

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Reform of Generator Interconnection)	Docket No. RM17-8-000
Procedures and Agreements)	
)	
)	

**COMMENTS OF
THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.**

The New York Independent System Operator, Inc. (“NYISO”) respectfully submits these comments in response to the December 15, 2016 *Notice of Proposed Rulemaking* (“NOPR”) issued by the Federal Energy Regulatory Commission (“Commission”) that proposes to revise the Commission’s regulations, the *pro forma* Large Generator Interconnection Procedures (“Pro Forma LGIP”), and the *pro forma* Large Generator Interconnection Agreement (“Pro Forma LGIA”).¹

If the Commission decides to proceed with a rulemaking at this time, the NYISO urges the Commission to require reforms to the interconnection process without confining parties to specific tariff language and mechanisms through which such reforms are best addressed. Due to the unique interconnection issues in each region and the significant Commission-approved variations among the regional interconnection processes, the NYISO urges the Commission to allow parties to tailor appropriate tariff revisions and/or demonstrate to the Commission how they are addressing, or plan to address, the NOPR’s concerns in a manner consistent with or superior to the NOPR’s proposed revisions.

¹ *Reform of Generator Interconnection Procedures and Agreements*, Notice of Proposed Rulemaking, Docket No. RM17-8-000 (December 15, 2016) (“NOPR”).

The uniform revisions proposed by way of specific language in the NOPR revise *pro forma* provisions that have evolved significantly over time to address the unique situations that exist in all regions of the country. Since Order No. 2003, the NYISO, along with the other Independent System Operators (“ISOs”) and Regional Transmission Organizations (“RTOs”), in coordination with regional stakeholders, have proposed, and the Commission has accepted, significant variations from the Pro Forma LGIP and Pro Forma LGIA that reflect the specific circumstances of their respective regions.

The NYISO’s interconnection process has evolved based on an ongoing and collaborative effort with its stakeholders to develop and implement interconnection process improvements, which are driven largely by the input of stakeholders based on their experience in the interconnection process in New York. As a result, the NYISO’s interconnection process has evolved from the Pro Forma LGIP and Pro Forma LGIA to become carefully tailored to circumstances unique to New York. The NYISO and its stakeholders are currently in the process of developing further process improvements as part of a comprehensive queue reform effort involving over 30 different process enhancements, which the NYISO anticipates filing with the Commission later this year, following stakeholder approval.² The NYISO requests that, in place of a one-size-fits-all rulemaking, the Commission allow regional efforts, such as those currently underway by the NYISO, to drive the necessary improvements to the interconnection process.

The NYISO would support a Commission requirement that each ISO and RTO consider and address, as applicable, the specific concerns raised in the NOPR through its own governance process. The NYISO would further support a requirement that each ISO and RTO report to the

² See Proposed Interconnection Queue Improvement List – 2017 Comprehensive Queue Reform Initiative, the most recent version of which is at Attachment I; *see also*, Comprehensive Interconnection Process Improvements Initiative – Parts 1 and 2 posted for the April 3, 2017 Interconnection Issues Task Force at Attachments II and III.

Commission regarding such efforts on an annual basis in order for the Commission to track each region's progress in addressing the interconnection-related concerns that prompted the NOPR.

The NYISO submits specific comments on each of the NOPR's proposals in Part III below for the Commission's consideration; however, the NYISO respectfully requests that the Commission continue to permit ISO/RTOs to seek "independent entity variations" from any revisions to the Pro Forma LGIP and Pro Forma LGIA to enable them to customize the proposed revisions as necessary to fit regional needs.³ 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.

II. BACKGROUND

The NYISO's Standard Large Facility Interconnection Procedures⁴ contained in Attachment X of its Open Access Transmission Tariff ("OATT") ("NYISO LFIP") establish the requirements by which the NYISO, in coordination with the relevant Connecting Transmission Owner,⁵ administers the proposed interconnection of a Large Facility greater than 20 MW to the New York State Transmission System or Distribution System.⁶ The NYISO LFIP were

³ See NOPR at P 232.

⁴ Capitalized terms not otherwise defined in this letter have the meaning set forth in Attachments X and Z of the NYISO's Open Access Transmission Tariff ("OATT"), as amended by the enclosed proposed revisions to Attachments X and Z of the OATT.

⁵ The term "Transmission Provider" as defined in the Pro Forma LGIP encompasses both the NYISO and the New York Transmission Owners. The NYISO LFIP, with its Commission-approved variations from the Pro Forma LGIP, assigns the responsibilities of "Transmission Providers" to the NYISO, as the system operator, and the New York Transmission Owners, as the owners of the impacted transmission and distribution facilities in New York.

⁶ The term "Large Facility" as defined in Attachment X of the NYISO OATT concerns a Large Generating Facility or a Merchant Transmission Facility. With the exception of controllable transmission facilities that seek Capacity Resource Interconnection Service and transmission facilities proposed by a Transmission Owner as part of

developed with extensive stakeholder involvement in response to the Commission's Order No. 2003.⁷

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.”⁸ Accordingly, while generally following the Pro Forma LGIP and Pro Forma LGIA, the NYISO LFIP and the NYISO's Standard Large Generator Interconnection Agreement (“NYISO LGIA”) include numerous independent-entity variations accepted by the Commission that are specifically tailored to the unique circumstances in New York. Since Order No. 2003, the NYISO, in conjunction with Developer and stakeholder input, has continued to implement additional and significant revisions to interconnection process to update and enhance the New York-specific interconnection requirements in Attachments P, S, X, and Z of the OATT.

In particular, the NYISO's interconnection process includes significant Commission-approved variations from the Pro Forma LGIP and other ISOs' and RTOs' procedures concerning the treatment of proposed projects in the interconnection queue, the scope of

its local plan, the interconnection of transmission facilities are addressed through the NYISO's separate Transmission Interconnection Procedures (“TIP”) located in Attachment P of the NYISO OATT. The TIP are currently pending at the Commission. *See New York Independent System Operator, Inc.*, Compliance Filing, Docket No. ER13-102-009 (March 22, 2016); Errata Correcting Compliance Filing, Docket No. ER13-102-010 (May 24, 2016).

⁷ *Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, FERC Stats. & Regs. ¶ 31,146 (2003) (“Order No. 2003”), *order on reh'g*, Order No. 2003-A, FERC Stats. & Regs. ¶ 31,160 (“Order No. 2003-A”), *order on reh'g*, Order No. 2003-B, FERC Stats. & Regs. ¶ 31,171 (2004), *order on reh'g*, Order No. 2003-C, FERC Stats. & Regs. ¶ 31,190 (2005), *aff'd sub nom. Nat'l Ass'n of Regulatory Util. Comm'rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007).

⁸ Order No. 2003 at P 827.

interconnection studies, and the process for allocating the cost of System Upgrade Facilities and System Deliverability Upgrades.⁹ Some of the more significant variations are highlighted below.

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). While the NYISO takes Queue Position into account in determining the order of performing interconnection studies,¹⁰ 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.

⁹ The Commission refers to “Interconnection Customers” in the NOPR. In these comments, the NYISO uses the term “Developer,” which is the term used in Attachments X and S of the OATT to refer to a project developer for a Large Facility. In addition, the Commission refers to “network upgrades” in the NOPR. In these comments, the NYISO uses the following terms defined in Attachments S and X of the OATT: “System Upgrade Facilities,” which refer to the upgrades required to reliably interconnect a Large Facility, and “System Deliverability Upgrades,” which refer to the upgrades required to make a Large Facility deliverable.

¹⁰ See OATT, Attachment X Section 30.4.1.

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 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, a 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. Other Unique Elements of the NYISO’s Interconnection Study Process

The NYISO LFIP call for three successive interconnection studies of each proposed project, which provide for increasingly detailed analysis. First is the Interconnection Feasibility Study (“Feasibility Study”), which is a high-level, single-project evaluation of the configuration and local system impacts. It includes thermal, voltage and short circuit analyses that indicate potential overloads the project may cause. The Feasibility Study identifies and provides good-faith non-binding cost estimates for the System Upgrade Facilities and Connecting Transmission Owner’s Attachment Facilities that are needed solely as a result of the project.

The second study is the Interconnection System Reliability Impact Study (“SRIS”), a detailed single-project study that evaluates the project’s impact on transfer capability and system reliability. The SRIS consists of short circuit, stability and power flow analyses. The SRIS identifies the facilities required for the project to reliably interconnect under the NYISO’s

Minimum Interconnection Standard – *i.e.*, the identification of adverse impacts to reliability caused by the project that would prevent it from obtaining Energy Resource Interconnection Service (“ERIS”) without upgrades to mitigate such impacts.¹¹ The SRIS report includes not only a detailed description of such required facilities and equipment, but also includes a good faith cost estimate and estimated construction schedule.

Among the unique variations in the NYISO’s SRIS is the Developer’s ability to opt for an additional preliminary evaluation of its proposed facility under the NYISO’s Deliverability Interconnection Standard. This was added to the NYISO LFIP in 2013 in an effort to provide Developers with additional information earlier in the process. This option provides the Developer with a preliminary indication of potential deliverability issues, reveals the possibility that System Deliverability Upgrades may be required for the Developer to obtain Capacity Resource Interconnection Service (“CRIS”), and provides a preliminary cost estimate for potential System Deliverability Upgrades.¹²

The final study in the interconnection process is the Class Year Study, which is a construct unique to the NYISO, the continued use of which most stakeholders support.¹³ There is no queue prioritization of projects in the Class Year Study. Through this unique clustered

¹¹ ERIS is the basic interconnection service that enables a Developer, subject to other requirements in the NYISO’s tariffs, to provide Energy and Ancillary Services in the NYISO-administered markets. For purposes of ERIS, the NYISO evaluates whether a project can reliably interconnect its facility to the New York State Transmission System or Distribution System under the NYISO’s Minimum Interconnection Standard and identifies and allocates the costs of the Connecting Transmission Owner’s Attachment Facilities and any System Upgrade Facilities required for the project.

¹² A project seeking to be eligible to participate in the NYISO-administered Installed Capacity market must obtain in addition to ERIS a second level of interconnection service – CRIS. For purposes of CRIS, the NYISO evaluates whether a project is deliverable under the NYISO’s Deliverability Interconnection Standard and identifies and allocates the costs of any System Deliverability Upgrades required to make the project deliverable.

¹³ In discussions with stakeholders regarding suggested revisions to the Class Year Study process in 2012 and again in 2016, the majority of stakeholders indicated a desire to retain the Class Year Study structure with its detailed cost estimates and other study outputs.

study, the NYISO is able to equitably allocate upgrade costs and generate detailed cost estimates that provide reasonable accuracy on upgrade costs.

III. COMMENTS

A. **Interconnection Process Improvements Will Be Most Effective if Developed on a Regional Level**

The NYISO acknowledges that improvements can be made to the interconnection process. Indeed, AWEA and other stakeholders have a number of valid suggestions for improvement of the interconnection process that the NYISO has already started to address.¹⁴ While the NYISO supports initiatives to improve the interconnection processes, it urges the Commission to allow for regionally tailored solutions to these concerns.

It is through unique and regionally tailored efforts that reforms are likely to have the most success in addressing the concerns raised by AWEA in its initial petition.¹⁵ As demonstrated by the attached list of pending proposals to reform the NYISO's interconnection procedures, many of these issues are unique to the NYISO and its Class Year Study process – reforms that would be wholly inapplicable to other ISOs and RTOs. Given the extensive variations among interconnection procedures across regions, a nationwide rulemaking is not the appropriate vehicle for reform and would require the Commission to address a significant number of independent entity variations¹⁶ from ISOs and RTOs in response to many of the new uniform *pro forma* rules proposed in the NOPR.

The Commission has often acknowledged that each region has unique characteristics and has, accordingly, accepted numerous and significant variations from the Pro Forma LGIP and

¹⁴ See Attachments I, II and III (describing the interconnection process improvements the NYISO is discussing with stakeholders).

¹⁵ Petition for Rulemaking of the American Wind Energy Association to Revise Generator Interconnection Rules and Procedures, Docket No. RM15-21-000 (June 19, 2015) (“AWEA Petition”).

¹⁶ See NOPR at P 232.

Pro Forma LGIA across the regions.¹⁷ As with the interconnection procedures of other ISOs and RTOs, the NYISO's LFIP contains rules that have evolved over time and include significant differences from the Pro Forma LGIP and other ISOs' and RTOs' rules. 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 unique 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 in the manner proposed in the NOPR without potentially creating adverse impacts in diverse areas.¹⁸

As the concerns raised in the NOPR are not universally applicable, the proposed uniform solutions are often inapplicable or conflict with regional procedures that the Commission has previously accepted in the context of a regional variation. Recognizing the unique aspects to each region's interconnection 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.¹⁹

¹⁷See 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.

¹⁸For example, certain NOPR proposals require significant re-allocation of administrative resources currently devoted to performing interconnection studies. Other proposals require information to be posted publicly on OASIS that could reveal Critical Energy Infrastructure Information. Other proposals require information to be made available that is unique to ISOs and RTOs that engage in restudies or that offer physical transmission rights. In order for the NYISO, which does not offer physical transmission rights, to post the congestion and curtailment information required by the NOPR, could require the NYISO to undergo significant software modifications to make information available that has little if any benefit to prospective Developers.

¹⁹See *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-

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.²⁰ In its Order the Commission stated:

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.²¹

ISOs and RTOs responded to the Commission's Queue Management Order by submitting numerous reforms tailored to their individual processes.²² ISOs and RTOs have not concluded their reforms but rather continue to work with their stakeholders to identify additional process improvements that address Developers' concerns, including many of the concerns raised in the NOPR. In place of a nationwide rulemaking, the Commission should instead require ISOs and RTOs to demonstrate the manner in which they are or plan to improve their interconnection processes in light of the concerns raised in the NOPR.

The NYISO would support a requirement that it address applicable concerns in its stakeholder process, and would also support a Commission requirement that the ISOs and RTOs submit a report to the Commission tracking the manner in which we have addressed or are addressing interconnection concerns. Such a process would have several benefits over a

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.

²⁰ Queue Management Order at P 3.

²¹ Queue Management Order at P 8.

²² NOPR at P 27.

nationwide rulemaking. First, allowing the ISOs and RTOs to address these issues in each of our unique stakeholder processes would (a) eliminate the host of independent entity variations the Commission would certainly receive in compliance filings; and (b) provide for regionally tailored solutions to the unique issues facing each region. Second, such a reporting requirement would provide accountability on the part of the ISOs and RTOs to address the interconnection concerns that prompted the NOPR.

The NYISO has 36 proposals before stakeholders now, all of which are designed to improve the interconnection process. Through this comprehensive interconnection process improvement initiative, the NYISO seeks to address the very concerns that prompted this NOPR. The NYISO's proposals, summarized in Attachment I, have the following objectives:

- to increase administrative efficiency;
- to increase transparency;
- to expedite the interconnection study process;
- to allow Developers to proceed through the entire interconnection process more quickly, particularly the Class Year Study, while allowing as much flexibility as possible;
- to clarify existing practices/procedures that Developers find confusing; and
- to update practices and procedures.

Through a collaborative queue improvement process with its stakeholders, the NYISO identified potential process improvements in late 2016. Based on stakeholder input, the NYISO starting vetting detailed proposals with stakeholders in the Interconnection Issues Task Force (“IITF”) – a subcommittee of the NYISO’s Operating Committee – on March 2, 2017. Further details were presented to stakeholders on April 3, 2017.²³ The NYISO plans to provide draft tariff language to stakeholders at the May and June IITF meetings and to request approval from

²³ See Attachments II and III.

the NYISO's Operating Committee, Management Committee and Board of Directors for a Section 205 filing in July and August of 2017. As a result of this interconnection queue reform initiative, the NYISO anticipates submitting a Section 205 filing to Commission later this year that will include comprehensive tariff revisions that the NYISO believes will significantly improve its interconnection procedures and address the concerns that prompted the NOPR.

B. Comments on Specific Revisions Proposed in the NOPR

The NYISO supports the Commission's general goals set forth in the NOPR that interconnection processes provide timely and accurate information, are transparent, and have the flexibility to accommodate new technologies.²⁴ The NYISO currently administers its interconnection process²⁵ and works with stakeholders to develop process improvements, as needed, consistent with these goals.²⁶ However, as detailed below, many of the Commission's proposed revisions in the NOPR are either inapplicable to the New York-specific rules previously accepted by the Commission or are contrary to accomplishing the stated goals in the NOPR and, if implemented, could add delay and cost to the interconnection study process.

1. Re-Studies

The Commission proposes to revise the Pro Forma LGIP to require transmission providers that conduct cluster studies to conduct re-studies on a scheduled, periodic basis.²⁷

The Commission further seeks comments regarding whether regions should retain discretion to

²⁴ See NOPR at PP 4-5.

²⁵ See Attachments P, S, X, and Z of the OATT.

²⁶ Terms with initial capitalization that are not otherwise defined herein shall have the meaning set forth in Attachments S and X of the NYISO's Open Access Transmission Tariff ("OATT"), or, if not defined therein, in Section 1 of the OATT or Section 2 of the NYISO's Market Administration and Control Area Services Tariff ("Services Tariff").

²⁷ NOPR at PP 46-49.

conduct re-studies outside of these established schedules and whether further reforms are needed to improve the transparency and accuracy of re-study triggers.²⁸

As noted above, the NYISO does not perform re-studies in the NYISO LFIP to modify the upgrades required for projects or their cost estimates based on changes to higher-queued projects or system conditions. The NYISO may perform clustered interconnection studies outside of its Class Year Study process in its Small Generator Interconnection Procedures²⁹ and Transmission Interconnection Procedures;³⁰ however, in performing such clustered studies, the NYISO does not study every prior project in the interconnection queue and these procedures do not provide for re-studies. For this reason, the NYISO does not take a position regarding the Commission's proposed revisions to the re-study requirements in the Pro Forma LGIP that may be applicable to other transmission providers. The NYISO would anticipate requesting an independent entity variation from any revisions that would adversely impact its Class Year Study process.

As described above, the NYISO studies a cluster of projects in its Class Year Study that have each satisfied certain eligibility requirements, regardless of their queue position. The Class Year Study will determine the facilities, and related costs, to interconnect all projects in the Class Year. If one or more Developers decline to accept their respective costs, the NYISO will remove their projects from the Class Year Study and update the facility and cost information for the remaining Developers. Only when all remaining Developers accept their costs and provide the required security will the Class Year Study be final. This update process is performed in

²⁸ NOPR at PP 50-51.

²⁹ OATT Attachment Z § 32.1.6.

³⁰ OATT, Attachment P § 22.5.2 – currently pending before the Commission in Docket No. ER13-102-009.

accordance with tight, tariff-prescribed time frames.³¹ A Developer is only responsible for project costs in excess of its secured amount under limited circumstances set forth in Attachment S of the OATT. The NYISO's process effectively replaces the need for a "re-study" process and has the significant effect of providing clarity with respect to cost-sharing of upgrade facilities.

2. Option to Build

The Commission proposes to revise the Pro Forma LGIA to allow the interconnection customer to unilaterally exercise the option to build.³² The NYISO does not take a position on this proposal.

3. Self-Funding of Network Upgrades

The Commission proposes to revise the Pro Forma LGIA to require an agreement between a transmission owner/provider and interconnection customer before the transmission owner/provider may elect to initially fund network upgrades.³³ The Commission also seeks comments regarding the benefits to the interconnection customer of funding or foregoing its opportunity to fund network upgrades.³⁴ Finally, the Commission seeks comments on any potential harm to the interconnection customer by requiring agreement with the transmission owner/provider.³⁵

The NYISO does not take a position on this proposal, since it is not relevant to the NYISO interconnection process. The NYISO LGIA does not provide for the Transmission Owner to self-fund network upgrades in the manner that the Commission is addressing with this

³¹ The Developer must indicate whether it will accept its respective costs within thirty days of the initial determination and within seven days of subsequent determinations. NYISO OATT, Attachment S Section 25.8.2. The NYISO must update the facility and cost information within fourteen calendar days. NYISO OATT, Attachment S Section 25.8.3.

³² NOPR at PP 59-63.

³³ NOPR at P 71.

³⁴ NOPR at P 73.

³⁵ NOPR at P 73.

proposal.³⁶ Specifically, the Commission previously accepted, as an independent entity variation, the removal of the following language that is included in the Pro Forma LGIA from Section 11.3 of the NYISO LGIA: “Unless Transmission Provider or Transmission Owner elects to fund the capital for the Network Upgrades, they shall be solely funded by Interconnection Customer.”

The NYISO’s proposal to remove this language from the NYISO LGIA was accepted by the Commission in its Order on the NYISO’s Order No. 2003 compliance filing in which it recognized that some transmission providers have permissibly adopted a “but for” pricing approach versus the “crediting” pricing approach for transmission service. Under this “but for” pricing approach, the rules set forth in Attachment S of the NYISO OATT allocate to each Developer its responsibility for the cost of the net impact of the interconnection of its project on the reliability of the transmission system. The Developer is held responsible for the cost of the interconnection facilities that are caused by its project – the facilities that would not be needed “but for” the Developer’s project. Under the NYISO’s cost allocation provisions in Attachment S, a Developer is not responsible for the cost of facilities that are required anyway, without the construction of its project, to maintain system reliability. The cost of such facilities is borne by Transmission Owners under the NYISO’s cost allocation procedures.

In New York, it is not generally anticipated that the installation of interconnection facilities required for a project, such as circuit breakers, will improve the deliverability of power or reduce system congestion. Therefore, transmission credits under the “crediting” approach are not applicable. In the event that an interconnection facility does improve the deliverability of

³⁶ The NYISO LFIP allows Developers and Transmissions Owners to enter alternative cost allocation agreements as long as such agreements do not “increase the cost responsibility or cause a material adverse change in the circumstances as determined by [Attachment S of the NYISO’s OATT] of any Developer or Transmission Owner who is not a party to such agreement.” NYISO OATT, Attachment S Section 25.5.1.

power or reduce system congestion, the NYISO's "but for" process provides for the possibility that Incremental Transmission Congestion Contracts ("TCCs") could be created. Such TCCs are well-defined, long-term and tradable capacity rights (in lieu of transmission credits).³⁷ As the Commission recognized in its Order on the NYISO's Order No. 2003 compliance filing, the NYISO's process is different from the type of "and" pricing that is prohibited by Order No, 2003 as follows: "Since transmission costs in the NY Control Area are paid for by the load receiving the power, the Developer is not stuck paying for both the physical upgrades themselves and the right to use them."³⁸

As a result of the "but for" paradigm in New York, the Transmission Owner's option to self-fund the capital of upgrade facilities is not relevant in the NYISO's interconnection process. For this reason, the NYISO does not take a position regarding the Commission's proposed revisions to the self-funding requirements that may be applicable to other entities. The NYISO would anticipate requesting an independent entity variation from any revisions regarding these requirements to maintain its existing exclusion of the self-funding language from the NYISO LGIA.

4. Dispute Resolution

The Commission proposes to revise its regulations to require ISOs and RTOs to establish interconnection dispute resolution procedures that allow a disputing party to unilaterally seek dispute resolution and provide for ISO/RTO staff or subcontractors to serve as the neutral decision-makers.³⁹

³⁷ See *New York Independent System Operator, Inc. and New York Transmission Owners, Order Conditionally Accepting Large Generator Interconnection Procedures and Large Generator Interconnection Agreement*, 108 FERC ¶ 61,159 (Aug. 5, 2004) at PP 57-59.

³⁸ Id. at P 58.

³⁹ NOPR at PP 84-85.

The NYISO opposes the proposed revisions as unnecessary since they would duplicate existing opportunities for dispute resolution offered under the interconnection process. While the NOPR's proposal appears to be premised on the notion that a party cannot unilaterally invoke dispute resolution, the NOPR does not recognize the significant role that existing NYISO governance procedures and formal interconnection dispute resolution procedures already serve – procedures that may be invoked unilaterally by any party to the interconnection process.⁴⁰

Extensive dispute resolution procedures were required by Order No. 2003⁴¹ and are detailed in the Pro Forma LGIP and in Section 30.13.5 of the NYISO's LGIP.⁴² These procedures allow any party, including the developer, to raise a dispute at any point during the process. When such a dispute arises, the tariff requires a senior representative of each party to be designated to meet with the other parties and to attempt to resolve the dispute within 30 days. When interconnection disputes arise, the NYISO works with all parties to address the issue pursuant to these dispute resolution procedures.

In cases where the complaining party opts to vet its concerns in the NYISO's governance process, the NYISO accommodates such requests and, in response, may propose tariff revisions to address the issue in dispute. In cases in which a party requests dispute resolution, the NYISO leads the efforts to facilitate discussions between the designated representatives of the parties to timely address the issue. This process has worked effectively in resolving disputes that can be resolved without Commission intervention. Adding another layer of formal administrative review within the NYISO's procedures would likely only serve to make the dispute resolution process lengthier and less efficient.

⁴⁰ OATT Attachment X § 30.13.5.1.

⁴¹ Order No. 2003 at PP 287-291.

⁴² OATT Attachment X § 30.13.5.

The NOPR appears to be considering a role for subcontractors in resolving disputes. While the NYISO supports the use of subcontractors as a resource and tool in completing interconnection studies, the NYISO is concerned about a framework that would outsource responsibility for final technical decisions to subcontractors. ISOs and RTOs are independent entities with the ultimate responsibility of administering their tariffs, including the interconnection process. This obligation is explicitly recognized in Section 30.2.2 of the NYISO's LGIP.⁴³ Moreover, Section 30.13.2 of the NYISO's LGIP states that even when the NYISO uses subcontractors, the NYISO remains obligated to comply with the requirements of its tariff. Therefore, the NYISO would object to any process that would allow a subcontractor's determination—for example, regarding appropriate network upgrades—to override the NYISO's judgment concerning what is required under the tariff and applicable reliability standards.

5. Caps on Network Upgrade Costs

The Commission seeks comment on whether it should revise the Pro Forma LGIP and Pro Forma LGIA to provide for a cost cap that would limit an interconnection customer's network upgrade costs at the higher bound of a transmission provider's cost estimate plus a stated accuracy margin following a certain stage in the interconnection study process.⁴⁴ The

⁴³ OATT Attachment X, § 30.2.2 provides:

The NYISO shall receive, process and analyze all Interconnection Requests in a timely manner as set forth in the Large Facility Interconnection Procedures. As described herein, the NYISO will process and analyze all Interconnection Requests with independence and impartiality, in cooperation with and with input from the Developers, Connecting Transmission Owners and other Market Participants. The NYISO will perform, oversee or review the Interconnection Studies to ensure compliance with the Large Facility Interconnection Procedures. The NYISO will use the same Reasonable Efforts in processing and analyzing Interconnection Requests from all Developers, whether or not the Large Generating Facilities or Merchant Transmission are owned by a Connecting Transmission Owner, its subsidiaries or Affiliates, or others.

⁴⁴ NOPR at P 95.

Commission also seeks comments on how to minimize potential cost shifts to other parties if a cap is imposed and alternate proposals to provide more cost certainty.⁴⁵

The NYISO's tariff already provides for detailed provisions regarding how to allocate actual costs that exceed cost estimates from the Class Year Study. Specifically, Attachment S of the NYISO OATT establishes an explicit Commission-approved process that was developed by the NYISO and its stakeholders to allocate the responsibility for the costs of facilities that are above the estimated cost amount determined in the Class Year Study. Pursuant to that process, a Developer must accept, and provide security for, the estimated cost of facilities required to reliably interconnect its project if it wants to proceed to interconnect its project. The Developer is not responsible for costs above the accepted and secured amount, except in the specific circumstances described in Attachment S—*e.g.*, changes to the design or operating characteristics of the project that impact the scope or cost of related upgrades.⁴⁶ In determining which party would be responsible for costs above the estimated amount, Section 25.8.6.4 of Attachment S of the NYISO OATT provides detailed cost causation principles to allocate such cost responsibility among the Developer and Connecting Transmission Owners in a well-defined and balanced manner.

Adoption of bright line cost caps would likely require more detailed studies and cost estimates at, or prior to, the Class Year Study stage. Such additional detail would come at increased cost and time, both of which are contrary to the stated principles of the NOPR. For this reason, the NYISO does not support the Commission's proposed revisions to develop a cost cap requirement in the Pro Forma LGIP and Pro Forma LGIA. To the extent the Commission adopts such a cost cap proposal, the NYISO anticipates requesting an independent entity

⁴⁵ NOPR at P 95.

⁴⁶ OATT Attachment S § 25.8.6.4.

variation from any revisions that would adversely impact the actual cost provisions in its tariff that were painstakingly developed by the NYISO and its stakeholders to carefully balance the interest of, and the potential for cost shifts among, Developers, Transmission Owners, and Load Serving Entities in New York.

6. Contingent Facilities

The Commission proposes to revise the Pro Forma LGIP to require transmission providers to identify contingent facilities,⁴⁷ detail the methodology for determining such facilities, and provide the estimated network upgrade costs and in-service completion time of each such contingent facility, when the information is not commercially sensitive.⁴⁸ In addition, the Commission seeks comments on how transmission providers currently identify contingent facilities, what improvements to existing approaches are recommended, and how the process can be standardized.⁴⁹

The identification of contingent facilities is not relevant to the NYISO LFIP. As described above, the NYISO studies a cluster of projects in its Class Year Study. The results of this study are only final when all Developers remaining in the Class Year have accepted their allocation of the costs required for the System Upgrade Facilities necessary to reliably interconnect the remaining projects and have provided security in the amount of their respective cost allocation. If one of these Developers then fails to proceed with its project, it forfeits its security to the extent necessary to defer its portion of the cost of the upgrades required to reliably interconnect the remaining projects in the Class Year. In addition, in developing its base case to

⁴⁷ The Commission defines “contingent facilities” as “those unbuilt interconnection facilities and network upgrades upon which the interconnection request’s costs, timing, and study findings are dependent and, if not built, could cause a need for restudies of the interconnection request or a reassessment of network upgrades and/or cost and timing.” NOPR at P 97.

⁴⁸ NOPR at PP 103-104.

⁴⁹ NOPR at P 105.

study the reliable interconnection of projects in future Class Years, the NYISO only includes facilities that are either already interconnected or projects that have provided the security required to cover the costs of necessary upgrades. For this reason, the NYISO does not take a position regarding the Commission's proposed revisions to the Pro Forma LGIP regarding the determination of contingent facilities that may be applicable to other entities. The NYISO would anticipate requesting an independent entity variation from any revisions that would adversely impact its Class Year Study process.

7. System Modeling and Assumptions

The Commission proposes to revise the Pro Forma LGIP to require that transmission providers provide on their OASIS sites network models and underlying assumptions (*e.g.*, shift factors, dispatch assumptions, load power factors, and power flows) used for interconnection studies in their LGIPs.⁵⁰ The Commission also proposes that non-confidential supporting data be included on OASIS and that transmission providers detail the network modeling assumptions used during their studies.⁵¹ The Commission seeks comments on whether there are other specific network model details/underlying assumptions that should be posted on OASIS and described in the LGIP and whether transmission providers should provide notice of any variations from posted assumptions for a specific study.⁵² Finally, the Commission seeks comments on confidentiality/security concerns regarding posting/describing specific model assumptions.⁵³

⁵⁰ NOPR at P 119.

⁵¹ NOPR at PP 109, 118.

⁵² NOPR at P 120.

⁵³ NOPR at P 121.

The NYISO strongly supports transparency with regards to data that can assist potential Developers and already provides dispatch assumptions, load power factors, and power flows, together with other data and studies. Rather than posting such data on OASIS (the non-password-protected portion of the NYISO's website), the NYISO posts interconnection studies with detailed appendices to the password-protected portion of its website because they contain CEII. Pursuant to the NYISO's procedures to protect against disclosure of CEII, the NYISO only posts CEII materials to the password-protected portion of its website that is accessible only by individuals who have the appropriate CEII clearance. Dispatch assumptions, load power factors, and power flows are contained in network models that contain CEII. These network models are too large to post on the password-protected portion of the NYISO's website; however, the NYISO has a secure portal, separate from its public website – "NYISO ePlanning" – that permits Developers with appropriate CEII clearance to access large files such as interconnection base cases and models. The NYISO believes this is the appropriate vehicle through which to make dispatch assumptions, load power factors and power flows available to Developers.

In the NYISO's interconnection process, the network models containing load power factors and power flows are already available on the NYISO's ePlanning portal to authorized Developers and other interested Stakeholders who submit the required CEII forms and are approved to receive CEII. In addition, study assumptions are already detailed in the specific study scopes. Before a Developer even submits an Interconnection Request, it can request the standard base cases currently being used by the NYISO for Feasibility Studies and SRISs. With the appropriate CEII approvals, the NYISO can provide the cases to the Developer. Before a study begins, the NYISO also details the specific scope and assumptions (including dispatch

assumptions) to be used for each interconnection study. These details are provided in the interconnection study forms, study agreements, and appendices to the study agreements.

While the NYISO has no objection to making the above data available through secure portals it currently maintains, the NYISO does not support providing shift factors which are not informative to NYISO Developers. First, because shift factors are not as informative in the NYISO as they might be in other regions, they provide little, if any, value to Developers in their siting determinations. Shift factors generally only pertain to power flow and thermal analyses, which are more applicable to interconnections in ISOs or RTOs that offer physical transmission rights. Shift factors are not applicable to short circuit or system protection issues, and are not applicable to voltage or stability issues except to the extent that voltage and stability limitations may sometimes be expressed in terms of power flow limits (*e.g.*, voltage or stability-constrained transfer limits). Since the System Upgrade Facilities identified by NYISO for ERIS most often address the physical interconnection, system protection and/or short circuit matters, and only occasionally address power flow limitations, shift factors are not as relevant to NYISO interconnection issues. Second, in the NYISO, shift factors are calculated as a result of power flow analyses, and therefore are not readily available. Unlike power flows, shift factors are not available “off-the-shelf.” For these reasons, the NYISO opposes providing shift factors to prospective Developers.

8. Congestion/Curtailment Information

The Commission proposes to revise its regulations to require transmission providers to post congestion and curtailment information in one location on their OASIS.⁵⁴ In particular, the Commission proposes to require transmission providers to post on OASIS more granular

⁵⁴ NOPR at P 128.

congestion and curtailment information – specifically, information on congestion data representing (i) total hours of curtailment on all interfaces, (ii) total hours of transmission provider-ordered generation curtailment and transmission service curtailment due to congestion on that facility or interface, (iii) the cause of the congestion (*e.g.*, a congestion or an outage), and (iv) total megawatt hours of curtailment due to lack of transmission for that month.⁵⁵ The Commission proposes that this data be posted on a monthly basis by the 15th day of the following month and maintained for a minimum of three years.⁵⁶ The Commission seeks comments on the level of detail appropriate for congestion and curtailment information, the frequency of reporting, the length of time reported data should cover, and whether there is interconnection-request-specific congestion and curtailment information that could be provided to interconnection customers as part of the interconnection study process.⁵⁷ Finally, the Commission proposes to revise the Pro Forma LGIP to require transmission providers/owners to provide curtailment and congestion information at the scoping meeting.⁵⁸

The NYISO has historically made available a significant amount of system information on its public website, including congestion and curtailment information.⁵⁹ The NYISO’s public

⁵⁵ NOPR at P 130.

⁵⁶ NOPR at P 130.

⁵⁷ NOPR at P 132.

⁵⁸ NOPR at P 133.

⁵⁹ This includes (1) aggregate statewide wind curtailment information every month (*See, e.g.*, NYISO Operations Metrics Report an example of which is available at the following link: http://www.nyiso.com/public/webdocs/markets_operations/committees/mc/meeting_materials/2015-08-26/Agenda%2003_Operations_Report.pdf); (2) congestion analysis published in the biennial Congestion Assessment and Resource Integration Study (“CARIS”) and, in years in which the CARIS is not published, such analysis appears in the Reliability Needs Assessment (*See, e.g.*, the 2013 CARIS Report, available at: [http://www.nyiso.com/public/webdocs/markets_operations/services/planning/Planning_Studies/Economic_Planning_Studies_\(CARIS\)/CARIS_Final_Reports/2013_CARIS_Final_Report.pdf](http://www.nyiso.com/public/webdocs/markets_operations/services/planning/Planning_Studies/Economic_Planning_Studies_(CARIS)/CARIS_Final_Reports/2013_CARIS_Final_Report.pdf)) and https://www.nyiso.com/public/webdocs/markets_operations/services/planning/Planning_Studies/Reliability_Planning_Studies/Reliability_Assessment_Documents/2016RNA_Final_Oct18_2016.pdf and (3) additional data specific to renewable resources (*See, e.g.*, the NYISO’s 2010 Wind Study, providing a detailed analysis of constraints, estimates of bottled wind, and required transmission upgrades at varying levels of wind penetration).

website allows users to generate custom reports that identify real-time limiting constraints on a five-minute basis for historic operating days. Such reports provide the five-minute timestamp, the limiting facility, the specific limiting contingency and the constraint cost.⁶⁰ This information provides Developers with insight regarding which areas of the transmission system are constrained by economic dispatch.

With respect to congestion, NYISO posts all active constraints, and their associated shadow prices, with every real-time run of its security constrained dispatch system software model (nominally every 5-minutes). In addition, NYISO produces an LBMP for every pricing point in the NYISO's footprint with every real-time run, and this LBMP includes the marginal cost of congestion. Therefore, a potential interconnecting customer could use the NYISO's LBMP data to examine the frequency with which the LBMP (at their interconnection point) falls at or below their own anticipated costs, which can give them a good idea of how often they would not be fully economic to generate.

With respect to curtailments, unlike regions in which firm transmission service is available, NYISO does not typically curtail generation in the manner assumed by the NOPR. Rather, in the face of system constraints, the NYISO economically dispatches resources higher or lower based on their impacts to the constraints. This is not "curtailment" in the sense it is used in the NOPR; rather it is an economic signal to the facility to reduce its output when LBMPs fall at or below the facility's offers. The NYISO does not have firm or non-firm transmission service that is separately curtailed like other regions. In the NYISO, such transmission service is inherently included to the extent that the resource is economic to provide

⁶⁰ These reports are available publicly on the NYISO's website at http://www.nyiso.com/public/markets_operations/market_data/custom_report/index.jsp?report=limiting_constraints.

energy. Therefore, the curtailment data requested by AWEA and proposed in the NOPR would not be useful data to Developers seeking to interconnect in New York.

Indeed, the NYISO may not even have the capability to provide certain data proposed by the NOPR. As the Commission is aware and has previously approved, the NYISO offers Open Access based upon a “financial reservation” transmission model, which materially differs from the “physical reservation” transmission model contemplated by the Order No. 890 *pro forma* OATT.⁶¹ For example, the information conveyed by the NYISO’s Available Transfer Capability (“ATC”) largely differs from physical reservation ISO/RTO regimes because it is not a determinant as to whether additional requests for transmission can be satisfied.⁶² Based on numerous compliance filings under Order No. 890 and No. 890-A and various waivers filed and approved by the Commission, the NYISO is not obligated to maintain and post the same OASIS-related information as RTOs and ISOs with a physical reservation transmission system.⁶³

The information the NYISO can provide that appears most responsive to AWEA’s concerns is either (1) information regarding the extent to which a facility is likely to be required

⁶¹ See *New York Independent System Operator, Inc.*, 123 FERC ¶ 61,134 (2008), at PP 8-13; *New York Independent System Operator, Inc.*, Letter Order on Compliance Filing, Docket No. OA08-13-003 (November 12, 2008); *New York Independent System Operator, Inc.*, Compliance with Order No. 890, Docket No. OA08-13-000 (April 11, 2008); *New York Independent System Operator, Inc.*, Compliance Filing, Docket No. OA08-13-000 (October 11, 2007).

⁶² *Request for Limited OASIS Waivers*, Docket No. EL99-77-000 (July 9, 1999), at pp 5-6; see also *New York Independent System Operator, Inc.*, Filing in Compliance with May 7, 2008 Order, Docket No. OA08-13-003 (June 6, 2008), at pp 4-6; *New York Independent System Operator, Inc.*, Filing in Compliance with Order No. 890-A, Docket No. OA08-107-000 (April 15, 2008), at pp 8-11; see also *New York Independent System Operator, Inc.*, 130 FERC ¶ 61,104 (2010), at PP 9-14.

⁶³ See *New York Independent System Operator, Inc.*, Letter Order, Docket Nos. ER11-2048-003, -004 (June 6, 2011); *New York Independent System Operator, Inc.*, 133 FERC ¶ 61,208 (2010), at PP 12-13 (granting the NYISO’s amended waiver request from OASIS posting requirements that were incompatible with the NYISO’s transmission service); *New York Independent System Operator, Inc.*, 132 FERC ¶ 61,239 (2010), at P 22; *New York Independent System Operator, Inc.*, 125 FERC ¶ 61,274 (December 5, 2008), at PP 8-13; *New York Independent System Operator, Inc.*, Letter Order, Docket No. OA08-13-003 (November 12, 2008); *New York Independent System Operator, Inc.*, 127 FERC ¶ 61,005 (2009), at P 7; *New York Independent System Operator, Inc.*, 125 FERC ¶ 61,275 (2008); *New York Independent System Operator, Inc.*, 94 FERC ¶ 61,215 (2001), at P 61,795; *Central Hudson Gas & Electric Corp.*, 88 FERC ¶ 61,253 (1999).

to be dispatched down under the Minimum Interconnection Standard – information available in the SRIS; or (2) information that may be gleaned from deliverability analyses performed as part of the NYISO’s Class Year Study and, at the Developer’s option, at the SRIS stage. This information would likely be the most useful to project Developers seeking to determine whether their projects will have to “compete for the as-available transmission capacity” – AWEA’s stated concern in the petition that prompted this NOPR.⁶⁴

Deliverability under the NYISO OATT is the ability to deliver the aggregate of New York Control Area (“NYCA”) resources to the aggregate of the NYCA load under summer peak load conditions. This is evaluated by analyzing each proposed project in a Class Year Study within its respective Capacity Zone. In the Class Year Study’s deliverability analysis, the NYISO determines the deliverable capacity across specified interfaces within the NYCA. The NYISO’s deliverability evaluations determine whether generation is constrained or “bottled” capacity and may not be fully deliverable under all conditions or, in the alternative, whether there is available “transfer capability” to accommodate additional generation resources in the upstream area. For the NYISO, such information is already concisely packaged in the most recent deliverability analyses rather than through operational data posted on the public website.⁶⁵

In addition to having access to the most recent deliverability analyses from Class Year Studies, Developers can also request deliverability information tailored specifically to their project in the SRIS. Through an interconnection process improvement proposed by the NYISO in 2012, and accepted by the Commission in 2013, the NYISO permits Developers to request a

⁶⁴ AWEA Petition at 38-39.

⁶⁵ The NYISO’s deliverability analyses from each Class Year Study are available on the password-protected portion of its website. As noted above, access to such information can be gained by authorized individuals who have completed the appropriate request forms, executed a CEII non-disclosure agreement, demonstrated a legitimate business need for the information, and have been approved to obtain CEII under the NYISO’s CEII procedures.

preliminary deliverability evaluation as part of their SRIS analysis.⁶⁶ Before this tariff revision, the scope of the SRIS included only the evaluation of a project's impact on the safety and reliability of the New York State Transmission System and, if applicable, an Affected System, to determine what upgrades are needed under the NYISO Minimum Interconnection Standard.⁶⁷ The scope of the SRIS did not include a deliverability analysis which, prior to such tariff revisions, was performed only within the Class Year Study process.⁶⁸ While Developers could and may still request the NYISO's deliverability base case and obtain copies of deliverability study reports completed to date, Developers expressed an interest in obtaining information regarding potential deliverability issues associated with their projects earlier in the interconnection process. The NYISO addressed this concern through Commission-accepted revisions to the NYISO LFIP that allow a Developer to request a preliminary Deliverability analysis for its project at the SRIS stage.

In light of the expansive information already provided, the NYISO opposes the Commission's proposal to the extent it requires the NYISO to provide additional congestion and curtailment information. As explained above, additional operational data posted to the NYISO's public website would not provide the information that AWEA seeks and that the NOPR anticipates Developers will find useful. Due to the differences in the NYISO's curtailment and congestion management practices, the information that is most relevant for Developers in New York is that which is already available through deliverability analyses which can be requested by the Developer prior to the Class Year Study.

⁶⁶ *New York Independent System Operator, Inc.*, Order Accepting Tariff Revisions With Modifications, 142 FERC ¶ 61,113 (Issued February 15, 2013).

⁶⁷ See Attachment X, Section 30.7.3.

⁶⁸ See Attachment S, Section 25.7.

The NYISO does not oppose providing available curtailment and congestion information to Developers at the scoping meeting—specifically, to the extent known at the particular Point of Interconnection, the amount of bottled capacity that may not be fully deliverable under all conditions. The NYISO’s provision of further detail, however, would expand the scope of the scoping meeting and initial studies so as to potentially expand the time, required resources, and cost of the NYISO’s interconnection process, in direct contradiction to the stated goals of the NOPR.

The NYISO proposes that instead of the proposed OASIS postings, which as noted above, are neither implementable nor useful to NYISO Developers, the Commission should consider adding the option of a pre-application request for Large Facilities similar to that required for the Small Generator Interconnection Procedures (“SGIP”) under Order No. 792. Under such a procedure, a Large Facility Developer could complete a request form with information about a proposed or contemplated Point of Interconnection and, based on the information provided, the NYISO would coordinate with the Connecting Transmission Owner to provide information, to the extent it is readily available, such as existing or known constraints (*e.g.*, electrical dependencies at the Point of Interconnection, short circuit interrupting capacity issues, power quality or stability issues on the circuit, capacity constraints, or secondary networks). This appears to be precisely what the NOPR seeks to obtain for Developers and would be much more helpful to a Developer than operational data pulled from OASIS. This information would, by contrast, be tailored to the specific Point of Interconnection contemplated by the Developer. The NYISO urges the Commission to consider such an approach as an alternative to requiring cumbersome posting requirements that are not applicable in all regions and which can only provide historical data – data that is of little use to a Developer and indeed

may be misleading compared to data that could be provided through an interconnection study or in response to a pre-application request.

9. Electric Storage Resources as Generating Facility

The Commission proposes to revise the definition of “Generating Facility” in the Pro Forma LGIP and Pro Forma LGIA to include electric storage resources by inserting “and/or storage for later injection” in the definition.⁶⁹ The definition of “Generation Facility” in the NYISO’s LGIP already captures electric storage facilities. The NYISO therefore does not take a position on these proposed revisions other than to suggest that any revisions to the definition of “Generating Facility” intended to specifically reference energy storage resources reflect not only that the facility may store energy for later injection, but also for withdrawal, as energy storage facilities typically do both.

10. Reporting on Progress of Interconnection Studies

The Commission proposes to revise the Pro Forma LGIP to establish reporting requirements on transmission providers’ completion of interconnection studies within established time frames.⁷⁰ Specifically, transmission providers must post on their OASIS site, on a quarterly basis, detailed statistics related to processing each type of interconnection study and interconnection service request withdrawals, which information must be maintained for three years.⁷¹ If a transmission provider has more than 25% of any study type exceeding study deadlines for two consecutive quarters, it must (1) file informational reports at the Commission for the next four calendar quarters that describe the reason for each study delay and any steps

⁶⁹ NOPR at PP 138-139.

⁷⁰ NOPR at P 148.

⁷¹ NOPR at PP 148-149.

taken to remedy the cause of the delay; and (2) post on OASIS the total number of employee/consultant hours devoted to processing studies that quarter.⁷²

The Commission seeks comments regarding whether to require fewer or additional interconnection processing statistics, whether it is proposing the appropriate summary data requirements to enhance transparency, and what, if any, customization should be made to adjust for different regional processes.⁷³ Finally, the Commission seeks comments as to whether interconnection customers have sufficient information regarding the cause of study delays, whether transmission providers should be required to provide more detailed explanations, whether the transmission provider should have to inform the interconnection customer regarding its process for revising study timelines once a delay occurs, and whether it must also describe in sufficient detail any relevant details that could further affect the revised timeline.⁷⁴

The NYISO currently has extensive processes in place to ensure that consistent, thorough communication occurs with each Developer and with the NYISO's stakeholder community. The NYISO also currently maintains on its OASIS a list of all valid Interconnection Requests, together with the status of the Interconnection Request including, for example, where the project is in the study process, what studies have been completed, etc. The NYISO also updates the Transmission Planning Advisory Subcommittee ("TPAS") – a subcommittee of the NYISO's Operating Committee – on the status of all pending Large Facility studies. Such updates are included in the monthly TPAS agenda posted on the OASIS. More detailed status updates and information relevant to specific projects are provided directly to the Developer throughout the study process.

⁷² NOPR at PP 148-149.

⁷³ NOPR at P 150.

⁷⁴ NOPR at P 151.

Adding additional detail regarding the status of a particular study is not informative to the specific Developer, who already knows its status. Moreover, additional administrative requirements to track study statistics will not expedite the study process. Rather, the best way to expedite the studies is through targeted interconnection process improvements such as those the NYISO has proposed to its stakeholders. Among the NYISO's proposals are the following, each of which is designed to make the study process move along more quickly and efficiently:

- Electronic Form Submission;
- Expedited Study Agreement Processing (by eliminating the Connecting Transmission Owner from the necessary signatories);
- Standardized format of Study Reports;
- Reinforcement of the Roles and Responsibilities of Parties in the Interconnection Study Process;
- Allowing projects with Multiple Voltage Levels to submit only one Interconnection Request;
- Providing for Additional Class Year Start Dates (to allow Class Years to start as soon as possible after the prior Class Year Study completes);
- Bifurcating the Class Year Study (to allow certain Class Year Developers to complete their Class Year Study early); and
- Making the Feasibility Study optional at the Developer's election.

The NYISO urges the Commission to allow it to tailor appropriate process improvements with the goal of expediting the studies rather than merely tracking their status. The NYISO already publishes average study times for each study in its Transmission Expansion and Interconnection Manual, and would not oppose sharing periodic statistics with its stakeholders on average study timelines. This would help illustrate the impact of the NYISO's process improvements and identify where additional improvements may be needed. Such data would be

much more informative to prospective Developers than the detailed statistics proposed in the NOPR.

Posting information such as the number of days required to complete an interconnection study is only informative if additional detail is revealed, such as the reason for particular delays. To reveal such information may require disclosure of Confidential Information (*e.g.*, where delays are due to Developer's data being invalid, or where there is a pending withdrawal or pending dispute resolution negotiations). In addition, such detailed information regarding the status of a particular study is appropriately shared only with the Developer, not all projects in the interconnection queue. The NYISO does not believe providing additional details on a particular project's status on a publicly viewable report would provide any benefit to that project in regards to the processing of its Interconnection Request.

The NYISO must evaluate a multitude of projects that make use of a wide variety of technologies, seek to interconnect at different points on the electric system possessing different system characteristics, and often introduce unique complexities not previously addressed in earlier interconnection studies. In addition, the performance of interconnection studies requires the active participation and input of multiple parties, including the provision of extensive information and technical data by Developers. In the NYISO's experience, the responsiveness of the Developer and the accuracy of the information it submits are directly related to the NYISO's ability to timely perform interconnection studies.⁷⁵ The NYISO must also coordinate with all Affected Systems which, for certain projects, include multiple Affected Transmission Owners and Affected System Operators from other Control Areas.

⁷⁵ Developers often provide inaccurate information that requires significant back and forth discussion to verify and also modify their project specifications and location during the process, all of which can considerably add to the time required to complete a study. Developer's refusal to provide timely information and/or the provision of inaccurate or conflicting information can considerably delay the performance of studies that require accurate inputs before the study can begin.

Given these factors, the NYISO requires flexibility in performing the interconnection studies to evaluate the unique complexities of each project and should be evaluated based on its performance of studies in accordance with the Reasonable Efforts standard. The requirement to submit explanatory filings to the Commission on a quarterly basis upon failure to meet strict, rigid deadlines, despite using Reasonable Efforts under the NYISO LFIP, is unnecessarily punitive and would jeopardize the NYISO's ability to allow flexibility to Developers in its interconnection procedures. For example, the NYISO would have to consider process changes that would require issuance of a withdrawal notice for failure to provide valid data rather than the NYISO's current practice of working with Developers to validate and supplement insufficient data. In addition, the NYISO's ability to accommodate changes requested by Developers to their projects would be much more limited. Maintaining such flexibility is something that Developers in the NYISO's process have expressed the desire to retain, and even expand. To implement this NOPR proposal would necessarily limit such flexibility and, as a result, create an inefficient process in which projects would find themselves more easily subject to withdrawal and required to go back through the interconnection study process.

11. Affected Systems

The Commission seeks comment on whether it should prescribe guidelines for affected systems analyses and coordination or if it should impose study requirements and associated timelines on affected systems that are also public utility transmission providers.⁷⁶ The Commission also seeks comment on whether to standardize the process for coordinating an affected system analysis and whether to develop a standard affected system study agreement.⁷⁷ Finally, the Commission seeks comments on proposals or additional steps that the Commission

⁷⁶ NOPR at P 159.

⁷⁷ NOPR at P 159.

could take (*e.g.*, conducting a workshop or technical conference focused on improving issues that arise when affected systems are impacted by a proposed interconnection).⁷⁸

The NYISO does not support the Commission prescribing *pro forma* guidelines for affected systems analysis and coordination or imposing study requirements and associated timelines on affected systems – at least for the Northeast region. The NYISO is already working with its neighbors, PJM Interconnection, L.L.C. (“PJM”) and ISO New England Inc. (“ISO-NE”), under the Northeastern ISO/RTO Planning Coordination Protocol to improve existing processes for addressing affected systems. The NYISO, PJM, and ISO-NE have already made significant strides in improving their processes. For example, they have established procedures to govern the coordination of study costs, estimates of study costs, development of study scopes, work flow among the impacted ISOs and RTOs and their respective Transmission Owners, and sharing of information among the impacted parties. Because these procedures vary based on the unique characteristics of the respective NYISO, PJM and ISO-NE interconnection processes, the NYISO does not believe that *pro forma* procedures would be the most beneficial way to address areas of improvement.

12. Requesting Interconnection Service Below Generating Facility Capacity

The Commission proposes to modify the Pro Forma LGIP to establish a process by which transmission providers consider interconnection customer requests for interconnection service below their generating facility capacity.⁷⁹ Under this proposal, an interconnection customer requesting service below its generating facility capacity must install appropriate monitoring and control technologies and would be subject to reasonable provisions to enforce a maximum export

⁷⁸ NOPR at P 159.

⁷⁹ NOPR at P 167. The Commission also proposes to modify the definitions of Large Generating Facility and Small Generating Facility in the Pro Forma LGIP and LGIA, so that they are based on the level of interconnection service for the generating facility rather than the generating facility capacity. NOPR at P 172.

limit, a notification process to a facility that has exceeded its limit, and a process for resolving disputes.⁸⁰ The Commission seeks comments on the types and availability of control technologies and protective equipment and the extent to which penalties should apply if the interconnection customer exceeds its limit.⁸¹ The Commission also seeks comments on whether additional revisions to the Pro Forma LGIP and Pro Forma LGIA are required, whether transmission providers should describe proposed processes on compliance, or whether such requests should be processed on an ad hoc basis.⁸²

The NYISO does not oppose a process by which it and the Connecting Transmission Owner would consider a Developer's request for interconnection service at a proposed maximum injection limit below its generating facility capacity. However, to ensure reliability, two evaluations are critical: (1) short circuit analysis of the full generating facility capability; and (2) steady-state and dynamic study evaluations of the specific mechanism by which this limit will be enforced. These evaluations are both necessary in order to ensure the mechanism does not impact the resource's ability to reliably interconnect to the New York State Transmission System or Distribution System and that, in the event the mechanism fails, there are no adverse short circuit impacts.

The NYISO suggests that the maximum limit of the generating facility should be set forth in the interconnection agreement. The NYISO and Connecting Transmission Owner should have the ability to take corrective actions as necessary to maintain reliability in the event that the maximum power limit is exceeded—*e.g.*, the ability to curtail the resource. NYISO does not, however, support penalties for non-compliance, other than being subject to breach of the

⁸⁰ NOPR at P 168.

⁸¹ NOPR at PP 168-169.

⁸² NOPR at P 173.

Interconnection Agreement, which may provide for termination of the facility's interconnection service.

13. Provisional Agreements

The Commission proposes to revise the Pro Forma LGIP and Pro Forma LGIA to allow interconnection customers to request provisional interconnection service and operate under provisional interconnection agreements based on existing and regularly updated studies that demonstrate that necessary interconnection facilities/network upgrades are in place to meet applicable reliability requirements.⁸³ The transmission provider would provide additional studies as necessary to determine whether provisional service can be reliably accommodated and whether stability, short circuit, and/or voltage issues would arise, and such studies would be updated by the transmission provider on a quarterly basis.⁸⁴ The Commission seeks comment on the proposal, the means to mitigate any risks and liabilities for provisional service, and under what circumstances such service is beneficial.⁸⁵ The Commission also seeks comments regarding whether there is a need to establish a *pro forma* provisional LGIA as well as any important details related to the service (*e.g.*, when the service could be requested, when milestone payments would be required).⁸⁶

The NYISO does not oppose requirements for providing provisional interconnection service and in fact already does so under the Limited Operation provision of the NYISO LGIA. Currently, the NYISO tenders an LGIA upon the earlier of (1) completion of the Class Year Study in which the Developer accepts its Project Cost Allocation and posts required Security for

⁸³ NOPR at P 186.

⁸⁴ NOPR at PP 188, 190.

⁸⁵ NOPR at P 188.

⁸⁶ NOPR at P 190.

upgrades required for reliability – System Upgrade Facilities; or (2) upon request from the Developer, an option available to the Developer once it has executed a Class Year Facilities Study Agreement.⁸⁷ Under the LGIA, if the Developer wishes to go in-service prior to the completion of required System Upgrade Facilities, the Developer may request a limited operations study under Article 5.9 of the LGIA. Through such a study, the NYISO and the Connecting Transmission Owner determine whether and the extent to which the facility can reliably interconnect on a provisional basis. Among NYISO’s pending queue process improvements is a proposal to provide specific tariff language outlining the manner in which this practice could be extended to requests that pre-date execution of the LGIA as long as such tariff language provides the NYISO and Connecting Transmission Owner the opportunity to fully evaluate the reliability impacts of the project going in-service prior to completion of its required upgrades.⁸⁸

The NYISO does not support performing limited operation study updates on a quarterly basis. Consistent with its existing practice for performing limited operation studies, the NYISO proposes that the provisional time frame be defined upfront and be studied at the outset to provide a permissible output over the defined time frame. The NYISO would, however, propose to retain the discretion to update its analysis as needed based on system changes. In addition, the NYISO does not support the development of a new provisional interconnection agreement. A separate provisional interconnection agreement unnecessarily complicates and prolongs the interconnection agreement negotiations. Instead, the terms and conditions of the limited

⁸⁷ See Attachment X, Section 30.11.1 and 30.11.2.

⁸⁸ See Issue No. 10 described in Attachment I and Attachment II.

provisional service should be documented in the existing *pro forma* interconnection agreement, which can be amended, as needed, after the provisional service has ended.⁸⁹

14. Surplus Interconnection Service

The Commission proposes to require transmission providers to revise their Pro Forma LGIP and Pro Forma LGIA to include an expedited process for interconnection customers to utilize or transfer surplus interconnection service at existing generating facilities.⁹⁰ The Commission further proposes that this process would not only afford priority to an existing generating facility owner or its affiliate to use the surplus interconnection service, but would also establish an open and transparent process for the sale of that surplus interconnection service if the owner and its affiliates elect not to use it and make it available to another party.⁹¹ The Commission proposes that this expedited process for surplus interconnection service be available for any quantity of surplus interconnection service, regardless of whether it is above or below the 20 MW threshold for small and large generator interconnection.⁹²

The NYISO opposes tariff revisions that would allow an existing facility to simply “transfer” interconnection service provided for in its LGIA that it is not using. An energy storage resource that wants to use the interconnection service that may not be used from time to time by a variable wind generator cannot simply “plug-and-play” by obtaining the wind generator’s existing interconnection service. It is not simply a matter of the MW capacity of an interconnection that is deemed reliable; it is the MW capacity along with the other specific

⁸⁹ See, e.g., New York Independent System Operator, Inc., Service Agreement No. 2305 Among NYISO, NYSEG & Greenidge Generation LLC (non-conforming LGIA providing for Limited Operation; accepted by the Commission in a January 5, 2017 letter order in Docket No. ER17-352-000), available via etariff at the following link: [Agreement No. 2305, LGIA \(SA 2305\) NYISO, NYSEG & Greenidge Generation LLC, 0.0.0.](#)

⁹⁰ NOPR at P 200-202.

⁹¹ NOPR at P 201.

⁹² NOPR at P 191.

technical characteristics of the facility that was evaluated in the interconnection process. Megawatts are not simply interchangeable.

Developers are obligated to notify the NYISO of any modifications to the facility compared to what was evaluated in the interconnection studies. If a generator ends up constructing a facility that is smaller than proposed during the interconnection process, the Developer should inform the NYISO so that change can be considered and reflected in an amendment to the project's Interconnection Agreement and system models. The Developer is required to provide this information under Article 24.4 of the NYISO's LGIA. If, however, a new facility is proposing to use the "surplus interconnection service," it should be required to submit a new Interconnection Request as any other new facility would be required to do. This is necessary despite the original facility not using all the interconnection service for which it was evaluated. Short circuit issues, for example, must be evaluated to ensure the new facility does not create an adverse reliability impact. If the new facility seeks to use 20 MW or less of the existing "surplus" interconnection service, it could proceed under the SGIP which allow the parties to agree to waive some or even all of the interconnection studies required. In many circumstances it might be appropriate to proceed directly to a Small Generator Facilities Study and a Small Generator Interconnection Agreement ("SGIA"), requiring only limited time and cost to be spent by the Developer in the interconnection study process.

Moreover, this proposal raises concerns with Open Access. The Commission has noted the potential for undue discrimination and preferential treatment by an owner of existing generation when it has the ability to transfer interconnection service to some customers and not others.⁹³ Accordingly, the NYISO developed, and the Commission approved, its LGIA and

⁹³ See, e.g., *Midwest Independent System Operator, Inc.*, 140 FERC ¶ 61,237 (2012), at PP 50-51 ("[W]e are concerned that MISO's present proposal creates opportunities for undue discrimination and preferential

SGIA in a manner that ensures that access to a point of interconnection will be available on a non-discriminatory basis.⁹⁴ For example, under the NYISO’s Commission-approved tariff, once a generator is retired and its interconnection agreement is terminated, access to that generator’s point of interconnection will be available to proposed projects, including the retired generator itself, through the generally applicable interconnection or transmission expansion processes, unless temporary use is required to maintain reliability.⁹⁵ The right to a particular point of interconnection is therefore a contractual right. The NOPR would expand this into a property right by allowing a generator to transfer interconnection service to a third party when the generator has no property interest to transfer – *i.e.*, no ownership interest in the facilities or obligation to maintain or operate the facilities. This appears to be in conflict with the principle of Open Access.

The NYISO’s tariff already includes processes to permit Developers to make use of surplus capacity created by upgrades they are required to fund due to their projects. Specifically, Attachment S of the NYISO OATT establishes a “Headroom” mechanism pursuant to which a Developer may recover the costs of certain upgrades that other Developers use. Under the Headroom requirements, if a Developer pays for upgrades that create functional or electrical capacity on the electric system in excess of that needed for the Developer’s project, then the Developer may be reimbursed by a subsequent Developer for their use of the excess capacity of

treatment by providing an owner of an existing generator the ability to grant access to this service to some customers and not to others.”); *Midwest Independent System Operator, Inc.*, 155 FERC ¶ 61,274 (2016), at P 19 (rejecting MISO’s compliance filing regarding the ability to retain and transfer interconnection service for open access concerns).

⁹⁴ See *New York Independent System Operator, Inc.*, 151 FERC 61,075 (2015), at P 27; *New York Independent System Operator, Inc.*, Compliance Filing, Docket No. ER14-2518-003 (June 1, 2015) at pp 4-5; *New York Independent System Operator, Inc.*, Response to Deficiency Letter, Docket Nos. ER14-2518-000, -001 (February 12, 2015); see also *Erie Power, LLC*, 148 FERC ¶ 61,038 (2014), at P 21.

⁹⁵ See *New York Independent System Operator, Inc.*, Response to Deficiency Letter, Docket Nos. ER14-2518-000, -001 (February 12, 2015), at pp 2-3; *New York Independent System Operator, Inc.*, 151 FERC ¶ 61,075 (2015), at PP 27, 32-35, 48.

the upgrades, to the extent the headroom meets the electrical or functional Headroom requirements of Attachment S.

Such Headroom can be created by a Developer that elects to construct System Upgrade Facilities that are larger or more extensive than the minimum facilities required to reliably interconnect its proposed project (“Elective System Upgrade Facilities”). The Developer can construct Elective System Upgrade Facilities as long as they are reasonably related to the interconnection of the proposed project. Headroom can also result simply from the fact that commercially available facilities may be somewhat larger than what is required for a particular project, to the extent the headroom meets the electrical or functional Headroom requirements of Attachment S. If a Developer of a later project uses the Headroom created and paid for by the earlier Developer, the later Developer must pay the original Developer for this Headroom in accordance with specific Headroom reimbursement rules.

15. Material Modifications

The Commission proposes to revise the Pro Forma LGIP to establish a technological change procedure to assess and, if necessary, study whether the transmission provider can accommodate a technical change request without it being considered a material modification.⁹⁶ For the new procedure, the Commission proposes that the interconnection customer provide a request to the relevant transmission provider, which notification would include analysis to demonstrate that the proposed incorporation of the technical advancement would result in equal or better electrical performance.⁹⁷ The Commission proposes that the interconnection customer may submit such request prior to the execution of the Facilities Study Agreement, upon which the transmission provider would use sound engineering judgment to determine whether it can

⁹⁶ NOPR at P 217.

⁹⁷ NOPR at P 218.

accommodate the proposed technological change without it constituting a material modification, or whether a study of the proposed change is required, such study to be performed within 30 days.⁹⁸

The Commission seeks comments on these requirements, including whether the new procedure should specify what technological advancements can be incorporated at various stages of the interconnection process, which requirements apply to the interconnection customer and transmission provider, and what is appropriate for the information and study requirements.

The NYISO does not oppose this proposal if it is limited to assessing the materiality of, and considering whether it can accommodate, a modification related to the specific technology type initially proposed for the project. The NYISO, however, opposes tariff changes that could require it to accommodate as a non-material modification a change to the technology type of the project that would essentially constitute a new facility – *e.g.*, the addition of a battery element to a wind project or the addition of a solar element to a wind project. Such “modifications” are treated as new facilities requiring new Interconnection Requests under the NYISO’s current procedures. This is, in part, due to the fact that under current market rules, such a dual-technology resource cannot be treated as a single resource in the NYISO’s markets. Current market rules require such a resource to be treated as two separate resources with separate bidding points and separate metering.

Even with changes to market rules that would allow such resources to be treated as one “facility,” the proposal to add one technology to an existing alternative technology may nonetheless be a material modification. Different technologies operate differently in the markets and need to be studied differently, using the appropriate modeling data for that type of

⁹⁸ NOPR at PP 219, 223.

technology. For example, a solar facility has a different capacity value than a battery and cannot be evaluated in short-circuit, stability, or deliverability analyses in the same way as a wind facility or combined-cycle plant. Therefore, a proposal to combine two different technology types at one Point of Interconnection may be a material modification. Stability and short circuit analysis would need to be performed and subsynchronous torsional interactions may also need to be evaluated before such a modification could be considered non-material.

While the NYISO could support allowing certain minor technical modifications reflecting technological advances to the same technology type (*e.g.*, change to the type of wind turbines), it only supports allowing such modifications early in the interconnection study process. The NYISO opposes allowing modifications to projects later in the interconnection process as the evaluation of such technology changes require updates to much of the analyses performed in the SRIS. In such cases, the NYISO must evaluate the proposed additions or modifications to determine the short circuit, voltage, and stability impact to the system.

16. Modeling Electric Storage Resources

The Commission proposes to require that transmission providers evaluate their methods for modeling electric storage resources for interconnection studies, identify whether their current modeling and study processes adequately and efficiently account for the operational characteristics of electric storage resources, and report to the Commission why and how their existing practices are or are not sufficient.⁹⁹ In particular, the Commission seeks comments on whether establishing a unified model for studying electric storage resources would expedite the study process and reduce the time and cost expended.¹⁰⁰ Finally, the Commission seeks

⁹⁹ NOPR at P 229.

¹⁰⁰ NOPR at P 229.

comments on what information electric storage resources should provide that is not already consistently provided with interconnection requests.¹⁰¹

The NYISO finds its electric storage modeling methods to be sufficient. The NYISO's interconnection studies currently account for the operating characteristics of electric storage resources to the extent necessary under its Minimum Interconnection Standard. Interconnection studies for individual energy storage projects typically evaluate the impact of the project on the system at the proposed design maximum power injection and maximum charging load, which is consistent with how other generation resources are evaluated.

While the NYISO has experienced challenges with the accuracy of modeling information used to evaluate energy storage resources in the interconnection process, the NYISO does not support a unified model for studying electric storage resources. The evaluation and modeling assumptions for an electric storage resource are very different depending on whether the resource seeks to provide energy and capacity or only regulation solution. A unified model would not provide the required flexibility. The NYISO finds its electric storage modeling methods to be sufficient as long as the Developer provides accurate modeling data and validation of such data.¹⁰² Electric storage resources should be required to provide accurate data and validation as any other facility in the interconnection process is required to do.

¹⁰¹ NOPR at P 230.

¹⁰² The NYISO filed comments in response to the Commission's Notice of Proposed Rulemaking for Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators in Docket Nos. RM16-20-000 and RM16-20-000 concerning, among other things, the implementation of appropriate rules to integrate electric storage resources in the RTO/ISO markets. *See Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Comments of the New York Independent System Operator, Inc., Docket Nos. RM16-20-000 and RM16-20-000 (February 13, 2017). In the event the Commission directs changes in the market rules that affect the operation of the system, the NYISO may need to revisit its electric modeling methods for interconnection studies.

17. Reforms to SGIA/SGIP

The Commission seeks comment on whether any of the proposed reforms should be applied to small generating facilities and implemented in the *pro forma* Small Generator Interconnection Procedures and Small Generator Interconnection Agreement.¹⁰³

The NYISO opposes the application of these proposals to the SGIP and SGIA. FERC addressed efficiencies in the SGIP through Order No. 792 and made considerable revisions to the process that may be difficult to reconcile with proposals in this NOPR. Also, in Order No. 2006 the Commission emphasized its intent that the SGIP be more streamlined than the LGIP. Layering these numerous proposals onto the existing SGIP would serve to make the SGIP more cumbersome, not more streamlined. Moreover, applying these NOPR proposals to the SGIP could add delay and inefficiency in the interconnection process for Small Generators, which would appear to be precisely what the Commission seeks to avoid.

IV. COMMUNICATIONS AND CORRESPONDENCE

All communications and correspondence concerning these Comments should be served as follows:

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¹⁰³ NOPR at P 11.

V. CONCLUSION

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

Respectfully submitted,

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Attachment I

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No. ¹	CONTEMPLATED INITIATIVE	DESCRIPTION	STATUS
Part 1			
Administrative Process Improvements			
1	Electronic Form Submission	Increase efficiency of form submission and routing for IRs, Pre-App requests, Study Agreements (including, <i>e.g.</i> , fillable .pdfs with drop down boxes that can be completed and emailed directly to a NYISO mailbox)	Already being implemented in part. Revisions and supplements to 3/2/2017 proposal with detailed status of this proposal are being presented to the 4/3/2017 Interconnection Issue Task Force for discussion
2	Expedited Processing of Study Agreements	Require only the project Developer and NYISO to execute the study agreement	Revisions and supplements to 3/2/2017 proposal are being presented to the 4/3/2017 Interconnection Issue Task Force for discussion
3	Study Report Format	Issue reports in a standard and simple format	Revisions and supplements to 3/2/2017 proposal are being presented to the 4/3/2017 Interconnection Issue Task Force for discussion

¹ Due to the different categorization of the issues on this chart into the various categories within each part of the comprehensive queue reform initiative, the issue numbers have changed in this version vs. the version posted for the 2/17/2017 TPAS

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No. ¹	CONTEMPLATED INITIATIVE	DESCRIPTION	STATUS
4	Roles and Responsibilities of Each Party in the Interconnection Process	Propose mechanisms by which to reinforce the roles and responsibilities of all parties in the interconnection process (<i>e.g.</i> , through tariff language, additional provisions in study agreements and/or verbal reminders at Scoping Meeting)	Revisions and supplements to 3/2/2017 proposal are being presented to the 4/3/2017 Interconnection Issue Task Force for discussion
5	Interconnection Requests for Multiple Voltage Levels	Require only one interconnection request for the following situations: (1) generator with 3-winding transformer w/legs to two different voltage level lines; and (2) combined cycle with a GT and ST connected at different voltage levels (currently, tariff requires two separate interconnection requests for these situations)	Revisions and supplements to 3/2/2017 proposal are being presented to the 4/3/2017 Interconnection Issue Task Force for discussion

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No. ¹	CONTEMPLATED INITIATIVE	DESCRIPTION	STATUS
6	Withdrawal	The withdrawal provision provides for a 15 Business Day cure period, but that cure period does not apply to certain deadlines in Attachments S and X – particularly the deadline from Section 25.6.2.3.1.4 of Attachment S. Reconsider the specific deadlines to which the 15 Business Day cure period should/should not apply	Revisions and supplements to 3/2/2017 proposal are being presented to the 4/3/2017 Interconnection Issue Task Force for discussion
Class Year Process Improvements			
7	Class Year Start Dates	Provide more possible Class Year Start Dates than the existing process (which provides for only 3 possible start dates within a calendar year) by allowing the next Class Year to start on the first Business Day after 30 days after completion (<i>i.e.</i> settlement and posting of Security) of the prior Class Year	Revisions and supplements to 3/2/2017 proposal are being presented to the 4/3/2017 Interconnection Issue Task Force for discussion

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No. ¹	CONTEMPLATED INITIATIVE	DESCRIPTION	STATUS
8	Class Year Structure	Allow a project to withdraw from the Class Year Study prior to the completion of the ATBA (but will still count as one of 2 Class Years a project may enter)	Revisions and supplements to 3/2/2017 proposal are being presented to the 4/3/2017 Interconnection Issue Task Force for discussion
9	Class Year Structure	Allow any CY project that has no impact on additional SDU studies to settle cost allocation and complete the CY Study	Revisions and supplements to 3/2/2017 proposal are being presented to the 4/3/2017 Interconnection Issue Task Force for discussion
10	Class Year Structure	Clarify how a project can go in service for Energy prior to completed a Class Year Study	Revisions and supplements to 3/2/2017 proposal are being presented to the 4/3/2017 Interconnection Issue Task Force for discussion
Other Study Process Improvements			
11	Optional Feasibility Study	Make the Feasibility Study for Large Facilities and Small Generating Facilities optional, similar to the TIP, with the exception of alternative POIs that must be evaluated in a Feasibility Study.	Revisions and supplements to 3/2/2017 proposal are being presented to the 4/3/2017 Interconnection Issue Task Force for discussion

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No. ¹	CONTEMPLATED INITIATIVE	DESCRIPTION	STATUS
Part 2			
Other Study Process Improvements, Continued			
12	Progression of SIS and SRIS Reports	Revise OATT 3.7 and Attachments P and X to require all SISs and SRISs to move forward to TPAS within 6 months of completion of the study report	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion
13	Standard Generator Models	Revise the IR form and <i>pro forma</i> SRISA so that stability data is not required until the SRIS stage. NYISO does not support maintaining a library of standard models, but supports allowing Developers to provide generic models (with project-specific parameters and adequate manufacturer documentation)	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion
14	Small Generator Deposits and Application Fee	Increase Small Generator Feasibility Study deposit from \$1K to \$10K and decrease the Small Generator System Impact Study deposit from the full study cost estimate to \$30K; also consider making the Small Generator application fee of \$1K non-refundable (similar to the Large Facility fee)	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion

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No. ¹	CONTEMPLATED INITIATIVE	DESCRIPTION	STATUS
15	Base Cases	Clarify base case inclusion rules for interconnection studies	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion
16	Tracking and Approvals of Proposed In-Service Dates	Revise the manner in which In-Service Dates (and presumably Commercial Operation Dates (CODs)) are tracked/approved by requiring Developers to provide updates to proposed I/S Dates on a quarterly basis once they have executed a Facilities Study Agreement	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion
17	Refunds with Interest	Require outstanding invoices for withdrawn projects to be provided within a specific timeframe and require study deposits to be trued up with outstanding invoices before deposits are refunded in the event of withdrawal. Currently, upon withdrawal, deposits are payable with interest, regardless of outstanding invoices yet to be received.	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion

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No. ¹	CONTEMPLATED INITIATIVE	DESCRIPTION	STATUS
18	Alternative POIs for Small Generating Facilities	Clarify the process for electing the evaluation of alternative POIs in the Small Generator Interconnection Procedures, with clarification that alternative POIs must be evaluated in a Feasibility Study (for both Large and Small Facilities)	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion
19	Limited Interconnection Studies for Uprates and Winter CRIS determinations for Uprates	Clarify manner in which study scopes for uprate projects may be narrowed, subject to NYISO and CTO coordination Clarify manner in which Winter CRIS ratio is determined for projects with uprates	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion
20	PMU Requirement	Require a PMU for proposed new Large Generating Facilities and Merchant Transmission Facility ≥ 100 MW and new substations (230kV or above)	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion
21	Small Generators Subject to Class Year Process	Clarify the clustering process for Small Gen studies for Small Gens that potentially impact each other and when upgrades identified in clustered studies will require Small Generators to enter a Class Year Study	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion

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No. ¹	CONTEMPLATED INITIATIVE	DESCRIPTION	STATUS
22	Technical Requirements	Develop more specific requirements that TOs present changes to planning criteria to stakeholders	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion
23	Tie Line Projects	<p>Clarify in the TE&I Manual how MIS is applied, including extent to which transfer limit degradation requires mitigation under the Minimum Interconnection Standard.</p> <p>Propose tariff revisions that would allow transmission upgrades identified by the NYISO in Affected System Studies (for projects interconnecting to neighboring control areas) to proceed directly from the other control area’s System Impact Study to the NYISO’s Facilities Study under Attachment P</p>	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion

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No. ¹	CONTEMPLATED INITIATIVE	DESCRIPTION	STATUS
Clarifications regarding Cost Recovery for SDUs and Incremental TCCs for SDUs			
24	Offset of SDU Costs	Expand the allowed offset of SDU costs (w/conforming revisions to Attachment Y and related rate schedules) to provide that SDU funds could be used to cover portion of costs of regulated solutions to Reliability Needs and regulated solutions in CARIS and PPTPP, to extent funds were collected for same SDU if actually constructed by the regulated solution; clarify what would constitute the “same” upgrade for these purposes	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion
25	Highway Facilities Charge	Clarify formula for allocated remainder of ROS Highway SDU costs (beyond that paid by CY Developers) to LSEs	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion

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No. ¹	CONTEMPLATED INITIATIVE	DESCRIPTION	STATUS
26	Incremental TCCs	Clarify method for requesting, evaluating and allocating Incremental TCCs associated with SDUs	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion
Other Tariff/Manual Clarifications/Updates			
27	Post-Class Year Studies	Clarify the manner in which post-Class Year studies are conducted and coordinated (<i>e.g.</i> , detailed design studies, SSR and protection coordination studies)	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion
28	Security	Specify Security reductions with respect to the Connecting TO(s) and <u>Affected TOs</u> ; consider clarifying forfeiture provisions	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion
29	EPC	Require Developer, CTO, the NYISO, and any Affected Transmission Owner to enter into an EPC agreement for the construction of triggered SUFs. (Similar language is in § 25.7.11.1.4.2.6 for SDUs)	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion

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No. ¹	CONTEMPLATED INITIATIVE	DESCRIPTION	STATUS
30	LGIA – Tax Provisions	Revise/udpate tax provisions in the <i>pro forma</i> Large Generator Interconnection Agreement	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion
31	LGIA – Insurance Provisions	Update insurance language in the <i>pro forma</i> Large Generator Interconnection Agreement; consider revising IA language to defer the need to have insurance coverage in place within 10 days of executing or filing the IA with the FERC (allowing parties to stipulate regarding when insurance coverage must be in place) (See CAISO proposals in ER16-693-000)	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion
32	Ministerial Edits to Services Tariff	Remove the March 1 reference in Section 5.12.1.8 of the Services Tariff since a Class Year can now begin on alternative dates	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion

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No. ¹	CONTEMPLATED INITIATIVE	DESCRIPTION	STATUS
33	Ministerial and Clarifying Edits to LFIP and SGIP	<p>Remove “Standard” from remaining Att. X references to “Standard LFIP” (see, e.g., Section 30.2.1 header)</p> <p>Clarify the 30 day deadline for execution of the FSA in Section 30.8.1 of Attachment X, referring only to 30 days from tender of the FSA.</p> <p>Use LGIA acronym in section 30.11. In Section 30.11.3 add language consistent with regulatory milestone tariff revisions from 2017 that to make clear that execution of IA cannot occur until applicable milestone is met</p> <p>In Sections 30.3.1 and 32.1.3, clarify baseline ERIS for project that doesn’t go forward with part of project studied in the interconnection process</p> <p>Correct reference to FSA in Section 32.1.1.7 to refer to the Class Year FSA, which is required for CRIS requests by Small Generators.</p>	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion

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No. ¹	CONTEMPLATED INITIATIVE	DESCRIPTION	STATUS
34	Ministerial Edit to <i>pro forma</i> SRIS Agreement	In pro forma SRISA in Attachment X, it revise “Interconnection System Reliability Study,” to “Interconnection System Reliability Impact Study”	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion
35	Ministerial Edits to Facilities Study Agreement in LFIP	<p style="color: red;">–“New York Transmission System,” should be “New York State Transmission System”</p> <p style="color: red;">–Reference to Section 13.1 should be a reference to Section 30.13</p> <p style="color: red;">- Change “Large Facility” to “facility” as appropriate, to accommodate Small Generators and non-FERC jurisdictional interconnections that enter a Class Year only for CRIS</p> <p style="color: red;">Make the following edit to Article 6.5:</p> <p style="color: red;">“Developer or NYISO may terminate this Agreement upon the withdrawal of the Developer’s withdrawal project from the Interconnection Facilities Study pursuant to Section 25.7.7.1 of Attachment S.”</p>	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion

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No. ¹	CONTEMPLATED INITIATIVE	DESCRIPTION	STATUS
36	Ministerial Edit to <i>pro forma</i> External CRIS FSA	Revise “winder” to “winter” in Attachment to External CRIS FSA	NYISO bringing this proposal to the 4/3/2017 Interconnection Issue Task Force for discussion
To be considered as part of Compliance Filing, if required			
TBD	Benchmarking & Best Practices	Benchmark the time it takes projects to proceed through the interconnection process in other ISOs/RTOs compared to NYISO; identify best practices for an efficient interconnection process from other ISOs/RTOs	Not to be included in 2017 Queue Improvements, but may be subject of or related to compliance filing obligations, if any arise pursuant to a Final Order under RM17-8-000
TBD	Developer and Transmission Owner Responses to Information Requests	Consider provisions making Developer and TO obligations more explicit with respect to responding to requests for supplemental information and data.	Not to be included in 2017 Queue Improvements, but may be subject of or related to compliance filing obligations, if any arise pursuant to a Final Order under RM17-8-000
TBD	Materiality Reviews	Clarify what is a material modification; address whether and how to update studies when developer makes modifications	NYISO supports this initiative for the entire interconnection process (<i>i.e.</i> , in Attachments P, X, and Z, including specific provisions on study costs attributable to initiated modifications, including perhaps a <i>pro forma</i> modification study agreement – not to be included in 2017 Queue Improvements, but may be subject of or related to compliance filing obligations, if any arise pursuant to a Final Order under RM17-8-000

Proposed Interconnection Queue Improvement List
2017 Comprehensive Queue Reform Initiative
 Transmission Planning Advisory Subcommittee – April 3, 2017

No. ¹	CONTEMPLATED INITIATIVE	DESCRIPTION	STATUS
TBD	Dispute Resolution	When parties disagree about an interconnection issue, the NYISO should be permitted, encouraged or required to provide an advisory opinion	NYISO does not support this initiative. NYISO already assists parties resolve disputes; a formal advisory opinion would not be appropriate – not to be included in 2017 Queue Improvements, but may be subject of or related to compliance filing obligations, if any arise pursuant to a Final Order under RM17-8-000

Attachment II



Comprehensive Interconnection Process Improvements Initiative Part 1

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Interconnection Issues Task Force
April 3, 2017
NYISO's Krey Corporate Center

Revisions and Updates to 3/2/2017 version are in red

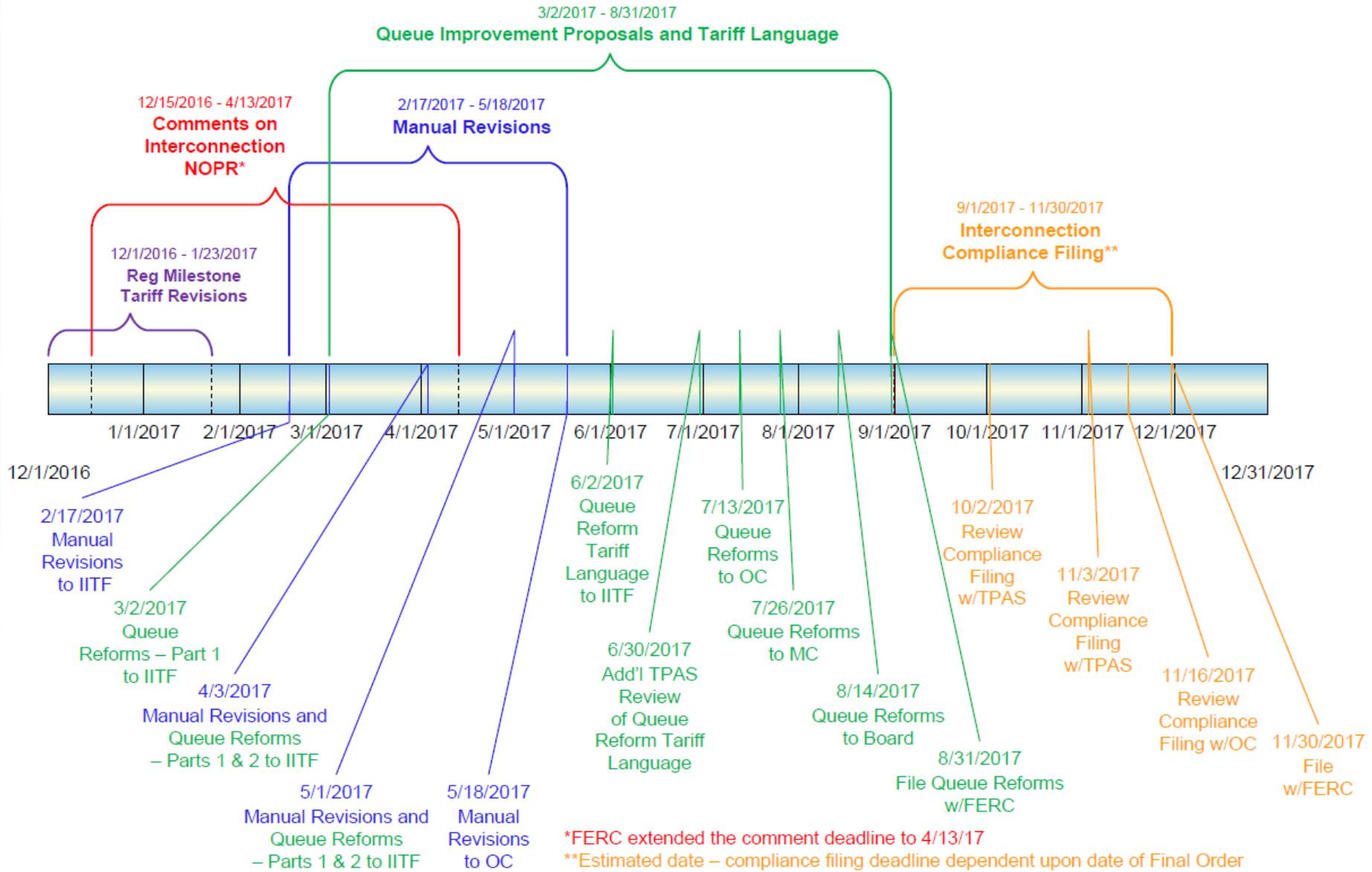
Topics for Discussion

- ◆ Objectives
- ◆ Targeted Schedule
- ◆ Overview of All Proposed Process Changes
- ◆ Overview of Part 1 Proposals
- ◆ Specific Part 1 Proposals
 - *Administrative Process Improvements*
 - *Class Year Study Process Improvements*
 - *Other Study Process Improvements*
- ◆ Next Steps

Objectives

- ◆ **Improve the efficiency of the interconnection process while maintaining necessary reliability evaluations treating Developers equitably**
- ◆ **Specific Objectives:**
 - *Increase administrative efficiency*
 - *Expedite the study process*
 - *Allow Developers to proceed through entire process more quickly, particularly the Class Year Study, while allowing as much flexibility as possible*
 - *Clarify and update existing practices/procedures*

Comprehensive Interconnection Process Improvements Targeted Schedule



Overview of Proposals

- ◆ **Administrative Improvements**
 - *Issue Nos. 1 through 6*
- ◆ **Class Year Study Process Improvements**
 - *Issues Nos. 7 through 10*
- ◆ **Other Study Process Improvements**
 - *Issues Nos. 11 through 23*
- ◆ **Clarifications regarding cost recovery for SDUs and Incremental TCCs for SDUs**
 - *Issues Nos. 24 through 26*
- ◆ **Other Tariff/Manual Clarifications/Updates**
 - *Issue Nos. 27 through 36*

Overview of Part 1 Proposals

◆ Administrative Improvements

- *Electronic form submission*
- *Expedited processing of study agreements*
- *Improved format of study reports*
- *Clarification/reinforcement of roles and responsibilities of parties in the study process*
- *Revisions to requirement re: separate Interconnection Requests for interconnections with multiple voltage levels*
- *Clarify withdrawal procedure*

Overview of Part 1 Proposals

- ◆ **Class Year Study Process Improvements**
 - *Additional Class Year Start Dates*
 - *Additional Opportunities for a Class Year project to Withdraw from the Class*
 - *Opportunity for a Class Year project not impacted by additional SDUs to Complete the Class Year Early*
 - *Clarification re: how a project can go in-service prior to completion of a Class Year Study*
- ◆ **Other Study Process Improvements**
 - *Optional Feasibility Study for Large Facilities and Small Generators*
 - *Additional items to be discussed in Part 2*

Administrative Process Improvements

Administrative Process Improvements

◆ Issue No. 1: Electronic Form Submission

■ *Current Practice*

- Most forms and study agreements must be downloaded or printed, completed, signed, scanned and emailed to the NYISO

■ *Proposal*

- Increase efficiency of form submission and routing for forms such as the Interconnection Request forms, pre-application request forms, and Study Agreements by providing fillable .pdfs with drop down boxes (where possible) that can be completed and signed electronically and emailed directly to a NYISO mailbox

Administrative Process Improvements

- ◆ **Issue No. 1: Electronic Form Submission, cont.**
 - **Rationale for NYISO's Proposal**
 - NYISO aims to make it easier for developers to complete the necessary paperwork required in the interconnection process
 - Electronic fillable .pdfs with drop down boxes and allowing for electronic signatures makes this process quicker and easier for all parties involved, particularly the developer
 - **Details**
 - This proposal does not require tariff revisions
 - NYISO has already begun converting pro forma study agreements into fillable .pdfs, most recently with the Class Year 2017 Facilities Study Agreements and data forms

Administrative Process Improvements

- ◆ **Issue No. 2: Expedited Study Agreement Processing**
 - ***Current Practice/Rule***
 - Most study agreements are *pro forma* agreements contained in the OATT that require 3+ parties for execution: Developer, NYISO and each Connecting TO
 - ***Proposal***
 - Revise Attachments X and Z to require execution by only Developer and NYISO for Feasibility Studies, SIS/SRIS and Facilities Studies
 - Key provisions from study agreements re: parties' obligations to be inserted into Attachment X and Z
 - Scopes for each study will be provided to the Connecting TO for review and comment
 - SRIS scopes will be reviewed with TPAS and subject to approval by the OC and the SRIS agreement will refer to the OC-approved scope

Administrative Process Improvements

- ◆ Issue No. 2: Expedited Study Agreement Processing, cont.
 - Rationale for NYISO's Proposal
 - Full execution of study agreements take far longer than necessary due to the number of parties involved
 - Developers typically execute the agreements quickly, with the Connecting TO signatures lagging sometimes several weeks, if not more, which creates unnecessary delays in the study process

Administrative Process Improvements

◆ Issue No. 2: Expedited Study Agreement Processing, cont.

■ Details

- **Convert *pro forma* study agreements to two-party agreements for Feasibility Studies, SIS/SRIS and Facilities Studies**
- **Move the following details regarding study parties' obligations from the study agreements into the body of Attachments X and Z:**
 - Language currently in Section 4 of the FES and SRIS Agreements providing NYISO with the right to request additional information from the Connecting Transmission Owner as may reasonably become necessary during the study
 - Language obligating Developer to pay for any Connecting Transmission Owner study costs
- **Revise *pro forma* SRIS agreement to reference OC-approved study scope**

Administrative Process Improvements

- ◆ **Issue No. 2: Expedited Study Agreement Processing, cont.**
 - **Specific tariff sections NYISO proposes to revise**
 - Attachment P, Section 22.7.1 – TIP Optional FES
 - Attachment P, Section 22.8.2 – TIP SIS
 - Attachment P, Section 22.9.2 – TIP Facilities Study
 - Attachment X, Section 30.6 – Large Facility Feasibility Study (FES)
 - Attachment X, Section 30.7 – Large Facility System Reliability Impact Study (SRIS)
 - Attachment X, Section 30.8 – Large Facility Facilities Study/Class Year Study
 - Attachment Z, Section 32.3.3 – Small Gen FES
 - Attachment Z, Section 32.3.4 – Small Gen System Impact Study (SIS)
 - Attachment Z, Section 32.3.5 – Small Gen Facilities Study
 - Attachment X, Section 30.14, Appx. 2 (Large Facility FES Agreement)
 - Attachment X, Section 30.14, Appx. 3 (Large Facility SRIS Agreement)
 - Attachment X, Section 30.14, Appx. 4 and 4A (Large Facility Facilities Study Agreements)
 - Attachment Z, Section 32.5, Appx. 6 (Small Gen FES Agreement)
 - Attachment Z, Section 32.5, Appx. 7 (Small Gen SIS Agreement)
 - Attachment Z, Section 32.5, Appx. 8 (Small Gen Facilities Study Agreement)

Administrative Process Improvements

- ◆ **Issue No. 3: Format of Study Reports**
 - ***Current Practice***
 - NYISO either performs an interconnection study in-house or uses a consultant to perform the study
 - The study reports all contain the same types of analyses, but depending upon the entity preparing the report, the format can be different
 - NYISO also provides a brief NYISO Review Report presented to TPAS and the OC that follows a standardized format
 - ***Proposal***
 - Develop a more standardized study report format/template for both NYISO and its consultants to use

Administrative Process Improvements

- ◆ Issue No. 3: Format of Study Reports, cont.
 - Rationale for NYISO's Proposal
 - This was requested by developers for the SRIS
 - A more standardized format may enable parties reviewing the report to review it more quickly and provide comments on a shorter turn-around
 - A more standardized format may enable both developers and TPAS/OC members to more easily review the study reports
 - Details
 - NYISO proposes that all FES and SRIS study reports follow the general framework provided on the following slides

Administrative Process Improvements

◆ Issue No. 3: Format of Study Reports, cont.

■ *Outline for FES Study Reports*

- **Executive Summary**
- **Introduction**
- **Project Description**
 - POI configuration
 - Modeling data
- **Study Methodology**
- **Steady State N-0 & N-1 Analysis**
- **Short Circuit Analysis**
- **Interconnection Cost Estimates**
 - CTOAFs and Local SUFs
 - SUFs
- **Conclusions**
- **Appendices**

Administrative Process Improvements

◆ Issue No. 3: Format of Study Reports, cont.

■ *Outline for SRIS Study Reports*

- **Executive Summary**
- **Introduction**
- **Project Description**
 - POI configuration
 - Modeling data
- **Study Methodology**
- **Steady State N-0 & N-1 Analysis**
- **Steady State N-1-1 Analysis**
- **Transfer Limit Analysis**
 - Thermal Transfer Results
 - Voltage Transfer Results
 - Stability Transfer Results
- **Dynamic Analysis**
 - Normal, Extreme Contingencies
 - Critical Clearing Time
- **Short Circuit Analysis**
- **Extreme Contingency Analysis**
 - Steady State Analysis
 - Dynamic Analysis
- **NPCC A-10**
 - Steady State Analysis
 - Dynamic Analysis
- **Interconnection Cost Estimates**
 - CTOAFs and Local SUFs
 - SUFs
- **Conclusions**
- **Appendices**

Administrative Process Improvements

- ◆ **Issue No. 4: Roles and Responsibilities of Parties in the Interconnection Study Process**
 - ***Current Rule***
 - Each parties' obligations are set forth in the tariff and study agreements
 - ***Proposal***
 - Reinforce the roles and responsibilities of all parties in the interconnection process through additional provisions in study agreements and through the Scoping Meeting

Administrative Process Improvements

- ◆ Issue No. 4: Roles and Responsibilities of Parties in the Interconnection Study Process, cont.
 - *Rationale for NYISO's Proposal*
 - It is helpful, particularly to parties new to the NYISO's interconnection process, to explain each parties' role in the process. This helps set realistic expectations at the outset.
 - Even for parties that frequent the interconnection study process, such reminders can be helpful with respect to recent tariff changes

Administrative Process Improvements

- ◆ Issue No. 4: Roles and Responsibilities of Parties in the Interconnection Study Process, cont.
 - Details
 - NYISO is already reinforcing this in Scoping Meetings
 - NYISO also proposes to add language to the tariff and TE&I Manual reinforcing these obligations, e.g.:
 - Requiring Developers to provide data requested during study and be present for TPAS and OC where study scope and report is discussed
 - Requiring Connecting and Affected TOs to review and comment on contingency lists, one-line diagrams and study reports

Administrative Process Improvements

- ◆ Issue No. 4: Roles and Responsibilities of Parties in the Interconnection Study Process, cont.
 - **Specific tariff sections NYISO proposes to revise:**
 - Attachment P, Section 22.7.2 – TIP Optional FES Procedures
 - Attachment P, Section 22.8.2 – TIP System Impact Study (SIS) Procedures
 - Attachment P, Section 22.9.4 – TIP Facilities Study Procedures
 - Attachment X, Section 30.6.3 – Large Facility FES Procedures
 - Attachment X, Section 30.7.4 – Large Facility SRIS Procedures
 - Attachment X, Section 30.8.3 – Class Year Interconnection Facilities Study Procedures
 - Attachment Z, Section 32.3.3 – Small Gen FES
 - Attachment Z, Section 32.3.4 – Small Gen SIS
 - Attachment Z, Section 32.3.5 – Small Gen Facilities Study

Administrative Process Improvements

◆ Issue No. 5: Interconnection Requests with Multiple Voltage Levels

■ *Current Rule*

- Attachment X provides that an Interconnection Request for one site at two different voltage levels shall require two Interconnection Requests
- Pending tariff revisions in an Order 1000 compliance filing revised this language such that it only applies to generation facilities

■ *Proposal*

- Revise Attachment X to require only one interconnection request for the following situations:
 - *generator with 3-winding transformer w/legs to two different voltage level lines; and*
 - *combined cycle with a GT and ST connected at different voltage levels*

Administrative Process Improvements

◆ Issue No. 5: Interconnection Requests with Multiple Voltage Levels, cont.

■ Rationale for NYISO's Proposal

- Unnecessary administrative burden to developers to submit separate Interconnection Request for one site at two different voltage levels
- It is more efficient to evaluate such a facility in a single study

■ Details

- **Revise Attachment X, Section 30.3.1 as follows:**
 - “... A proposed Large Generating Facility requesting to evaluate one site at two different voltage levels shall require two Interconnection Requests unless the Large Generating Facility, as it proposes to interconnect, includes either (1) a 3-winding transformer with connections to two different voltage level lines; or (2) a combined cycle with a generator turbine and steam turbine connected at two different voltage levels.”

Administrative Process Improvements

◆ Issue No. 6: Clarification of Withdrawal Procedure

■ *Current Rule*

- The withdrawal provision in Section 30.3.6 of Attachment X provides for a 15 Business Day cure period, but specifies that the cure period does not apply to certain deadlines in Attachments S and X (e.g., the deadline by which to accept Project Cost Allocations in the Class Year)
- One of the deadlines referenced in Section 30.3.6 is the deadline to notify the NYISO re: a project's regulatory milestone, even if the project is not entering a Class Year Study
- **The obligation to notify the NYISO re: a project's regulatory milestone status is in Section 25.6.2.3.1.4 of Attachment S.**

■ *Proposal*

- Delete the reference to the deadline in Section 25.6.2.3.1.4 from the withdrawal provision in Section 30.3.6 of Attachment X **and delete the consequence of withdrawal from Section 25.6.2.3.1.4**

Administrative Process Improvements

- ◆ Issue No. 6: Clarification of Withdrawal Procedure, cont.
 - *Rationale for NYISO's Proposal*
 - With the recently approved revisions to the regulatory milestone requirement, a project is eligible for CY entry once it has an OC-approved SRIS – it is less critical that the NYISO know when a regulatory milestone is met

Administrative Process Improvements

◆ Issue No. 6: Clarification of Withdrawal Procedure, cont.

■ Details

- NYISO proposes the following revisions to **Attachment S, Section 25.6.2.3.1.4:**

“After a Large Facility’s Interconnection System Reliability Impact Study is approved by the Operating Committee and until the NYISO confirms that the Large Facility has satisfied the regulatory milestone, the Developer must inform the NYISO, upon request, each year, within five business days of the Class Year Start Date, whether or not the Large Facility has satisfied the regulatory milestone described above. If a project fails to inform the NYISO ~~by this date~~ within 5 Business Days of the NYISO’s request for such information, the Interconnection Request of the project will be deemed to be withdrawn in accordance with Section 3.6 of the Large Facility Interconnection Procedures contained in Attachment X.”

Administrative Process Improvements

- ◆ Issue No. 6: Clarification of Withdrawal Procedure, cont.

- **NYISO proposes the following revisions to Attachment X, Section 30.3.6:**

“...In addition, if the Developer fails to adhere to all requirements of these Large Facility Interconnection Procedures, except as provided in Section 30.13.5 (Disputes), the NYISO shall deem the Interconnection Request to be withdrawn and shall provide written notice to the Developer of the deemed withdrawal and an explanation of the reasons for such deemed withdrawal. Upon receipt of such written notice, the Developer shall have a cure period of fifteen (15) Business Days in which to either respond with information or actions that cures the deficiency or to notify the NYISO of its intent to pursue Dispute Resolution; except that such cure period does not extend specific deadlines set forth in Sections ~~25.6.2.3.1.4~~, 25.6.2.3.2 and 25.8.2 of Attachment S and Section 30.8.1 of this Attachment X (i.e., Developer cannot obtain an additional fifteen (15) business days by virtue of the cure period to comply with the requirements of the above-referenced tariff provisions, but could use the cure period to provide evidence that Developer did in fact provide the required information by the tariff-required date).”

Class Year Study Process Improvements

Class Year Process Improvements

◆ Issue No. 7: Additional Class Year

Start Dates

■ *Current Rule*

- Class Year Study will start on the first of the following dates after completion of the prior Class Year Study: March 1, June 1 or September 1
- Only 3 possible Class Year Start Dates within a calendar year

■ *Proposal*

- Revise Attachment X to provide more possible Class Year Start Dates than the existing process by allowing the next Class Year to start on the first Business Day after 30 days after completion (*i.e.* settlement and posting of Security) of the prior Class Year

Class Year Process Improvements

- ◆ **Issue No. 7: Additional Class Year Start Dates, cont.**
 - **Rationale for NYISO's Proposal**
 - It is unnecessary to wait 3-6 months to start a new Class Year once a Class Year has completed
 - NYISO only needs approximately 30 days between Class Year studies
 - 30 days is the minimum amount of time the NYISO requires to notify potential Class Year projects, confirm eligibility and determine whether projects have met the regulatory milestone (while not required, failure to meet this milestone changes the Class Year entry requirements with respect to the deposit in lieu of regulatory milestone)
 - Developers have requested some period of time between Class Years to determine whether they wish to enter

Class Year Process Improvements

- ◆ Issue No. 7: Additional Class Year Start Dates, cont.

- Details:

- **NYISO proposes the following revisions to Attachment S, Section 25.5.9:**

“Starting with the Class Year subsequent to Class Year ~~2012~~2017, the Annual Transmission Reliability Assessment will begin on the Class Year Start Date, which will be the ~~earliest of the following dates~~ first Business Day after thirty Calendar Days following the completion of the prior Class Year Interconnection Facilities Study (i.e., date upon which all remaining Class Year Developers have accepted their Project Cost Allocations and have posted security for same): ~~March 1, June 1 or September 1.~~”

Class Year Process Improvements

- ◆ **Issue No. 8: Additional Opportunities for a Class Year project to withdraw from Class**
 - ***Current Rule***
 - Unless additional SDU studies are required, and notice of such is provided to Class Year members, there is no opportunity to withdraw from the Class Year Study until the decision rounds
 - ***Proposal***
 - Revise Attachment S and the *pro forma* Class Year Facilities Study Agreement in Attachment X to allow a project to withdraw from the Class Year Study prior to the completion of the ATBA
 - A Class Year that a project enters and from which it withdraws will still count as one of 2 Class Years a project may enter

Class Year Process Improvements

- ◆ Issue No. 8: Additional Opportunities for a Class Year project to withdraw from Class, cont.
 - Rationale for NYISO's Proposal
 - Developers would like additional opportunities to withdraw from a Class Year Study
 - NYISO proposes only one additional withdrawal opportunity in order to avoid the potential for project withdrawals to delay the completion of the Class Year Study
 - Allowing a project to withdraw from the Class Year Study prior to the completion of the ATBA would have minimal impact on the Class Year schedule

Class Year Process Improvements

- ◆ Issue No. 8: Additional Opportunities for a Class Year project to withdraw from Class, cont.
 - Details
 - NYISO proposes a new subsection under the ATBA requirements in Attachment S to require notice from the NYISO to Class Year Developers regarding the anticipated ATBA completion date
 - **New Section 25.6.1.1.1.10:**

“Through the Interconnection Projects Facilities Study Working Group distribution list, the NYISO will provide the anticipated Class Year Schedule, including the status of and anticipated completion date of the Annual Transmission Baseline Assessment.”

Class Year Process Improvements

- ◆ **Issue No. 8: Additional Opportunities for a Class Year project to withdraw from Class, cont.**
 - **NYISO also proposes a new Section 30.8.1.2 in Attachment X to provide for withdrawal prior to completion of the ATBA:**
 - **New Section 30.8.1.2:**

“Starting with the Class Year Study subsequent to Class Year 2017, a Class Year project may withdraw from the Class Year Study prior to completion of the Annual Transmission Baseline Assessment performed under Section 25.6.1.1.1 of Attachment S; however upon such withdrawal, the deposits paid in lieu of satisfaction of the regulatory milestone pursuant to Section 25.6.2.3.1 of Attachment S will subject to the following: the \$3,000/MW deposit will be fully refunded; however, the \$100,000 deposit will only be refunded if the Class Year project has satisfied its regulatory milestone at the time of withdrawal from the Class Year.”

Class Year Process Improvements

- ◆ Issue No. 8: Additional Opportunities for a Class Year project to withdraw from Class, cont.
 - *NYISO also proposes the revisions to Attachment S, Section 25.6.2.3.4, to provide that projects that take advantage of this additional withdrawal opportunity use one of their two Class Year entry opportunities:*

“Once a project has an Operating Committee-approved SRIS or the NYISO has determined the project is required to enter a Class Year Study pursuant to Attachment Z, then the project may enter up to two, but no more than two, of the next three consecutive Class Year Studies. The first Class Year with a Class Year Start Date after the date the Operating Committee approves a project’s Interconnection System Reliability Impact Study will count as the first of the three consecutive Class Year Studies. For purposes of this Section 25.6.2.3.4, a Class Year that a project enters and from which it later withdraws for ERIS evaluation pursuant to Section 25.7.7.1 or 25.6.2.3.3 of this Attachment S or Section 30.8.1.2 of Attachment X, counts as one of the two Class Years a project may enter.”

Class Year Process Improvements

- ◆ **Issue No. 9: Bifurcated Class Year**
 - ***Current Rule***
 - All projects in a Class Year Study must wait to complete the decision and settlement process until after additional SDU studies are completed (if such studies are required)
 - ***Proposal***
 - Allow any Class Year project that has no impact on additional SDU studies to settle cost allocation and complete the CY Study (see next slides for additional details)

Class Year Process Improvements

◆ Issue No. 9: Bifurcated Class Year

■ *Rationale for NYISO's Proposal*

- In two recent Class Years the need to perform additional SDU studies required additional Class Year study time unrelated to the upgrades and cost allocation for a majority of the Class Year projects in those Class Year Studies**
- In order to allow projects ready to move forward to complete the Class Year, NYISO proposes this bifurcated Class Year structure allowing projects unrelated to and not impacting or impacted by the SDU studies to complete the Class Year**

Class Year Process Improvements

◆ Issue No. 9: Bifurcated Class Year

- *Proposal involves two separate decision/settlement phases – CY X-1, CY X-2*
 - “X” = the year of the Class Year Start Date (e.g., CY17-1 and CY17-2)
- *Both Class Year X-1 and X-2 would required OC approval – essentially treating the Class Year as two separate Class Years*
- *At the stage in Class Year Study when the need for additional SDUs is identified, NYISO would determine which projects have impact on the deliverability analysis with regard to the SDU*
 - If no impact, project may elect to settle the Class Year early in Class Year Decision/Settlement as part of Class Year X-1
 - **This settlement process is not an iterative process like the multi-round Class Year decision process that will occur for Class Year X-2**
 - If a project chooses, it may stay in the Class Year and wait to participate in the Class Year Decision/ Settlement for Class Year X-2

Class Year Process Improvements

- ◆ **Issue No. 9: Bifurcated Class Year, cont.**
 - ***Security posting implications***
 - If a project that elects to settle in Class Year X-1 shares a cost allocation for SUFs or Headroom with a project that elects to remain in the Class Year Study through Class Year X-2, the project electing to settle in Class Year X-1 will be required to post security equal to the higher of:
 - *the amount required if all the Class Year projects drop out (decline their cost allocations) or*
 - *the amount required if all the Class Year projects accept their cost allocations and post security.*
 - In the Class Year X-2 cost allocation process, the NYISO would recalculate the security requirements for each project that settled in Class Year X-1, potentially requiring the CTO to refund excess security resulting from this recalculation

Class Year Process Improvements

- ◆ **Issue No. 9: Bifurcated Class Year, cont.**
 - *Next Class Year Study could not begin until after all Class Year evaluations, including the additional SDU studies are completed, and Class Year X-2 has completed its decision/settlement period*
 - ***Interconnection Base Case Implications***
 - ATBA would not be updated to reflect projects that accepted cost allocation and posted Security until Class Year X-2 has completed
 - Interconnection studies (e.g., SRISs) performed after the completion of Class Year X-1 may reflect those projects that accepted cost allocation and posted Security in Class Year X-1

Class Year Process Improvements

- ◆ **Issue No. 9: Bifurcated Class Year, cont.**
 - ***Buyer Side Mitigation Implications***
 - NYISO reviewed how it would perform BSM determinations for the Class Year X-1 projects vis-à-vis the Class Year X-2 projects
 - **Proposal:** For the first decision/settlement phase of the Class Year, treat projects in Class Year X-2 as remaining in the Class Year for purposes of BSM determinations (and in forecasts that are used in the determinations.) For the second decision/settlement phase, Class Year X-2, treat the projects that remained in Class Year X-1 at the time of its completion in the same manner as Examined Facilities that remained in a prior Class Year at the time of its completion
 - *If a project elects to settle in Class Year X-1, even though it shares SUFs and/or Headroom Payments with a project continuing into Class Year X-2, the NYISO proposes that it would use the “higher of” the SUFs and Headroom payments in the calculation of Unit Net CONE*
 - *Same as the current tariff, BSM determinations are final for a project only if and when it remains in a Class Year at the time it completes the Class Year – completion of Class Year X-1 or Class Year X-2*
 - *NYISO would not revise a Class Year X-1 project’s BSM determination when Class Year X-2 was completed or at any point, e.g., to reflect a “lower of” SUF or Headroom payment if the project with which it shared such costs remained in Class Year X-2 at the time of its completion*

Class Year Process Improvements

- ◆ **Issue No. 10: Clarification regarding ability for a project to go in-service prior to completion of a Class Year Study**
 - ***Current Practice/Rule***
 - **NYISO tenders the Interconnection Agreement on the earlier of:**
 - ***Completion of the Class Year in which the Developer accepted cost allocation and posted required Security; or***
 - ***Upon the Developer's request, once the Developer has executed a Class Year Facilities Study Agreement***

Class Year Process Improvements

- ◆ **Issue No. 10: Ability to go in-service prior to completion of a Class Year Study, cont.**
 - ***Current Practice/Rule, cont ...***
 - Prior to executing an Interconnection Agreement, a Developer may request and the CTO shall offer an E&P Agreement (See Section 30.9 of Attachment X)
 - Upon execution of the Class Year FSA, the NYISO begins work on the Part 1 Study
 - Once a Class Year “Part 1” study is completed, even if that Class Year Study has not formally begun, the parties can execute the Interconnection Agreement

Class Year Process Improvements

- ◆ **Issue No. 10: Ability to go in-service prior to completion of a Class Year Study, cont.**
 - ***Current Practice/Rule, cont ...***
 - Under the Interconnection Agreement, if the projects wishes to go in-service prior to the completion of required upgrades, it may request a Limited Operations study under which the NYISO and CTO determine whether and the extent to which the facility can reliably interconnection on a provisional basis

Class Year Process Improvements

- ◆ **Issue No. 10: Ability to go in-service prior to completion of a Class Year Study, cont.**
 - ***Proposal***
 - NYISO proposes to describe all of the steps required for a project to go in-service prior to completing a Class Year in the tariff/manual
 - NYISO proposes to include a specific provision in the tariff permitting a Developer to request a Limited Operations study prior to execution of an Interconnection Agreement

Class Year Process Improvements

- ◆ Issue No. 10: Ability to go in-service prior to completion of a Class Year Study, cont.
 - Rationale for NYISO's Proposal
 - NYISO is seeing an increase in the number of projects that desire to go into service prior to completion of a Class Year Study
 - To increase transparency and provide a detailed description of the process and limitations applicable to such facilities, NYISO believes that tariff revisions are appropriate

Class Year Process Improvements

- ◆ **Issue No. 10: Ability to go in-service prior to completion of a Class Year Study, cont.**
 - **Details**
 - **NYISO proposes to renumber Sections 30.11.4 and 30.11.5, and insert into Section 30.11.4, a new section, entitled, “Interconnection Agreement Pre-Dating Completion of the Large Facility’s Class Year Study”**
 - This new section to contain a detailed description of the process for requesting, negotiating and executing an Interconnection Agreement prior to completing a Class Year Study
 - This new section to also describe the applicable limitations (e.g., a facility must accept its Project Cost Allocation for SUFs; a facility cannot sell CRIS requested in a Class Year until the project completes the Class Year and posts Security for any SDUs)

Class Year Process Improvements

- ◆ Issue No. 10: Ability to go in-service prior to completion of a Class Year Study, cont.
 - NYISO also proposes to add a new Section 30.12.3 (similar to Article 5.9 of the *pro forma* LGIA) to provide for a limited operations analysis for projects that wish to go in-service prior to completion of all required upgrades (CTO Attachment Facilities and System Upgrade Facilities):
 - (see proposed tariff language on next slide)

Class Year Process Improvements

- ◆ Issue No. 10: Ability to go in-service prior to completion of a Class Year Study, cont.

- Proposed New Section 30.12.3

“Limited Operation. The NYISO shall, upon the request and at the expense of Developer, in conjunction with the Connecting Transmission Owner, perform operating studies to determine the extent to which the Developer’s Large Generating Facility and the Developer’s Attachment Facilities may operate prior to the completion of the Connecting Transmission Owner’s Attachment Facilities or System Upgrade Facilities or System Deliverability Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice. This provision does not permit the Developer to operate the Developer’s Large Generating Facility and the Developer’s Attachment Facilities in accordance with the results of such studies. Such requirements must be documented in the Large Facility’s Interconnection Agreement, which must be fully executed or filed unexecuted and accepted by the Commission prior to the Large Facility going into Commercial Operation.”

Other Study Process Improvements

Other Study Process Improvements

◆ Issue No. 11: Optional Feasibility Study

■ *Current Rules*

- Attachments X and Z require an Interconnection Feasibility Study for Large Facilities and Small Generating Facilities
- Feasibility Study may be waived if the NYISO, Connecting TO and Developer all agree

■ *Proposal*

- **Revise Attachments X and Z to make the Feasibility Study optional**
 - *Available at the Developer's option – not subject to NYISO and/or Connecting TO approval*
 - *Study schedule for optional Feasibility Study to depend on options elected by proposing entity*
 - *If Developer opts to forego Feasibility Study, required evaluations will be addressed in the SIS/SRIS*

Other Study Process Improvements

- ◆ **Issue No. 11: Optional Feasibility Study, cont.**
 - **Rationale for NYISO's Proposal**
 - Analyses that are required can easily be folded into the SIS or SRIS without the need to develop separate FES scopes, study agreements and study reports
 - This would allow a project developer to complete the interconnection process in less time
 - **Details**
 - NYISO proposes to revise Attachments X and Z to make the FES optional (see following slide for specific tariff revisions proposed)

Other Study Process Improvements

◆ Issue No. 11: Optional Feasibility Study, cont.

■ Details

- NYISO proposes to rename the Interconnection Feasibility Study throughout Attachments X and Z as the “Optional Interconnection Feasibility Study”
- NYISO proposes the following revisions to Attachment X, Section 30.6.1:

“... If the ~~NYISO, Connecting Transmission Owner and Developer~~ **agree opts** to forego the Interconnection Feasibility Study, the NYISO will initiate an Interconnection System Reliability Impact Study under Section 30.7 of these Large Facility Interconnection Procedures and apply the \$30,000 deposit provided with the Interconnection Request, towards the Interconnection System Reliability Impact Study.”

Other Study Process Improvements

- ◆ **Issue No. 11: Optional Feasibility Study, cont.**
 - **NYISO proposes the following revisions to Attachment Z, Section 32.3.2.2:**
 - “The scoping meeting may be omitted by mutual agreement. In order to remain in consideration for interconnection, an Interconnection Customer who has requested a feasibility study must return the executed feasibility study agreement within 15 Business Days. If the ~~Parties agree~~ **Interconnection Customer opts** not to ~~perform request~~ a feasibility study, the NYISO shall provide the Interconnection Customer and the Connecting Transmission Owner, no later than five Business Days after the scoping meeting, a system impact study agreement (Appendix 7) including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study.”

Other Study Process Improvements

- ◆ **Issue No. 11: Optional Feasibility Study, cont.**
 - ***NYISO proposes to revise Attachment X, Section 30.6.2 and Attachment Z, Section 32.3.3 to specify that the Scope of Optional Feasibility Study may include any of the following, at the option of the Developer/Customer:***
 - **For \$10,000 Study Deposit:**
 - Development of conceptual breaker-level one-line diagram of existing system where project proposes to interconnect (i.e., how to integrate the project into the existing system); *and/or*
 - Review of feasibility/constructability of conceptual breaker-level one-line diagram of the proposed interconnection (e.g., space for additional breaker bay in existing substation or identification of cable routing concerns inside existing substation)
 - **For \$30,000 Study Deposit:**
 - *Above analyses as well as one of more of the following:*
 - Preliminary review of local protection, communication, grounding issues associated with the proposed interconnection
 - Power flow, short circuit, and/or bus flow analyses
 - Identification of Network Upgrades with non-binding good faith estimate of cost responsibility and non-binding good faith estimated time to construct

Other Study Process Improvements

- ◆ **Issue No. 11: Optional Feasibility Study, cont.**
 - ***NYISO proposes to revise the pro forma FES Agreement in Attachment X, Section 30.14, Appx. 2 as follows:***

5.0 The Interconnection Feasibility Study report shall provide the following information: [to be inserted into the agreement based on the options selected by the Interconnection Customer pursuant to Section 30.6.2 of Attachment X]

- ~~- preliminary identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;~~
- ~~- preliminary identification of any thermal overload or voltage limit violations resulting from the interconnection; and~~
- ~~- preliminary description and non-binding estimated cost of facilities required to interconnect the Large Facility to the New York State Transmission System (or Distribution System, as applicable) and to address the identified short circuit and power flow issues.~~

Other Study Process Improvements

- ◆ Issue No. 11: Optional Feasibility Study, cont.

- *NYISO proposes to revise the pro forma FES Agreements in Attachment Z, Section 32.5, Appx. 6 as follows:*

6.0 The feasibility study report shall provide, ~~as necessary,~~ the following analyses for the purpose of identifying any potential adverse system impacts that would result from the interconnection of the Small Generating Facility as proposed: [to be inserted into the agreement based on the options selected by the Interconnection Customer pursuant to Section 32.3.3 of Attachment Z]

6.1 Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;

6.2 Initial identification of any thermal overload or voltage limit violations resulting from the interconnection;

6.3 Initial review of grounding requirements and electric system protection; and

6.4 Description and non-binding estimated cost of facilities required to interconnect the proposed Small Generating Facility and to address the identified short circuit and power flow issues.

Next Steps

- ◆ **Further refine Part 1 and Part 2 proposals for discussion at 5/1/2017 IITF meeting**

The mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefit to consumers by:

- *Maintaining and enhancing regional reliability*
- *Operating open, fair and competitive wholesale electricity markets*
- *Planning the power system for the future*
- *Providing factual information to policy makers, stakeholders and investors in the power system*

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Attachment III



Comprehensive Interconnection Process Improvements Initiative Part 2

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New York Independent System Operator***

Interconnection Issues Task Force

April 3, 2017

NYISO's Krey Corporate Center

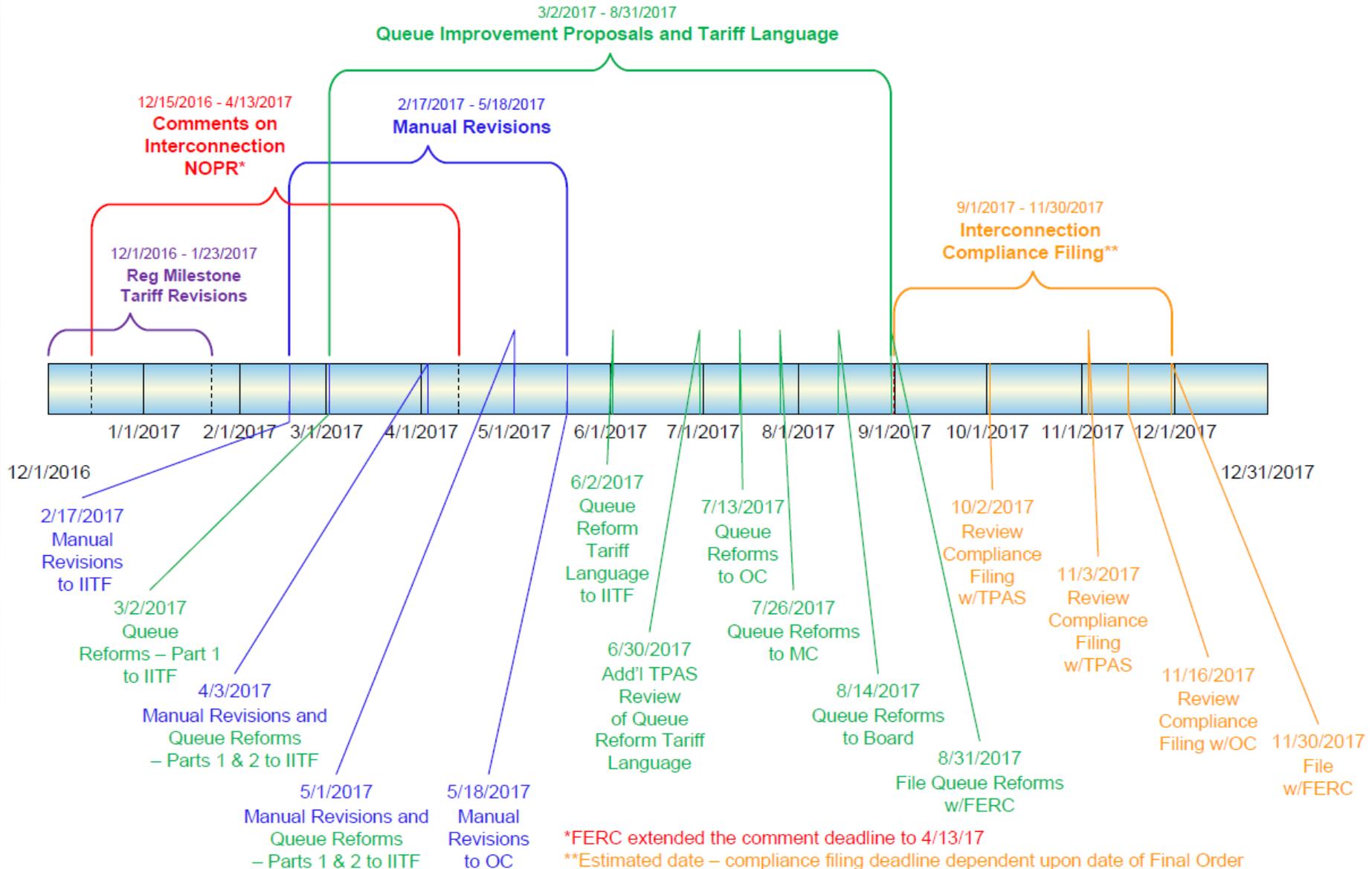
Topics for Discussion

- ◆ Objectives
- ◆ Targeted Schedule
- ◆ Overview of All Proposed Process Changes
- ◆ Overview of Part 2 Proposals
- ◆ Specific Part 2 Proposals
 - *Other (non-Class Year) Study Process Improvements*
 - *Clarifications regarding cost recovery for SDUs and Incremental TCCs for SDUs*
 - *Other Tariff/Manual Clarifications/Updates*
- ◆ Next Steps

Objectives

- ◆ **Improve the efficiency of the interconnection process while maintaining necessary reliability evaluations treating Developers equitably**
- ◆ **Specific Objectives:**
 - *Increase administrative efficiency*
 - *Expedite the study process*
 - *Allow Developers to proceed through entire process more quickly, particularly the Class Year Study, while allowing as much flexibility as possible*
 - *Clarify and update existing practices/procedures*

Comprehensive Interconnection Process Improvements Targeted Schedule



Overview of Proposals

- ◆ **Administrative Improvements**
 - *Issue Nos. 1 through 6 (covered in “Part 1” presentation)*
- ◆ **Class Year Study Process Improvements**
 - *Issues Nos. 7 through 10 (covered in “Part 1” presentation)*
- ◆ **Other Study Process Improvements**
 - *Issue Nos. 11 through 23 (Issue No. 11 covered in “Part 1” presentation; Issue Nos. 12-23 covered in this presentation)*
- ◆ **Clarifications regarding cost recovery for SDUs and Incremental TCCs for SDUs**
 - *Issues Nos. 24 through 26 (covered in this presentation)*
- ◆ **Other Tariff/Manual Clarifications/Updates**
 - *Issue Nos. 27 through 36 (covered in this presentation)*

Overview of Part 2 Proposals

- ◆ **Other (Non Class Year) Study Process Improvements**
 - *Requirement that SISs and SRISs move forward to TPAS within a specific time frame*
 - *Revisions to modeling data requirements*
 - *Updates to Small Generator Deposits and Application Fee*
 - *Clarification of base case inclusion rules*
 - *Revisions to tracking of In-Service Dates and Commercial Operation Dates*
 - *Requirement that outstanding invoices for be provided within a specific timeframe*
 - *Clarification of the process for evaluation of alternative POIs in the Small Generator Interconnection Procedures*

Overview of Part 2 Proposals

- ◆ **Other (Non Class Year) Study Process Improvements, cont.**
 - *Revise treatment of certain uprates – manner in which study scopes may be narrowed and manner in which Winter CRIS ratio is impacted*
 - *PMU requirement*
 - *Clarification of the clustering process for Small Generator studies*
 - *Develop more specific requirements that TOs present changes to planning criteria to stakeholders*
 - *Clarification regarding MIS methodology*
 - *Tariff provisions regarding evaluation of transmission upgrades identified by the NYISO in Affected System Studies (for projects interconnecting to neighboring control areas)*

Overview of Part 2 Proposals

- ◆ **Clarifications regarding cost recovery for SDUs and Incremental TCCs for SDUs**
 - *Expand allowed offset of SDU costs to allow certain SDU funds to cover portion of costs of regulated solutions in CARIS and PPTPP (only offset covered under current tariff language is regulated solution to Reliability Needs)*
 - *Clarification of the formula for Highway Facilities Charge in Rate Schedule 12*
 - *Clarification of the method for requesting, evaluating and allocating Incremental TCCs associated with SDUs*

Overview of Part 2 Proposals

- ◆ **Other Tariff/Manual Clarifications/Updates**
 - *Clarification of the manner in which post-Class Year studies are conducted and coordinated*
 - *Clarification of Security provisions*
 - *Requirement regarding EPC agreements for the construction of triggered SUFs*
 - *Revisions to tax and insurance provisions in the pro forma Large Generator Interconnection Agreement*
 - *Ministerial Edits*

Other (non-Class Year) Study Process Improvements

Other Study Process Improvements

◆ Issue No. 12: Requirement that SISs and SRISs move forward to TPAS

■ *Current Rules*

- Currently, there is no requirement that a project with a completed SIS or SRIS move forward to TPAS and the OC for review and approval of such reports within a specified time
- The only rules that would impact such studies concern Large Facilities subject to a Class Year process
 - Large Facilities (*i.e.*, Large Generating Facilities and Merchant Transmission Facilities) are subject to withdrawal if they do not enter a Class Year within 3 Class Year Start Dates after OC approval of the SRIS (Section 25.6.2.3.4.2 of Attachment S)
 - No such rules apply to the other studies subject to OC approval – SISs performed under OATT 3.7, OATT 3.9 or Attachment P

Other Study Process Improvements

◆ Issue No. 12: Requirement that SISs and SRISs move forward to TPAS, cont.

■ *Proposal*

- Revise OATT 3.7, OATT 3.9, Attachment P and Attachment X to require all SISs and SRISs to move forward to TPAS within 6 months of completion of the study report
- “Completion” to be defined as the point at which a final draft study report has been issued by the NYISO

■ *Rationale for NYISO's Proposal*

- Allowing a project with a completed SRIS or SIS to wait to proceed to TPAS and the OC for up to 3 Class Years can lead to studies coming to the OC for approval even though modeling assumptions, analyses and study conclusions may be stale
- Members of the TPAS and OC have expressed significant concerns regarding this practice

Other Study Process Improvements

- ◆ **Issue No. 13: Revisions to Modeling Data Requirements**
 - ***Current Practice***
 - The Interconnection Request form requires detailed, project-specific dynamic modeling data
 - ***Proposal***
 - Revise the Interconnection Request form and *pro forma* SRIS Agreement such that dynamic modeling data is not required until the SRIS stage.
 - Permit Developers to provide generic dynamic models (with project-specific parameters and adequate manufacturer documentation)

Other Study Process Improvements

- ◆ **Issue No. 13: Revisions to Modeling Data Requirements, cont.**
 - ***Rationale for NYISO's Proposal***
 - **The level of detail currently required in the Interconnection Request form with regard to dynamic modeling data is not necessary at the outset of the interconnection process.**
 - **Such information is not required to validate an Interconnection Request, nor is it required for the Feasibility Study**
 - **Such information can be submitted as part of the eligibility requirements for an SRIS**
 - **Generic dynamic models can be accommodated if such models contain project specific parameters and adequate manufacturer documentation**

Other Study Process Improvements

- ◆ **Issue No. 14: Updates to Small Generator Deposits and Application Fee**
 - ***Current Provisions***
 - **Small Generator Interconnection Request requires an application fee of \$1,000**
 - **The Small Generator Feasibility Study (FES) requires a deposit of the lesser of 50% of the good faith estimated FES costs or \$1,000**
 - **The Small Generator System Impact Study (SIS) requires a deposit of the good faith estimated costs, which is typically \$75,000**

Other Study Process Improvements

◆ Issue No. 14: Updates to Small Generator Deposits and Application Fee, cont.

■ *Proposal*

- **Make the Small Generator Interconnection Request application fee of \$1,000 a non-refundable fee**
- **Increase Small Generator FES deposit from \$1,000 to \$10,000 (if project elects more limited FES scope) or \$30,000 (if projects elects more detailed FES scope)**
- **Decrease the Small Generator SIS deposit from the full study cost estimate of approx. \$75,000 to \$50,000**

Other Study Process Improvements

- ◆ **Issue No. 14: Updates to Small Generator Deposits and Application Fee, cont.**
 - ***Rationale for NYISO's Proposal***
 - Overall, this proposal would reduce the fees/deposits required for Small Generators from the Interconnection Request through the beginning of the SIS from approx. \$77,000 to \$61,000 (or as low as \$51,000 if no FES)
 - Rational for application fee being non-refundable:
 - Processing of Interconnection Requests requires administrative work by both the NYISO and Connecting TO that needs to be covered by the application fee
 - Like the application fee for the Large Facility Interconnection Request, this application fee should be non-refundable to cover such costs in the event the project ultimately withdraws or its Interconnection Request is found deficient

Other Study Process Improvements

◆ Issue No. 15: Clarification of Base Case Inclusion Rules

■ *Current Provisions*

- Attachment S provides detailed base case inclusion rules for the Class Year Study (Section 25.5.5.1)
- Attachment X provides the following description of Base Cases:

The power flow, short circuit and stability data bases, hereinafter referred to as Base Cases, provided shall be those that the NYISO is using in the Annual Transmission Baseline Assessment then in progress, or if such data bases are not available, the data bases from the last completed Annual Transmission Reliability Assessment conducted pursuant to Attachment S of the OATT prior to the request. In the case of a request from a Developer considering Capacity Resource Interconnection Service, the power flow data bases provided shall include the Annual Transmission Reliability Assessment case from the most recently completed Class Year Deliverability Study.

Other Study Process Improvements

- ◆ **Issue No. 15: Clarification of Base Case Inclusion Rules, cont.**
 - ***Proposal***
 - **Provide more explanation in the Transmission Expansion & Interconnection Manual regarding the manner in which base cases are created and updated**
 - **Clarify ATBA Section 25.5.5.1 as applied to cross-border projects requires applicable base case inclusions milestones to have been satisfied in both regions**

Other Study Process Improvements

- ◆ **Issue No. 15: Clarification of Base Case Inclusion Rules, cont.**
 - ***Rationale for NYISO's Proposal***
 - Stakeholders have requested clarification regarding how and when interconnection studies are updated
 - NYISO believes more specific details will provide increased transparency to participants in the interconnection study process

Other Study Process Improvements

◆ Issue No. 16: Revisions to Tracking of In-Service Dates and Commercial Operation Dates

■ *Current Provisions*

- Projects must specify a proposed In-Service (I/S) Date and Commercial Operation Date (CODs) in the Interconnection Request
- Updates to these dates must be included in the Class Year Facilities Study Agreement data sheet and in the Interconnection Agreement

■ *Proposal*

- Require Developers (Large Facilities and Small Generators) to provide updates to proposed I/S Dates and CODs on a quarterly basis once they have executed a Facilities Study Agreement

■ *Rationale for NYISO's Proposal*

- Stakeholders believe proposed I/S Dates and CODs are often unrealistic and request that Developers be required to update them on a more frequent basis based on the project status

Other Study Process Improvements

◆ Issue No. 17: Outstanding Invoices

■ *Current Practice*

- Consistent with FERC precedent, upon withdrawal, all deposits are payable with interest

■ *Proposal*

- Require outstanding invoices from TOs, Affected System Operators and Consultants to be provided within a specific timeframe, e.g., 60 days after completion of the subject study
- For withdrawn projects, require study deposits to be trued up with all outstanding invoices before deposits are refunded in the event of withdrawal.

■ *Rationale for NYISO's Proposal*

- Unfair windfall to a withdrawn project to receive study deposit refunds with interest, when such refunds have not been trued up against outstanding invoices

Other Study Process Improvements

- ◆ **Issue No. 18: Clarification of Process for evaluation of alternative POIs in the Small Generator Interconnection Procedures**
 - ***Current Provisions***
 - The Small Generator FES Agreements and SIS Agreement both refer to alternative POIs, appearing to contemplate that a Small Generator may request evaluation of an alternative POI, however there are no provisions in Attachment Z explaining how alternative POIs should be evaluated
 - ***Proposal***
 - Clarify the process for electing the evaluation of alternative POIs in the Small Generator Interconnection Procedures
 - Require alternative POIs to be evaluated in a Feasibility Study (for both Large and Small Facilities) – *i.e.*, a project that requests alternative POIs may not opt to forego a Feasibility Study
 - Clarify that a project requesting alternative POIs must select one POI before moving to the Facilities Study

Other Study Process Improvements

- ◆ **Issue No. 18: Clarification of Process for evaluation of alternative POIs in the Small Generator Interconnection Procedures, cont.**
 - ***Rationale for NYISO's Proposal***
 - **The Small Generator procedures are silent on how an alternative POI can be requested and evaluated**
 - **NYISO proposes to add such provisions to provide needed clarity**

Other Study Process Improvements

- ◆ **Issue No. 19a: Scope of Studies for Uprate Projects**
 - ***Current Practice***
 - Currently, uprate projects may, with the NYISO's and Connecting TO's agreement, be able to forego a FES and may have a more narrow study scope for the SRIS than a typical new facility
 - ***Proposal***
 - Eliminate requirement that Developer obtain consent from the Connecting TO and NYISO to forego a FES
 - Continue to narrow the scope of an SRIS, as appropriate, for uprates
 - ***Rationale for NYISO's Proposal***
 - Uprates to an existing facility may not require all of the same evaluations that a new facility requires

Other Study Process Improvements

- ◆ **Issue No. 19b: Winter CRIS Determinations for Uprate Projects**
 - ***Current Provisions***
 - **Section 25.7.6 of Attachment S requires the NYISO to maintain the same proportion of CRIS to ERIS in the Winter as the facility has in the Summer**
 - **Since the CRIS level assigned to a facility under Attachment S is a Summer value, this tariff language extends a CRIS value to the Winter**
 - **If the facility is fully deliverable, the Summer CRIS/ERIS ratio will be 100% and the unit's Winter CRIS cap is equal to Winter ERIS**
 - **A unit is fully deliverable if it was (1) grandfathered for CRIS, evaluated for CRIS in a CY and found fully deliverable or paid Security for SDUs to make it fully deliverable; and (2) has not increased its capability**

Other Study Process Improvements

◆ Issue No. 19b: Winter CRIS Determinations for Uprate Projects, cont.

■ *Current Practice*

- NYISO currently determines a Winter CRIS cap for all projects that are not fully deliverable in the Summer
 - Projects that elected to take only partial Summer CRIS in a CY
 - Projects with CRIS that have increased their capability and such increases have been deemed de minimis (non-material increases that do not require a new Interconnection Request)
 - Projects with CRIS that have increased their capability and been evaluated through a new Interconnection Request, but that have not requesting a corresponding increase in CRIS

Other Study Process Improvements

- ◆ Issue No. 19b: Winter CRIS Determinations for Uprate Projects, cont.
 - *Winter CRIS is calculated through the following formula:*

$$\frac{\text{CRIS}_s}{\text{ERIS}_s} = \frac{X}{\text{ERIS}_w}$$

Other Study Process Improvements

- ◆ **Issue No. 19b: Winter CRIS Determinations for Uprate Projects, cont.**
 - ***Proposal***
 - NYISO proposes to clarify/reconsider the manner in which Winter CRIS is limited
 - ***Rationale***
 - The intent of Section 25.7.6 was to limit a facility's Winter CRIS if it only received partial CRIS for the Summer
 - With the rule added to Attachments X and Z providing for non-material increases in output that can be permitted without an Interconnection Request, the NYISO is seeing an increase in such ERIS increases

Other Study Process Improvements

◆ Issue No. 20: PMU Requirement

■ *Current Provisions*

- Currently there are no PMU requirements for facilities interconnection to the New York State Transmission System

■ *Proposal*

- Require a PMU for proposed new Large Generating Facilities and Merchant Transmission Facility ≥ 100 MW and new substations (230kV or above)

■ *Rationale for NYISO's Proposal*

- A PMU requirement is common in other ISOs/RTOs
 - *PJM requires PMUs for generators of 100 MVA and above*
 - *ERCOT requires PMUs for 20 MVA and above*

Other Study Process Improvements

- ◆ **Issue No. 20: PMU Requirement, cont.**
 - *Rational for NYISO's Proposal, cont.*
 - System-wide situational awareness
 - Faster diagnosis of operational issues
 - *E.g., if operators identify power swings at a plant and have to order it off-line, PMU data can help identify the root-cause of the issue and allow the plant be brought back on-line sooner*
 - Supports NERC MOD-026, MOD-027 and MOD-033
 - *NERC requires generating plants to validate their stability models*
 - *Since recording equipment is already required by NERC, NYISO's additional requirement would be only to transfer the phasor measurements back to the control center in real-time*

Other Study Process Improvements

- ◆ **Issue No. 21: Clarification of Clustering for Small Generator Studies**
 - ***Current Practice***
 - **Section 32.1.6 of Attachment Z provides that, “Interconnection Requests may be studied serially or in clusters for the purpose of the system impact study.”**
 - **For Small Generators that could potentially impact each other or that could collectively impact system conditions so as to require shared upgrade facilities, such projects are evaluated in a clustered SIS**
 - **If a cluster study identifies non-Local SUFs, projects triggering such upgrades must enter a Class Year**

Other Study Process Improvements

- ◆ **Issue No. 21: Clarification of Clustering for Small Generator Studies**
 - ***Proposal***
 - Explain in the TE&I Manual the manner in which NYISO performs clustering studies for Small Generators
 - Add tariff language to Attachment Z to explain how costs will be allocated for shared Local SUFs
 - ***Rationale for NYISO's Proposal***
 - NYISO is seeing a significant influx of Small Generating Facilities in the Interconnection Queue, many in close proximity to each other, that require evaluation of their collective impacts in order to ensure reliability
 - To increase transparency, NYISO believes it will be helpful to provide more details regarding the manner in which clustered studies are performed and the implications for cost allocation

Other Study Process Improvements

◆ Issue No. 22: Stakeholder Review of Changes in TO Planning Criteria

■ *Current Practice*

- TOs provide updates to their local planning criteria in the annual FERC 715 report
- While NYISO requests TOs review changes with TPAS and the OC, stakeholders have requested that TOs have a more firm obligation to present changes to stakeholders for review and comment

■ *Proposal*

- Add tariff requirements to require TOs to present changes to planning criteria to TPAS before such changes are implemented

■ *Rationale for NYISO's Proposal*

- Increased transparency
- Opportunity for affected parties to review and comment on proposed changes

Other Study Process Improvements

- ◆ **Issue No. 23a: Clarification of MIS Methodology for Transfer Limit Impacts**
 - ***Current Provisions***
 - Attachment P and OATT 3.7 specifically provide that transmission projects evaluated under those procedures are responsible for upgrades if the projects degrades transfer capability by > 25 MW
 - While Attachment S and X currently do not specify the specific levels of transfer degradation that require mitigation under the MIS, they do require upgrades under the MIS if the adverse reliability impact cannot be mitigated by normal operating procedures
 - Transfer limit degradations can cause adverse reliability impacts that cannot always be mitigated by normal operating procedures

Other Study Process Improvements

- ◆ **Issue No. 23a: Clarification of MIS Methodology for Transfer Limit Impacts, cont.**
 - ***Proposal***
 - NYISO proposes to clarify in the TE&I Manual, that under the MIS evaluation Large Facilities interconnecting to the NYCA must mitigate the adverse impact, above a specified threshold – 25 MW – on NYISO’s external interfaces
 - NYISO proposes to clarify that in the CY Study and clustered TIP studies, the 25 MW permissible transfer limit degradation is collective, not per-project
 - ***Rationale for NYISO's Proposal***
 - Beneficial to potential project developers to understand the specific threshold of transfer limit degradation that can be accommodated under the MIS without triggering upgrades

Other Study Process Improvements

- ◆ **Issue No. 23b: Evaluation of Transmission Upgrades Identified by the NYISO in Affected System Studies**
 - ***Current Provisions***
 - Tariff currently requires that transmission upgrades identified by the NYISO in an Affected System Study be evaluated in the NYISO's TIP process, which includes an optional FES, an SIS and a Facilities Study
 - ***Proposal***
 - Allow transmission upgrades in the NYCA identified by the NYISO in Affected System Studies (for projects interconnecting to neighboring regions) to proceed directly from the other region's SIS to a NYISO's TIP Facilities Study
 - ***Rationale for NYISO's Proposal***
 - The NYISO's identification of such upgrades is part of the SIS for another region and involves the same analyses the NYISO would perform in a TIP SIS

Clarifications regarding Cost Recovery for SDUs and Incremental TCCs for SDUs

SDUs and Incremental TCCs

◆ Issue No. 24: Offset of SDU Costs

■ *Current Provisions*

- Section 25.7.12.3.3 of Attachment S provides that if the NYISO Comprehensive Reliability Planning Process (“CRPP”) identifies a Reliability Need requiring a Highway facility to be constructed earlier than would be required under Attachment S, funds collected from Class Year Developers will be used to cover a portion of the regulated solution costs to the extent such funds were collected for SDUs that are actually constructed by the regulated solution
- Section 25.7.12.3.3 further provides that to the extent this tariff provision applies, the Class Year Developer funds that had been contributed to the Highway SDU will be used as an offset to the total reliability solution upgrade cost, with the remainder of the upgrade cost to be allocated per the requirements of the CRPP

SDUs and Incremental TCCs

◆ Issue No. 24: Offset of SDU Costs, cont.

■ *Proposal*

- Expand the allowed offset of SDU costs in Section 25.7.12.3.3 of Attachment S to provide that SDU funds could be used to cover a portion of the costs of other regulated solutions (not just those triggered by Reliability Needs), including regulated solutions in CARIS and PPTPP
- Clarify what would constitute the “same” upgrade for these purposes – a facility providing the exact amount of transfer capability the Highway SDU provides or a facility that provides transfer capability equal to or greater than the Highway SDU?

■ *Rationale for NYISO's Proposal*

- This provision in Attachment S predated the current Attachment Y processes that include the PPTPP. NYISO believes it should be updated to apply to CARIS and PPTPP as well as Reliability Needs

SDUs and Incremental TCCs

◆ Issue No. 25: Highway Facilities Charge

■ *Current Provisions*

- Under Attachment S, if Class Year Developers have posted Security for at least 60% of the total cost allocation of a ROS Highway SDU, construction is triggered
- Attachment S further provides that once constructed, the actual cost of the ROS Highway SDU, above that paid for by Class Year Developers, will be funded by Load Serving Entities, using the rate mechanism contained in Rate Schedule 12 of the NYISO OATT

■ *Proposal*

- Clarify the formula and procedures for cost recovery of ROS Highway SDU costs in Rate Schedule 12

■ *Rationale for NYISO's Proposal*

- As NYISO prepares to implement Rate Schedule 12 for the Leeds-Hurley SDU, it believes the language and formula in RS 12 could benefit from clarification and additional detail

SDUs and Incremental TCCs

◆ Issue No. 26: Incremental TCCs for SDUs

■ *Current Provisions*

- Attachment S provides that for Class Year Developers that contribute to an SDU, once the SDU is built, any resulting Incremental TCCs will be distributed to the Developers in proportion to their funding of the SDU
- Attachment S also provides that a subsequent Developer paying for use of Headroom on SDUs will receive the corresponding Incremental TCCs
- Attachment S provides that Incremental TCCs attributable to LSE funding will be credited to the LSEs in proportion to their funding of the Highway SDU in accordance with Rate Schedule 12

SDUs and Incremental TCCs

◆ Issue No. 26: Incremental TCCs for SDUs

■ *Proposal*

- Require the Connecting TO(s) who constructed the SDU to be responsible for requesting Incremental TCCs for the SDU
- Clarify that each CY Developer (or subsequent CY Developer making a Headroom payment) that elects to receive their portion of any Incremental TCCs will be the Primary Holder thereof and subject to the requirements of Section 19.7 of Attachment M of the OATT (including registering as a Customer and meeting the applicable credit requirements – see MST, Attachment K)
- Clarify the ability of CY Developers (or subsequent CY Developers making Headroom payments) to decline their portion of any Incremental TCCs at the time offered or subsequently terminate any accepted Incremental TCCs in accordance with Section 19.2.4 of Attachment M of the OATT

SDUs and Incremental TCCs

◆ Issue No. 26: Incremental TCCs for SDUs

■ *Proposal, cont.*

- Clarify that any Incremental TCCs declined or subsequently terminated by CY Developers (or subsequent CY Developers making Headroom payments) will be allocated to the Connecting TO(s) who constructed the SDU
- Clarify the procedures for re-allocating previously awarded Incremental TCCs to subsequent CY Developers paying for use of Headroom on an SDU
- Clarify that in cases where LSEs have funded a portion of a Highway SDU, any Headroom payments by subsequent CY Developers will be made to the Connecting TO(s) who constructed the SDU and be credited to the LSEs that funded a portion of the SDU

SDUs and Incremental TCCs

◆ Issue No. 26: Incremental TCCs for SDUs

■ *Proposal, cont.*

- Clarify that all Incremental TCCs related to SDUs will not be eligible for sale in NYISO-administered TCC auctions or secondary markets regardless of the entity holding the Incremental TCCs. Primary Holders of these Incremental TCCs will receive congestion payments pursuant to Section 20.2.3 of Attachment N of the OATT
- Clarify how the congestion value of any Incremental TCCs held by the Connecting TO(s) who constructed an SDU will be accounted for either pursuant to Rate Schedule 12 (for Highway SDUs that include LSE funding) or Attachment H of the OATT (for all other SDUs)

SDUs and Incremental TCCs

- ◆ **Issue No. 26: Incremental TCCs for SDUs**
 - ***Rationale for NYISO's Proposal***
 - An SDU is unique in that it can potentially have numerous holders for any Incremental TCCs resulting therefrom:
 - TO(s) who constructed it;
 - Class Year Developers who contributed to it;
 - LSEs who paid for a portion of it under Rate Schedule 12; and
 - Subsequent Developers who use Headroom on the SDU
 - Certain of these entities may not be Customers at the time the SDU goes In-Service and any Incremental TCCs associated therewith become effective
 - As such, the NYISO would have no way to administer the Incremental TCCs vis-à-vis such entities
 - These unique aspects of Incremental TCCs for SDUs require specific rules regarding how they will be administered

Other Tariff/Manual Clarifications/Updates

Other Clarifications and Updates

◆ Issue No. 27: Post-Class Year Studies

■ *Current Practice*

- Currently, certain detailed design studies are performed within the scope of the Class Year Facilities Study (e.g., EMTP studies) while others are performed under engineering work required by the Interconnection Agreement (e.g., SSR studies)

■ *Proposal*

- Clarify the manner in which such studies are conducted and coordinated (e.g., detailed design studies, SSR and protection coordination studies) and how the results of such studies may impact actual costs of upgrades for the project

■ *Rationale for NYISO's Proposal*

- NYISO seeks to create consistency in the manner in which such studies are performed and provide transparency to Developers regarding how such studies can impact actual costs

Other Clarifications and Updates

◆ Issue No. 28: Clarifications of Security Provisions

■ *Current Provisions*

- **Section 25.8.5 of Attachment S provides for Connecting TOs to reduce Security they hold as discrete portions of the System Upgrade Facilities have been completed by the Transmission Owner and paid for by the Developer, on a dollar-for-dollar basis**
- **Section 25.8.5 also provides for the circumstances under which Security is forfeited by terminated projects and is used to defray the cost of SUFs and SDUs for other projects**

Other Clarifications and Updates

- ◆ **Issue No. 28: Clarifications of Security Provisions, cont.**
 - ***Proposal***
 - NYISO proposes to revise Attachment S to provide that the Security reduction provisions apply equally to Affected TOs and Connecting TO(s)
 - NYISO proposes to clarify the Security forfeiture provisions regarding the extent to which Security must be forfeited to defray the costs of SUFs and SDUs required for other projects
 - ***Rationale for NYISO's Proposal***
 - Security reductions should be permitted for Security held for SUFs and SDUs regardless of whether the Security is held by the Connecting TO or Affected TOs
 - The forfeiture provisions could benefit from additional detail

Other Clarifications and Updates

◆ Issue No. 29: Affected System EPC Agreements

■ *Current Practice*

- While not specifically required by Attachment S, NYISO has been a party to EPC agreements among the Developer, Connecting TO, and Affected TO for SUFs and SDUs required on Affected TO facilities

■ *Proposal*

- Require Developer, Connecting TO, the NYISO, and any Affected Transmission Owner to enter into an EPC agreement for the construction of triggered SUFs

■ *Rationale for NYISO's Proposal*

- This would memorialize current practice and would be consistent with language in Attachment S, Section 25.7.11.1.4.2.6 for EPCs required for SDUs

Other Clarifications and Updates

◆ Issue No. 30: Tax Provisions in *Pro Forma* LGIA

■ *Current Provisions*

- Section 5.17 of the *pro forma* LGIA provides a number of tax provisions, addressing, e.g.:
 - Tax treatment of payments or property transfers made by Developer to Connecting TO for CTO Attachment Facilities, SUFs and SDUs
 - Indemnification for cost consequences of current tax liability imposed upon the Connecting TO
 - Circumstances under which the Connecting TO must file with the IRS a request for a private letter ruling
 - Impact of subsequent taxable events
 - Tax Status with regard to non-jurisdictional entities

Other Clarifications and Updates

- ◆ **Issue No. 30: Tax Provisions in *Pro Forma* LGIA, cont.**
 - ***Proposal***
 - **Revise/update tax provisions in the *pro forma* Large Generator Interconnection Agreement as necessary in light of current tax laws**
 - ***Rationale for NYISO's Proposal***
 - **Parties to recent Interconnection Agreements have identified concerns with language in the existing *pro forma* tax provisions that require updating**

Other Clarifications and Updates

- ◆ **Issue No. 31: Insurance Provisions in *Pro Forma* LGIA**
 - ***Current Provisions***
 - **Section 18.3 of the *pro forma* LGIA requiring minimum insurance coverages with insurers authorized to do business in the state of New York**
 - **Section 18.3 covers the following types of insurance:**
 - **Employers' Liability and Workers' Compensation Insurance**
 - **Commercial General Liability Insurance**
 - **Comprehensive Automobile Liability Insurance**
 - **Excess Public Liability Insurance over and above the Employers' Liability, Commercial General Liability and Comprehensive Automobile Liability Insurance coverage**
 - **Section 18.3.9 requires that within 10 days after execution of the IA, Developer and Connecting TO provide certification of all insurance required in the IA**

Other Clarifications and Updates

- ◆ **Issue No. 31: Insurance Provisions in *Pro Forma* LGIA, cont.**
 - ***Proposal***
 - Update insurance language in the *pro forma* LGIA as necessary in light of current insurance laws
 - Consider revising LGIA language to defer the need to have insurance coverage in place within 10 days of executing or filing the IA with the FERC (allowing parties to stipulate regarding when insurance coverage must be in place)
 - ***Rationale for NYISO's Proposal***
 - Parties to recent Interconnection Agreements have identified concerns with language in the existing *pro forma* insurance provisions that require updating

Other Clarifications and Updates

- ◆ **Issue Nos. 32-36: Ministerial and Other Edits**
 - ***Ministerial Edits to Services Tariff, Section 5***
 - Remove the March 1 reference in Section 5.12.1.8 of the Services Tariff – refer to “Class Year Start Date”
 - ***Ministerial and Other Edits to Attachment X***
 - Remove “Standard” from remaining Att. X references to “Standard LFIP” and use LGIA acronym where appropriate (e.g., Section 30.11)
 - In Sections 30.3.1, clarify baseline ERIS for project that doesn’t go forward with part of project studied in the interconnection process
 - Simplify the language regarding the 30 day deadline for execution of the FSA in Section 30.8.1
 - Add language to Section 30.11.3 consistent with regulatory milestone tariff revisions re: regulatory milestone requirement prior to IA execution

Other Clarifications and Updates

◆ Issue Nos. 32-33: Ministerial and Other Edits, cont.

■ *Ministerial Edits to Attachment X Agreements*

- In pro forma SRIS Agreement, revise “Interconnection System Reliability Study,” to “Interconnection System Reliability Impact Study”
- In *pro forma* Facilities Study Agreement, make the following revisions:
 - Change “Large Facility” to “facility” as appropriate, to accommodate Small Generators and non-FERC jurisdictional interconnections that enter a Class Year only for CRIS
 - Make the following edit to Article 6.5:
“Developer or NYISO may terminate this Agreement upon the withdrawal of the Developer’s ~~withdrawal-project~~ from the Interconnection Facilities Study pursuant to Section 25.7.7.1 of Attachment S.”
- In External CRIS FSA, revise “winder” to “winter”

Other Clarifications and Updates

- ◆ **Issue Nos. 32-36: Ministerial and Other Edits, cont.**
 - ***Ministerial Edits to Attachment Z***
 - **In Sections 30.3.1 and 32.1.3, clarify baseline ERIS for project that doesn't go forward with part of project studied in the interconnection process**
 - **Correct reference to FSA in Section 32.1.1.7 to refer to the Class Year FSA, which is required for CRIS requests by Small Generators.**

Next Steps

- ◆ **Further refine Part 1 and Part 2 proposals for discussion at 5/1/2017 IITF meeting**

The mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefit to consumers by:

- *Maintaining and enhancing regional reliability*
- *Operating open, fair and competitive wholesale electricity markets*
- *Planning the power system for the future*
- *Providing factual information to policy makers, stakeholders and investors in the power system*

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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 13th day of April 2017.

/s/ Joy A. Zimmerlin

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