May 22, 2019

By Electronic Delivery
Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Re: New York Independent System Operator, Inc.'s Compliance Filing; Docket Nos. RM17-8-000, ER19-___-000

Dear Ms. Bose:

In compliance with the Federal Energy Regulatory Commission's ("Commission's") Order No. 845 and Order No. 845-A,[1] the New York Independent System Operator, Inc. ("NYISO") respectfully submits revisions to its Large Facility Interconnection Procedures ("LFIP") and Standard Large Generator Interconnection Agreement ("LGIA") set forth in Attachment X of its Open Access Transmission Tariff ("OATT").[2]

In Order No. 845, the Commission revised the *pro forma* Large Generator Interconnection Procedures ("LGIP") and LGIA to implement ten reforms aimed at improving interconnection processes applicable to Large Facilities.[3] The NYISO proposes to revise its LFIP and LGIA to incorporate the revisions with the specified independent entity variations described below.[4] The proposed variations largely conform the revisions in Order No. 845 to the terminology and procedures of the NYISO OATT previously accepted by the Commission. A limited number of other, more substantive, variations are proposed with detailed explanations regarding, among other things, the need for independent entity variations in light of interconnection, operational and market issues unique to the NYISO.

The NYISO respectfully requests that the revisions become effective sixty (60) calendar days following the date of an order from the Commission accepting the revisions proposed

[1] *Reform of Generator Interconnection Procedures and Agreements*, Order No. 845, 83 Fed. Reg. 21342 (May 9, 2018), 163 FERC ¶ 61,043 (2018) ("Order No. 845"), *order on clarification and reh'g*, Order No. 845-A, 166 FERC ¶ 61,137 (2019) ("Order No. 845-A").

[2] Capitalized terms that are not otherwise defined in this filing shall have the meaning specified in Attachment X of the NYISO OATT, and if not defined therein, in Attachment S of the NYISO OATT and Section 1 of the NYISO OATT.

[3] Order No. 845, at P 1.

[4] The NYISO also proposes to make a limited, conforming revision to Attachment S of the OATT, as further described in herein.

herein, as described in Part V below. The NYISO submits that with this compliance filing it fully complies with the requirements set forth in Order No. 845 and Order No. 845-A. The NYISO reviewed the proposed revisions with its stakeholders.

I. Documents Submitted

The NYISO submits the following documents with this filing letter:

1. A clean version of the proposed revisions to the NYISO's OATT ("Attachment I"); and

2. A blacklined version of the proposed revisions to the NYISO's OATT ("Attachment II").

II. Communications

All communications, pleadings, and orders with respect to this proceeding should be sent to the following individuals:

Karen Georgenson Gach, Acting General Counsel
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III. Background

In its Order Nos. 2003,[5] the Commission established the *pro forma* LGIP and LGIA to set forth the terms and conditions under which public utilities must provide interconnection services to Large Generating Facilities greater than 20 MW to existing transmission systems. These *pro forma* interconnection procedures and agreements have since been revised by the Commission in

[5] *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 (2004), *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. 131,190 (2005), *aff'd sub nom. Nat'l Ass'n of Regulatory Util. Com'rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007).

various proceedings.[6] In compliance with these orders, the NYISO incorporated the Commission's interconnection procedures and agreements into its OATT, with certain variations that the Commission previously accepted under the "independent entity variation" standard.[7] Over time, the NYISO has proposed, and the Commission has accepted, significant variations from the *pro forma* LGIP and LGIA resulting in carefully tailored interconnection procedures unique to New York.

On April 19, 2018, the Commission issued Order No. 845 to amend its *pro forma* interconnection procedures and agreements by adopting ten reforms in order to improve certainty for interconnection customers; promote more informed interconnection decisions; and enhance the interconnection process.[8] In an effort to improve certainty, Order No. 845 expanded the ability for a Developer to exercise the option to build the transmission provider's interconnection facilities and stand alone network upgrades and enhanced dispute resolution procedures that can be invoked unilaterally by a party. For promoting more informed decisions, Order No. 845 directed transmission providers to (1) outline and make public a method for determining contingent facilities; (2) list specific study process and assumptions for forming network models used in interconnection studies; (3) include electric storage resources in the definition of "Generating Facility," and (4) require summary reporting metrics for the performance of the interconnection process. Finally, in order to enhance the interconnection process, Order No. 845 required provisions allowing the interconnection customer the ability to (1) request the level of its facility's interconnection service below the full generating capacity; (2) request provisional interconnection service for facilities to have limited operations prior to completing the full interconnection process; (3) use surplus interconnection service at existing points of interconnection; and (4) make technological changes without affecting its queue position. The Commission directed each public utility transmission provider to submit a compliance filing demonstrating that it meets the requirements of Order No. 845,[9] but clarified that it made "no changes to variations allowed by Order No. 2003.[10]

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[6] *See, e.g.*, *Reactive Power Requirements for Non-Synchronous Generation*, Order No. 827, FERC Stats. & Regs. ¶ 31,385, 155 FERC ¶ 61,277 (2016); *Essential Reliability Services and the Evolving Bulk-Power System – Primary Frequency Response,* Order No. 842, 83 Fed. Reg. 9,636 (Mar. 6, 2018), 162 FERC ¶ 61,128, *order on clarification and reh'g*, 164 FERC ¶ 61,135 (2018).

[7] *See, e.g.*, *New York Indep. Sys. Operator, Inc. and New York Transmission Owners*, Order Conditionally Accepting Large Generator Interconnection Procedures and Large Generator Interconnection Agreement, 108 FERC ¶ 61,159 (2004) (accepting compliance filings and directing certain changes); *New York Indep. Sys. Operator, Inc. and New York Transmission Owners*, Letter Order, Docket No. ER04-449-004 (2005); *New York Indep. Sys. Operator, Inc. and New York Transmission Owners*, Order on Compliance Filing, 149 FERC ¶ 61,209, (2014); *New York Indep. Sys. Operator, Inc.*, Letter Order on Compliance Filing Under Order Nos. 827 and 828, Docket Nos. ER17-61-000, -001 (2017); *New York Indep. Sys. Operator, Inc.*, Letter Order on Order No. 842 Compliance Filing, Docket No. ER18-1620-000 (2018).

[8] *See generally*, Order No. 845.

[9] *Id.* at P 253.

[10] *Id.* at P 43; *see also* Order No. 845-A, at P 2.

Twelve requests for rehearing and/or clarification of Order No. 845 were submitted by various parties on a number of different issues. The NYISO submitted a Request for Clarification and Alternative Request for Rehearing on several issues related to the ability of a transmission provider to request an independent entity variation and substantive issues in connection with the surplus interconnection reform identified in Order No. 845.[11] On February 21, 2019, the Commission issued Order No. 845-A and granted clarification and/or rehearing on several issues, including the option to build revisions, summary reporting metrics for the performance of the interconnection process, determining contingent facilities, making network models used in interconnection studies available to interested parties, and surplus interconnection. With regard to the NYISO's requests, the Commission granted the request for rehearing on the independent entity variation for the surplus interconnection revisions and modified Order No. 845 to make it clear that "requesting an independent entity variation provides more flexibility than requesting a variation that is 'consistent with or superior to' a final rule's requirements."[12] The Commission, however, deferred ruling on any substantive independent entity variations until the NYISO submits its compliance filing.[13]

A. Background of NYISO's Interconnection Queue Process

The NYISO's Standard LFIP establish the requirements by which the NYISO, in coordination with the relevant Connecting Transmission Owner,[14] administers the proposed interconnection of a Large Facility greater than 20 MW to the New York State Transmission System or Distribution System.[15] The NYISO's LFIP were developed with extensive stakeholder involvement in response to the Commission's Order No. 2003.

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."[16] Accordingly, while generally following the *pro forma* LGIP and *pro forma* LGIA, the

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[11] *Reform of Generator Interconnection Procedures and Agreements*, Request for Clarification and Alternative Request for Rehearing of the New York Independent System Operator, Inc., Docket No. RM17-8-001 (May 22, 2018) ("Request for Rehearing").

[12] Order No. 845-A, at P 141.

[13] *Id.*

[14] The term "Transmission Provider" as defined in the *pro forma* LGIP encompasses both the NYISO and the New York Transmission Owners. The NYISO's 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.

[15] The term "Large Facility" as defined in Attachment X to the NYISO OATT concerns a Large Generating Facility or a Class Year Transmission Project. With the exception of controllable transmission facilities that seek Capacity Resource Interconnection Service and transmission facilities proposed by a Transmission Owner as part of its local plan, the interconnection of transmission facilities are addressed through the NYISO's separate Transmission Interconnection Procedures located in Attachment P to the NYISO OATT.

[16] Order No. 2003, at P 827.

NYISO's LFIP and the NYISO's Standard 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 its transmission expansion and interconnection processes to update and enhance the New York-specific interconnection requirements in Attachments P, S, X, and Z to 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 interconnection studies, and the process for allocating the cost of System Upgrade Facilities and System Deliverability Upgrades.[17] Some of the more significant variations are highlighted below.

B. Overview of NYISO's LFIP

Attachment X contains the procedures for processing interconnections of Large Generating Facilities and Class Year Transmission Projects (*i.e.*, transmission projects that are eligible for and request Capacity Resource Interconnection Service) (collectively, "Large Facilities"). Attachment X provides for potentially three successive Interconnection Studies of each proposed project. These studies analyze proposed projects in varying levels of detail. First is the Optional Interconnection Feasibility Study, which is a high-level evaluation of the project's configuration and local system impacts.[18] The second study is the Interconnection System Reliability Impact Study ("System Reliability Interconnection Study"), which is a detailed single-project study that evaluates the project's impact on transfer capability and system reliability.[19] The final study in the interconnection process is the Class Year Interconnection Facilities Study ("Class Year Study"), which is a construct unique to the NYISO.[20] The Class Year Study is unique to the NYISO's interconnection procedures in that it evaluates the cumulative impact of a group of projects—a "Class Year" of projects. The Class Year Study identifies the upgrade facilities needed to reliably interconnect all of the projects in a Class Year. A Class Year is comprised of projects that have met specified Class Year Study eligibility requirements by the time the combined group study begins. The hallmark of the NYISO's Class Year Study process is that it is performed for a group of projects that have achieved similar interconnection milestones to determine the cumulative impact of such projects in order to equitably allocate upgrade costs and generate detailed cost estimates that provide reasonable

[17] The Commission refers to "Interconnection Customers" in Order No. 845 and Order No. 845-A. In these comments, the NYISO uses the term "Developer," which is the term used in Attachments X and S to the OATT to refer to a project developer for a Large Facility. In addition, the Commission refers to "network upgrades" in Order No. 845 and Order No. 845-A. In these comments, the NYISO uses the following terms defined in Attachments S and X to 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.

[18] *See* Attachment X, Section 30.6.

[19] *See* Attachment X, Section 30.7.

[20] *See* Attachment X, Section 30.8.

accuracy on upgrade costs. Each Class Year Study allocates the cost of System Upgrade Facilities and System Deliverability Upgrades identified in the study among the projects in the Class Year in accordance with the cost allocation methodologies set forth in Attachment S.[21]

All Large Facilities (studied in the LFIP under Attachment X) are subject to the Class Year Study procedures. Certain Small Generating Facilities are also required to participate in the Class Year Study and other Small Generating Facilities may elect to participate in a Class Year Study.[22] The Class Year Study procedures are primarily contained in Attachment S,[23] which sets forth the eligibility requirements for Class Year entry, establishes the Class Year Start Date and schedule, describes the obligations of Class Year Projects once they enter a Class Year Study,[24] and details the scope and the cost allocation methodology for interconnection of new generation and certain merchant transmission facilities. It also contains the detailed procedures for the identification and cost allocation of System Upgrade Facilities required for a project to reliably interconnect to the system and thereby provide Energy Resource Interconnection Service ("ERIS").[25] For those Class Year Projects that elect Capacity Resource Interconnection Service ("CRIS"),[26] Attachment S provides for the evaluation of a project's Deliverability and the identification and cost allocation of System Deliverability Upgrades required for a project's proposed capacity to be fully deliverable. Attachment S also provides for the decisional process toward the completion of the Class Year Study during which Class Year Projects accept or reject their Project Cost Allocations (the costs allocated to a Class Year Project for System Upgrade Facilities and System Deliverability Upgrades, as applicable), and the process by which Security and Headroom obligations must be satisfied. Through this unique clustered Class Year Study,

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[21] *See* Attachment X, Section 30.8.2; *see also* Attachment S, Sections 25.6.2.3.1 and 25.6.2.3.4 (Class Year Study eligibility and re-entry criteria).

[22] Small Generating Facilities no larger than 20 MWs proposing to interconnect to the New York State Transmission System or to the Distribution System are studied in accordance with the SGIP in Attachment Z. As described in Section 32.3.5.3 of Attachment Z, if any Interconnection Study determines that a Small Generating Facility requires any non-Local System Upgrade Facilities to reliably interconnect, then that Small Generating Facility is placed in the next Class Year Study, and cost responsibility is allocated to the Small Generating Facility in accordance with the procedures and methodologies in Attachment S.

[23] Attachment X details the obligations related to execution of a Class Year Study Agreement and provides a high-level scope of the Class Year Study and Class Year Study procedures, but it incorporates by reference the terms of Attachment S, which provide more detailed Class Year Study procedures.

[24] Attachment X also details Developers' obligations related to the execution of the Class Year Study Agreement and Class Year Study procedures, generally.

[25] ERIS is basic interconnection service that allows a Developer to interconnect its facility to the New York State Transmission System or Distribution System in accordance with the NYISO Minimum Interconnection Standard to enable the New York State Transmission System or Distribution System to receive electric energy from the facility.

[26] CRIS is interconnection service that allows a Developer to interconnect its facility to the New York State Transmission System or Distribution System in accordance with the NYISO Deliverability Interconnection standard, which allows participation in the NYISO's Installed Capacity market to the extent of the facility's deliverable capacity.

the NYISO is able to equitably allocate upgrade costs and generate detailed good faith, binding cost estimates that provide reasonable closure on upgrade costs.

IV. Compliance Revisions

In Order No. 845, the Commission provided that, consistent with Order No. 2003, RTOs/ISOs may propose independent entity variations from its *pro forma* provisions.[27] In addition, the Commission provided that RTOs/ISOs may demonstrate that previously approved variations continue to be permissible under the independent entity variation standard.[28] The NYISO, therefore, proposes revisions to its interconnection procedures and agreements in Attachment X of its OATT and a limited, conforming revision to Attachment S of its OATT to adopt the Commission's revisions to its *pro forma* interconnection procedures and agreements set forth in Order No. 845 with certain variations described below and in the specific sections herein.

A. NYISO's Proposed Variations

The NYISO generally follows the Commission's *pro forma* LGIP and LGIA, but its LFIP and LGIA have long included numerous independent entity variations. These Commission-accepted variations are specifically tailored to New York's unique circumstances, and the existence of previously accepted variations has prompted the NYISO to obtain additional independent entity variations in response to prior modifications to the *pro forma* LGIP and LGIA.[29] All of the NYISO's independent entity variations have been and continue to be necessary in order to make Commission revisions to the *pro forma* LFIP and LGIA consistent with NYISO's existing OATT and current practices. Since Order No. 2003, the NYISO has continued to implement significant revisions to its interconnection process to update and enhance the New York-specific interconnection requirements.[30] Importantly, these procedures are fundamentally and inextricably integrated with the NYISO's market and planning rules.

The independent entity variation standard provides ISOs/RTOs with flexibility in adopting the Commission's *pro forma* language because ISOs/RTOs have different operating characteristics, depending on their geographic size and location, and are less likely to act in an unduly discriminatory manner than non-independent transmission providers.[31] The Commission has explained that under this standard, "the Commission will review the proposed variations to ensure they do not provide an unwarranted opportunity for undue discrimination or produce an

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[27] *Id.* at P 43.

[28] *Id.* at P 254.

[29] *See, e.g.*, *New York Indep. Sys. Operator, Inc.*, Order on Tariff Revisions, 135 FERC ¶ 61,014 (2011); *New York Indep. Sys. Operator, Inc.*, Order Accepting and Rejecting Tariff Revisions, 124 FERC ¶ 61,238 (2008).

[30] *See, e.g.*, *New York Indep. Sys. Operator, Inc.*, Letter Order on Interconnection Process Improvements, Docket No. ER18-80-000 (2017).

[31] *New York Indep. Sys. Operator, Inc.*, *et al.*, 108 FERC ¶ 61,159, at P 4; Order No. 2003, at P 827.

interconnection process that is unjust and unreasonable."[32] It has recognized that where changes to interconnection procedures "are clarifying and/or ministerial in nature and/or NYISO has supplied sufficient justification," such modifications are acceptable under the independent entity variation standard.[33] In addition, the Commission has recognized that the independent entity variation standard "is more flexible than the 'consistent with or superior to' standard and the regional differences standard."[34]

For the reasons explained below, the NYISO's proposed variations from the Commission's *pro forma* revisions are fully justified under the Commission's independent entity variation standard and/or "consistent with or superior to" standard.

1. Independent Entity Variation with Respect to the Terminology Used in the NYISO's LFIP and LGIA

The following are independent entity variations in terminology that will apply throughout all of the NYISO's proposed compliance revisions directed by Order No. 845.

Beginning with its compliance with Order No. 2003, the NYISO proposed and the Commission accepted variations in the terminology used in the NYISO's LFIP and LGIA.[35] The following are Commission-accepted independent variations that the NYISO incorporates in its proposed revisions to comply with Order No. 845 and Order No. 845-A.

a) Independent Entity Variation with Respect to the Term "Transmission Provider"

Both the NYISO and the New York Transmission Owners ("NYTOs") have responsibilities in the interconnection process in New York that are assigned to the "Transmission Provider" in the Commission's *pro forma* LGIP and LGIA. The Commission has previously accepted the NYISO's proposed revisions to the *pro forma* term "Transmission Provider" that allocate the Transmission Provider's responsibilities between the NYISO and the NYTOs in a manner that reflects their roles in interconnection and system operations in New York.[36]

Consistent with the existing allocation of the Transmission Provider's responsibilities in

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[32] *New York Indep. Sys. Operator, Inc.*, 124 FERC ¶ 61,238, at P 17.

[33] *Id.* at PP 17–18.

[34] Order No. 845-A, at P 141; Order No. 2003, at P 26.

[35] *See New York Indep. Sys. Operator, Inc., et al.*, 108 FERC ¶ 61,159, at P 19.

[36] *See id.*; *see also, e.g.*, *New York Indep. Sys. Operator, Inc. and New York Transmission Owners*, Order Granting Rehearing in Part and Denying Rehearing in Part and Accepting Compliance Filing, 119 FERC ¶ 61,333, P 34 (2007) (accepting compliance revisions filed by NYISO and NYTOs on March 22, 2007, in the Order No. 2006 proceeding, including the split of responsibilities between the NYISO and NYTO in the Small Generator Interconnection Procedures and Small Generator Interconnection Agreement).

the NYISO's LFIP and LGIA, the NYISO proposes to replace the term "Transmission Provider" as used in the Commission's revisions in Order No. 845 with the terms "ISO" and/or "Connecting Transmission Owner," as applicable, to clarify the respective roles of the NYISO and the Connecting Transmission Owners as they relate to the modifications to the NYISO's LFIP and LGIA directed by Order No. 845.

b) Independent Entity Variation with Respect to the Term "Interconnection Customer"

The term "Developer," as used in the NYISO's LFIP and LGIA,[37] is a tariff-defined term referring to a project developer for a Large Facility (versus a Small Generating Facility). The NYISO uses the term "Developer" instead of "Interconnection Customer" throughout its LFIP and LGIA. To avoid confusion and for consistency with the other provisions in the LGIA and LFIP not subject to revision under Order No. 845 and Order No. 845-A, the NYISO proposes to continue to use the term "Developer" in place of "Interconnection Customer."

c) Independent Entity Variation with Respect to the Terminology for Interconnection Facilities and Network Upgrades

The NYISO's LFIP, as well as the ISO Tariffs, use different terminology to refer to the types of interconnection facilities and network upgrades. The Commission has previously accepted the NYISO's terminology as it relates to attachment facilities and network upgrades. For example, the NYISO defines "Attachment Facilities" in the LFIP and LGIA but further designates it based upon the responsibility of the party—*i.e.*, Developer Attachment Facility and "Connecting Transmission Owner Attachment Facility."[38] Moreover, instead of using "network upgrade," the NYISO uses "System Upgrade Facilities" to reference network upgrades necessary to address violations of the Applicable Reliability Criteria and "System Deliverability Upgrades" to refer to network upgrades necessary for the project's deliverability. For consistency in the NYISO's LFIP and LGIA, the NYISO proposes to continue the use of this terminology consistent with the directives in Order No. 845 and Order No. 845-A.

d) Independent Entity Variation with Respect to the Term "Transmission System"

The terms "New York State Transmission System" and "Distribution System," as used in the NYISO's Commission-approved LFIP and LGIA, are tariff-defined terms that define the scope of the New York State electric transmission system that is subject to the NYISO's interconnection procedures.[39] The NYISO uses the term "New York State Transmission

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[37] *New York Indep. Sys. Operator, Inc., et al.*, 108 FERC ¶ 61,159 at PP 17–19.

[38] *See* Attachment X, Section 30.1.

[39] The NYISO's LFIP and LGIA define "New York State Transmission System" as the "entire New York State electric transmission system, which includes (i) the Transmission Facilities under ISO Operational Control; (ii) the Transmission Facilities Requiring ISO Notification; and (iii) all remaining transmission facilities within the New York Control Area." Attachment X, Section 30.1; Section 30.14, Appx. 3, Art. 1.

System" instead of "Transmission System" throughout its interconnection procedures and agreements, while "Distribution System" refers to facilities and equipment used to distribute electricity that is subject to the Commission's jurisdiction and the NYISO's LFIP under Order No. 2003.[40] To avoid confusion and for consistency with the other provisions in the NYISO's LFIP and LGIA not subject to revision under Order No. 845, the NYISO proposes to continue to use the terms "New York State Transmission System" and "Distribution System," as applicable, in place of "Transmission System" in its proposed revisions to the LFIP and LGIA.

e) Additional Miscellaneous Variations in NYISO's LFIP and LGIA

The NYISO proposes a few additional minor clarifying or ministerial variations in adopting the Commission's language in order to ensure consistency within the NYISO's LGIA. Consistent with its LGIA, the NYISO has substituted the word "Article" for the word "Section" in the LGIA provisions added in response to Order No. 845 and Order No. 845-A.

2. Proposal-Specific Variations

In addition to the above-identified variations, the NYISO proposes certain additional independent entity variations, as well as variations "consistent with or superior to" the *pro forma* revision, in its compliance revisions as discussed in detail below. As the NYISO explained in its Request for Rehearing, independent entity variations are necessary to comply with Order No. 845 due, in part, to the fact that the NYISO's rules are fundamentally different from other regions. In light of this concern, the Commission determined, in Order No. 845-A, that it was not its intent in Order No. 845 to limit the flexibility of independent entities to request independent entity variations.[41] The NYISO respectfully requests that the Commission accept the variations described below in compliance with the Commission's Order No. 845 directives.

B. Proposed Revisions to Address Order No. 845 Reforms

1. <u>Improving Certainty for Developers</u>

a) Developer's Option to Build

Order No. 845 modifies articles 5.1, 5.1.3 and 5.1.4 of the *pro forma* LGIA to afford an interconnection customer the option to build with respect to interconnection facilities and stand alone network upgrades regardless of whether the transmission provider can meet the interconnection customer's proposed dates (*i.e.*, in-service date, initial synchronization date, or commercial operation date).[42] In Order No. 845-A, the Commission clarified and/or granted rehearing on several issues raised by commenters related to the modifications to the option to

[40] *See* Attachment X, Section 30.1

[41] Order No. 845-A, at PP 139–41.

[42] Order No. 845, at P 85.

build, including, but not limited to,[43] modifying the definition of "Stand Alone Network Upgrades" to clarify that the option to build does not apply to stand alone network upgrades on affected systems[44] and require the transmission provider to provide a written technical explanation if it does not consider a network upgrade to be a stand alone network upgrade.[45]

The NYISO incorporates the Commission's modifications to the NYISO's LGIA and the definition of "Stand Alone System Upgrade Facility" under the LFIP and LGIA with minor revisions to the Commission's language based on the previously accepted variations in the terminology discussed above. Additionally, the NYISO proposes to continue, based on the NYISO's Class Year process, the Commission-accepted independent entity variation to Article 5.1.3 that a Developer's option to build an Attachment Facility or Stand Alone System Upgrade Facility that is needed for more than one project is contingent on the agreement of all the other affected Developers.[46] Maintaining this independent entity variation is not inconsistent with and would not interfere with the option to build requirement under Order No. 845. The NYISO, therefore, requests that the Commission accept the compliance revisions continuing to reflect this independent entity variation.

b) Dispute Resolution

Order No. 845 revises the *pro forma* LGIA to add a new section allowing a party to unilaterally seek non-binding dispute resolution.[47] The process would afford a disputing party the opportunity to request the transmission provider to engage in non-binding dispute resolution if an issue cannot be resolved within the initial informal 30-day period.[48] The transmission provider would then be required to appoint a neutral decision-maker, who is an independent contractor without any current or past substantial business or financial relationships with either party, that would render a written decision within 60 days of appointment.[49] If a disputing party elects to pursue non-binding dispute resolution, that party or any other party may still pursue the existing binding arbitration process in a transmission provider's procedures or bring a complaint pursuant to Section 206 of the Federal Power Act.[50] Order No. 845 also provided that each party

[43] On March 25, 2019, American Electric Power Services Corporation filed a Request for Clarification, or in the Alternative, Rehearing of Order No. 845-A in this docket, raising several issues concerning participant funding and the expansion of the option to build based on the risk/reward rationale employed by the D.C. Circuit in *Ameren Services Co. v. FERC*, 880 F.3d 571 (D.C. Circ. 2018). In the event that the Commission grants the above-referenced Request for Clarification, or in the Alternative Rehearing of Order No. 845-A, this compliance filing does not foreclose the NYISO's right to submit a further compliance filing(s), as appropriate, to address any with directives in a Commission order on such Request for Clarification, or in the Alternative, Rehearing of Order No. 845-A.

[44] Order No. 845-A, at P 61.

[45] *Id.* at P 68.

[46] *New York Indep. Sys. Operator, Inc.*, *et al.*, 108 FERC ¶ 61,159.

[47] Order No. 845, at P 132.

[48] *Id.* at P 133.

[49] *Id.*

[50] *Id.* at P 139.

is responsible for its costs and that the cost of the decision-maker is to be divided equally among the disputing parties.[51]

The NYISO adopts the dispute resolution procedures in Order No. 845 and proposes to include the language in new Section 30.13.5.5 of Attachment X to the OATT. In addition to the language contained in Order No. 845, the NYISO proposes two variations to further the intent of purpose of the non-binding dispute resolution—mainly, specifying what is necessary to include in a written request and adding a requirement that the neutral decision-maker disclose any disqualifying relationship or interest. These two variations are aimed at reducing delays once non-binding dispute resolution is requested by providing high-level details and information necessary to involve the correct parties and to be able to appoint a neutral decision-maker that does not have any "current or past substantial business or financial relationships with either party."[52]

As it relates to the affirmative disclosure obligation by the neutral decision-maker, there is always the possibility that an individual may initially appear to be neutral but it becomes known, at a later point, that the individual has a potential impermissible relationship or interest. The proposed language places an affirmative obligation on the neutral decision-maker to advise of any disqualifying relationships and interests when known and a clear mechanism to either replace the decision-maker or obtain the express written consent from each party.

These variations further the Commission's goal with regard to the dispute resolution directives in Order No. 845; therefore, the NYISO requests that the Commission accept these as consistent with or superior to the required revisions.[53]

2. Promoting More Informed Interconnection Decisions

a) Identification and Definition of Contingent Facilities

Order No. 845 adopted a definition of "contingent facilities" and added a new section to the *pro forma* LGIP for transmission providers to specify a method to identify and to inform interconnection customers of contingent facilities at the conclusion of the system impact study and to include in the interconnection agreement.[54] Order No. 845 also required transmission providers to provide, upon the request of an interconnection customer, the estimated cost and in-service completion date of any identified contingent facility at certain points in the process.[55]

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[51] *Id.* at P 133.

[52] *Id.*

[53] *Id.* at P 43.

[54] Order No. 845, at P 218.

[55] *Id.* at P 194.

The NYISO adds a new Section 30.3.7 in Attachment X to specify the method used to identify Contingent Facilities,[56] but proposes several independent entity variations related to the timing of identifying Contingent Facilities and the definition of Contingent Facilities in Order No. 845 due to the differences in NYISO's interconnection queue approach and its unique Class Year process. Specifically, the NYISO proposes to identify and inform a Developer about Contingent Facilities at the conclusion of the Class Year Studies in the detailed study report that is provided to each Developer. The NYISO will also, upon the request of a Developer, provide the estimated costs and estimated in-service completion time of each identified Contingent Facility when the information is readily available and not commercially sensitive.[57] Such Contingent Facilities will also be specified in the Interconnection Agreement.

Additionally, the NYISO proposes to use a revised definition of contingent facility to reflect the differences in the NYISO's interconnection queue process, as detailed below.

> **Contingent Facilities** shall mean those unbuilt ~~interconnection facilities and network upgrades~~ Attachment Facilities and System Upgrade Facilities and/or System Deliverability Upgrades associated with Class Year Projects upon which the ~~interconnection request's costs, timing, and study findings~~ Large Facility's Class Year Project Cost Allocations are dependent, and if delayed or not built, could ~~cause a need for restudies of the interconnection request or a reassessment of the interconnection facilities and/or network upgrades and/or costs and timing~~ impact the actual costs and timing of the Large Facility's System Upgrade Facilities or System Deliverability Upgrades.[58]

The NYISO's proposed variations are consistent with the purpose and intent of Order No. 845. As described above, the NYISO's interconnection queue approach and study of a cluster of projects in its Class Year Study does not use a "hard" or "serial" interconnection queue approach employed by most other regions. The queue position is only a limited factor in determining the progress of a project through the interconnection studies and is even less relevant to the identification of required Attachment Facilities, System Upgrade Facilities, and System Deliverability Upgrades and their related costs to reliably interconnect.[59]

In Order No. 845, the Commission selected the system impact study phase as the appropriate time to provide the list of contingent facilities because that study "considers generating facilities and identified network upgrades associated with higher-queued interconnection requests, and an accompanying list of contingent facilities can contextualize

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[56] To the extent needed, the NYISO will publish additional, technical implementation details relating to the methods as necessary in NYISO Manuals and Procedures. *See id.* at P 200.

[57] *Proposed* Attachment X, Section 30.3.7.

[58] *Proposed* Attachment X, Section 30.1 (definition of "Contingent Facilities"); *proposed* Attachment S, Section 25.1.2 (definition of "Contingent Facilities").

[59] Section 25.5.8 of Attachment S to the OATT expressly provides that even in the Class Year Study, there is "no prioritization of the projects grouped and studied."

these results."[60] Given the interconnection queue process employed by the NYISO, however, providing a list of contingent facilities would not accurately represent the potential facilities and upgrades that could affect a Developer's Interconnection Request. Because the NYISO does not employ a serial queue approach, the NYISO would have to expand the scope of the System Reliability Impact Study to evaluate the impact of both higher-queued projects, as well as lower-queued projects and, as a result, would be unable to identify Contingent Facilities with the accuracy that would be useful to a Developer.

The NYISO's Class Year Study, however, is the stage in the interconnection process that will allow for a much more accurate identification of Contingent Facilities. Therefore, the NYISO proposes to identify and provide the list of Contingent Facilities at the conclusion of the Class Year Study.

Attachment S of the OATT already provides detailed procedures for building the base cases and identifying upgrade facilities, which can include sharing of upgrade facilities by multiple projects, and allocating the costs of those upgrades to the responsible projects.[61] At the conclusion of a Class Year Study, all Developers remaining in the study must either accept or reject their allocation of costs required for System Upgrade Facilities and System Deliverability Upgrades.[62] The remaining Developers—those that accepted their project cost allocations—must also provide Security in the amount of the respective cost allocation. If such Security is posted for an upgrade that is a Contingent Facility but that project does not go forward, the Security will be used to the extent necessary to defray the cost of upgrades required for projects that remain in a Class Year.[63] For Interconnection Requests entering a future Class Year Study, the base cases used for such studies include only those facilities that are either already interconnected or proposed Large Facilities or Small Generating Facilities that have provided the Security required to cover the costs of necessary upgrades. As a result, the NYISO's interconnection queue approach and Class Year process already account for Contingent Facilities, as the facilities are reflected in the Class Year Study Report.

b) Transparency Regarding Study Models and Assumptions

The Commission determined in Order No. 845 that there is a benefit to interconnection customers by increasing transparency of network models and assumptions, and directed modifications to the *pro forma* LGIP to maintain network models and underlying assumptions on the transmission provider's OASIS site or a password-protected website that are representative of current system conditions.[64] The Commission, however, permitted that a transmission provider could decide to "maintain the required information on its website as long as it has a link to the

[60] Order No. 845, at P 204.

[61] *See generally*, Attachment S, Sections 25.5.8, 25.6.2, and 25.7.

[62] *See* Attachment S, Section 25.8.

[63] *See, e.g.*, Attachment S, Section 25.8.6.3.

[64] Order No. 845, at PP 236–38.

location of the information on OASIS."[65] In Order No. 845-A, the Commission made certain clarifications in that transmission providers are not required to modify network models and underlying assumptions in making them available to interested parties. "Current system conditions" need only "reflect the conditions currently used in interconnection studies."[66]

The NYISO proposes to adopt the requirement to maintain network models and underlying assumptions on a password-protected website in Section 30.2.3 of Attachment X by building off of existing provisions to make such representations and assumptions available to Developers upon request. Currently, an existing system representation is included in the NYISO's Annual Transmission Base Assessment ("ATBA") used for interconnection studies. The NYISO proposes to modify its LFIP through revisions to Section 30.2.3 of Attachment X to the OATT to not only make the ATBA and its underlying assumptions available, but also its Annual Transmission Reliability Assessment ("ATRA")—the ATBA base case with the addition of projects in the current Class Year Study. Together with their underlying assumptions, the NYISO will make the above base cases available to Developers upon request, and will also maintain the completed ATBA and ATRA and the underlying assumptions that are currently being used in interconnection studies on a secure portion of its website.

Section 30.2.3 already identifies that the power flow, short circuit, and stability base cases available to a Developer, upon request, are "those [base cases] that the ISO is using in the [ATBA] then in progress, or if such data bases are not available, the data bases from the last completed [ATRA] conducted pursuant to Attachment S."[67] Specifically, the NYISO proposes to add:

> In addition, the ISO shall maintain network models and underlying assumptions within its possession on its secure portion of the NYISO website, which shall be accessible through a link from the OASIS. Such network models and underlying assumptions should reasonably represent those used during the most recent Class Year Interconnection Facilities Study and be representative of current system conditions used in the interconnection studies.

Additionally, Section 30.2.3 already provides requirements to access Confidential Information or Critical Energy Infrastructure Information. The NYISO proposes apply them to interested parties accessing the network models but to make it clear that such requirements would not only apply to Developers but also "password-protected website users."[68]

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[65] *Id.* at P 238.

[66] Order No. 845-A, at P 79. In Order No. 845-A, the Commission clarified that " the phrase 'current system conditions' does not require transmission providers to maintain network models that reflect current real-time operating conditions of the transmission provider's system." *Id.* at P 88.

[67] Attachment X, Section 30.2.3.

[68] *Proposed* Attachment X, Section 30.2.3.

c) Definition of Generating Facility

Order No. 845 directs transmission providers to revise the definition of "Generating Facility" in the *pro forma* LGIP and LGIA to include electric storage resources.[69] The NYISO proposes to incorporate "and/or storage for later injection" to the definition of Generating Facility under the NYISO's LFIP and LGIA, consistent with Order No. 845.

3. Enhancing Interconnection Processes

a) Interconnection Study Deadlines

Order No. 845 modifies the *pro forma* LGIP to require transmission providers to post interconnection study processing metrics quarterly on its OASIS or website and to file informational reports with the Commission if they exceed study deadlines for more than 25 percent of any study type for two consecutive quarters.[70] New sections 3.5.2 and 3.5.3 of the *pro forma* LFIP establish the required statistics concerning the processing time for the feasibility study, system impact study, and facilities study, along with the interconnection service request withdrawals from the interconnection queue.[71] The Commission identified that the start date for each study included in the performance reporting metrics is the date that the transmission provider receives a fully executed study agreement.[72] In Order No. 845-A, the Commission granted rehearing and modified the commencement date for measuring study performance metrics and the reporting requirement to "the first calendar quarter of 2020."

The NYISO adopts the posting requirements of Order No. 845 and includes the requirements in Sections 30.3.4.2, 30.3.4.3, and 30.3.4.4 of Attachment X to the OATT. Consistent with Order No. 845, the NYISO proposes to post the metrics on its OASIS or "publicly accessible portion of its website" and include any links as necessary.[73] Consistent with Order No. 845-A, the NYISO will begin reporting metrics by completing the posting and updating of the metrics for the first quarter of 2020 within 30 days from the end of that quarter.[74] Additionally, the NYISO proposes several independent entity variations to account for Commission-accepted variations in the NYISO's interconnection process.

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[69] Order No. 845, at P 275.

[70] *Id.* at P 305. Order No. 845 required they be updated within 30 days of the end of a calendar quarter and must be retained for three calendar years.

[71] *See id.* at Appendix B, Compilation of Final Rule changes to the *pro forma* LGIP.

[72] *Id.* at P 331.

[73] The NYISO proposes a minor conforming change to existing language that would be contained in new Section 30.3.4.1 of Attachment X to also specify that the list of valid Interconnection Requests may be also maintained in a publicly accessible portion of its website."

[74] As the Commission determined in Order No. 845-A, the effective date of the NYISO's revisions will be no earlier than the date of an order accepting such revisions. *See* Order No. 845-A, at P 166. In the event that the NYISO does not have an order by the required time to post its metrics for the first quarter of 2020, the NYISO will post the metrics in the first quarter following the Commission's order accepting the proposed revisions or as otherwise specified in the order.

First, while the Commission required the start date of the study to be the date on which the fully executed study agreement is received by the transmission provider, the NYISO proposes to use an alternative but equivalent date in light of Commission-approved independent entity variations through which the NYISO eliminated study agreements for certain interconnection studies. Specifically, the NYISO's comprehensive queue improvement reforms in 2018 added administrative efficiencies by eliminating separate study agreements for the Optional Interconnection Feasibility Study and System Reliability Interconnection Study.[75] Currently, the Optional Interconnection Feasibility Study begins following a notice provided by the NYISO following the receipt of the required deposit and the NYISO deeming the required technical data to be sufficient, together with the Connecting Transmission Owner(s)'s acceptance of the scope for the Optional Interconnection Feasibility Study—all of which is necessary to begin and complete the study work.[76] Moreover, this is consistent with the study start date of the *pro forma* LGIP under Order No. 2003. Before a study commences under the *pro forma* LGIP, a Developer must have provided the required study deposit and have a fully executed study agreement, which requires all technical data and the scope detailed in Attachment A to the study agreements.[77] The NYISO's proposed variation for the study start date is synonymous with a fully executed study agreement and is described in the metrics set forth in Section 30.3.4.2.1 of Attachment X.[78]

The NYISO made similar changes for the System Reliability Interconnection Study metrics but conformed them to the necessary requirements that must be met before such study may commence.[79] Specifically, the date on which a System Reliability Interconnection Study commences would be "the date of the NYISO's notification that the study commenced following the latter of: (i) confirmation of receipt of the required study deposit; (ii) confirmation of receipt of the required technical data; (iii) confirmation of Site Control; or (iv) approval of the study scope for the Interconnection System Reliability Study by the ISO Operating Committee."[80] This is consistent with the start of the study under the *pro forma* LGIP set forth in Order No. 2003 because an interconnection customer must also demonstrate Site Control when the executed system impact study agreement is delivered to the transmission provider.[81]

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[75] *See New York Indep. Sys. Operator, Inc.*, Letter Order on Interconnection Process Improvements, Docket No. ER18-80-000 (2017); *see also New York Indep. Sys. Operator, Inc.*, Proposed Tariff Revisions Regarding Interconnection Process Improvements, Docket No. ER18-80-000, at pp 11–22 (October 16, 2017).

[76] Attachment X, Sections 30.6.1, 30.6.2.

[77] Order No. 2003, *pro forma* Appendices 2 and 3 to LGIP.

[78] *Proposed* Attachment X, Section 30.3.4.2.1 (specifying that the "start date of the study . . . is the date that the ISO notifies the parties that the study commenced following the latter of: (i) confirmation of receipt of the required study deposit; (ii) confirmation of receipt of the required technical data; or (iii) acceptance by the Connecting Transmission Owner(s) of the study scope for the Optional Interconnection Feasibility Study").

[79] The date on which a System Reliability Interconnection Study commences is the date of the notification from the NYISO that the study commenced, which is issued following the receipt of the study deposit, all technical data, including Site Control if it was not previously provided, and approval of the study scope by the Operating Committee. *See* Attachment X, Sections 30.7.2 and 30.7.3.

[80] *Proposed* Attachment X, Section 30.3.4.2.2.

[81] Order No. 2003, section 7.2 of *pro forma* LGIP.

Second, given the unique nature of the Class Year Study and the specific timelines specified for completing the Class Year Study, the NYISO proposes to reference the Class Year schedule set forth in Section 25.5.9 of Attachment S.[82] This will account for the different paths by which a Class Year Study can progress. Moreover, projects in a Class Year Study execute Interconnection Facilities Study Agreements at different times, but all for the same Class Year Study. This unique feature of the NYISO's interconnection procedures necessitates the use of a start date other than the execution of an Interconnection Facilities Study Agreement. The NYISO, therefore, proposes to use the defined term Class Year Start Date as the study start date for purposes of reporting metrics related to the Class Year Study.

The NYISO also proposes other independent entity variations to clarify the calculation of the study timeframes and the date upon which a study is deemed complete for purposes of the reporting metrics.

First, the NYISO proposes to account for potential delays caused by tariff-required time periods for a Developer to cure deficiencies related to its Interconnection Request and tariff-defined comment period following the NYISO's issuance of the initial draft study report. Specifically, the new Section 30.3.4.2 of Attachment X would include the following language:

> For purposes of this section, an Interconnection Study is deemed complete on the date upon which the study itself is completed and an initial study report is circulated to the Developer and the Connecting Transmission Owner(s). Further, the statistics related to processing of Interconnection Studies will exclude days within which, in the event of a withdrawal notice issued by the ISO pursuant to Section 30.3.6 of Attachment X, the Developer is permitted to cure the deficiencies that prompted the withdrawal notice.

The Commission determined in Order No. 845-A that the purpose of these reforms is to increase transparency to "allow interconnection customers to assess whether a transmission provider is using 'reasonable efforts' to process interconnection studies."[83] In turn, a Developer can "develop informed expectations about how long the interconnection study portion of the process actually takes" within a particular transmission system.[84] The NYISO's proposed revisions do not affect the stated purpose of reporting these statistics, as the delays are due to affording a Developer time to cure its deficiencies and time to provide comments on the results of its study. The cure period for deficiencies is up to 15 Business Days and, in some cases, could amount to almost one-third or one half of the time for the NYISO to complete its analysis. Additionally, the NYISO's current tariff provisions afford a Developer, as well as other parties, ample time to comment and identify potential issues to be resolved in the study evaluation prior to finalizing the study report. This time period often allows for resolution of issues in the study without the need to invoke dispute resolution or bring the matter before the Commission.

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[82] *Proposed* Attachment X, Section 30.3.4.2.3.

[83] Order No. 845, at P 306; *see also* Order No. 845-A, at P 101.

[84] Order No. 845, at P 306; *see also* Order No. 845-A, at P 101.

Second, the NYISO proposes variations to account for the requirements under the NYISO tariff and foundational agreements that require System Reliability Impact Study scopes and reports to be approved by the NYISO Operating Committee before they are considered final.[85] The Commission-accepted tariff affords a Developer three months to bring the study report to the NYISO Transmission Planning Advisory Subcommittee following delivery of the final draft report (after receipt of all comments on the initial draft report), which is a tariff-required step, before proceeding to the Operating Committee.[86] This three-month period allows a Developer to weigh its options in proceeding to the Operating Committee, which is to a Developer's benefit. In light of the Developer's three-month window following the comment period and issuance of a final draft report, the NYISO proposes to use the distribution of the initial draft study report as the "deemed complete" point. To use the final report, which is the date the Operating Committee approves the report, would reduce the NYISO's study time to near zero days within which to perform the study, as the Developer's decision period to bring the study to the Operating Committee and the Operating Committee's approval will alone take more than 90 days from receipt of the final draft.

Finally, the NYISO incorporates the requirements of section 3.5.3 of the *pro forma* LGIP, as revised by Order No. 845-A, in its new Section 30.3.4.3 of Attachment X but specifies that "days" refers to "Calendar Days" to provide further clarity and consistency with the language of the NYISO's LFIP. Additionally, the NYISO adopts the requirements of section 3.5.4 of the *pro forma* LFIP in its new Section 30.3.4.4 of Attachment X specifying that "days" refers to "Calendar Days" and other minor, non-substantive revisions to match the previously accepted terminology used throughout the NYISO's LFIP.

b) Interconnection Service Below Generating Facility Capacity

Order No. 845 revised the *pro forma* LGIP to permit an interconnection customer to request interconnection service that is lower than its facility's full generating capacity and required transmission providers to have a process for considering requests for such interconnection service.[87] Specifically, Order No. 845 and Order No. 845-A revised section 3.1 and appendix 1 of the *pro forma* LGIP to study requests for interconnection service at the level of requested interconnection service based on available studies, while permitting a transmission provider, at its discretion and based on good utility practice, to perform other studies, at the interconnection customer's expense, to evaluate the facility at its full generating capacity for safety and reliability of the system.

Order No. 845 also revised sections 4.4.1 and 4.4.2 of the *pro* forma LGIP to specify that a decrease in a facility's output before execution of a system impact study agreement or an interconnection facilities agreement could be due to a decrease in the size of the facility or a decrease in the level of interconnection service through transmission provider-approved

[85] OATT, Section 3.9.3; ISO Agreement, Article 8.0.

[86] Attachment X, Section 30.7.5.

[87] Order No. 845, at P 367.

injection-limiting technologies.[88] If it is due to a decrease in the level of interconnection service, an interconnection customer may also propose control technologies at this point in the process to limit the output of its facilities to match the reduced level of interconnection service.[89]

The NYISO incorporates the requirements of Order No. 845 and Order No. 845-A to allow Developers to request interconnection service below a facility's capacity with limited requested variations. The process for requesting and studying a request for interconnection service below the full generating facility capacity is detailed in revised Section 30.3.2.3 of Attachment X to the OATT.[90] Initially, the NYISO adapts some of the language to make it applicable for both Large Generating Facilities as well as Class Year Transmission Projects.[91] Additionally, if a Developer requests ERIS below the full capacity of the Large Facility, the NYISO shall study the requested level of ERIS for purposes of Attachment Facilities, Distribution Upgrades, System Upgrade Facilities, and associated costs. The NYISO proposes to specify that it and the Connecting Transmission Owners can require the facility to be studied at its full output, at the Developer's expense, to ensure the safety and reliability of the New York State Transmission (and Distribution System as applicable) "based on Good Utility Practice and related engineering considerations after accounting for any control technology proposed by the Developer."[92] Consistent with Order No. 845-A, the NYISO proposes to specify that it will provide the Developer a detailed explanation for the need for additional studies prior to beginning such studies.[93]

Order No. 845 did not permit a Developer to unilaterally determine what control technologies would be permitted to limit a facility's capacity.[94] Therefore, borrowing on language from the NYISO's Small Generator Interconnection Procedures, the NYISO proposes revisions to Section 30.3.2.3 of Attachment X to require the agreement of the NYISO and the Connecting Transmission Owners for the use of a control system, power relay, or other similar device settings or adjustments in order to limit the output of the facility.[95] Under the proposed revisions, neither the NYISO nor Connecting Transmission Owner may unreasonably withhold agreement, provided that the method that the Developer proposes to limit the injection "will not

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[88] Order No. 845, at P 406.

[89] Order No. 845-A, at P 118; *see also* Order No. 845, at P 406.

[90] The NYISO proposes revisions to the data form for the Large Facility Interconnection Request, as well as the Interconnection Facilities Study Agreement, to provide a specific location for a Developer to specify any injection-limiting equipment that would limit the capacity of the Large Facility. *See proposed* Attachment X, Appendices 1 and 3.

[91] The Order No. 845 language focused on Generating Facility Capacity; however, given that a Class Year Transmission Project does not have generating capacity, the NYISO revised the language to ensure that the provisions of the NYISO's LFIP cover both types of Large Facilities. *Compare* Order No. 845, at PP 347–49, *with proposed* Attachment X, Sections 30.3.2.3, 30.6.3, 30.8.2.

[92] *Proposed* Attachment X, Section 30.3.2.3.

[93] Order No. 845-A, at P 117.

[94] Order No. 845, at P 385 (permitting a transmission provider to either accept or design its own control technology).

[95] *Proposed* Section 30.3.2.3 of Attachment X.

adversely affect the safety and reliability of the New York State Transmission System (or Distribution System as applicable)."[96] In the event that the NYISO and Connecting Transmission Owner do not agree with the method, Section 30.3.2.3 of Attachment X identifies some of the courses of action that are available to a Developer, as well as pursuing dispute resolution under Section 30.13 of the Attachment X.

Lastly, the NYISO proposes a minor variation from the added field in Appendix 1 of the *pro forma* LGIP for an interconnection customer to include the requested level of capacity of interconnection service, "if lower than the Generating Facility Capacity."[97] The NYISO proposes to keep its Commission-accepted variation that has a Developer specifying the nameplate capacity of the facility under field number 5 and the requested level of ERIS under field number 6.[98] In addition, the NYISO proposes to include a parenthetical to note for a Developer as it relates to the requested level of ERIS that "[a] Developer may request ERIS below the Generating Facility Capability for Large Generating Facilities and the full facility capacity for Class Year Transmission Projects subject to the requirements and limitations set forth in Section 30.3.2.3 of Attachment X to the ISO OATT." These variations further the Commission's goal with regard to the request for interconnection service below a facility's capacity in Order No. 845; therefore, the NYISO requests that the Commission accept these as consistent with or superior to the required revisions.[99]

c) Provisional Interconnection Service

In Order No. 845, the Commission determined that transmission providers must allow interconnection customers to request provisional interconnection service and operate under a provisional interconnection agreement prior to completion of the full interconnection process. Thus, Order No. 845 revised section 1 of the *pro forma* LGIP and sections 1 and 5.9.2 of the *pro forma* LGIA to allow a Developer to seek provisional interconnection service once there are available studies to indicate that there is "a level of interconnection that can occur without any additional interconnection facilities and/or network upgrades."[100] However, such provisional interconnection service is only permitted while the facility completes its interconnection studies and may not receive "its full level of interconnection service" under the provisional interconnection provision.

The NYISO proposes revisions to incorporate the requirements of Order No. 845 as it relates to Provisional Interconnection Service with requests for independent entity variations to account for (1) prior tariff revisions that the Commission accepted in which the NYISO expanded the provisions regarding Limited Operations; (2) the NYISO's unique Class Year

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[96] *Id.*

[97] *Reform of Generator Interconnection Procedures*, Errata Notice, 167 FERC ¶ 61,124 (May 13, 2019) (adding "Requested capacity (in MW) of Interconnection Service (if lower than the Generating Facility Capacity)" to item no. 5 of Appendix 1 to the *pro forma* LGIP).

[98] Attachment X, Appendix 1 of Section 30.14.

[99] Order No. 845, at P 43.

[100] *Id.* at P 441.

structure; and (3) the NYISO's CRIS requirements and necessary limitation on the use of CRIS for facilities interconnected with Provisional Interconnection Service.

Consistent with Order No. 845, the NYISO proposes to include a definition of "Provisional Interconnection Service" in Section 30.1 of Attachment X to the OATT and the NYISO's LGIA, as follows:

> **Provisional Interconnection Service** shall mean interconnection service provided by the ISO associated with interconnecting the Developer's Large Facility to the New York State Transmission System (or Distribution System as applicable) and enabling the transmission system to receive electric energy from the Large Facility at the Point of Interconnection, pursuant to the terms of the Provisional Large Generator Interconnection Agreement and, if applicable, the ISO OATT.

The NYISO also includes (1) a definition for Provisional Large Facility Interconnection Agreement, (2) a new Article 5.9.2 of the NYISO's LGIA for Provisional Interconnection Service at the request of the Developer prior to the completion of the NYISO's LFIP, and (3) a similar provision for Provisional Interconnection Service that replaces Section 30.12.3 of Attachment X (*i.e.*, procedures for a request for limited operations).

In addition to the proposed revisions to the language in order to be consistent with the terminology previously accepted by the Commission for the NYISO's LFIP and LGIA, the NYISO proposes an independent variation to specify that the interconnection service that a facility may offer while providing Provisional Interconnection Service is limited to ERIS and may not include CRIS unless the Developer has completed a Class Year Study, accepted cost allocation, and posted Security for any required System Deliverability Upgrades. Section 30.11.4 of Attachment X includes language previously accepted by the Commission that affords Developers the opportunity to enter into a LGIA prior to completion of the Class Year Study.[101] However, a Developer cannot participate as an Installed Capacity Supplier until after it completes a Class Year Study and its requested CRIS is either (i) deemed fully or partially deliverable, and the Developer accepts its deliverable megawatts, or (ii) accepts its Project Cost Allocation and posts Security for any required System Deliverability Upgrades identified in the Class Year study.[102] This is consistent with Commission-accepted provisions of the NYISO's Market Administration and Control Area Services Tariff, requiring a Developer to obtain CRIS (which, for any resource larger than 2 MW requires completion of a Class Year Study) before being eligible to participate as an Installed Capacity Supplier.[103] This limitation of allowing

[101] *See* Attachment X, Section 30.11.4.

[102] Attachment X, Section 30.11.4.

[103] Section 5.12.1 of the NYISO Market Administration and Control Area Services Tariff ("In order to qualify as an Installed Capacity Supplier, Generators and controllable transmission projects electrically located in the NYCA, and transmission projects with associated incremental transfer capability, must have obtained Capacity Resource Interconnection Service ["CRIS"] pursuant to the applicable provisions of Attachment S to the ISO OATT and have entered service: controllable transmission projects must also have obtained Unforced Capacity

facilities that go into service prior to completion of a Class Year Study to do so only with ERIS is one that has been accepted by the Commission in LGIAs for facilities yet to complete a Class Year Study at the time the LGIA was executed and should apply to Provisional Interconnection Service as well.[104]

The NYISO proposes an additional independent entity variation with regard to Provisional Interconnection Service in order to extend the current requirement in Section 30.11.4 of Attachment X to Developers seeking Provisional Interconnection Service. This would require such Developers to agree, in the LGIA, to accept the cost of System Upgrade Facilities that are identified (after the facility commences Provisional Interconnection Service) in the Class Year Study. The proposed revision to Section 30.12.3 of Attachment X applies the requirement in Section 30.11.4 that the Developer with a Provisional Large Facility Interconnection Agreement must agree that the proposed facility will accept the cost allocation from the Class Year Study and post Security for any identified System Upgrade Facilities, regardless of whether the cost allocation exceeds any identified System Upgrade Facilities or additional System Upgrade Facilities are required.[105] The proposed variations are consistent with the Commission-accepted limitations on entering into a LGIA prior to completion of the Class Year Study, particularly given the unique nature of the NYISO's Class Year process and requirement to accept cost allocation for System Upgrade Facilities.[106]

d) Utilization of Surplus Interconnection Service

Order No. 845 revises the *pro forma* LGIP and LGIA to require transmission providers to establish an expedited interconnection process outside of the interconnection queue to allow for transfers of surplus interconnection service.[107] The Commission provided that Surplus Interconnection Service is "created because generating facilities may not operate at full capacity at all time," and that if an existing transmission provider, or its affiliates, do not use such service, the service may be made available to other potential interconnection customers.[108] This requirement relies on the premise that a facility's interconnection service is based on an evaluation of the facility at full capacity, with reliability upgrades being required for any adverse reliability impacts of the facility's injection of its full capacity, with no re-dispatch or dispatching down of the facility to mitigate such adverse impacts.[109] The Commission fashioned the order based upon this construct. However, that is not the case under the NYISO's unique Minimum Interconnection Standard, described in more detail below, which allows for re-dispatch of a facility (*i.e.*, both the studied project and existing generators in the case) in interconnection studies

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Deliverability Rights and transmission projects with associated incremental transfer capability must also have obtained External-to-ROS Deliverability Rights.").

[104] *See, e.g., New York Indep. Sys. Operator, Inc.*, Letter Order, Docket No. ER18-1161-000 (2018); *New York Indep. Sys. Operator, Inc.*, Letter Order, Docket No. ER17-467-000 (January 23, 2017).

[105] Attachment X, Section 30.11.4.

[106] *See id.*

[107] Order No. 845, at P 467.

[108] *Id.* at PP 468–72.

[109] *Id.*

to less than the facility's full capacity in order to mitigate reliability impacts at full capacity. Even if an interconnection study did not require re-dispatch, a facility is never guaranteed that it can operate at its full capacity in normal operations due to various system conditions and subsequent new project entry.

The NYISO, therefore, requests an independent entity variation to continue its existing interconnection process—a cornerstone of which is its formulation of the Minimum Interconnection Standard. The NYISO's existing interconnection process and application of its unique Minimum Interconnection Standard rely on previously accepted variations from the *pro forma* LGIP and LGIA, which differ from the basic premise relied on by Order No. 845's requirement to offer surplus interconnection service to Developers. As a result, the NYISO requests this variation, as the surplus interconnection service required in Order No. 845 is fundamentally incompatible with certain aspects of the NYISO's interconnection process and market design. If the Commission were to not accept this independent entity variation, the NYISO anticipates that it could have the unfortunate effect of overturning long-settled and understood procedures. Additionally, it could disrupt the careful balance of interests in the process that has been broadly agreed upon by NYISO stakeholders and accepted by the Commission. It would also lead to increased interconnection costs for Developers, thereby erecting barriers to entry into the NYISO market—a significant departure from the NYISO's market design intended to foster competitive markets and encourage new entry.

(1) NYISO's Unique Interconnection Standard and Planning Rules are Fundamentally Incompatible with Surplus Interconnection Service

As explained above, the NYISO has established unique regional rules—and obtained independent entity variations consistent with those rules—that are fundamentally different from those that the Commission used in structuring the surplus interconnection service requirement. One of the variations unique to the NYISO's interconnection process is the manner in which it conducts studies for requests for ERIS and identifies System Upgrade Facilities, which does not align with the key assumptions underlying surplus interconnection service in Order No. 845.

Under the NYISO's Commission-approved variation of the definition of ERIS in the NYISO OATT, the interconnection service that a Developer receives is based on a facility's ability to satisfy the NYISO's Minimum Interconnection Standard.[110] The definition of

[110] *See New York Indep. Sys. Operator Inc. and New York Transmission Owners*, Order Conditionally Accepting Compliance, 126 FERC ¶ 61,046 (2009); *New York Indep. Sys. Operator Inc. and New York Transmission Owners*, Order on Rehearing, Clarification, and Compliance, 127 FERC ¶ 61,318 (2009). The current NYISO OATT definition of ERIS under Section 30.1 of Attachment X reads as:

> **Energy Resource Interconnection Service ("ERIS")** shall mean the service provided by the ISO to interconnect the Developer's Large Generating Facility or Class Year Transmission Project to the New York State Transmission System or to the Distribution System, *in accordance with the NYISO Minimum Interconnection Standard,* to enable the New York State Transmission System to receive Energy and Ancillary Services from

Minimum Interconnection Standard was accepted by the Commission in 2001, but its origins in the NYISO's interconnection studies date almost back to the NYISO's inception.[111] When the NYISO first proposed the definition, the "Minimum Interconnection Standard" was the standard "described in the System Reliability Impact Study Criteria and Procedures developed by NYISO staff and approved by the Operating Committee in July, 2000" (hereinafter "Minimum Interconnection Standard methodology").[112] That Minimum Interconnection Standard methodology specified that:

> Any potential adverse reliability impact identified by the [System Reliability Impact Study] that can be managed through the normal operating procedures of the NYISO and/or [Connecting Transmission Owner ("CTO")] will not be identified as a degradation of system reliability or noncompliance with the [North America Reliability Corporation ("NERC")], [Northeast Power Coordinating Council ("NPCC")], or [New York State Reliability Council ("NYSRC")] reliability standards.

This definition of Minimum Interconnection Standard has remained nearly unchanged since it was first accepted by the Commission in 2001 and, more importantly, through the NYISO's Order No. 2003 compliance filings.[113] The methodology has since been incorporated in the NYISO's Transmission Expansion and Interconnection Manual, which recites the original language almost verbatim with the only change italicized below:

> Any potential adverse reliability impact identified by the *Interconnection Study* that can be managed through the normal operating procedures of the NYISO and/or CTO will not be identified as a degradation of system reliability or noncompliance with the NERC, NPCC, or NYSRC reliability standards.[114]

The key distinction between the *pro forma* LGIP definition and NYISO's definition of ERIS is that the latter relies on the NYISO's Minimum Interconnection Standard, which, as described above, "is designed to ensure reliable access by the proposed project to the New York State Transmission System or to the Distribution System. The Standard does not impose any deliverability test or deliverability requirement on the proposed interconnection."[115] In other

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> the Large Generating Facility or Class Year Transmission Project, pursuant to the terms of the ISO OATT.

[111] *New York Indep. Sys. Operator, Inc.*, Order Accepting Tariff Revisions Subject to Modifications, 97 FERC ¶ 61,118 (2001).

[112] *New York Indep. Sys. Operator, Inc.*, Filing of New Attachment S to Open Access Transmission Tariff to Implement Rules to Allocate Responsibility for the Cost of New Interconnection Facilities, Docket No, ER01-2967-000, at p 5 (August 29, 2001).

[113] *See, e.g., New York Indep. Sys. Operator, Inc. and the New York Transmission Owners*, Joint Compliance on Consensus Deliverability Plan, Docket No. ER04-449-017 (August 5, 2008); *see also, e.g., New York Indep. Sys. Operator, Inc.*, Letter Order on Interconnection Process Improvements, Docket No. ER18-80-000 (2017).

[114] NYISO Transmission Expansion and Interconnection Manual, Section 3.6.1, *available at* https://www.nyiso.com/documents/20142/2924447/tei_mnl.pdf/099cdf73-feee-4247-df20-8605a67c5089.

[115] *Id.*

words, the NYISO's Minimum Interconnection Service focuses on whether a specific facility proposed by the Developer can reliably connect to the system rather than identifying upgrades necessary to maintain any maximum MW output under various system conditions.

Under the Minimum Interconnection Standard, the NYISO in performing interconnection studies does not necessarily assume that a generating facility is operating at its full output under various system conditions and, instead, permits the re-dispatch of the facility and/or other facilities to the extent possible under normal operating procedures to mitigate adverse reliability impacts—*i.e.*, establish a feasible base dispatch.[116] If the project's or another generator's output is reduced and does not require a System Upgrade Facility, the NYISO does not identify upgrades. As a result, there is no specified output in connection with the facility whether or not a System Upgrade Facility is identified that could provide the "surplus" contemplated in Order No. 845. Therefore, the underlying premise of the surplus interconnection service requirement that transmission providers assume that generating facilities operate at their full capacity in interconnection studies is inconsistent with the NYISO's process.

(2) NYISO's Unique Market Design and Capacity Market Rules are Inconsistent with Surplus Interconnection Service

Aspects of the surplus interconnection service requirements under Order No. 845 also are inconsistent with the NYISO's existing market rules. Under the NYISO's existing market design, two projects behind the same Point of Interconnection must be modeled, scheduled, and settled as two separate generators.[117] This difference in the NYISO's market design makes adopting various components of the proposed rule infeasible, particularly with regard to the ability of two resources behind the same Point of Interconnection to transfer unused interconnection service between them. This is true whether the transfer of interconnection service between the resources is on an intermittent, short-term basis (*e.g.*, a generation facility transferring interconnection service to another resource when the first facility is out for maintenance) or whether the transfer of interconnection service between the resources is on a continuous basis (*e.g.*, a solar facility transferring interconnection service during night-time hours to a wind facility).

The proposed rule is also incompatible with the NYISO's capacity market rules. First, Installed Capacity ("ICAP") Suppliers have a daily requirement to offer into the Day Ahead

[116] Transmission constraints and other adverse reliability impacts internal to the New York Control Area ("NYCA") are typically manageable through NYISO and/or Connecting Transmission Owner normal operating procedures. There are scenarios in which neither the NYISO or the Connecting Transmission Owner can, through normal operating procedures, dispatch down generation to eliminate the need for System Upgrade Facilities. For example, multiple generation projects interconnecting to various locations within the NYCA may individually or collectively have an adverse impact on transfer limit capability over inter-area tie lines. Such impacts are not fully manageable by NYISO and/or Connecting Transmission Owner normal operating procedures alone.

[117] The NYISO plans to provide limited flexibility in the market participation of Small Generating Facilities through tariff revisions recently approved by its stakeholders that are currently pending approval by its Board of Directors that will provide the ability to accommodate multiple units behind a single point of interconnection as a single Small Generating Facility.

Market for energy in the amount of the ICAP equivalent of their capacity sold for that month.[118] That obligation would preclude them from transferring ERIS in any month for which they sold associated ICAP or would establish a scenario that opens the door to a supplier failing to meet its obligations to offer energy as required under the rules and for its expected availability.

Second, the use of surplus interconnection service for two facilities behind the same Point of Interconnection on a scheduled, periodic basis for a specified number of MW available only intermittently is not feasible under the NYISO's capacity market rules. Only one of the two suppliers in the proposed scenario would be able to offer into the NYISO's capacity market for an obligation month because each supplier behind the same Point of Interconnection, even if the same technology type, might have different proven capabilities (*i.e.*, for traditional technology types, their DMNC values)[119] and different availability or performance derating factors (*i.e.*, EFORd values),[120] both of which are used to calculate resources' Unforced Capacity ("UCAP"), which is the quantity of capacity they are allowed to offer into the market each Capability Period. Thus, were the NYISO required to implement the surplus interconnection service rule, commitment participation caps for resources at the Point of Interconnection would need to be established. Even if such a rule could reasonably be fashioned to identify the manner in which such resources would be qualified and the amount thereof, the energy market obligations of ICAP Suppliers that have sold UCAP for an obligation month would also need to be revised to reflect the amount in which each resource, or both, would have to offer into the Day Ahead Market for energy. In any case, both resources should be subject to the NYISO's Supplemental Resource Evaluation if required.

Third, the surplus interconnections service requirements under Order No. 845 do not work under the NYISO's unique and well established CRIS requirements and buyer-side capacity market power mitigation measures ("BSM Rules"). CRIS was developed and accepted by the Commission as an independent entity variation to Network Resource Interconnection Service based on the "unique regional circumstances" related to the NYISO.[121] When tariff revisions implementing CRIS and the associated NYISO Deliverability Interconnection Standard

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[118] *See* Services Tariff, Section 5.12.7. An example of the general rule when applied to a hypothetical generator that sells an ICAP equivalent of 100 MW of UCAP in a given month is that it is required to offer 100 MW of energy every day. That generator must have a corresponding amount of ERIS to validly offer that energy every day, even if the generator actually runs infrequently or even not at all.

[119] A DMNC value or "Dependable Maximum Net Capability" is an annual demonstration of a generator's ability to generator power, specifically, its sustained maximum net output. *See* Services Tariff, Section 2.4.

[120] An EFORd or "Equivalent Demand Forced Outage Rate" represents the portion of time a unit is dispatched and unable to respond due to forced outages or derates. *See* Services Tariff, Section 2.5.

[121] *New York Indep. Sys. Operator, Inc.*, *et al.*, 108 FERC ¶ 61,159, at PP 24–28 (2004) (requiring the NYISO's LFIP to incorporate two levels of interconnection service—one of which would contain a deliverability standard, similar to Network Resource Interconnection Service), *order on reh'g*, 111 FERC ¶ 61,347, at PP 13–14 (2005) (recognizing two competing principles—the requirement under Order No. 2003 to offer two levels of interconnection service and that the NYISO's region is distinct and should have flexibility to craft a system appropriate to New York's specific needs); *see also New York Indep. Sys. Operator, Inc.*, *et al.*, Letter Order, Docket No. ER04-449-020 (2009); *New York Indep. Sys. Operator, Inc.*, *et al.*, 126 FERC ¶ 61,046 (2009), *order on reh'g*, 127 FERC ¶ 61,318 (2009).

were submitted to the Commission in 2008, they represented the culmination of years of work with stakeholders to develop an acceptable framework to implement a second level of interconnection service that contained a deliverability standard as required by the Commission while also being compatible with regional circumstances and rules.[122] Under the current tariff, a facility must meet the NYISO's Deliverability Interconnection Standard (as well as have ERIS) before it can receive CRIS[123] and must obtain CRIS in order to become eligible to become an Installed Capacity Supplier.[124]

NYISO's OATT Attachment S contains a comprehensive rule set regarding the requirements for obtaining, maintaining, and transferring CRIS.[125] A key aspect of those rules provides for transfers of CRIS on a bilateral basis between an existing facility that is deactivating and exiting the market and another facility, existing or new, regardless of whether the facilities are at the same or different electrical location.[126] In particular, transfer of CRIS at the same electrical location is permitted without the recipient project being evaluated for deliverability in the NYISO's interconnection process (although the transferor must be deactivating and the transferee must have ERIS and become operational prior to the transferor's CRIS expiring).[127]

The CRIS transfer rules were designed to accommodate permanent transfers of CRIS from an entity leaving the market. The CRIS transfer provisions are not intended to allow temporary transfers—such transfers would be disruptive to the ICAP market, as described herein. Further, any Commission requirement for a mechanism that permits CRIS to toggle back and forth between two resources must appropriately account for this under the BSM review process. Under the NYISO's current CRIS transfer rules, if the "transferee" is located in a Mitigated Capacity Zone or a New Capacity Zone, both CRIS transfers at the same location and CRIS transfers from a different location are subject to the BSM Rules.[128] These rules provide that the examination of a recipient of transferred CRIS occurs in conjunction with the NYISO's examination of other proposed new projects and existing resources' requests for Additional CRIS

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[122] *See New York Indep. Sys. Operator, Inc.*, *et al.*, Compliance Filing and Request for Further Extension of Time, Docket No. ER04-449-017 (August 5, 2008); *see also New York Indep. Sys. Operator, Inc.*, 122 FERC ¶ 61,267 (2008) (providing guidance on NYISO's Consensus Plan filed on October 5, 2007 and directing revisions to the OATT to be submitted by August 4, 2008); *New York Indep. Sys. Operator, Inc.*, *et al.*, Consensus Deliverability Plan, Docket Nos. ER04-449-003, -007, -008 (October 5, 2007) (providing the agreed-upon framework under which the NYISO and stakeholders would facilitate the development of tariff revisions); *New York Indep. Sys. Operator, Inc.*, *et al.*, Compliance Filing and Request for Further Extension of Time, Docket No. ER04-449-005 (February 7, 2005).

[123] OATT Attachment S, Section 25.3.1.

[124] OATT Attachment S, Section 25.7.4; Services Tariff, Section 5.12.1.

[125] *See, generally*, OATT Attachment S.

[126] OTT Attachment S, Sections 25.9.4 and 25.9.5.

[127] Same location CRIS transfers are permitted if a facility deactivates an existing unit and commissions a new one at the same electrical location. The CRIS of the deactivated facility may be transferred to the new facility at that same electrical location provided that the new facility becomes operational within three years from the deactivation of the original facility. *See* OATT Attachment S, Section 25.9.4.

[128] The BSM Rules are set forth in Section 23.4.5.7, *et seq*. of the Services tariff.

MW. This process allows the NYISO to perform the economic analyses required to determine whether a proposed project's entry would be uneconomic and to establish Offer Floors.

As is clear from the above, the surplus interconnection service requirement does not comport with the Commission-accepted variations related to the NYISO's markets. More importantly, it would have broad ramifications for existing NYISO rules. As a result, the NYISO requests an independent entity variation to continue its current rules without offering surplus interconnection service as envisioned by the Commission in Order No. 845.

e) Material Modification and Incorporation of Advanced Technologies

Order No. 845 lastly required each transmission provider's *pro forma* LGIP to include a technological change procedure to "assess, and if necessary, study whether proposed technological advancements can be incorporated into interconnection requests without triggering the material modification provisions."[129] The stated purpose of this revision is "to allow for equipment changes resulting in electrical performance that is equal to or better than an interconnection request's previously projected electrical performance and not cause any reliability concerns."[130] To achieve this result, permissible technological advancements were added to the existing list of modifications contained in section 4.4.2 of the *pro forma* LFIP that do not require a material modification.[131]

Transmission providers were also required to incorporate technological change procedures to, among other things, (1) "specify what technological advancements can be incorporated at various stages of the interconnection process;" (2) identify the responsibilities for the respective parties; (3) specify that an interconnection customer should submit a technological advancement request; and (4) specify the necessary information that must be submitted as a part of the technological advancement request.[132] The Developer's technological advancement request must demonstrate that such advancement would "result in electrical performance that is equal to or better than the electrical performance expected prior to the technological change and not cause any reliability concerns."[133] The Commission noted that a request to incorporate technological advancements should come before the execution of a facilities study agreement, but afforded transmission providers an opportunity to establish a rule that permits such technological advancements at a designated point in time during the interconnection process.[134] Order No. 845 also permitted the technological change procedures to require a study deposit to

[129] Order No. 845, at P 518,

[130] *Id.* at P 525.

[131] Order No. 845-A, at P 152.

[132] Order No. 845, at P 519.

[133] *Id.* at P 520.

[134] *Id.* at P 536.

offset cost incurred by the transmission provider in conducting any necessary studies to determine whether a technological advancement is permissible.[135]

In addition to the technological change procedures, Order No. 845 required transmission providers to adopt a definition of permissible technological advancements, which would *per se* not constitute a material modification and, therefore, not result in the loss of queue position of the interconnection request.[136] Consistent with Order No. 845, the NYISO proposes to include a definition of Permissible Technological Advancement in Section 30.1 of Attachment X to the OATT, as follows:

> **Permissible Technological Advancement** shall mean advancements to turbines, inverters, or plant supervisory controls or other similar advancements to the existing technology proposed in the Interconnection Request, provided that such advancements result in electrical performance that is equal or better than the electrical performance prior to the technological change and do not (i) increase the capability of the Large Facility by more than two (2) megawatts, (ii) change the generation technology or fuel type of the Large Facility, (iii) have a material adverse impact on the New York State Transmission System or Distribution System, and (iv) degrade the electrical characteristics of the generating equipment proposed in the Interconnection Request (*e.g.*, the ratings, impedances, efficiencies, capabilities, and performance of the equipment under steady state and dynamic conditions).

Consistent with the requirements of Order No. 845, the definition permissibly excludes changes in the generation technology or fuel type, and includes those changes that do not cause any reliability concerns, do not degrade the electrical characteristics of the generating equipment, and are equal to or better than the performance expected prior to the change.[137] The NYISO proposes to permit, as part of a Permissible Technological Advancement, technological advancements that result in a *de minimis* increase in the requested interconnection service, such increase not to exceed 2 MW. While the Commission indicated that a technical advancement that does not increase the interconnection customer's requested interconnection service or cause reliability concerns is generally not a material modification, it does not by extension preclude increases in interconnection service as part of a Permissible Technological Advancement. The NYISO proposes this permissible *de minimis* increase in order to accommodate the most frequent technological changes requested in its interconnection studies—changes to turbine manufacturers that slightly change the capability of a turbine, sometimes by mere tenths of a MW. To accommodate this threshold for changes related to technological advancements, the NYISO revises existing language in Attachment X regarding modifications generally to specifically permit 2 MW increases resulting from a Permissible Technological Advancement.[138]

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[135] *Id.* at P 534.

[136] *Id.* at PP 518, 534.

[137] *Id.* at PP 530–31 (determining that a change in the fuel type—*i.e.*, gas to wind—"involve[s] a change in the electrical characteristics of an interconnection request").

[138] *Proposed* Attachment X, Section 30.4.4.1.

As directed by Order No. 845, the NYISO also incorporates a technological change procedure in a new Section 30.4.4.7 of Attachment X that details the manner in which a Developer can request a technological advancement. To initiate the procedure, a Developer is required to submit a request for a technological change using the request form as further detailed below. The technological change request may be made following the initial draft of the System Reliability Impact Study report to the Developer and Connecting Transmission Owner but prior to the return of an executed Interconnection Facilities Study Agreement.[139]

The first step of the procedures is to review the technological change and determine whether it meets the definition and whether there is sufficient documentation submitted by the Developer to demonstrate that the proposed change does not change the electrical characteristics of the project that would result in a greater than two (2) percent voltage drop at the Point of Interconnection, or a greater than 100 amperes short circuit contribution. If the proposed change passes the first step, then it constitutes a Permissible Technological Advancement without the need for further study.

If the proposed change does not satisfy the first step, the second step is for the NYISO to perform additional studies to determine whether the electrical performance is equal to or better than the electrical performance prior to the technological change and that the change does not result in adverse reliability concerns. Due to the limited time to complete the study (*i.e.*, 30 days), the procedures detail that the Developer is required to submit all information or data that is required for the NYISO to perform the additional studies in the original request. In the event that the Developer fails to provide the necessary information, the requested technological change will be rejected, but the Developer may resubmit for the same technological change with the required information.[140] If the proposed change does not demonstrate that the project is equal to or better than the electrical performance prior to the technological change or there are adverse reliability violations, the third step will consist of a review to determine whether the change would constitute a Material Modification consistent with Section 30.4.4.3 of Attachment X to the OATT. The technological change procedures require the aforementioned steps to be completed upon receipt of a technological change request, as further discussed below.

In addition to creating the technological change procedure under Section 30.4.7, the NYISO proposes additional revisions to 30.4.4 of Attachment X,[141] as well as adding a new

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[139] *Proposed* Attachment X, Sections 30.4.4.7 and 30.4.4.7.1. The NYISO proposes these procedures apply following the completion of the System Reliability Impact Study but before commencement of the Class Year Study because (1) current tariff provisions allow significant latitude in modifications prior to commencement the System Reliability Impact Study and (2) modifications during the System Reliability Impact Study will prolong the study and not afford the NYISO a basis upon which to evaluate the change (*i.e.*, the System Reliability Impact Study provides the technical parameters pre-modification against which the proposed modification will be evaluated).

[140] *Proposed* Attachment X, Section 30.4.4.7.2.

[141] Minor revisions are proposed to the preamble language to Section 30.4.4 of Attachment X to the OATT to reference the new Section 30.4.4.7 and reference the use of the Large Facility Modification Request. NYISO also proposes a minor revision to remove the term "Agreement" from Section 30.4.4.1 of Attachment X that was a remnant of the tariff prior to the revisions proposed and the Commission accepted in Docket No. ER18-80-000. Additionally, the NYISO proposes to strike the work "Agreement" from the first sentence, which was inadvertently

"Large Facility Modification Request" to streamline requesting modifications to Interconnection Requests in the NYISO's interconnection queue process. This request form will identify for the Developer the specific information that must be submitted for a proposed technological advancement.[142] The addition of the Large Facility Modification Request does not result in any substantive changes to other modifications that can be made or reviewed by the NYISO under Section 30.4.4 of Attachment X to the OATT. It principally adds administrative efficiencies and eliminates questions for Developers on the information that the NYISO will need to evaluate a request to modify a pending Interconnection Request. It also adds terms and conditions that a Developer will need to agree to for the NYISO to conduct the review and avoid the need for delays in negotiating a study agreement with a Developer to evaluate whether a proposed modification constitutes a Permissible Technological Advancement or if the NYISO needs to conduct a materiality review under Section 30.4.4.3 of Attachment X to the OATT. If a developer submits a technological change, the terms and conditions require the submission of a $10,000 study deposit, together with documentation that shows that the technological change is a Permissible Technological Advancement.[143] This proposed variation furthers the Commission's goal with Permissible Technological Advancements in Order No. 845 and Order No.845-A; therefore, the NYISO requests that the Commission accept it as consistent with or superior to the required revisions.[144]

V. Effective Date

In Order No. 845-A, the Commission directed that the effective date of the proposed revisions to comply with the requirements in Order No. 845 and Order No. 845-A "shall be the date established in the Commission's order accepting that RTO's/ISO's compliance filing, which shall be no earlier than the issuance date of such an order."[145] Based on this directive, the NYISO respectfully requests that the Commission allow for these tariff revisions to become effective sixty (60) Calendar Days following the issuance of the an order accepting the NYISO's compliance filing or as otherwise set by the Commission. In the event that the proposed effective date is later than the date of the Commission's order, the NYISO submits that it has good cause for the additional time period. Such an effective date will afford the NYISO sufficient time to implement the changes to the NYISO's LFIP, including, but not limited to, making adjustments to its website, portals, and interconnection software.

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left in the first sentence of Section 30.4.4.1 when the NYISO previously eliminated the need for a separate Interconnection System Reliability Impact Study Agreement. *See New York Indep. Sys. Operator, Inc.*, Proposed Tariff Revisions Regarding Interconnection Process Improvements, Docket No. ER18-80-000, at pp 11–22 (October 16, 2017).

[142] *See* Order No. 845, at P 521 (requiring the transmission provider to "clearly indicate to the interconnection customer the types of information and/or study inputs that the transmission customer must provide to the transmission provider" if a study is necessary to evaluate a technological advancement).

[143] Consistent with Order No. 845, the terms and conditions only require the $10,000 study deposit for a proposed technological change. *See id.* at P 534 (setting a $10,000 default study deposit). For all other modifications to an Interconnection Request, there is no required study deposit in the OATT.

[144] *Id.* at P 43.

[145] Order No. 845-A, at P 166.

VI. Service

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

VII. Conclusion

Wherefore, the NYISO respectfully requests that the Commission accept this compliance filing.

Respectfully submitted,

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