the NYISO's establishment of baseline planning base cases, load forecasts and data banks. These sources together with continuous data updates from market participants and the NYISO's annual Load and Capacity Data Report ("Gold Book") feed into the NYISO's long-term and short-term reliability planning processes. The NYISO builds its economic planning and public policy planning base cases on the reliability planning base cases and incorporates actual or generic solutions that represent the foundation of a reliable system. As the study cycle progresses, the NYISO updates its economic and public policy studies with additional local transmission and reliability planning inputs to make sure the assumptions remain correct and the inputs stay fresh. By feeding each process and its inputs into the next set of studies, the NYISO captures the full set of system needs and plans comprehensively for New York's bulk power system needs.

a. Local Transmission Planning Process

The purpose of the Local Transmission Planning Process ("LTPP") is for the local Transmission Owners ("TOs") to obtain stakeholder input on their plans to address the needs of

Compliance, 151 FERC ¶ 61,040 (2015); *New York Independent System Operator, Inc.*, Order Conditionally Accepting Tariff Revisions and Requiring Further Compliance, 153 FERC ¶ 61,341 (2015); *New York Independent System Operator, Inc.*, Order Conditionally Accepting Tariff Revisions and Requiring Further Compliance, 162 FERC ¶ 61,107 (2018); *New York Independent System Operator, Inc.,* Order Granting, in Part, and Denying, in Part, Rehearing and Clarification, and Requiring Further Compliance, 162 FERC ¶ 61,124 (2018); *New York Independent System Operator, Inc.,* Letter Order, Docket Nos. ER13-102- 012, 013, and 014 (June 5, 2018); *New York Independent System Operator, Inc.,* Letter Order, Docket No. ER13-102-015 (August 21, 2018).

[7] These processes are detailed primarily in NYISO OATT Attachments Y and FF.

their transmission systems in each of local transmission districts.[8] At least once in every biennial planning cycle, each TO posts on its website the planning criteria, assumptions, and analytical tools it uses, and reviews its proposed Local Transmission Plan with stakeholders at a working group meeting in the NYISO's planning process.[9] In developing its Local Transmission Plan, each TO must consider whether there is a transmission need on its system that is being driven by a Public Policy Requirement. Stakeholders comment on the inputs and proposed plans, and the NYISO determines whether to accept them under planning criteria before the TOs finalize their local plans. The LTPP also provides the opportunity for the NYISO and stakeholders to identify potential regional solutions that may be more efficient or cost-effective than individual TO plans and serves to integrate these local plans into the NYISO's Comprehensive Reliability Plan and its economic and public policy processes. The TOs consider inputs from stakeholders and the NYISO and finalize their local plans, which feed directly into the NYISO's assumptions, data and models used for regional planning in New York. Projects undertaken by each Transmission District for its local system needs are not eligible for regional cost allocation and cost recovery through the NYISO's tariffs.[10]

b. Reliability Planning Process

The purpose of the Reliability Planning Process ("RPP") is to plan the transmission system for the long-term reliability of the New York bulk power system.[11] The RPP addresses reliability needs identified in year 4 through year 10 of the 10-year study period, together with

[8] *See* NYISO OATT Section 31.2.1.

[9] The NYISO requests annual updates to the TOs' local transmissions.

[10] *See* NYISO OATT Section 6.10.1.2.

[11] *See* NYISO OATT Sections 31.2.2-31.2.13.

the Short-Term Reliability Process ("STRP") which primarily focuses on needs in the next three years. Under the biennial process for conducting the RPP, the reliability of the New York Bulk Power Transmission Facilities ("BPTF") is assessed, any Reliability Needs are identified, solutions to identified needs are proposed and evaluated for their viability and sufficiency to satisfy the identified needs and, if necessary, the more efficient or cost-effective transmission solution to the identified need(s) is selected by the NYISO. The RPP consists of several studies that are reviewed by NYISO stakeholders and approved by the Board of Directors:

The Reliability Needs Assessment ("RNA"). The NYISO performs a biennial study in which it evaluates the resource and transmission adequacy and transmission system security of the New York BPTF over its Study Period, encompassing years 4 through 10 following the year in which the RNA is conducted. Through this evaluation, the NYISO identifies Reliability Needs in accordance with applicable Reliability Criteria.[12]

The Comprehensive Reliability Plan ("CRP"). After the RNA is complete, the NYISO requests the submission of market-based solutions to satisfy the Reliability Needs. The NYISO also identifies a Responsible TO and requests that the TO submit a regulated backstop solution and that any interested entities submit alternative regulated solutions to address the identified Reliability Needs. The NYISO evaluates the viability and sufficiency of the proposed solutions to satisfy the identified Reliability Needs and evaluates and selects the more efficient or cost-effective transmission solution to the identified need. The NYISO considers a series of metrics in selecting the more efficient or cost-effective transmission solution, including project cost, operability, expandability, and performance, but does not consider the economic benefits to the transmission system of proposed reliability transmission projects. In the event that market-based

[12] *See* NYISO OATT Section 31.2.2.

solutions do not materialize to meet a Reliability Need in a timely manner, the NYISO triggers regulated solution(s) to satisfy the need. The NYISO develops the CRP for its Study Period that sets forth its findings regarding the proposed solutions.[13] Transmission solutions included in the CRP are eligible for cost allocation and cost recovery through the NYISO's tariffs.[14]

Short-Term Reliability Process ("STRP"). Added in 2019 to enhance its biennial reliability planning process, the NYISO also conducts a quarterly STRP. The NYISO conducts Short-Term Assessment of Reliability ("STAR") studies focusing on reliability needs that could arise in the next three years, and the ability to address needs up to five years in the future if necessary.[15] The STAR assesses the reliability impacts of Generator deactivations on both Bulk Power Transmission Facilities and non-BPTF (local) transmission facilities, in coordination with the Responsible Transmission Owner(s). The STAR also assesses the reliability impacts on the BPTF of system changes, such as load forecast and transmission system changes, that are not related to a Generator deactivation.

The STRP concludes if a STAR does not identify a need or if the NYISO determines that all identified needs will be addressed in the RPP. Should a STAR identify a need to be addressed in the STRP, the NYISO would request the submission of market-based solutions to satisfy the need along with a Responsible Transmission Owner STRP solution. The NYISO evaluates the viability and sufficiency of the proposed solutions to satisfy the identified needs and selects the more efficient or cost-effective solution to address the need. As a last resort, the NYISO can enter into a Reliability Must Run ("RMR") agreement with a generator until a long-term solution can be completed. The NYISO reviews the results of the solution or combination

[13] *See* NYISO OATT Section 31.2.7.

[14] *See* NYISO OATT Section 31.2.6.5.2 and Section 6.10 (Rate Schedule 10).

[15] *See* NYISO OATT Section 38 (Attachment FF).

of solutions (including an explanation regarding the solution that is selected) with stakeholders and posts a Short-Term Reliability Process Report detailing its determination with stakeholders. Selected transmission projects and Generator RMR agreements are eligible for cost allocation and recovery through the NYISO tariffs.[16]

c. Economic Planning Process

The purpose of the Economic Planning Process is to identify economic opportunities to relieve congestion on the transmission system and improve the deliverability of resources to consumers. The NYISO conducts a system-wide study to identify system bottlenecks and provides that as input to the TOs and Developers to consider potential economic transmission projects for approval for cost allocation and cost recovery through the NYISO's tariffs. The Economic Planning Process consists of three study processes:

The System & Resource Outlook ("The Outlook"). The Outlook is a biennial report by which the NYISO summarizes the current assessments, evaluations, and plans in the biennial Comprehensive System Planning Process; produces a 20-year projection of congestion on the New York State Transmission System; identifies, ranks, and groups congested elements; and assesses the potential benefits of addressing the identified congestion. This report is reviewed by NYISO stakeholders and approved by the Board of Directors.[17]

Economic Transmission Project Evaluation. If a Developer proposes a Regulated Economic Transmission Project to address constraints on the BPTFs identified in the Economic Planning Process, the NYISO will perform an Economic Transmission Project Evaluation ("ETPE") of the proposed Regulated Economic Transmission Project to determine the project's

[16] *See* NYISO OATT Sections 38.10, 38.23, 6.16 (Rate Schedule 16).

[17] *See* NYISO OATT Section 31.3.1.

initial eligibility for cost allocation and recovery under the NYISO OATT and to identify the beneficiaries that would be allocated the cost of the project.[18] In order to be considered for approval, a proposed economic transmission project must cost at least $25 million and have a benefit to cost ratio of at least 1.0 measured solely by net production costs savings against project costs over 10 years from the project's in-service date.[19] Load serving entities ("LSEs") identified by the NYISO as the project beneficiaries must approve the project's selection with a super-majority of at least 80% of the weighted loads represented by the LSEs.[20] The NYISO provides additional economic benefits such as changes to generator payments, installed capacity costs, Transmission Congestion Contract revenues, Ancillary Services costs, emissions costs, fuel and load forecast uncertainty and energy deliverability, as information for LSEs to consider in casting their votes. The informational metrics do not include benefits of a project to system reliability, operability, expandability or performance. If a project is approved, it is eligible for cost allocation and recovery through the NYISO OATT.[21]

Requested Economic Planning Study ("REPS"). Market Participants and other interested parties may also request that the NYISO perform a REPS at the requesting party's expense solely for information purposes, which scope and deliverables will be agreed upon by the NYISO and the requesting entity.[22]

d. Public Policy Transmission Planning Process ("Public Policy Process")

The purpose of the Public Policy Process is to determine whether there are needs on the transmission system beyond reliability and economic considerations that are driven by federal,

[18] *See* NYISO OATT Sections 31.3.2.1, 31.5.1, 31.5.4 and 31.5.6.
[19] *See* NYISO OATT Section 31.5.4.3.
[20] *See* NYISO OATT Section 31.5.4.6.
[21] *See* NYISO OATT Section 31.5.4.6.4, 31.5.5.3; 6.10 (Rate Schedule 10).
[22] *See* NYISO OATT Section 31.3.3.

state or local laws and regulations.[23] Under this process, interested entities propose, and the New York State Public Service Commission ("NYPSC") identifies, transmission needs driven by Public Policy Requirements.[24] If the NYPSC identifies a Public Policy Transmission Need, the NYISO requests that interested entities submit proposed solutions to the identified need. This process is based on a sponsorship model, by which Developers propose the transmission project design as well as bid on the project based on cost and other selection criteria. The NYISO's Public Policy Process is unique among its planning processes because it utilizes multiple cases and scenarios over a 20-year evaluation time horizon, and uses a broad set of reliability, economic and public policy metrics to evaluate projects and select a transmission solution.

The NYISO determines whether the proposed solutions are viable and sufficient to satisfy the identified Public Policy Transmission Need.[25] The NYISO then evaluates the viable and sufficient transmission projects under a variety of criteria to rank the projects and select the more efficient or cost-effective solution.[26] Those criteria are set forth in ten categories of metrics that include project cost and cost containment, operability, expandability, performance, and system-wide economic benefits to production costs, installed capacity costs and environmental emissions. Those metrics do not include benefits to meeting system reliability needs, such as resource adequacy and transmission security.[27] A draft Public Policy Transmission Planning Report sets forth the NYISO's findings, ranking of solutions, and any recommended selection of the more efficient or cost-effective transmission solution to the identified need. NYISO

[23] *See* NYISO OATT Section 31.4.

[24] Transmission owners also review their Local Transmission Plans to determine if there are additional needs driven by Public Policy Requirements. The Long Island Power Authority may determine Public Policy Transmission Needs on Long Island, to seek solutions eligible for cost allocation across the New York Control Area, with the approval of the NYPSC.

[25] *See* NYISO OATT Section 31.4.6.5.

[26] *See* NYISO OATT Section 31.4.8.

[27] *See* NYISO OATT Section 31.4.8.1.

stakeholders have the opportunity to review and comment on the report. The Board of Directors considers whether to approve the report and whether to select the transmission solution recommended in the report.[28] The selected transmission project is eligible for cost allocation and cost recovery under the NYISO's tariffs.[29]

In concert with these four components, interregional planning is conducted with NYISO's neighboring control areas in the United States and Canada under the Northeastern ISO/RTO Planning Coordination Protocol.[30] The NYISO participates in interregional planning and may consider Interregional Transmission Projects in its regional planning processes.[31]

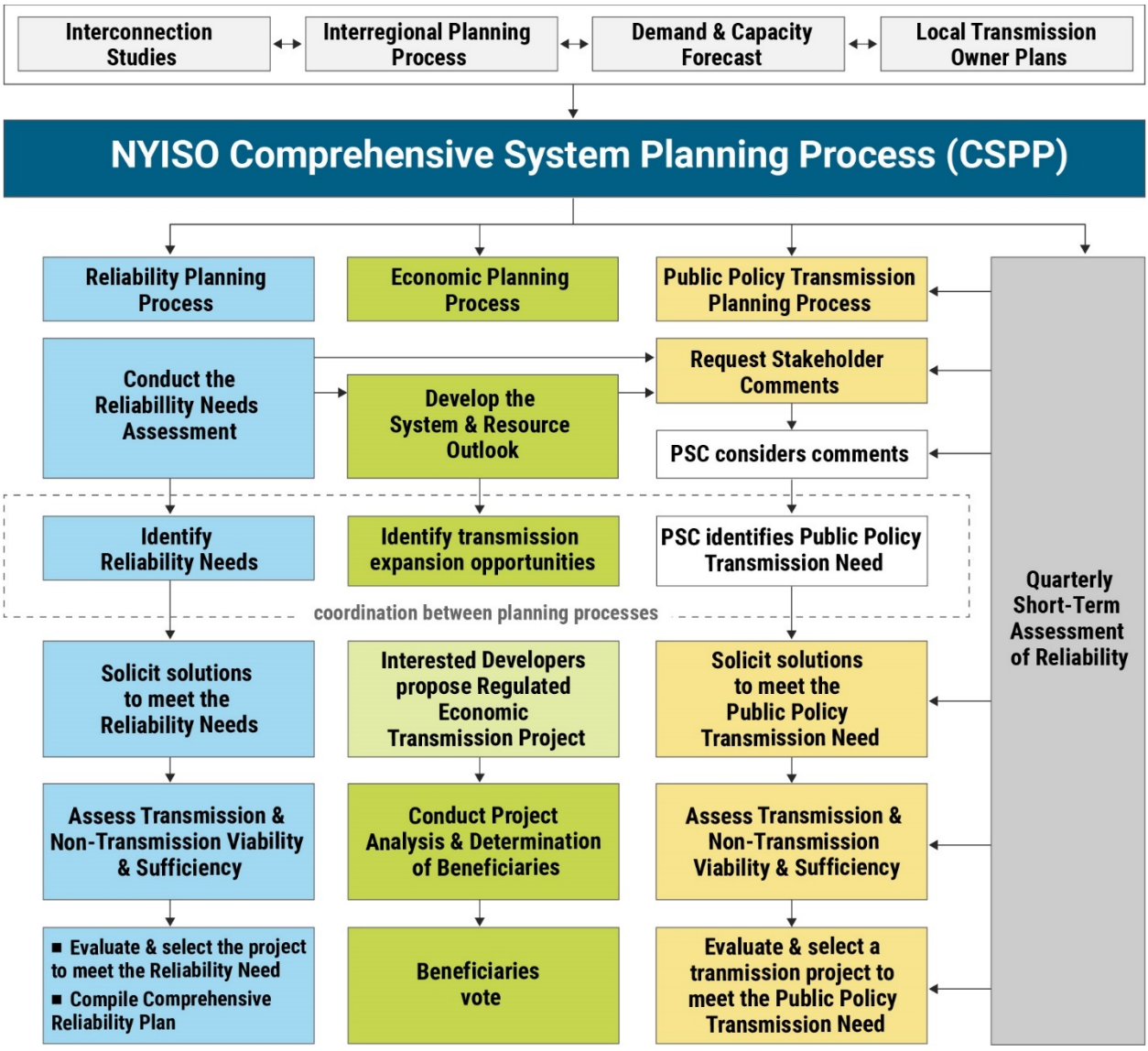
The NYISO CSPP is illustrated in the flow diagram below:

[28] *See* NYISO OATT Section 31.4.11.

[29] *See* NYISO OATT Sections 31.4.8, 6.10 (Rate Schedule 10).

[30] *See* NYISO OATT Section 31.1.5. The Northeastern ISO/RTO Planning Coordination Protocol is available at the following link: https://www.nyiso.com/documents/20142/1406358/Northeast_Planning_Protocol_FINAL_SIGNED_VERSION.pdf

[31] The NYISO is a member of the Joint Interregional Planning Committee and together with PJM and ISO-NE, hosts the Interregional Planning Stakeholder Advisory Subcommittee. *See https://www.nyiso.com/ipsac*.



The NYISO has enjoyed significant success in expanding transmission in the New York Control Area to meet transmission needs in the state.[32] Particularly under its Public Policy Process, the NYISO has selected for cost allocation and recovery under its tariffs significant

[32] In Commissioner Clements' concurrence to the Declaratory Order issued to the NYISO regarding rights of first refusal over upgrades to existing planning processes, she stated that: "[w]hile this has not been the case in all regions, the success of NYISO's competitive solicitations for public policy projects has been a bright spot in the Order No. 1000 landscape." FERC Docket No. EL20-65-000, *Order on Petition for Declaratory Ruling,* Clements, Commissioner, concurring, at P. 3 (April 15, 2021).

transmission expansions in Western New York, Central New York and the Hudson Valley Region.

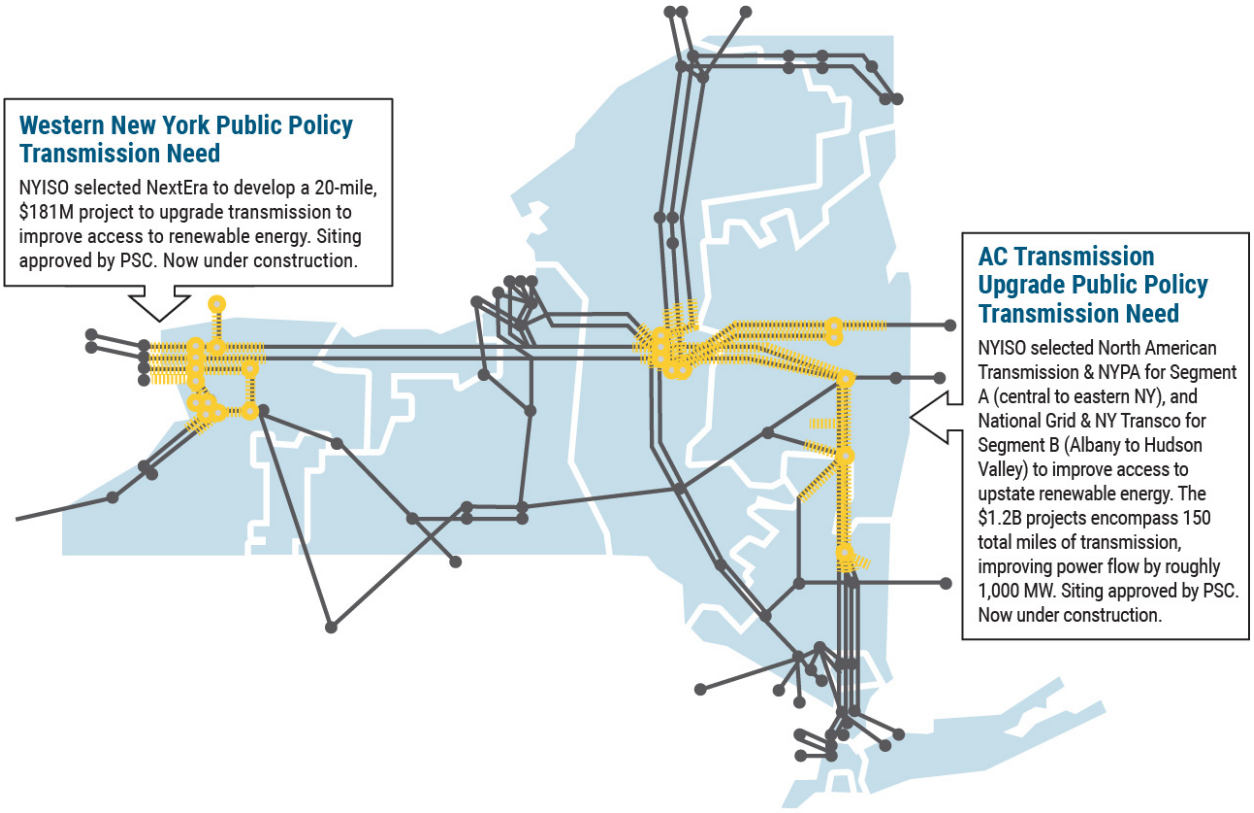
In 2015, the NYPSC determined that there was a need for transmission in Western New York to obtain the full output of the Niagara hydroelectric project and imports of renewable resources from Ontario without fossil-fueled generation that had retired in the region. The NYISO received 12 proposed transmission projects, determined that 10 were viable and sufficient to meet the needs, and in 2017, the NYISO's Board of Directors selected the Empire State Line proposal from NextEra to address the public policy need for new transmission in Western New York. The transmission line has received all regulatory approvals, is under construction, and is expected to enter into service in 2022.

In December 2015, the NYPSC identified a Public Policy Transmission Need to increase transfer capability from central to eastern New York by at least 350 MW (Segment A) and from the Albany region through the Hudson Valley region by at least 900 MW (Segment B), collectively known as the "AC Transmission Need." The NYISO received seven viable and sufficient transmission proposals for Segment A, and received six viable transmission proposals for Segment B. Due to the nature of the AC Transmission Need requiring two segments each addressing different constraints, yet collectively benefiting the entire control area, the comparative performance of each of the proposals was thoroughly investigated, not only for each Segment, but also in combination with proposed projects for the other Segment.

In April 2019, the NYISO's Board of Directors selected transmission projects to address the AC Transmission Need. The NYISO selected a joint proposal by North American Transmission and NYPA for Segment A in central New York, and a joint proposal by National Grid and New York Transco for Segment B in the Hudson Valley. The projects will reduce total

system electricity production costs, lower system capacity procurement costs, replace aging transmission infrastructure, improve system performance, reduce emissions, and add resilience and operating flexibility to the New York power grid. Both projects commenced construction in 2021 and are planned to enter into service in 2023.

The selected public policy projects are depicted on the following map:



Public Policy Transmission Project Map

Presently, the NYISO is addressing a Public Policy Transmission Need identified by the NYPSC this year to deliver at least 3,000 MW of offshore wind from Long Island to New York City and the rest of the NYCA, through a new tie line and at associated transmission upgrades on

Long Island.[33] The NYISO has solicited solutions to the need, which were due on October 11, 2021.[34]

2. Interconnection Procedures

The NYISO's interconnection procedures were developed with extensive stakeholder involvement primarily in response to the Commission's Order Nos. 2003 and 2006. In Order No. 2003, the Commission acknowledged the differing characteristics of each region and provided ISOs and RTOs with the flexibility to seek independent entity variations from the final rule "to customize its interconnection procedures and agreements to fit regional needs." Accordingly, the NYISO's interconnection procedures include numerous independent-entity variations accepted by the Commission that are specifically tailored to the distinct circumstances in New York. As discussed in more detail below, since Order No. 2003, the NYISO, in conjunction with Developer and stakeholder input, has continued to implement additional and significant revisions to the interconnection process to update and enhance the New York-specific interconnection requirements.

In particular, the NYISO's interconnection process includes significant Commission-approved variations from the *pro forma* interconnection procedures in Order Nos. 2003 and 2006 concerning the treatment of proposed projects in the interconnection queue, the scope of interconnection studies, and the process for allocating the cost of System Upgrade Facilities and System Deliverability Upgrades. Some of the more significant variations are highlighted below.

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[33] Case No. 20-E-0497 and Case No. 18-E-0623, *Order Addressing Public Policy Requirements for Transmission Planning Purposes* (March 19, 2021), at 23, *available at* https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={8C8F3D7A-4FEB-4B18-88F5-82CF587895C9}.

[34] *See* https://www.nyiso.com/documents/20142/22968753/Long-Island-Offshore-Wind-Export-Public-Policy-Transmission-Need-Project-Solicitation.pdf/51b8fdeb-1a66-2938-f116-38f1be486e0d.

a. The NYISO's Unique Interconnection Queue Provides for Parallel, Rather than Sequential, Project Evaluation

The NYISO's interconnection queue approach differs significantly from the "hard" or "serial" interconnection queue approach used in other ISO/RTO regions. Once a Developer has submitted a valid Interconnection Request for its project and the project has been included in the NYISO's interconnection queue, the Developer's advancement through the NYISO's interconnection process, including the identification of required facilities and related costs to reliably interconnect its project, is largely driven by its own project development and not the progress, or lack thereof, of other projects with higher Queue Positions (*i.e.*, Interconnection Requests that preceded the project).[35] While the NYISO takes Queue Position into account in determining the order of performing interconnection studies, it is only one of the factors that impact the manner in which the NYISO performs its interconnection studies. To the extent practicable, the NYISO evaluates Interconnection Requests in parallel, not sequentially.

The NYISO does not include proposed projects in the base case of its interconnection studies simply because the project has a higher Queue Position than the studied project. Rather, a project is only included in the base case when it has satisfied certain requirements, including its Developer's acceptance of the cost of, and provision of security for, any upgrades identified in the Class Year Interconnection Facilities Study ("Class Year Study") to interconnect its project.[36] For this reason, when studying a Developer's proposed project, the NYISO does not model in its base case other projects that are not progressing in their development simply because they have a higher Queue Position. Therefore, unlike other ISOs and RTOs, the NYISO

[35] *See* generally, NYISO OATT Sections 30.3 – 30.8 and Sections 32.1 – 32.4. *See also* NYISO OATT Section 25.6.2.3.4 (providing that once eligible for a Class Year Study, a project can enter up to two of the following three Class Year Studies.)

[36] *See* NYISO OATT Sections 22.6.1, 25.5.5.1, 30.2.3. Through the definition of "Base Case" the SGIP incorporates Section 30.2.3's base case rules into the SGIP. *See* NYISO OATT Section 32.5, Appendix 1).

does not require a process to continuously re-study the facilities, and related costs, required to interconnect a project if other projects with higher Queue Positions withdraw or fail to progress.

In addition, as described below, for a project subject to a Class Year Study, the project may only advance to be studied with a cluster of other projects in the final Class Year Study when it has met certain eligibility requirements, the satisfaction of which are independent of its Queue Position. That is, a project with a lower Queue Position that has satisfied the required eligibility requirements may advance into the Class Year Study prior to a project with a higher Queue Position that has not progressed sufficiently to satisfy the eligibility requirements.

b. Transmission Interconnection Studies

The NYISO's interconnection process is different than other regions in that it evaluates both generation and transmission. Transmission projects subject to the CSPP are evaluated under the Transmission Interconnection Procedures ("TIP").[37] The TIP process was developed as part of the NYISO's Order No. 1000 compliance filings. The TIP can include any proposed transmission project, regardless of whether the Transmission Developer seeks cost allocation under the NYISO OATT or proposes a market-based project, and regardless of whether the Transmission Developer is an incumbent Transmission Owner. The only exceptions to transmission projects subject to the TIP are transmission projects in a Local Transmission Plan ("LTP") or NYPA transmission plan (subject to NYISO OATT Section 3.7) and Class Year Transmission Projects (subject to the Large Facility Interconnection Procedures in NYISO OATT Attachment X.)

Transmission projects evaluated under NYISO OATT 3.7 include new transmission facilities or upgrades to existing transmission facilities pursued by a Transmission Owner as part

[37] *See* NYISO OATT Attachment P.

of an LTP or a NYPA transmission plan that is not subject to the NYISO's competitive selection process under Attachment Y and for which the TO is not seeking regional cost allocation under the NYISO OATT.

The last category of transmission projects evaluated in interconnection studies by the NYISO are Class Year Transmission Projects – transmission projects seeking Capacity Resource Interconnection Service ("CRIS"). Transmission projects that participate in the NYISO's Installed Capacity market do so through Unforced Capacity Deliverability Rights ("UDRs") that let a controllable line be treated as if it were located within the locality into which it delivers. As a result, transmission projects eligible for and that request CRIS for UDRs are evaluated akin to generators and fall under the NYISO Large Facility Interconnection Procedures in Attachments S and X to the NYISO OATT, discussed below.

c. The NYISO's Large Facility Interconnection Procedures ("LFIP") and Small Generator Interconnection Procedures ("SGIP")

The NYISO's LFIP and SGIP establish the rights and obligations of parties involved in the NYISO's interconnection processes related to the interconnection or modification of Large Facilities and Small Generating Facilities.

A Developer that seeks to interconnect its Large Facility or Small Generating Facility to the New York State Transmission System or Distribution System must obtain Energy Resource Interconnection Service ("ERIS"). The Interconnection Studies in the LFIP and SGIP identify and allocate the costs of any Attachment Facilities and System Upgrade Facilities required to reliably interconnect the Developer's proposed project to the New York State Transmission System or Distribution System. In addition, if a Developer wants its Large Facility or Small Generating Facility to qualify as an Installed Capacity Supplier and to participate in the NYISO-

administered Installed Capacity market, the Developer must also obtain CRIS, requiring, with limited exceptions, a deliverability study of the proposed project in a Class Year Study.[38]

The LFIP contains the procedures for processing the interconnection or modification of Large Generators Facilities (*i.e.*, generating facilities greater than 20 MW) and Class Year Transmission Projects (*i.e.*, transmission projects that are eligible for and request CRIS).[39,40] The LFIP provides for potentially three successive Interconnection Studies of each proposed project. These studies analyze proposed projects in varying levels of detail. First is the Optional Interconnection Feasibility Study, which is a high-level evaluation of the project's configuration and local system impacts. The second study is the Interconnection System Reliability Impact Study ("SRIS"), which is a detailed single-project study that evaluates the project's impact on transfer capability and system reliability. The final study in the LFIP is the Class Year Study, which is further described below.

The SGIP contains the procedures for processing the interconnection or modification of generating facilities 20 MW or smaller.[41] Like the LFIP, the SGIP provides for potentially three successive Interconnection Studies of each proposed project of varying levels of detail: an optional feasibility study, a system impact study, and a facilities study or participation in a Class

[38] In a Class Year Deliverability Study, the NYISO will identify and allocate the costs of any System Deliverability Upgrades required for the proposed project to meet deliverability requirements.

[39] *See* NYISO OATT Attachment X.

[40] Class Year Transmission Project is defined as "a Developer's proposed new transmission facility that will interconnect to the New York State Transmission System or a proposed upgrade—an improvement to, addition to, or replacement of a part of an existing transmission facility—to the New York State Transmission System, for which (1) the Developer is eligible to request and does request Capacity Resource Interconnection Service, subject to the eligibility requirements set forth in the ISO Procedures; or (2) the Developer requests only Energy Resource Interconnection Service and the transmission facility for which it requests Energy Resource Interconnection Service is a transmission facility over which power flow can be directly controlled by power flow control devices directly connected to the Class Year Transmission Project without having to re-dispatch generation. Class Year Transmission Projects shall not include Attachment Facilities, Network Upgrade Facilities, System Upgrade Facilities or System Deliverability Upgrades." NYISO OATT Attachment X, Section 30.1.

[41] *See* NYISO OATT Attachment Z.

Year Study. The facilities study determines the binding cost estimates and allocates the costs of Local System Upgrade Facilities.[42] For Small Generating Facilities that require non-Local System Upgrade Facilities, such projects proceed to a Class Year Study.

d. NYISO's Unique Class Year Study Process

The NYISO's Class Year Study process is a unique concept among ISOs and RTOs. The Class Year Study evaluates the cumulative impact of a group of projects—a "Class Year" of projects. All Large Facilities studied under the LFIP are required to participate in the Class Year Study. Certain Small Generating Facilities studied under the SGIP are also required to participate in the Class Year Study, and Small Generating Facilities requesting CRIS of greater than 2 MW must participate in the deliverability elements of the Class Year Study to obtain CRIS. The Class Year Study procedures are primarily contained in Attachment S to the NYISO OATT, which sets forth the eligibility requirements for Class Year entry, establishes the Class Year Start Date and schedule, describes the obligations of Class Year Projects once they enter a Class Year Study, and details the scope and the cost allocation methodology for the interconnection of new generation facilities and Class Year Transmission Facilities.

A Class Year is comprised of projects that have met specified Class Year Study eligibility requirements by the time the study begins. A significant feature of the Class Year Study process is that it is performed for a group of projects that have achieved similar interconnection milestones to determine the cumulative impact of such projects in order to equitably allocate

[42] Local System Upgrade Facilities are defined as "the System Upgrade Facilities necessary to physically interconnect a proposed Project to the Connecting Transmission Owner's transmission system, consistent with applicable interconnection and system protection design standards." NYISO OATT Sections 25.1.1, 30.1, 32.5. Local System Upgrade Facilities include any electrical facilities required to make the physical connection (e.g., a new ring bus for a line connection or facilities required to create a new bay for a substation connection) and can also include any system protection or communication facilities that may be required for protection of the Connecting Transmission Owner's transmission facility (line or substation) involved in the interconnection.

upgrade costs and generate detailed cost estimates. The Class Year Study identifies and allocates the costs of the System Upgrade Facilities needed to reliably interconnect all of the projects in a Class Year. The Class Year Study also includes a deliverability evaluation for Class Year Projects that request CRIS and identifies and allocates the costs of any System Deliverability Upgrades required to make these projects deliverable. Developers proceed to a decision and settlement process toward the completion of the Class Year Study during which they can accept or reject the cost allocations for System Upgrade Facilities and/or System Deliverability Upgrades, as applicable.

C. Improvements and Enhancements of the NYISO's Interconnection and Long-Term Planning Processes.

The NYISO has continued to work with its stakeholders on an ongoing basis to review its interconnection and transmission planning processes and to identify and implement process enhancements. In recent years, the NYISO has adopted a number of comprehensive revisions to its interconnection processes driven by both stakeholder and Developer input and the NYISO's experience in administering these processes.[43] These process improvements have focused primarily on increasing efficiencies, increasing transparency, and expediting the interconnection study process.[44] Through its engagement with stakeholders, the NYISO has been able to identify

[43] *See, e.g., New York Independent System Operator, Inc.*, Letter Order on Tariff Revisions, Docket No. ER20-638-000 (Jan. 31, 2020)(corrected via errata issued on Feb. 4, 2020); *New York Independent System Operator, Inc.*, Letter Order on Tariff Revisions, Docket No. ER18-80-000 (Dec. 7, 2017); *New York Independent System Operator, Inc.*, Letter Order on Tariff Revisions, Docket No. ER14-627-000 (Jan. 23, 2014); *New York Independent System Operator, Inc.*, Order on Tariff Revisions, 135 FERC ¶ 51,014 (2011); *New York Independent System Operator, Inc.*, Letter Order on Tariff Revisions, Docket No. ER11-2842-001 (July 6, 2011); *New York Independent System Operator, Inc.*, Letter Order on Tariff Revisions, Docket No. ER10-290-000 (Jan. 6, 2010).

[44] Among the more significant modifications made to the NYISO's interconnection procedures over recent years as part of these ongoing efforts are the following:

- Creation of a separate track, apart from the Class Year Study, for detailed deliverability studies in order that the Class Year can complete and the next Class Year can begin irrespective of the status of the detailed deliverability studies;

the key areas of concern expressed by many Developers and to develop targeted solutions that function effectively in the NYISO's process.

The recent interconnection reforms have already demonstrated significant improvements. For example, Class Year 2019 was the largest Class Year in the history of the NYISO's interconnection process. Sixty-one projects completed Class Year 2019, one of the most expeditious Class Year Studies to date. The revisions have resulted in significant improvements in the performance of the NYISO's interconnection processes and the NYISO's coordination with Developers, Transmission Owners, and other process participants. Most recently, the NYISO conducted a comprehensive improvement effort in 2019 through which the NYISO enhanced numerous aspects of the interconnection process, particularly the need to expedite the interconnection study processes.

Through a 2022 project initiative, the NYISO anticipates further reforms to revise the interconnection and transmission expansion tariffs to provide for coordination among the various processes – both NYISO and Connecting Transmission Owner interconnection study processes – to help mitigate the potential for inconsistent treatment among project developers, provide for

- Increased Class Year study efficiencies by (i) frontloading the Class Year Study; (ii) restructuring the scopes of the System Impact Study and the Class Year Study; (iii) requiring project data earlier in the Class Year Study process; and (iv) creating additional milestones for projects to enter a Class Year;
- Modifications to Class Year Study entry and re-entry rules to provide flexibility to Developers while at the same time tightening the overall process to address "queue squatting" by projects not making reasonable progress toward commercial operation;
- Addition of a non-refundable application fee and revised study deposits to discourage premature or speculative projects from entering the queue and to align the deposit amount with actual study costs;
- Modifications of the Class Year Study requirements to reduce the number of Small Generating Facilities that are required to proceed through the Class Year Study, limiting the Class Year Study requirement to only those Small Generating Facilities that require more systemic System Upgrade Facilities;
- Creation of an Expedited Deliverability Study for projects that only request CRIS such that they can be studied for deliverability and obtain CRIS without going through a Class Year Study; and
- Modifications to base case assumptions for Feasibility Studies, SRISs and System Impact Studies to improve technical quality of the studies and to improve efficiency.

more comprehensive study results, and develop explicit tariff mechanisms to address the potential for interactions between projects in different processes. The NYISO's 2022 project provides a timely opportunity to focus those efforts on goals shared in the ANOPR, as a part of or in parallel with this rulemaking proceeding.

The NYISO also has taken significant steps to enhance its planning processes under Order Nos. 890 and 1000. Since the Commission's final approval of its long-term planning processes, the NYISO has engaged in a series of planning process enhancements. In 2018, the Commission approved the NYISO's reforms to its Public Policy Process to streamline and clarify the process for defining transmission needs that are driven by public policy, as well as the criteria and process for selection of the more efficient or cost-effective transmission projects to fulfill public policies, such as increasing delivery of renewable resources to loads to meet New York State's energy and climate change requirements.[45] In 2019, FERC approved the NYISO's process enhancements to consider the voluntary capital cost containment commitments in its Public Policy Process.[46] In 2020, the Commission approved the NYISO's tariff filing to expand its biennial Reliability Planning Process that evaluates ten years of reliability needs to include a quarterly Short-Term Reliability Process that focuses on needs in the next three years.[47] In April 2021, the Commission approved the NYISO's reformulation of its Economic Planning Process to expand its economic analysis of transmission system congestion to include the entire New York

[45] *N.Y. Indep. Sys. Operator, Inc.*, 166 FERC ¶ 61,099, at P 20 (2019) (accepting NYISO's proposed tariff revisions to clarify, streamline, and enhance its Public Policy Transmission Planning Process).

[46] *N.Y. Indep. Sys. Operator, Inc.*, 170 FERC ¶ 61,098, at P 38 (2020) (accepting NYISO's proposed tariff revisions to establish cost containment requirements in its Public Policy Transmission Planning Process).

[47] *N.Y. Indep. Sys. Operator, Inc.*, 171 FERC ¶ 61,082, at PP 1, 29 (2020) (accepting NYISO's proposed tariff revisions to establish a Short-Term Reliability Process).

State transmission system, extending the study period to 20 years, and analyzing the deliverability of energy from resources to loads.[48]

D. Expanded Considerations in Regional Transmission Planning

A core concern appearing to lay the foundation for the ANOPR is whether the existing regional transmission planning and cost allocation processes are sufficient in light of the changing resource mix of new generation and future transmission needed to accommodate that generation.[49]

The Commission asks whether reforms are needed regarding how regional transmission planning processes model future scenarios to ensure that those scenarios incorporate sufficiently long-term and comprehensive forecasts of future transmission needs.[50] The ANOPR seeks comment on whether and how transmission planning should be restructured to consider a longer-term outlook, including future scenario planning, over what period of years, the inputs that should be considered in modeling anticipated future generation, accounting for federal, state and local energy and climate goals, and how benefits and costs of transmission solutions should be accounted for in system models.[51]

Opportunities exist to improve the existing reliability, economic and public policy processes in New York. As evidenced by the ANOPR, the scope of potential approaches to achieve the Commission's goals can range significantly. On one end of the spectrum, the Commission could allow regions to improve upon existing planning processes to better anticipate and plan for future transmission needs. On other end of the spectrum, the Commission could

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[48] *N.Y. Indep. Sys. Operator, Inc.*, 175 FERC ¶ 61,010, at P 20 (2021) (accepting NYISO's proposed tariff revisions to improve its Economic Planning Process).

[49] ANOPR at P 5.

[50] ANOPR, P 46.

[51] ANOPR, PP 47-48.

require a complete overhaul of well-established interconnection and planning processes, essentially reopening and reforming key tenets of Order Nos. 890, 1000, 2003, 2006 and 845.

The NYISO agrees with the Commission that reforms should be pursued and implemented to make the processes more holistic and more efficient in the identification, evaluation, and ultimate buildout of transmission. However, a complete overhaul and reorientation of these existing planning processes is not necessary because the existing planning processes are working well in New York and revamping all of these planning processes would be disruptive to the progress currently being made in identifying and fulfilling transmission needs in New York. The NYISO encourages the Commission to consider that the pursuit of such goals, while ambitious, can be accomplished with targeted reforms to existing interconnection and planning structures without completely upsetting the transmission planning and interconnection paradigm.

Such targeted reforms can build on existing processes' strengths while focusing on the areas where change would be most beneficial. The NYISO highlights a few possible areas for such reform, below. In sum, an expanded ability to act on scenarios, expanded consideration of metrics, and a consistent planning horizon of 20 years in which to identify needs and take action could provide a more holistic planning process that leads to identifying more efficient and cost-effective transmission solutions in the regional transmission plan, ultimately reducing costs to consumers.

1. Transmission Planning for Future System Needs Through Actionable Scenarios

As the Commission recognizes, "regional transmission planning processes may not adequately model future scenarios to ensure that those scenarios incorporate sufficiently long-

term and comprehensive forecasts of future transmission needs, including considering the needs of anticipated future generation in identifying needed transmission facilities."[52] Allowing scenario planning, including for potential future anticipated generation and/or retirements, could facilitate the development of transmission solutions that will address future system conditions.

The NYISO agrees that significant shifts are expected in both the demand and supply sides of the electric grid, and these changes will affect how the power system is planned and operated. On the supply side, not only the type of generation, and the location of the generation, but also the operating characteristic of the resources may change significantly due to the fuel switch from fossil to wind and solar. On the demand side, electrification across many sectors such as building heating and electric vehicles, and proliferation of behind-the-meter resources, may lead to different seasonal and daily load profiles.[53] Furthermore, extreme weather brought by climate change may introduce further variables that are well outside of the normal operating and planning considerations.

Currently, the Public Policy Process allows the NYISO to consider project performance in various scenarios when identifying and selecting the most efficient or cost-effective transmission solutions. This flexibility allows the NYISO to identify a proposed transmission project's benefits using its reliability and economic planning models over a 20-year period under various conditions, including high and low load and fuel forecasts, additional generation

[52] ANOPR at P 31.

[53] The NYISO has highlighted the expected impacts of future electrification in its Phase 1 Climate Change Study and indicated that in future decades the New York system could switch from a summer to a winter peaking system. *See* https://www.nyiso.com/documents/20142/16884550/NYISO-Climate-Impact-Study-Phase1-Report.pdf/4311bdd4-a389-afbe-9ee9-b6bf523b0a36. The NYISO has already incorporated long-term impacts from behind-the-meter solar photovoltaics and energy storage, electric vehicles and building heat pumps into its planning load forecasts. *See* the NYISO Load and Capacity Data Book ("Gold Book") Section I, available at https://www.nyiso.com/documents/20142/2226333/2021-Gold-Book-Final-Public.pdf/b08606d7-db88-c04b-b260-ab35c300ed64?t=1619631804748.

retirements, and renewable resource additions to meet state climate change requirements.[54] Such flexibility is not afforded in the NYISO's other planning processes.

In the current Reliability Planning Process, the NYISO is limited to identifying needs based on specific manual and tariff-driven assumptions and criteria in a single base case.[55] The NYISO may evaluate additional reliability scenarios, but they may not be used to identify additional reliability needs.[56] One potential improvement for this process would be to provide for multiple base cases (*i.e.*, scenarios) to allow the NYISO to anticipate, and act on by soliciting solutions to, expected future needs to support reliability and resilience well before a reliability violation for resource adequacy or transmission security is triggered.

Scenario planning could also potentially allow the NYISO to expand the set of generator retirements considered in its analyses. The NYISO has expanded the retirements reflected in the reliability planning base case to include certain generator retirements driven by federal or state regulations. For example, the NYISO revised its base case inclusion rules to allow it to remove generation that will not have permits to operate.[57] The NYISO used these manual changes to remove from its base case certain peaking generators that are expected to retire because under new state regulations they will no longer have air emission permits necessary to operate.[58]

Nevertheless, the NYISO does not have clear authority to remove from its reliability models Generators that is not under a legal requirement to deactivate, but that realistically are

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[54] *See* NYISO OATT Section 31.4.6.1.

[55] *See* NYISO OATT Section 31.2.2.3.

[56] *See* NYISO OATT Section 31.2.2.6.

[57] *See* Reliability Planning Process Manual, Section 3.2.2, Generator Deactivations ("Generator Owner lacks authority to operate its current equipment configuration past a date certain (*e.g.,* due to a new or amended environmental law or regulation"), available at: https://www.nyiso.com/documents/20142/2924447/rpp_mnl.pdf.

[58] The New York State Department of Environmental Conservation regulations establishing emission limits for combustion generation turbines can be obtained at: https://www.dec.ny.gov/regulations/121052.html.

expected to retire in the future due to excessive age or economic considerations. Many New York Generators have remained in service past the end of the expected useful lives of similar types of generation units nationally, and some exceed 50, 55, 60 and even 65 years of age. Scenario planning could also allow for the consideration of longer-term reliability needs that are being driven by legal requirements that have not yet become an operational prohibition, but which are expected to lead to a sea-change in the existing generation fleet within the next 20 years.

For example, New York expects significant fossil-fueled generation fleet turnover under the Climate Leadership and Community Protection Act ("CLCPA"),[59] or the Accelerated Renewable Generation and Community Benefit Act of 2019.[60] These state laws are expected to result in the deactivation of significant fossil-fueled generation as New York fulfills mandates to obtain 70 percent of its energy from renewable resources by 2030 and a 100 percent emission-free power grid by 2040. Given the lead time that it takes to plan for, select and build replacement resources and additional transmission facilities, it is important to enable transmission planners to identify reliability needs now based on expected generation fleet turnover to maintain reliable electric service to New Yorkers.[61] The Commission may also consider expanding the scope of planning processes to include planning for transmission system resiliency.[62]

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[59] 2019 Laws of New York, ch. 106.

[60] 2020 Laws of N.Y. Ch. 58, Part JJJ.

[61] By comparison to its Reliability Planning Process, the NYISO's Public Policy Transmission Planning Process allows for consideration of a broad range of factors, including achievement of regulatory policies and clean energy goals (*e.g.*, clean energy state and federal goals, the social cost of carbon). *See* NYISO OATT Sections 31.4.8.1.1 – 31.4.8.1.10.

[62] The National Infrastructure Advisory Council defines "resilience" as "the ability to reduce the magnitude and/or duration of disruptive events." National Infrastructure Advisory Council, *Critical Infrastructure Resilience – Final Report and Recommendations* at 8 (September 8, 2009), available at: https://www.cisa.gov/publication/niac-critical-infrastructure-resilience-final-report. The NYISO understands resiliency to be closely interrelated with

Specifically, the Commission may wish to expand the ability of transmission planners to plan for beyond contingency reliability challenges that may arise in the future due to, for example, extreme weather or climate change policies. These include the loss of all generation connected to a pipeline, other fuel source, loss of an entire transmission line, and impacts from extreme weather events such as hurricanes and wildfires in a given area.

2. Pre-Planned Renewable Generation Pockets

The Commission requests comment regarding whether transmission providers should be required to establish, as part of their regional transmission planning and cost allocation processes, a process to identify geographic zones that have the potential for the development of large amounts of renewable generation and plan transmission to facilitate the integration of renewable resources in those zones.[63] The NYISO supports Commission consideration of enhancements to the planning processes to identify pockets where future generation could be developed if needed transmission were provided or to facilitate efficient identification of upgrades where a significant amount of entry is anticipated. Many laws and initiatives in New York are already leading to generation pockets where renewable resources are rich but the transmission lines to tap them are poor. The New York transmission system has transmission infrastructure needs driven by the state's policy mandates from CLCPA, the Accelerated Renewable Energy Growth and Community Benefit Act, and the revised the Clean Energy Standard.

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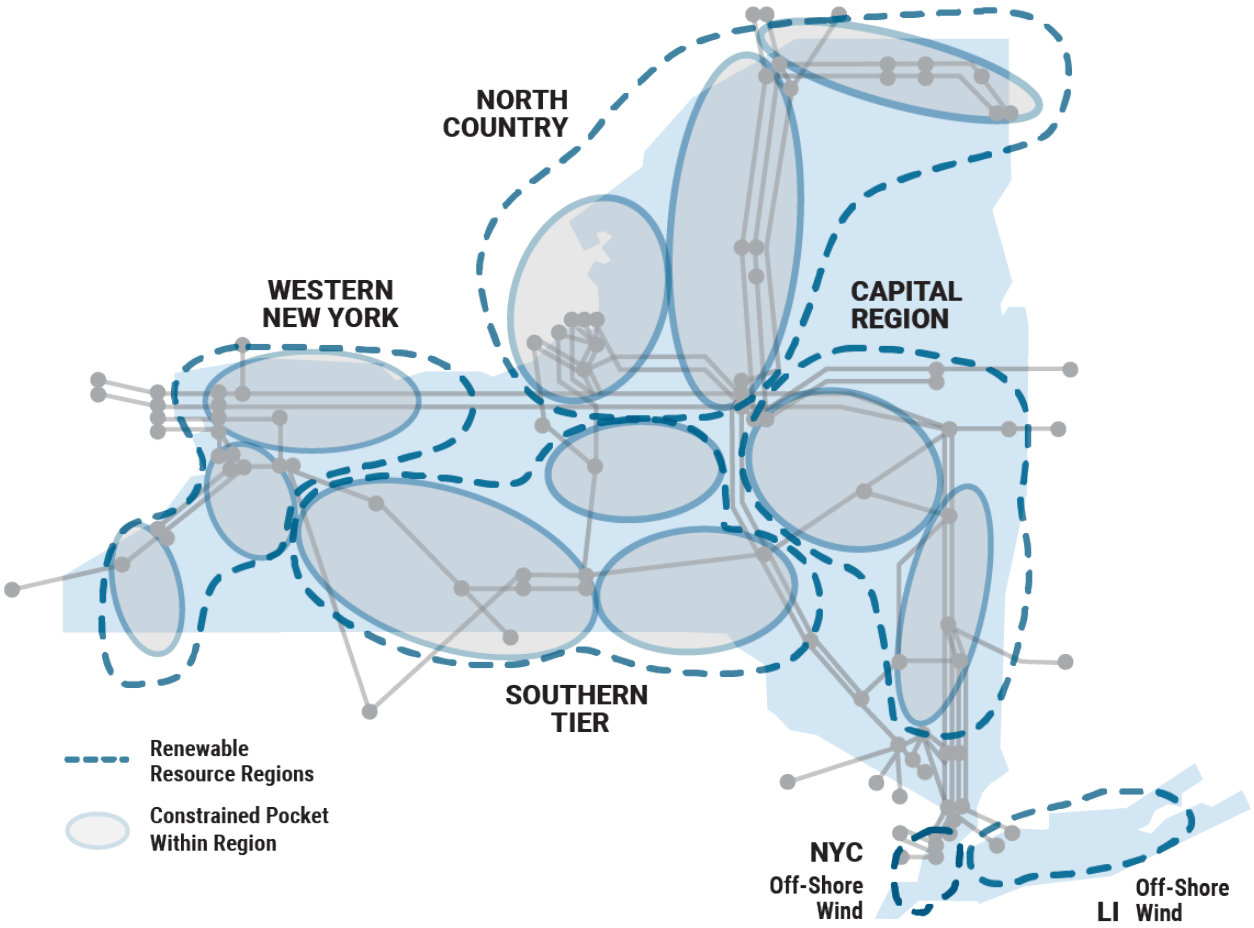
reliability as "a means of providing incremental reliability above and beyond that required to maintain the minimum reliable operation of the system." *See* Grid Reliability and Resilience Pricing, Docket No. RM18-1-000, Comments of the New York Independent System Operator, Inc., available at: https://nyisoviewer.etariff.biz/ViewerDocLibrary//Filing/Filing1331/Attachments/20171023%20NYISO%20NOPR%20Cmmnts%20Rspns%20RM18-1-000%20Cmplt.pdf.

[63] ANOPR at P 54.

In response, the NYISO's 2019 Economic Planning Process report provides key insights into the potential value of additional transmission capability across the NYCA. The 70x30 scenario examined the impacts of the CLCPA goal to deliver 70 percent renewable energy to New York. The NYISO identified transmission-constrained "renewable generation pockets" (depicted in the Renewable Generation Pockets Map below), as well as the levels of curtailments of renewable generation that would occur within each pocket.[64]

These renewable generation pockets are regions in the state where renewable generation resources cannot be fully delivered to consumers statewide due to transmission constraints. These transmission-constrained pockets are projected to result in curtailment of 11 percent of the annual total potential renewable energy production across the New York system. However, some pockets are much more constrained than others, with some experiencing as much as 63 percent of the potential renewable energy curtailed.

[64] *See* https://www.nyiso.com/documents/20142/2226108/2019-CARIS-Phase1-Report-Final.pdf/bcf0ab1a-eac2-0cc3-a2d6-6f374309e961.



Renewable Generation Pockets Map

Meeting the CLCPA goals will require a coordinated effort on many fronts – bringing significant new renewable resources online, "local" distribution and transmission upgrades to deliver renewable energy to the bulk system, and bulk system upgrades to deliver the energy to New York customers. The transmission constraints found in the NYISO studies are geographically diverse, but they are interrelated. 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 will lead to inefficient or ineffective solutions. These generation pockets

identified by the NYISO provide one example of how identification and relief of these congested areas would help plan for future generation additions, as contemplated by the ANOPR.

The NYISO agrees that it would be beneficial to anticipate upgrades required to support a large amount of expected generation. Such upgrades might include, for example, transmission lines from key substations to accommodate offshore wind or "super-sized" substations that can accommodate multiple new generators. Identification of such pre-planned renewable generation pockets could then expedite the interconnection process for renewable generation and make the interconnection process less costly for generators seeking to interconnect in such areas which should require fewer upgrades.[65]

In April 2021, FERC granted the NYISO the ability to assess energy deliverability associated with renewable generation pockets in the Economic Planning Process revisions. This provides independent information to policy makers, consumers, and generation/transmission developers. Such analyses and expanded scenario planning across the CSPP could lay the groundwork for the proactive development of upgrades that would accommodate new resources. This would help provide for the construction of timely and holistic transmission solutions that can be implemented to facilitate achievement of state policy goals.

3. Expanded Metrics and Timeframes to Evaluate Transmission Benefits

In addition to increasing the breadth of scenarios, the NYISO encourages the Commission to similarly allow regions to expand the scope of metrics used to select transmission under the reliability, economic and public policy processes without requiring a consolidated approach to all regional transmission planning drivers.

[65] This can serve the basis for potential fast-track treatment, as discussed below in Section 4.

When identifying the more efficient or cost-effective solution in Public Policy Transmission Planning Process, the NYISO is permitted under its tariff to consider a wide range of evaluation metrics. The ten categories of metrics include (1) quantitative characteristics, such as cost and NYCA production cost savings; and (2) qualitative characteristics, such as operability, expandability, performance and risks to project completion.[66] Nevertheless, the NYISO does not consider transmission project benefits to meeting identified or future resource adequacy and transmission security needs, which are key to meeting Reliability Needs in the Reliability Planning Process.[67]

In the Reliability Planning Process, the NYISO considers a series of metrics in selecting the more efficient or cost-effective transmission solution, including project cost, operability, expandability and performance, but does not consider the economic benefits to the transmission system of proposed reliability transmission projects.[68] It may be beneficial to consider additional criteria in the Reliability Planning Process, such as economic benefits of reliability projects, in selecting the more efficient or cost-effective solution.

Finally, while the NYISO's Economic Planning Process provides for flexibility in scenarios for informational purposes,[69] the base case used for determining benefits for the ultimate selection of a regulated economic project is narrower – both in the base case and the metrics the NYISO can use to demonstrate benefits. Specifically, the NYISO's determination

[66] *See* NYISO OATT Sections 31.4.8.1.1 – 31.4.8.1.10.

[67] *See* NYISO OATT Sections 31.2.2.3.1 (evaluation of bulk power system reliability needs); NYISO OATT Section 31.1.1 (defining "Reliability Needs" and "Reliability Criteria" for resource adequacy and transmission security under NERC, NPCC and NYSRC standards, criteria and rules.)

[68] *See* NYISO OATT Sections 31.2.6.5.1.

[69] The NYISO provides additional economic benefits such as changes to generator payments, installed capacity costs, Transmission Congestion Contract revenues, Ancillary Services costs, emissions costs, fuel and load forecast uncertainty and energy deliverability, as information for LSEs to consider in casting their votes. NYISO OATT Sections 31.5.4.3.3, 31.5.4.3.6, 31.5.4.3.7.

whether an economic transmission project is eligible to proceed to a vote by LSEs turns on whether the project has a benefit-cost ratio of at least 1.0.[70] This calculation is based exclusively on net-production cost savings and does not consider other economic benefits such as installed capacity cost savings to LSEs. Moreover, the informational metrics in the Economic Planning Process, do not include benefits of a transmission project to system reliability, operability, expandability or performance, which is the case in the Reliability Planning Process and the Public Policy Process. The Economic Planning Process should consider a broader set of metrics to include benefits to system reliability, when LSEs are considering voting for the more efficient or cost-effective transmission project.

The Commission may also wish to revisit the restriction of considering economic transmission projects using a minimum benefit-cost ratio because such a ratio does not take into account other system economic benefits such as energy deliverability, which the NYISO is now evaluating in its new System & Resource Outlook.[71] Flexibility to expand the economic metrics and timeframes for determining the benefits of economic projects for consideration by LSEs would allow for a more complete consideration of potentially beneficial transmission projects in New York.

The ANOPR asks whether the timeframe for considering transmission needs and solutions should be extended.[72] Incremental reforms would enable transmission planners to expand the time horizon for determining needs and for evaluating transmission project benefits. For example, the NYISO's Reliability Planning Process is limited to considering Reliability Needs for ten years, even though the State of New York requires the power system to be

[70] *See* NYISO OATT Section 31.5.4.3.2.

[71] *See* NYISO OATT Sections 31.5.4.6.2 – 31.5.4.6.3.

[72] ANOPR, at P. 48.

emission-free by 2040. Similarly, in the NYISO's Economic Planning Process, the benefit-cost ratio evaluation for transmission projects is limited to considering only ten years of project costs and benefits from the expected project in-service date, while the planning horizon for the Outlook study that forms the basis of the Economic Planning Process has been extended to 20 years.[73] By comparison, the Public Policy Process considers transmission project benefits over a 20-year planning horizon.[74] In its rulemaking, the Commission should consider granting the NYISO and other transmission planners discretion to plan for up to 20 years of needs and benefits in all of its planning processes.

4. Identification of Cost Responsibility for Regional Transmission Facilities and Upgrades Identified in the Interconnection Process

The ANOPR asks several questions about whether the existing approach to cost allocation in the regional transmission planning process fails to account for the full suite of benefits, including benefits to anticipated future Generators.[75] Conversely, the ANOPR inquires as to whether the Generator interconnection processes allocate costs too narrowly to only a subset of entities that benefit from upgrades identified through the interconnection process and whether there are beneficiaries for those upgrades beyond the developer.[76]

Under the NYISO's current transmission planning cost allocation process, the costs of new regional transmission facilities are regionally allocated and paid for by load serving entities that are identified as beneficiaries. If the Commission were to adopt changes to the regional transmission planning processes so that transmission providers could identify transmission facilities based on scenarios or anticipated future generation, there may be instances where it is

[73] *Id.*

[74] *See* NYISO OATT Section 31.4.8.1 (criteria); Section 31.4.6.1 (time period).

[75] ANOPR at PP 75-90.

[76] ANOPR at PP 100-146.

appropriate to allocate costs on a wider basis that includes interconnection customers. While this approach may be feasible, there are significant cost allocation considerations that would need to be resolved, such as defining the set of broader transmission benefits to cost allocate transmission facilities.

Additionally, the NYISO's interconnection processes result in a variety of network upgrades—required and elective[77]—ranging from replacing breakers to building new substations to building new or reconductoring transmission circuits that are solely allocated to interconnection customers. This allocation can occur through the interconnection studies or the NYISO's process of accounting for Headroom. While there is a broad range of potential network upgrades that can be identified in the NYISO's interconnection processes, the majority of them provide more local benefits that are appropriately allocated to the Interconnection Customer.[78] For example, the upgrades that are at the Point of Interconnection and required to reliably interconnect the new facility are typically Local System Upgrade Facilities—the benefit of which is primarily, if not exclusively, limited to the interconnecting customer. These could include new or modified substations or protection systems close to the project's Point of

[77] Under Section 25.6.1.4.1 of Attachment S to the NYISO OATT, interconnection customers or Transmission Owners may choose to build System Upgrade Facilities that are larger and more extensive than the minimum facilities required to reliability interconnect the proposed project and are reasonably related to the interconnection of the proposed project. The entity electing to construct under the larger System Upgrade Facility is responsible for the costs above the minimum upgrade necessary for the contributing project(s). To the extent that such upgrades create excess capability, the entity may be eligible to receive Headroom payments from future interconnecting facilities that use the capability. *See* Part III.E.2, *infra*.

[78] In some instances where there is a wider potential for system-wide benefits, such as Highway System Deliverability Upgrades, the NYISO has an existing mechanism that allocates the cost of Highway System Deliverability Upgrades beyond the cost sharing in the Class Year process or Headroom accounting. Specifically, under certain circumstances, a portion of the costs of a Highway System Deliverability Upgrade will be allocated to load serving entities. *See* NYISO OATT Section 25.7.12.

Interconnection. The local nature of most interconnection-related network upgrades is due to the manner in which such upgrades are identified under the NYISO's interconnection standards.[79]

Even upgrades that are less localized may provide little, if any, system benefits on a broader or regional basis due to tariff requirements that interconnection-related network upgrades be the least costly solution.[80] Such upgrades are typically "right-sized" or sized only as large as needed to resolve the issue created by the interconnecting facility.[81] Under the NYISO's interconnection standards, interconnection customers are required to, among other things, "restore transfer capability" if the proposed interconnection degrades it beyond a *de minimis* threshold; however, they do not require the interconnection customers to maximize or increase beyond the original capacity of the circuit.[82] Interconnection customers, therefore, only require

[79] "The NYISO's Minimum Interconnection Standard is designed to ensure reliable access by the proposed project to the New York State Transmission System or to the Distribution System. The NYISO Minimum Interconnection Standard does not impose any deliverability test or deliverability requirement on the proposed project." *See* NYISO OATT Section 25.1.2.NYISO Transmission Expansion and Interconnection Manual, Section 3.6.1, *available at* https://www.nyiso.com/documents/20142/2924447/tei_mnl.pdf/099cdf73-feee-4247-df20-8605a67c5089; *New York Indep. Sys. Operator, Inc. and the New York Transmission Owners*, Joint Compliance on Consensus Deliverability Plan, Docket No. ER04-449-017 (August 5, 2008). As a result, if the NYISO can manage any potential adverse reliability impact through normal operating procedures, including reducing the output of the studied Generator, then an interconnection-related network upgrade may not be required. *See* NYISO Transmission Expansion and Interconnection Manual, Section 3.6.1.

[80] *See* NYISO OATT Section 25.1, 30.1 ("System Upgrade Facilities" are defined as "[t]he least costly configuration of commercially available components of electrical equipment that can be used, consistent with Good Utility Practice and Applicable Reliability Requirements, to make the modifications to the existing transmission system that are required to maintain system reliability due to . . . proposed interconnections"); *see also* NYISO OATT Sections 22.1, 25.1, 30.1 (similarly limiting System Deliverability Upgrades and Network Upgrade Facilities to the least costly configuration).

[81] The last two NYISO Class Year Studies illustrate this point. Of 26 projects in Class Year 2019 that accepted cost allocation for System Upgrade Facilities, only two projects required non-local transmission upgrades—*i.e.*, (1) installing a PAR to restore the PJM-NY transfer degradation and (2) changing line equipment to increase line ratings. In Class Year 2017, of the 11 projects that accepted cost allocation for System Upgrade Facilities, only four projects required non-local transmission upgrades and three of those four projects share a common set of System Upgrade Facilities. The two non-local upgrades cost allocated in Class Year 2017 included (1) adding a new transmission circuit and reconductoring a portion of tie-line to restore the NY-ISONE transfer degradation and (2) for three Class Year projects connecting near the NY-PJM border, reconductoring tie-lines between PJM and NY to restore the PJM-NY transfer degradation.

[82] *See, e.g.*, NYISO Transmission Expansion and Interconnection Manual, Section 3.6.1 (identifying potential adverse reliability impacts if, among other things, a degradation of a NYISO inter-tie or interface transfer capability by more than 25 MW); *id.* at 3.6.4.1 (establishing a *de minimis* threshold for the NYISO's Deliverability Interconnection Standard to be 25 MW or 2% of base transfer capability and an increase in NYCA LOLE for

interconnection-related network upgrades with excess capability in such instances where the only available solution creates excess capability or where the interconnection customer elects to build more than the minimum interconnection-related network upgrades.

This leaves a potentially small subset of interconnection-related upgrades that may have clear, system-wide or regional benefits. With targeted revisions to the interaction between the NYISO's interconnection procedures and transmission planning processes, the costs of such upgrades could be allocated across the entities that ultimately benefit from the upgrades. Such upgrades might include, for example, reconductoring of a high voltage transmission line. While such facility may be required for the reliable interconnection of a new generator, it may also be significant enough to result in system benefits (*e.g.*, through increased transfer limit capability). The identification of beneficiaries can potentially be tied to benefits from, for example, improved resiliency, system reliability, and/or increased transfer limit capability, as well as to other benefits like those from reduced emissions that can impact a much broader set of beneficiaries. However, establishing defined cost allocation rules raises difficult questions in identifying and quantifying such benefits to comply with the Commission's cost allocation principles.

To the extent the Commission considers a broader cost allocation for certain upgrades required for new interconnections, the NYISO asks the Commission to address a significant related issue. Specifically, the NYISO's current process limits the identification of interconnection-related network upgrades to the least cost solution to allow a single generator (or Class Year of generators) to reliably interconnect to the system. A broader cost allocation could

Highways and 25 MW or 2% of base transfer capability for Other Interfaces); NYISO OATT Section 22.6.4 (requiring proposed interconnection to be consistent with applicable reliability standards and to not degrade interface transfer capability by more than 25 MW).

allow a transmission provider more flexibility to identify transmission beneficial to and/or required for future generation and to consider the best engineering solution for long-term needs.

E. Improved Integration of the Generator Interconnection Process with the Regional Transmission Planning and Cost Allocation Processes

1. Integration of Transmission Interconnection Procedures within the CSPP

In the ANOPR, the Commission requests comment regarding how the regional transmission planning and cost allocation and generator interconnection processes could be better coordinated or integrated.[83] Among reforms that could improve the integration of the interconnection and regional transmission planning processes in the NYISO is incorporating reliability studies for competitive transmission projects that would otherwise be evaluated in the Transmission Interconnection Procedures into the CSPP evaluation of such projects. This could increase efficiencies in the interconnection process and streamline the evaluation of competitive transmission projects that currently are evaluated in part under the Transmission Interconnection Procedures and in part under the applicable prong of the CSPP. This is one of potential reforms the NYISO's 2022 queue coordination project[84] may evaluate, including how to best address challenges in the implementation of such an integrated approach (*e.g.*, base case alignment).

Through such improved integration of the transmission interconnection and CSPP processes, the NYISO's interconnection process could be more streamlined and thereby process Interconnection Requests more efficiently and expeditiously. In addition, incorporating the interconnection reliability evaluations (*i.e.*, the extent to which upgrades are required to reliably interconnect the transmission project) into the CSPP will also create efficiencies by eliminating

[83] ANOPR at P 66.

[84] *See* 2022 Market Project Candidates (August 27, 2021) at 10 available at https://www.nyiso.com/bpwg.

the need to have multiple studies in different processes. The NYISO believes that this is an improvement that could be evaluated in parallel to this rulemaking.

2. Participant Funding Alternatives

The ANOPR raises questions regarding the continuation and appropriateness of allowing independent transmission providers to use participant funding for interconnection-related network upgrades and whether the Commission should consider alternatives to participant funding, including potentially revisiting the Order No. 2003 crediting policy.[85]

In considering changes to the participant funding structure in the interconnection process, the NYISO urges the Commission to take into account the following considerations. First, the rationale in Order No. 2003 for independent transmission providers to adopt a participant funding variation from the crediting approach accounts for current differences in regions that support different approaches. Second, the Commission should recognize that a crediting mechanism similar to the one originally established in Order No. 2003 is not necessarily implementable within the NYISO given the structure of its markets and manner in which transmission service is offered.

In Order No. 2003, the Commission identified two approaches for transmission providers to assign the costs of interconnection-related network upgrades.[86] First, the crediting policy would have interconnection customers initially fund the upgrade and then be reimbursed by the transmission owner through transmission credits with the full amount to be refunded, with interest, within 20 years from the facility's commercial operation.[87] Second, independent transmission providers could adopt participant funding where the costs of the interconnection-

[85] ANOPR, at PP 111-149.

[86] *See generally*, Order No. 2003, at PP 693-703.

[87] Order No. 2003, at PP 22, 28; Order No. 2003-B, at P 3, 36.

related network upgrades were directly assigned to the interconnection customer. In complying with Order No. 2003, the NYISO and New York Transmission Owners retained the cost allocation and funding schemes for interconnection-related network upgrades under Attachment S to the NYISO OATT, as a participant funding approach, in lieu of adopting the Order No. 2003 crediting approach.[88] This approach under Attachment S adopted a "but for" pricing, which was intended to promote the development of competitive wholesale markets, and interconnection customers would continue to fund the total cost of the upgrade.

If the Commission were to return to a crediting policy similar to the one identified in Order No. 2003, the NYISO would not be able to implement it because the NYISO does not charge interconnection customers costs for use of the transmission system. The NYISO's tariffs offer transmission service in the context of a "financial reservation" system based upon locational based marginal pricing, which manages congestion and operates a bid-based spot market.[89] As a result, the NYISO does not charge interconnection customers transmission charges for the transmission of energy. If the NYISO implemented the crediting approach from Order No. 2003, the practical result would be, in the absence of transmission charges, that interconnection customers would receive reimbursement for the cost of the network upgrades as a lump sum at the end of the 20-year period.[90]

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[88] *See New York Indep. Sys. Operator, Inc.*, Compliance Filing, Docket No. ER04-449-000 at pp 7-8 (Jan. 20, 2004); *New York Indep. Sys. Operator, Inc.*, 108 FERC ¶ 61,159, at PP 57-58 (2004). In the Order No. 2003 joint compliance filing, the NYISO and the New York Transmission Owners did not adopt the language in Articles 11.3 or 11.4 of the Commission's *pro forma* Large Generator Interconnection Agreement that provides the option for a Transmission Provider or Transmission Owner to elect to fund upgrades. *New York Indep. Sys. Operator, Inc.*, Compliance Filing, Docket No. ER04-449-000, at Appendix IV (Jan. 20, 2004).

[89] *Central Hudson Gas & Electric Corp., et al.*, Order Conditionally Accepting Tariff and Market Rules, Approving Market-Based Rates, and Establishing Hearing and Settlement Judge Procedures, 86 FERC ¶ 61,062, at pp 8–10 (January 27, 1999); *Central Hudson Gas & Electric Corp, et al.*, Order Denying in Part and Granting in Part Rehearing and Clarification and Conditionally Accepting Compliance Filing, Docket Nos. ER97-1523-003 and -004, OA 97-470-004 and -005, and ER97-4234-002 and -003, at p 8 (July 29, 1999).

[90] *See* Order No. 2003-B, at P 36.

As an alternative to eliminating participant funding of interconnection-related network upgrades and mandating a crediting approach, the Commission could consider further measures to facilitate cost allocation among interconnection customers requiring or benefiting from the same upgrades. The NYISO currently has cost-sharing measures that account for the fact that later-in-time interconnection customers may accrue benefits from interconnection-related network upgrades funded and built to accommodate a prior interconnection request. As discussed further below, the NYISO's Class Year process and Headroom accounting process already allocate the costs of interconnection-related network upgrades to a broader group of interconnection customers that contribute to the need or benefit from the facility.[91] Additionally, as noted above, most upgrades triggered in the interconnection process are local in nature. The NYISO has, therefore, not generally seen a significant number of interconnection-related network upgrades that provide quantifiable, system-wide benefits beyond the point of interconnection that warrant a broader allocation than the group of interconnection customers participating in the interconnection studies.[92]

In fact, the Class Year process largely addresses the free rider issue for interconnection customers because the NYISO conducts a single facilities study for a group of projects that have met a certain stage of development. In this study, the NYISO determines the projects' collective impact on the transmission system and how the resulting interconnection-related network upgrades should be allocated based on each facility's contribution to the impact.[93] This approach minimizes later-in-time interconnection customers from receiving a benefit without

[91] *See generally*, NYISO OATT Sections 25.6, 25.7, 25.8.

[92] *See* footnote [48], *supra*.

[93] *See generally*, NYISO OATT Sections 25.5, 30.8.2.

paying for the use of an interconnection-related network upgrade at the outset by collectively assigning cost responsibility during the facilities study stage across multiple projects.

The NYISO's Attachment S also contains a process that accounts for Headroom[94] created by interconnection-related network upgrades and permits later-in-time interconnection customers to reimburse the original interconnection customer for the use of such facility.[95] When a Class Year Project(s) accepts its cost allocation in the Class Year Study and that upgrade results in excess capacity that qualifies as Headroom, projects in future Class Year Studies that use that capacity to reliably interconnect will be assigned the cost of the excess capacity to reimburse the original interconnection customer.[96] The Headroom account remains available for use until the account is reduced to zero or for a period of 10 years from the creation of the Headroom account.[97] Particularly with the limited nature of interconnection-related network upgrades, this approach addresses, in part, the free rider scenario and has provided cost sharing among projects that are not evaluated in the same Class Year Study. However, the NYISO acknowledges that there is potential to expand its Headroom concept across its interconnection processes to capture more cost sharing opportunities among the various interconnection customers that benefit from an interconnection-related system upgrade.

The Commission also seeks comment on whether eliminating the participant funding will reduce the queue backlogs by reducing late-stage queue dropouts, as interconnection customers

[94] "Headroom" is defined as "The functional or electrical capacity of the System Upgrade Facility or the electrical capacity of the System Deliverability Upgrade that is in excess of the functional or electrical capacity actually used by the Developer's Project." NYISO OATT Section 25.1.

[95] *See* NYISO OATT Section 25.8.7 (providing that a later-in-time Developer will pay the depreciated cost of the excess capacity created by the interconnection-related system upgrade that is used within 10 years since the creation of the Headroom account).

[96] *See* NYISO OATT Section 25.8.7.

[97] *See* NYISO OATT Section 25.8.7.4.3.

may have less incentive to submit multiple requests to find the optimal costs for the project.[98] The NYISO has not seen delays in the NYISO's interconnection queue due to use of the participant funding approach. The NYISO's Class Year process reduces this potential because it provides interconnection customers more than one opportunity to be studied in a Class Year.[99]

3. Speculative Interconnection Requests

The ANOPR reflects the Commission's concern regarding the impact that speculative Interconnection Requests can have on the overall interconnection queue process.[100] Specifically, the Commission notes that it understands a contributing factor to the interconnection queue backlog is "a tendency by interconnection customers to submit multiple interconnection requests at different points of interconnection, with the intention of discovering the lowest cost location to site the generating facility (from an interconnection perspective), and then withdrawing higher-cost interconnection requests from the queue later in the process." [101] With regard to multiple Interconnection Requests from a single Developer for multiple, alternative projects, this is not as much of an issue in the NYISO than it might be in regions that use a "hard queue" or "queue window" approach in their interconnection processes.

In the NYISO's interconnection process, a developer that submits a single Interconnection Requests for multiple Points of Interconnection must proceed with an Optional Feasibility Study (*i.e.*, for such Interconnection Request, the Feasibility Study is not optional, but is required). After the Feasibility Study, as the developer proceeds to the System Impact

[98] ANOPR, at P 126.

[99] *See* NYISO OATT Section 25.6.2.3.4.

[100] ANOPR at PP138, 153.

[101] ANOPR at P153.

Reliability Study phase[102] the Developer must elect one of the alternatives and cannot proceed to a Class Year Study with alternative projects.

One challenge the NYISO is experiencing with multiple, alternative projects is the circumvention of the above requirement by submitting separate Interconnection Requests for each alternative. Among reforms that might help address this concern would be to apply the same requirement regardless of whether the multiple alternatives are proposed in the same or separate Interconnection Requests. This would allow Developers the ability to explore the benefits of different options early in the interconnection process—where it is less likely to impact the progress of other interconnection requests—but to select a single option for final study. Such an approach could help alleviate bottlenecks in the System Reliability Impact Studies. This could also encourage Developers to make more informed decisions early in the process.

4. Fast-Track Interconnection Process

In the ANOPR, the Commission references the model established by the Electric Reliability Council of Texas ("ERCOT") to construct transmission projects through the Public Utility Commission of Texas's Competitive Renewable Energy Zones ("CREZ") initiative.[103] As the Commission explains in the ANOPR, for CREZ transmission projects to be approved, ERCOT requires a certain percentage of capacity to be reserved by generation developers with existing projects, projects under construction, projects with signed interconnection agreements, or posted collateral.[104] Noting that this model may improve the coordination between transmission planning and the development of future generation, the Commission asks for

[102] In the Small Generator Interconnection Procedures, this is referred to as a "System Impact Study" while in the Large Facility Interconnection Procedures it is referred to as a "System Reliability Impact Study."

[103] ANOPR at P154.

[104] ANOPR at P155.

comment regarding whether and how this type of model could help streamline the generator interconnection process for generating facilities that are committed to interconnecting to these transmission facilities.

The NYISO has made significant strides in recent years to expedite many aspects of its interconnection process and is already seeing considerable process improvements. Further, reforms such as those contemplated by the Commission for generating facilities that are proposing to interconnect to new regional transmission facilities could be beneficial. Where, for example, a transmission facility has already been selected or built through the CSPP, Generators connecting to such facility might be appropriately evaluated under a fast-track process. Such a project might be able to skip both the Optional Feasibility Study and the System Reliability Impact Study and then, in the Class Year Study, have a more narrowly focused design engineering evaluation.

Notably, however, in the NYISO's interconnection process, any new process allowing a project to be "fast-tracked" must still require evaluation in the Class Year Study. In this study, the NYISO identifies, cost estimates, and estimates the time to construct upgrades required for projects collectively evaluated together as part of particular Class Year. It is through this process that Developers obtain the binding cost estimates and finality that the NYISO interconnection process offers through the Class Year construct.

To the extent the Commission proposes a fast-track process, factors for the Commission to consider in determining eligible projects might include the following:

- Whether the Developer proposes to interconnect to the system via transmission facilities already built or modeled as existing in the applicable interconnection base case (*i.e.*, whether the Developer proposes to interconnect using a lead line

that has already been built or that has met the base case inclusion rule for the pre-project base case);

- Whether the Developer proposes to interconnect in an area that is less congested and/or is likely to require fewer upgrades, based on pre-identification of such areas by the transmission provider (*e.g.*, based on the NYISO's 2019 Economic Planning Process Report's identification of transmission-constrained "renewable generation pockets" (depicted above); and
- Whether the project is repowering an existing Generator.

In such cases, the interconnecting customer is likely to require fewer upgrades and to require less design and engineering of Attachment Facilities and upgrades to the Point of Interconnection. Such projects are more appropriately considered for a fast-track interconnection process due to the more narrow scope of and less complex evaluations required.

5. Consideration of Grid-Enhancing Technologies ("GETs") in the Interconnection Process

The ANOPR raises questions regarding whether transmission providers should be required to consider Grid-Enhancing Technologies in interconnection studies to assess whether their deployment can more cost-effectively facilitate interconnections.[105]

GETs are already eligible for inclusion in the interconnection process in identifying upgrades to mitigate reliability and deliverability issues. The NYISO considers these new technologies as potential alternatives to other upgrades and where consistent with Good Utility Practice and least cost, they can be selected as the applicable upgrade. For example, the NYISO has identified phase angle regulators ("PARs"), series reactors, series compensators, and static

[105] ANOPR at ¶ 158.

synchronous series compensators as Network Upgrade Facilities, System Upgrade Facilities, and/or System Deliverability Upgrades.[106]

The NYISO therefore agrees that transmission providers should consider Grid-Enhancing Technologies in interconnection studies to assess whether their deployment can serve as the appropriate upgrade to mitigate the reliability or deliverability issue prompting the need for an upgrade. Challenges that exist in establishing such a requirement pertain primarily to cost – specifically where the upgrade itself is the best long-term solution for the transmission system, but the cost of the upgrade prevents the NYISO from being able to identify it in the interconnection process due to the interconnection requirement that upgrades be the least cost solution consistent with Good Utility Practice. Allowing transmission providers to consider the best upgrade for the system – even with specific criteria and parameters – versus the least cost solution is a reform the Commission should consider.

F. Transmission Oversight and Independent Transmission Monitor Proposals

The ANOPR emphasizes the "importance of ensuring that ratepayers are not saddled with costs for transmission facilities that are unnecessary or imprudent."[107] The Commission is considering a number of potential reforms that "may be needed to enhance oversight of transmission planning and transmission providers' spending on transmission facilities to ensure that transmission rates remain just and reasonable."[108] In particular, the ANOPR asks whether "it would be appropriate for the Commission to require that transmission providers in each

[106] As the NYISO stated during its participation in technical conferences on the role of Grid-Enhancing Technologies ("GET"), the NYISO has selected transmission projects as part of the Public Policy Process that included GETs. *See* Grid Enhancing Technologies, Docket No. AD19-19-000, Post-Technical Conference Comments of the New York Independent System Operator, Inc. (February 14, 2021), available at: https://nyisoviewer.etariff.biz/ViewerDocLibrary//Filing/Filing1570/Attachments/20200214NYISO-GETsPTCComments.pdf

[107] ANOPR at P 159.

[108] *Id.*

RTO/ISO, or more broadly, in non RTO/ISO transmission planning regions, establish an independent entity to monitor the planning and cost of transmission facilities in the region."[109]

The ANOPR poses numerous questions regarding the potential roles and functions that "Independent Transmission Monitors" ("ITMs") might perform. It is only after asking those questions that that the ANOPR reaches what the NYISO respectfully submits should be the threshold issue, i.e., whether "new or different transparency measures are needed within the RTO/ISO regions."[110] The answer is "no" with respect to the NYISO. The Commission certainly should not establish an ITM in an RTO/ISO[111] without clearly identifying the problem(s) that an ITM would purportedly solve. The Commission could only lawfully mandate an ITM if there were substantial record evidence[112] showing that ITMs were needed and that their benefits would outweigh their costs. At a minimum, if the Commission were to conclude that ITMs are necessary in some regions, it should allow other RTOs/ISOs to demonstrate that they do not need them under a regional variation policy.

The NYISO is an independent body overseeing the interconnection and transmission planning processes dictated by its tariff. These are core RTO/ISO functions. There is no reason to think that the NYISO has not performed them well or that an ITM would perform them better. The ANOPR itself does not offer any reasons why ITMs are necessary; it simply asks question

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[109] *Id.* at P 164.

[110] *Id.* at P 172.

[111] The NYISO takes no position at this time on the question of whether ITMs are needed in regions where traditional transmission providers perform planning functions. But it is unclear why the ANOPR's discussion of ITMs focused at the outset on the need for ITMs in RTO/ISO regions before asking whether they might also be warranted in other regions. See ANOPR at P 164. This is especially true because the ANOPR seems to recognize, at P 172, that RTO/ISO regions have transparency measures beyond those that exist in non-RTO/ISO regions.

[112] The United States Court of Appeals for the District of Columbia Circuit upheld the Commission's reliance on "theoretical evidence" when it upheld Order No. 1000. *See S.C. Pub. Serv. Auth. v. Fed. Energy Regulatory Comm'n*, 762 F.3d 41, 64-65 (D.C. Cir. 2014). But this does not mean that the Commission could justify imposing ITMs without a sound basis in "reasonable economic propositions." *Id.* at 65. The ANOPR offers no such rationale. The NYISO reserves the right to respond to any comments that may claim that imposing ITMs would be justified.

which assume that they are. To the extent that the Commission wishes for the NYISO to adopt new policy priorities, it should use the anticipated rulemaking in this proceeding to define them and then direct the NYISO and other transmission planners to implement them. It is unreasonable to presume that the NYISO, or other RTOs/ISOs, will fail to achieve these new objectives or that a newly created ITM would help them to succeed.

In addition, creating ITMs would necessarily be expensive. A new organization would need to hire qualified personnel and incur other costs in order to replicate, assume, and/or oversee functions that are currently performed by RTOs. Additional costs and burdens would arise from the unavoidable inefficiencies of adding another layer of review, and additional study iterations, to existing RTO/ISO planning processes. ITMs could make these processes less efficient and thereby prolong the identification, evaluation and ultimately buildout of needed transmission.

The ANOPR's unstated premise that planning and interconnection processes require ITM oversight is misplaced in New York, and likely in other RTO/ISO regions. The NYISO's process is already subject to considerable oversight and review by its stakeholders through each of the key interconnection and planning process steps. Moreover, the NYISO's independent Market Monitoring Unit ("MMU") formally reviews the NYISO's reliability, economic and public policy studies to determine the presence of market failures that are not sending appropriate price signals for investments in the New York system and whether changes should be pursued in the NYISO's wholesale electricity markets.[113] Subjecting the NYISO's independent planning determinations that are already overseen by the MMU to a further layer of independent review in

[113] *See, e.g.*, Potomac Economics, 2020 State of the Market Report for the New York ISO Markets, *available at* https://www.potomaceconomics.com/wp-content/uploads/2021/05/NYISO-2020-SOM-Report.pdf (May 2021) at xii, 59-62 (recommending improvements to the NYISO's Economic Planning Process and Public Policy Transmission Planning Process.)

addition to the Commission's would be at best redundant and at worst cumbersome and wasteful. In addition, the NYISO conducts lessons learned processes for each of its regional planning processes, and on the basis of such input has already made improvements in tariff filings with the support of its stakeholders, including streamlining its Public Policy Process and refocusing its Economic Planning Process. Similar efforts have led to expansive improvements and reforms through NYISO-initiated reforms of its interconnection processes.

Similarly, the ANOPR's concerns that states may play too limited a role in planning and interconnection are not applicable to the NYISO. As noted above, the NYPSC already plays a substantial role in the NYISO's processes, including in identifying critical needs.

In short, it appears that for a region like the NYISO, ITMs would "increase administrative and legal costs" of transmission planning "with no commensurate benefits for customers."[114] It would not be reasoned decision-making for the Commission to develop the ITM concept further under these circumstances.[115]

Moreover, some of the ANOPR's ITM proposals seem to conflict with the subdelegation doctrine which prohibits the Commission from delegating its core statutory functions to private entities.[116] Determining the justness and reasonableness of transmission rates is one of the Commission's primary responsibilities under the FPA. For example, reviewing "transmission provider spending on transmission facilities," identifying "instances of potentially excessive

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[114] ANOPR at P 170.

[115] *See e.g.*, *National Fuel Gas Supply Corp. v.* FERC, 468 F.3d 831 (D.C. Cir. 2006) (vacating and remanding a Commission rule that relied on theoretical concerns without any basis in record evidence); *Associated Gas Distribs. V. FERC*, 824 F.2d 1018 (D.C. Cir. 1987) (warning that there are situations where adopting an "industry-wide solution for a problem that exists only in isolated pockets" could represent an arbitrary and capricious "disproportion of remedy to ailment . . .")

[116] *See e.g.*, *U.S. Telecom Ass'n v. FCC,* 359 F.3d 554, 555-56 (D.C. Cir. 2004) (holding that federal regulatory agencies cannot subdelegate their core statutory responsibilities to private or public entities absent express Congressional authorization to do so.)

transmission facility costs," and determining whether selected projects were actually the most efficient or cost-effective solutions are tasks that must be performed by the Commission itself, not a private entity. Making an ITM responsible for referring such issues for ultimate decision by the Commission would not cure subdelegation concerns. Unlike existing market monitoring units, which assist the Commission in its oversight of wholesale markets and make referrals to bring the Commission's attention to possible market inefficiencies or market manipulation, an ITM would necessarily be directly assessing whether particular transmission costs were just and reasonable. To the extent that ITMs take on these kinds of cost-based ratemaking functions on behalf of the Commission they would seem to be impermissibly exercising delegated authority.

G. Interregional Transmission Planning

In the ANOPR, the Commission asks whether the current processes for interregional transmission planning, cost allocation and cost recovery are sufficient to meet expected transmission system needs for integrating additional renewable generation, and if not, how those processes should be reformed.[117] In response to the interregional planning requirements of Order No. 1000, the NYISO, PJM, and ISO-New England ("ISO-NE") revised the Northeastern ISO/RTO Planning Coordination Protocol and other joint agreements to increase their joint planning and coordination.[118] The protocol supports:

- Exchanging data and information between the regions;
- Coordinating interconnection requests and transmission requests with cross-border impacts;

[117] ANOPR at PP 62-64.

[118] *See* Amended and Restated Northeastern ISO/RTO Planning Coordination Protocol (July 13, 2015), https://www.nyiso.com/documents/20142/1406358/Northeast_Planning_Protocol_FINAL_SIGNED_VERSION.pdf/8471488b-2e9e-5060-7c04-4168e86e69b4; *see also* 2019 Northeast Coordinated System Plan (April 28, 2020) posted at: https://www.nyiso.com/documents/20142/1406358/2019-ncsp-fina-PJM-NYISO-ISO-NE-2020-04-28.pdf/5706af3f-1f87-d5ae-0a49-fadfc33c5663.

- Developing a Northeastern Coordinated System Plan ("NCSP") under transparent assumptions that is periodically updated and publicly posted[119];
- Performing planning studies of potential interregional transmission projects that may meet the needs of two or more regions more efficiently or cost effectively than regional transmission projects; and
- Allocating the costs associated with interregional projects having cross-border impacts consistent with regions' tariffs and applicable federal regulatory policies.

Through their respective interregional processes, the NYISO, ISO-New England, and PJM collaborate to identify and resolve planning issues with potential interregional impacts, consistent with NERC reliability requirements and applicable state, regional, and local reliability criteria. Interconnections with neighboring systems are important tools to support grid reliability, resiliency, and market efficiency by providing opportunities for the exchange of capacity and energy.

The three ISOs and RTOs hold regular biannual meetings of their Joint Interregional Planning Committee and the Interregional Planning Stakeholder Advisory Committee, which are open to all interested parties to share information on their regional plans and potential cross-border projects. In 2020, the three regions published an updated NCSP, which covers the period of 2020-2028. The key findings of the updated NCSP include:

- The ISO/RTO regional and interregional planning activities conducted during 2018 and 2019 reviewed regional needs and solutions and did not identify any need for new interregional transmission projects for cost allocation under regional

[119] *See* 2019 Northeastern Coordinated System Plan - ISO New England, New York ISO, and PJM (April 28, 2020), available at: https://www.iso-ne.com/static-assets/documents/2020/05/2019_ncsp_final_pjm_nyiso_isone_2020-04-28.pdf.

tariffs that would be more efficient or cost-effective than proposed regional system improvements included in each of the ISO/RTOs' respective regional plans; and

- Queue interconnection studies remain well coordinated across ISO/RTO boundaries, including studies of additional generating and transmission facilities that could affect interregional system performance.

To date, no interregional transmission project has been selected under the planning protocol and regional planning processes for cost allocation and cost recovery. However, there has been significant interest expressed in conducting a joint study of potential interregional transmission projects that could integrate offshore wind in the three regions, which will be discussed this year at stakeholder meetings under the protocol.[120]

As a member of the Eastern Interconnection Planning Collaborative ("EIPC"), the NYISO also conducts joint evaluations with planning authorities across the entire Eastern Interconnection, a region that includes 40 states and several Canadian provinces from the Rocky Mountains to the Atlantic Ocean, and from Canada south to the Gulf of Mexico. The EIPC is made up of 19 member electric system planning authorities and was the first organization to conduct interconnection-wide planning analysis across the eastern portion of North America.

Together, these current processes among the NYISO, ISO-NE, PJM and the Eastern Interconnection already meet the Commission's goals for interregional transmission planning. The NYISO does not think that additional interregional planning requirements are needed in the northeastern United States. FERC's planning rules should continue to require the consent of the regions, considering the input of their member states, utilities and stakeholders, for cost

[120] *See* https://pjm.com/committees-and-groups/stakeholder-meetings/ipsac-ny-ne#.

allocation of interregional transmission projects. The NYISO does not think that the Commission should adopt mandatory cost allocation of interregional transmission projects among the participating regions.

III. NEED FOR REGIONAL VARIATION/INDEPENDENT ENTITY VARIATIONS

The ANOPR is premised in large part on concerns that do not apply uniformly across all regions, particularly to a single-state ISO. Experiences of developers in specific geographic areas do not justify wholesale changes to interconnection and transmission planning procedures nationwide. This is particularly true with the unique NYISO processes that already address certain Commission concerns. For example, as discussed above, NYISO's Public Policy Transmission Planning Process can already consider multiple metrics, reliability, economics, emissions and public policy, in evaluating the benefits of transmission. The NYISO also has an interconnection queue study approach and a Class Year construct that makes restudy concerns inapplicable in the NYISO process.

As the concerns raised in the ANOPR are not universally applicable, uniform solutions are not the best approach to implement reforms. Standardized reforms can conflict with regional procedures that the Commission has previously accepted in the context of a regional variation. Recognizing the distinct aspects to each region's interconnection and transmission planning procedures, when the Commission has identified the need for interconnection process improvements across regions, it has generally left it up to the individual ISOs and RTOs to address the issue with their stakeholders within the context of their region.[121]

[121] For example, in its order regarding Interconnection Queuing Practices in Docket No. AD08-2-000, the Commission identified concerns that Interconnection Requests for Large Generating Facilities were not being efficiently processed due to surges in the volume of new generation, including an unprecedented demand in some regions for renewable generation. In its Order the Commission stated:

The NYISO and its stakeholders have spent substantial time and resources over the last decade in refining and enhancing these procedures in light of circumstances and concerns specific to New York. These procedures do not exist in a vacuum but rather are intertwined with the NYISO's market and planning requirements and reflect NYISO-specific market rules (*e.g.*, the absence of physical transmission rights), regional and state reliability requirements, state siting requirements, and a particular resource mix and transmission topography. The procedures cannot be abruptly changed without potentially creating adverse impacts in diverse areas. The Commission should allow for regional flexibility, in large part to avoid unforeseen conflicts with interrelated processes.

Due to the diverse interconnection and transmission planning issues in each region and the significant Commission-approved variations among the regional interconnection and transmission planning processes, the Commission should allow parties to tailor appropriate tariff revisions and/or demonstrate to the Commission how they are addressing, or plan to address, the Commission's concerns in a manner consistent with or superior to the Commission's proposed tariff revisions.[122]

To the extent the Commission proposes revisions to the *pro forma* interconnection procedures as part of this rulemaking, the NYISO respectfully requests that the Commission

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> While the Commission could take action to impose solutions and may need to do so if the RTOs and ISOs do not act themselves, we agree that we should allow each region the opportunity to propose its own solution. Although there are some common issues affecting all the regions, there are also significant differences in the nature and scope of the problem from region to region; there may, therefore, be no one right answer for how to improve queue management. Further, any solution involves a balancing of interests. Therefore, we urge the RTOs and ISOs to work with their stakeholders to develop consensus proposals.

[122] *See e.g., Interconnection for Wind Energy*, Order No. 661, FERC Stats. & Regs. ¶ 31,186 (2005) ("Order No. 661), *order on reh'g*, Order No. 661-A, FERC Stats. & Regs. ¶ 31,198 ("Order No. 661-A"). In Order 661, the Commission responded to concerns regarding the interconnection of wind generation not by replacing regionally tailored interconnection procedures; rather, the Commission supplemented the existing procedures with a wind-related addendum. Notably, as with Order No. 2003, the Commission permitted independent entity variations under Order No. 661 as well. *See* Order No. 661-A at PP 41-46.

continue to permit ISO/RTOs to seek "independent entity variations" to enable them to customize the proposed revisions as necessary to fit regional needs. The Commission has often acknowledged that each region has unique characteristics and has, accordingly, accepted numerous and significant variations from the *pro forma* interconnection procedures across the regions.[123] The Commission has explained that under this standard, "the Commission will review the proposed variations to ensure they do not provide an unwarranted opportunity for undue discrimination or produce an interconnection process that is unjust and unreasonable."

As with the interconnection procedures of other ISOs and RTOs, the NYISO's interconnection procedures contain rules that have evolved over time and include significant differences from the *pro forma* interconnection procedures and other ISOs' and RTOs' rules. Absent independent entity variations, the NYISO may be required to significantly alter the framework of its interconnection procedures and the manner in which they intersect with and interrelate to the NYISO's transmission planning process. This would have the unfortunate effect of overturning long settled and understood expectations and disrupting the careful balancing of interests in the process that already have been broadly agreed upon by NYISO stakeholders and accepted by the Commission.

[123] *See* Order No. 2003 at P 827 (acknowledging the differing characteristics of each region and providing ISO/RTOs with the flexibility to seek independent entity variations from the final rule "to customize its interconnection procedures and agreements to fit regional needs"); *see also* Interconnection Queuing Practices, Order on Technical Conference, 122 FERC ¶ 61,252 (March 20, 2008) ("Queue Management Order") at P 8. *See also New York Independent System Operator, Inc.*, 124 FERC ¶ 61,238 at P 18 (recognizing that where changes to *pro forma* interconnection procedures "are clarifying and/or ministerial in nature and/or NYISO has supplied sufficient justification," such modifications are acceptable under the "independent entity variation" standard.)

IV. COMMUNICATIONS AND CORRESPONDENCE[124]

All communications and service in this proceeding should be directed to:

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V. SERVICE

The NYISO will send an electronic link to this filing to the official representative of each of its customers, to each participant on its stakeholder committees, to the New York Public Service Commission, and to the New Jersey Board of Public Utilities. In addition, a complete copy of the documents included with this filing will be posted on the NYISO's website at www.nyiso.com.

[124] The NYISO respectfully requests waiver of 18 C.F.R. § 385.203(b)(3) (2021) to permit service on counsel in multiple locations.

VI. CONCLUSION

WHEREFORE, for the foregoing reasons, the NYISO respectfully requests that the Commission consider these comments when considering further action with regards to its ANOPR.

Respectfully submitted,

/s/ Sara B. Keegan
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Counsel for the
New York Independent System Operator, Inc.

October 12, 2021

cc:

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Jignasa Gadani	Jette Gebhart
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John C. Miller	David Morenoff
Douglas Roe	Frank Swigonski
Eric Vandenberg	Gary Will

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 12th day of October 2021.

/s/ Joy A. Zimberlin

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