UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Caithness Long Island II, LLC	)	
	)	
Complainant,	)	
	)	
v.	)	Docket No. EL15-84-000
	)	
New York Independent System Operator, Inc.	)	
	)	
Respondent	)	

ANSWER OF THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.

Pursuant to Rule 213[1] of the Commission's Rules of Practice and Procedure, the New York Independent System Operator, Inc. ("NYISO") respectfully submits this answer to the July 10, 2015 complaint filed by Caithness Long Island II, LLC ("Caithness") in the above-captioned proceeding ("Complaint").[2] Caithness alleges that the NYISO's recognition in its interconnection process of a Transmission Owner's criterion required to ensure reliability on Long Island is inconsistent with the requirements of the NYISO's Open Access Transmission Tariff ("OATT").[3] Caithness requests that the Commission direct the NYISO to ignore the Transmission Owner's criterion at issue in the NYISO's evaluation of upgrades required for Caithness's proposed facility (the "Caithness Project") to reliably interconnect to the New York State Transmission System.

[1] 18 C.F.R. § 385.213 (2014).

[2] *Caithness Long Island II, LLC v. New York Independent System Operator, Inc.*, Complaint of Caithness Long Island II, LLC, Request for Fast Track Processing and Request for Action by September 30, 2015, Docket No. EL15-84-000 (July 10, 2015) ("Complaint").

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

Specifically, Caithness alleges that the NYISO's application of the Long Island Power Authority's ("LIPA's") Long Island local reliability interface transfer capability test within its Minimum Interconnection Standard evaluation is in direct conflict with its OATT.[4] Caithness also alleges that application of this Long Island reliability criterion violates the Commission's directive in Order No. 2003[5] that the NYISO provide two levels of interconnection service.[6] Finally, Caithness argues that application of this Long Island reliability criterion in the NYISO's interconnection studies permits New York Transmission Owners to adopt rules unilaterally that conflict with explicit tariff provisions in the OATT.[7]

The Commission should deny the Complaint for the reasons set forth below and detailed in the affidavit of Steven L. Corey, NYISO Manager of Interconnection Projects in Attachment 2.[8] The NYISO reviewed LIPA's criterion and determined that its clear purpose was to address reliability issues unique to Long Island. Therefore, in accordance with its OATT and Commission precedent, the NYISO is appropriately applying the criterion in its interconnection studies to evaluate whether upgrades are required to reliably interconnect projects on Long Island, including the Caithness Project. While reliability driven upgrades may produce incidental "deliverability" benefits, LIPA's criterion does not supplant the NYISO's application of two separate and distinct levels of interconnection service as set forth in the OATT.

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[4] *See* Complaint at p 2.

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

[6] *See* Complaint at p 3.

[7] *See id.*

[8] Attachment 2, Affidavit of Steven L. Corey, NYISO Manager of Interconnection Projects (August 10, 2015) ("Corey Affidavit").

I. COMMUNICATIONS

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II. STATEMENT OF FACTS

A. Caithness Project

Caithness is proposing to construct a combined-cycle generating facility that will interconnect to the New York State Transmission System on Long Island, New York at the Sills Road 138 kV substation, which is owned by LIPA.[9] The Caithness Project will be a temperature sensitive facility with an anticipated net summer output of 744 MW and an anticipated net winter output of 785 MW. Caithness submitted its Interconnection Request for the project on March 22, 2013. Pursuant to the NYISO's Large Facility Interconnection Procedures ("LFIP") set forth in Attachment X of the OATT, the Caithness Project has proceeded through the required interconnection studies. The Caithness Project has completed the Interconnection Feasibility Study and Interconnection System Reliability Impact Study ("SRIS") and has most recently

[9] In the interconnection studies, PSEG Long Island LLC has acted on behalf of LIPA, which is the Connecting Transmission Owner. For purposes of this answer, the NYISO refers to both LIPA and PSEG Long Island LLC as "LIPA."

entered the final interconnection study, the Interconnection Facilities Study ("Class Year Study") for Class Year 2015 ("Class Year 2015 Study").

B. NYISO's Two Levels of Interconnection Service

A project seeking to interconnect to the New York State Transmission System or the Distribution System must obtain Energy Resource Interconnection Service ("ERIS") in accordance with the requirements in Attachments X and S of the OATT. ERIS is basic interconnection service that enables a Developer, subject to other requirements in the NYISO's tariffs, to provide Energy and Ancillary Services in the NYISO-administered markets. For purposes of ERIS, the NYISO evaluates whether a project can reliably interconnect its facility to the New York State Transmission System or Distribution System under the NYISO's Minimum Interconnection Standard and identifies and allocates the costs of any System Upgrade Facilities required for the project.[10]

A project seeking to be eligible to participate in the NYISO-administered Installed Capacity market must also obtain a second level of interconnection service – Capacity Resource Interconnection Service ("CRIS"). Projects seeking CRIS are evaluated under the NYISO's Deliverability Interconnection Standard. The Deliverability Interconnection Standard evaluates the deliverability of a proposed project within a Capacity Region using a specified set of assumptions and a particular methodology described in detail in Attachment S to the OATT.[11] Because CRIS only addresses eligibility for participation in Installed Capacity markets, requesting CRIS is optional, and projects that satisfy the ERIS requirements for a reliable

[10] Every Large Facility subject to Attachment X of the OATT and Small Generating Facility subject to Attachment Z of the OATT must meet the Minimum Interconnection Standard, regardless of whether it elects ERIS only or whether it elects to interconnect with both ERIS and CRIS. *See* Corey Affidavit at P 7.

[11] If a facility is not fully deliverable under the NYISO's Deliverability Interconnection Standard, the NYISO's evaluation determines what System Deliverability Upgrades are required for the facility to be eligible to obtain the requested CRIS rights.

interconnection are permitted to interconnect without being evaluated for CRIS or satisfying the CRIS requirements. The Caithness Project has elected to be evaluated in the Class Year 2015 Study for both ERIS and CRIS.

C. Minimum Interconnection Standard

The objective of the Minimum Interconnection Standard is to identify the facilities required for a proposed project to reliably interconnect to the New York State Transmission System or Distribution System so that it can obtain ERIS. The facilities include, but are not limited to, those required to mitigate any potential adverse electrical impacts from the proposed interconnection of a project.[12] Impacts that require mitigation include those that would result in a degradation of system reliability and/or noncompliance with Applicable Reliability Requirements or Applicable Reliability Standards, which, as described below, include the reliability criteria and standards of the North American Electric Reliability Corporation ("NERC"), the Northeast Power Coordinating Council, Inc. ("NPCC"), the New York State Reliability Council ("NYSRC"), and the Connecting Transmission Owners.[13]

If the NYISO identifies any adverse reliability impacts and/or potential reliability standard violations, the NYISO considers whether these potential adverse impacts are manageable through the normal operating procedures of the NYISO or the Connecting Transmission Owner.[14] While certain issues are manageable through normal operating procedures, that is often not the case. It is, therefore, often necessary for the NYISO to identify

[12] The NYISO's Class Year Study also identifies attachment facilities that are required for the interconnection of the project.

[13] *See* Corey Affidavit at P 8.

[14] *See id.* at P 9.

System Upgrade Facilities to mitigate the adverse reliability impacts of the proposed project.[15] This is particularly true with certain adverse reliability impacts experienced on Long Island, as described in Section II(E) below.

D. Application of Transmission Owners' Criteria in Interconnection Studies

The NYISO has always acted in accordance with its tariff requirements in Attachments X and S of the OATT to incorporate Transmission Owners' local criteria into the Applicable Reliability Requirements and Applicable Reliability Standards that serve as the basis for the NYISO's evaluation of the reliability impacts of proposed projects under the Minimum Interconnection Standard.[16] As summarized in the NYISO's Transmission Expansion and Interconnection Manual, "NYISO does not have its own reliability criteria for transmission studies, but rather NYISO recognizes and applies the applicable reliability criteria and standards of NERC, NPCC, NYSRC and the local Transmission District(s) for transmission expansion and interconnection studies."[17]

The term "Applicable Reliability Requirements" was introduced in 2001 as part of the NYISO's creation of its rules to allocate the costs of new interconnection facilities in Attachment S of the OATT.[18] The definition of the term has not substantively changed since 2001. Applicable Reliability Requirements, which describes the standards applicable to the Class Year

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[15] *See id.*

[16] OATT, Attachment S, Section 25.6.2; OATT, Attachment X, Sections 30.6.2, 30.7.3.

[17] *See NYISO Transmission Expansion and Interconnection Manual*, Manual 23, Version 2.0 (November 2012) at Section 4.1, available on the NYISO's website at: http://www.nyiso.com/public/webdocs/markets_operations/documents/Manuals_and_Guides/Manuals/Planning/tei_mnl.pdf.

[18] *See New York Independent System Operator, Inc.*, Order Accepting Tariff Revisions Subject to Modifications, 97 FERC ¶ 61,118 (2001) (accepting tariff revisions describing Applicable Reliability Requirements, including Transmission Owners' criteria, in Attachment S, Section IV.F.1.a(i)); *New York Independent System Operator, Inc.*, Order on Compliance Filing, 98 FERC ¶ 61,201 (2002) (accepting minor revisions to definition of Applicable Reliability Requirement that incorporate details of term from Attachment S, Section IV.F.1.a(i)).

Study, include "[t]he NYSRC Reliability Rules and *other criteria, standards and procedures, as described in Section 25.6.1.1.1.1 of this Attachment S . . . .*"[19] The standards are further defined in Section 25.6.1.1.1 to include: " NYSRC Reliability Rules, NPCC Basic Design and Operating Criteria, NERC Planning Standards, NYISO rules, practices and procedures, *and the Connecting Transmission Owner criteria included in FERC Form No. 715 . . .* in effect when the Annual Transmission Baseline Assessment is commenced.…"[20]

In Order No. 2003, the Commission separately adopted the term "Applicable Reliability Standard," which is the standard that applies to the NYISO's performance of the Interconnection Feasibility Study and the Interconnection System Reliability Impact Study. The Commission accepted the NYISO's independent entity variation to the definition of this term to incorporate each Transmission Owner's requirements and guidelines applicable for its Transmission District.[21] As currently defined, Applicable Reliability Standards are:

> *the requirements and guidelines of* the Applicable Reliability Councils, and *the Transmission District, to which the Developer's Large Facility is directly interconnected, as those requirements and guidelines are amended and modified and in effect from time to time*; provided that no Party shall waive its right to challenge the applicability or validity of any requirement or guideline as applied to it in the context of the Large Facility Interconnection Procedures.[22]

[19] *See* OATT, Attachment S, Section 25.1.2 (emphasis added).

[20] *See* OATT, Attachment S, Section 25.6.1.1.1.1 (emphasis added).

[21] *New York Independent System Operator, Inc.*, Order Conditionally Accepting Large Generator Interconnection Procedures and Large Generator Interconnection Agreement, 108 FERC ¶ 61,159 (2004) at PP 91-96, Order Denying Rehearing and Granting Request for Clarification, 111 FERC ¶ 61,347 (2005) at PP 15-17.

[22] *See* OATT, Attachment X, Section 30.1 (emphasis added).

Consistent with the requirements of the OATT and Commission guidance,[23] the NYISO reviews Transmission Owners' criteria, and if accepted, applies such criteria under the Minimum Interconnection Standard. All such criteria are also filed by the NYISO as part of the annual FERC Form No. 715 filing (Annual Transmission Planning and Evaluation Report). The NYISO most recently filed its annual FERC Form No. 715 on April 1, 2015.[24]

E. Local Reliability Issues Unique to Long Island

Long Island historically has had to address unique reliability issues with its transmission system both as a result of being an island and also due to the particular location on the island of load and generation resources. Long Island has limited interconnectivity with the rest of the New York State Transmission System or other systems (*i.e.*, New England or PJM).[25] It, therefore, has limitations on the extent to which it can rely on other systems for external help to satisfy local reliability needs.[26] In addition, most of Long Island's load is concentrated on the western part of the island, while much of the generation resources, including approximately 500 MW of quick-start gas turbine units ("GTs") used for operating reserves required for Long Island by the NYISO, [27] are located in the central and eastern parts of the island.[28] Due to the location

[23] *See New York Independent System Operator, Inc.*, Order Granting Clarification, 124 FERC ¶ 61,156 (2008) at PP 9-10 (clarifying that a New York Transmission Owner's local planning and design criteria can be an Applicable Reliability Requirement or Applicable Reliability Standard if reviewed by the NYISO and made public).

[24] The FERC Form No. 715 report is available on the NYISO's website at: http://www.nyiso.com/public/markets_operations/services/planning/documents/index.jsp.

[25] *See* Corey Affidavit at P 20.

[26] *See id.*

[27] The NYISO has addressed the unique characteristics of Long Island throughout its tariffs. Due to its unique situation, Long Island (Zone K) is a Locality under the NYISO's tariffs and, as such, has special requirements designed to meet reliability needs. For example, the NYISO annually determines a Locational Minimum Installed Capacity Requirement ("LCR") for Long Island, which is the minimum amount of capacity required to be electrically located on Long Island. The location of capacity and the LCR are designed so that the system will meet the NPCC and NYSRC reliability criteria.

[28] *See* Corey Affidavit at P 22.

of the generation resources on the island, the ability to transfer power and operating reserves from east to west has been, and continues to be, of critical importance to satisfying the reliability needs of Long Island.[29] In addition, the ability to transfer operating reserves from the GTs' location in central and eastern Long Island to the west and to export it to New York City has historically been of critical importance to satisfying New York City reliability needs.[30]

F. LIPA Deliverability Guideline

LIPA adopted certain "Generation Deliverability Criteria" in its LIPA's Transmission & Distribution Planning Criteria & Guidelines dated September 20, 2010.[31] LIPA also provided the NYISO with a guideline containing the detailed implementation of their criteria ("LIPA Deliverability Guideline"). The NYISO reviewed the LIPA Deliverability Guideline and rejected its application as an Applicable Reliability Standard under the Minimum Interconnection Standard because, as drafted, the guideline was beyond the scope of the Minimum Interconnection Standard. In particular, the LIPA Deliverability Guideline set forth requirements that would have to be satisfied for projects to participate in the NYISO-administered Installed Capacity market. The guideline would have redefined the NYISO's Deliverability Interconnection Standard – a specific test set forth in Attachment S to the OATT that cannot be modified by Transmission Owners – and, as such, directly conflicted with Attachment S.

[29] *See id.*

[30] *See id.*

[31] *See* Complaint at Exhibit 3 – LIPA, Transmission & Distribution Planning Criteria & Guidelines (Sept. 20, 2010).

G. 2015 LIPA Guideline

Following discussions with LIPA, it was evident to the NYISO that LIPA's intent in adopting the LIPA Deliverability Guideline was to address specific *reliability* concerns on Long Island, and that the problematic language of the LIPA Deliverability Guideline reflected confusion regarding certain elements of the NYISO's interconnection process. LIPA subsequently issued a revised guideline entitled, "Long Island Local Reliability Interface Transfer Capability Test to be Applied as Part of Interconnection Studies" ("2015 LIPA Guideline").[32]

The purpose of the 2015 LIPA Guideline is to "ensure LIPA's transmission system reliability and integrity is not jeopardized as a result of proposed resource additions and that LIPA internal interface transfer capabilities are maintained to support the system load on Long Island (Zone K), within certain constraints."[33] The analyses required under the guideline will identify system reinforcements necessary on LIPA's system for a project to interconnect and to ensure LIPA's internal interface transfer capabilities are maintained to support the system load.[34] The 2015 LIPA Guideline provides that any resource addition to the Long Island transmission system shall be tested as outlined in the guideline to ensure the reliability of the system is maintained.[35] The guideline does not seek to alter or replace the NYISO's Deliverability Interconnection Standard applied to resources seeking to become Installed Capacity Suppliers.

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[32] *See* Attachment 3, "Long Island Local Reliability Interface Transfer Capability Test to be Applied as Part of Interconnection Studies" (March 1, 2015) ("2015 LIPA Guideline"). LIPA issued a draft that was dated February 10, 2015, which was posted for and discussed at the February 17, 2015 TPAS, and then a final version that was dated March 1, 2015 was included in the 2015 FERC Form No. 715 filed by the NYISO and posted on the NYISO website.

[33] *See id.* at 1.

[34] *See id.* at 1-2.

[35] *See id.*

The NYISO independently determined that the clear purpose of the 2015 LIPA Guideline was to address *reliability* issues unique to Long Island. The NYISO asked LIPA to present the revised guideline to the Transmission Planning Advisory Subcommittee ("TPAS") of the NYISO's stakeholder Operating Committee. LIPA did so on February 17, 2015. The NYISO announced to stakeholders at that meeting that it accepted the 2015 LIPA Guideline as an Applicable Reliability Standard for SRIS's that commence after the guideline becomes effective and as an Applicable Reliability Requirement for the Class Year 2015 Study.[36] The NYISO filed the 2015 LIPA Guideline as part of the FERC Form No. 715 submitted on April 1, 2015.[37]

III. ANSWER

A. The NYISO's Determination that the 2015 LIPA Guideline Should Apply as an Applicable Reliability Requirement in Class Year 2015 Is Consistent With its OATT and Commission Precedent

1. The 2015 LIPA Guideline is an Applicable Reliability Requirement

Caithness misconstrues the NYISO's tariff requirements when it states that the 2015 LIPA Guideline conflicts with the NYISO's tariff. The NYISO's OATT contemplates the existence and application of Transmission Owners' criteria as Applicable Reliability Requirements and Applicable Reliability Standards. In addition, the Commission has accepted the NYISO's process for applying Transmission Owners' criteria as an Applicable Reliability

[36] *See* Complaint at Exhibit 8 – Transmission Planning Advisory Subcommittee, Meeting Minutes, at 1-2 (Feb. 17, 2015).

[37] *See supra* at n. 24.

Requirement or an Applicable Reliability Standard when they have been reviewed and approved by the NYISO.[38]

The NYISO's process for applying local reliability rules and Transmission District specific criteria is a well-established and Commission-approved practice that pre-dates the implementation of the NYISO's *pro forma* interconnection procedures in response to Order No. 2003.[39] In developing its *pro forma* requirements in Order Nos. 2003 and 2006, the Commission explicitly recognized the importance of accommodating local reliability rules in its Order Nos. 2003 and 2006.[40] The Commission proceeded to accept the NYISO's independent entity variation in its Order No. 2003 compliance filing concerning the NYISO's continued application of Transmission Owners' criteria in its interconnection process.[41] The Commission further confirmed that Applicable Reliability Requirements and Applicable Reliability Standards include

[38] *See New York Independent System Operator, Inc.*, Order Granting Clarification, 124 FERC ¶ 61,156 (2008) at PP 9-10 (clarifying that a New York Transmission Owner's local planning and design criteria can be an Applicable Reliability Requirement or Applicable Reliability Standard if reviewed by the NYISO and made public); *see also New York Independent System Operator, Inc., et al.*, Order Denying Rehearing and Granting Request for Clarification, 111 FERC ¶ 61,347 (2005) at P 17 (clarifying that Applicable Reliability Standards must be approved by the NYISO).

[39] *Con Edison Company of New York, Inc.*, Order Accepting Interconnection Agreement for Filing, 107 FERC ¶ 61,103 (2003) at PP 9-10 (rejecting developer's request to remove local reliability rule requirements from interconnection agreement, noting that "conformance with local reliability rules is important to ensure reliable delivery of electric energy.").

[40] The Commission stated in Order No. 2003: "Because we intend to supplement rather than supplant the work that regional reliability groups already have undertaken regarding interconnection, we are permitting a Transmission Provider, on compliance, to offer variations based on existing regional reliability requirements." Order No. 2003 at P 823. The Commission echoed this sentiment in Order No. 2006, wherein in recognized, "[t]he Commission has consistently held that an Interconnection Customer must adhere to established reliability practices within the control area with which it is interconnecting." *Standardization of Small Generator Interconnection Agreements and Procedures*, Order No. 2006, 111 FERC ¶ 61,220 (2005) at P 208.

[41] *New York Independent System Operator, Inc.*, Order Conditionally Accepting Large Generator Interconnection Procedures and Large Generator Interconnection Agreement, 108 FERC ¶ 61,159 (2004) at PP 91-96, Order Denying Rehearing and Granting Request for Clarification, 111 FERC ¶ 61,347 (2005) at PP 15-17.

both local reliability rules adopted by NYSRC and Transmission Owners' local criteria reviewed and approved by the NYISO.[42]

In this instance, the NYISO properly reviewed the 2015 LIPA Guideline and approved the criterion as an appropriate Applicable Reliability Requirement under the Minimum Interconnection Standard after determining that it was required to address reliability issues on Long Island. In addition, consistent with the requirements for an Applicable Reliability Requirement under Attachment S of the OATT, the NYISO included the 2015 LIPA Guideline in its most recently filed annual FERC Form No. 715 on April 1, 2015. The 2015 LIPA Guideline has, therefore, satisfied the requirements for an Applicable Reliability Requirement.

The implication inherent in Caithness's Complaint is that a Transmission Owner's criterion is in conflict with the OATT and cannot be applied as an Applicable Reliability Requirement if it is more stringent than NERC, NPCC, or NYSRC standards. There is, however, no prohibition on a Transmission Owner's criterion being more stringent than the other reliability standards listed in the definitions of Applicable Reliability Requirements and Applicable Reliability Standards. The language concerning Transmission Owners' criteria was included in the definitions of these terms ***because*** there are different and, potentially, more stringent local criteria that a developer must satisfy to ensure reliability based on the differing design and conditions of the system in each Transmission District.[43]

[42] *See supra* at n. 38.

[43] The NERC, NPCC, NYSRC and local Transmission Owner criteria are hierarchical and supplemental in nature in that: the NPCC criteria recognizes the NERC criteria, but includes regional criteria that are more stringent or more specific than the NERC criteria; the NYSRC and NYISO criteria recognizes NERC and NPCC criteria, but includes criteria that are more stringent or more specific than the NERC and NPCC criteria; and the local Transmission Owner criteria recognizes the other criteria, but includes criteria that are more stringent or more specific than the other criteria. *See* Corey Affidavit at P 15 n. 6.

NERC, NPCC, and NYSRC criteria only apply to the (NERC) Bulk Electric System, the (NPCC) Bulk Power System, and/or transmission facilities under NYISO operational control, and do not apply to local "non-bulk" portions of the interconnected electric power systems.[44] For that reason, only Transmission Owners' criteria apply to certain facilities that are not covered by the other, higher level criteria.[45] The inclusion of these criteria in the NYISO's interconnection studies is critical in determining whether a proposed facility will have any adverse impact on reliability. Indeed, these criteria may be the only applicable reliability criteria related specifically to the local system. If Transmission Owners' criteria, such as the 2015 LIPA Guideline, were not incorporated into the NYISO's interconnection studies as Applicable Reliability Requirements and addressed under the NYISO's interconnection studies, it is not clear how reliability issues, such as those identified on Long Island, would be addressed.

Accordingly, the NYISO's properly determined that the 2015 LIPA Guideline is an Applicable Reliability Requirement and must be applied as part of the Minimum Interconnection Standard evaluation in the Class Year 2015 Study. The NYISO must, therefore, apply the 2015 LIPA Guideline as required by Attachment S of the OATT.[46]

2. The 2015 LIPA Guideline Appropriately Addresses Reliability Needs under the Minimum Interconnection Standard

Caithness contends that the 2015 LIPA Guideline improperly incorporates a deliverability test.[47] Caithness argues that the guideline violates the NYISO's Minimum Interconnection

[44] *See id.* at P 15.

[45] *See id.*

[46] *See* OATT Attachment S, Section 25.6.2, which provides that "[t]he Annual Transmission Reliability Assessment will be conducted by NYISO staff to ensure New York State Transmission System compliance with Applicable Reliability Requirements." The Annual Transmission Reliability Assessment ("ATRA") is the part of the Class Year Study that determines the System Upgrade Facilities required for each project to reliably interconnect to the New York State Transmission System under the Minimum Interconnection Standard in compliance with Applicable Reliability Requirements.

Standard by impermissibly imposing a deliverability test or requirement that could result in the identification of additional System Upgrade Facilities needed for ERIS.[48] Caithness insists that applying the 2015 LIPA Guideline under the Minimum Interconnection Standard would also violate Commission policy by rendering meaningless Order No. 2003's requirement to have two forms of interconnection service.[49]

The Commission should reject these arguments. The 2015 LIPA Guideline must be applied under the Minimum Interconnection Standard as it is clearly designed to address specific *reliability* issues unique to Long Island. A Transmission Owner's criterion that addresses a reliability issue is not prohibited from being applied as part of the Minimum Interconnection Standard simply because it shares similarities with certain deliverability analyses or may result in the identification of System Upgrade Facilities that have an incidental impact on deliverability. In addition, the NYISO's application in the Class Year 2015 Study of the 2015 LIPA Guideline to evaluate projects' reliable interconnection in Long Island under the Minimum Interconnection Standard does not in any way supplant or displace the NYISO's distinct and separate evaluation for purpose of CRIS of projects' deliverability under the NYISO's Deliverability Interconnection Standard.

a. The 2015 LIPA Guideline addresses reliability concerns unique to Long Island

The 2015 LIPA Guideline is a reliability-based criterion intended to address reliability concerns unique to the Long Island transmission system and is appropriately classified as an

[47] *See* Complaint at 13.

[48] *See id.*

[49] *See id.*

Applicable Reliability Requirement and Applicable Reliability Standard under the OATT.[50] The 2015 LIPA Guideline is a "local Transmission District (*i.e.*, Connecting Transmission Owner) reliability criterion."[51] As explained in the guideline, "[LIPA] considers preservation of the transfer capability of LIPA's internal interfaces to be essential to ensure the reliability and integrity of the LIPA transmission system."[52] The guideline further explains:

> The purpose of this testing requirement is to ensure LIPA's transmission's system reliability and integrity is not jeopardized as a result of proposed resource additions and that LIPA internal interface transfer capabilities are maintained to support the system load on Long Island (Zone K), within certain constraints. The criterion will be used to assess proposed generation, merchant transmission or other power resources interconnecting to the Long Island Power Authority's (LIPA's) electric transmission system.…[53]

The analyses required under the 2015 LIPA Guideline will identify system reinforcements necessary on the LIPA system for a project to interconnect while ensuring LIPA's internal interface transfer capabilities are maintained to support the system load.[54]

As described above, LIPA faces unique reliability concerns with the Long Island transmission system: (i) as a result of Long Island being an island that has limited interconnectivity with external resources, and (ii) also due to the particular location on Long Island of load and generation resources that limit the ability to transfer power and operating reserves from generation resources to where it is required to assist in ensuring reliability both on and off of Long Island.

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[50] *See* Corey Affidavit at P 17.

[51] *See* 2015 LIPA Guideline at 1.

[52] *See id.* at 1.

[53] *See id.* at 1-2.

[54] *See id.* at 2.

This is particularly true with respect to the local Long Island transmission interface known as the "Holbrook interface," behind (or east) of which are about 500 MW of quick-start GTs needed for operating reserves on Long Island.[55] The 2015 LIPA Guideline is intended to address in particular the potential adverse impact that a new generating resource could have if it degraded LIPA's ability to transfer power and operating reserves from east to west via the portion of the Long Island transmission system critical to local transmission system operating reliability. As described above, this capability has been, and continues to be, of critical importance to meeting reliability needs both on and off of Long Island.[56] The ability to transfer operating reserves located in central and eastern Long Island to the west and export it to New York City has historically been of critical importance to meeting Long Island and New York City reliability needs.[57]

Long Island reliability concerns specific to generation interconnected and interconnecting east of the Holbrook interface, relative to internal transmission limitations, cannot be addressed under the NYISO's normal operating procedures – *i.e.*, through the NYISO's security constrained unit commitment and dispatch process. The NYISO does not secure transmission elements east of the Holbrook interface because the limiting constraints involve the impact of the contingency loss of local 138 kV facilities upon local 69 kV system facilities which are not secured by the NYISO.[58] Adverse reliability impacts due to internal transmission limitations on Long Island east of the Holbrook interface cannot be mitigated by the NYISO's operating procedures.[59]

[55] *See* Corey Affidavit at PP 22-23.

[56] *See id.* at P 22.

[57] *See id.* at P 22.

[58] *See id.* at P 23.

[59] *See id.* at P 23.

Therefore, if LIPA is unable to manage through its normal operating procedures adverse reliability impacts that would arise from the interconnection of new generation behind the constrained Holbrook interface, System Upgrade Facilities are necessary to address those reliability impacts.[60]

b. The purpose of the 2015 LIPA Guideline is to Identify System Upgrade Facilities Required to Reliably Interconnect Projects on Long Island

The NYISO tariff does not preclude the application of Transmission Owners' criteria necessary to ensure reliability under the Minimum Interconnection Standard simply because the criteria share similarities with certain deliverability analyses or may result in the identification of System Upgrade Facilities that may incidentally impact deliverability. Instead of providing any substantive support that would call into question the legitimacy of the reliability issues identified by LIPA, Caithness focuses on the term deliverability. Caithness essentially argues that any reliability standard that shares assumptions or analysis with any type of "deliverability" standard cannot be applied under the Minimum Interconnection Standard. The Commission should reject this oversimplification.

There are necessarily some elements of deliverability within the reliability standards applicable under the Minimum Interconnection Standard. The concept of deliverability in the context of transmission transfer capability has existed as part of reliability standards used in power system reliability evaluations for many years – well before the implementation of the NYISO's Deliverability Interconnection Standard in 2008, which is a very specific adaptation of the general concept of deliverability."[61] By way of example, the definition of "Reliability" under

[60] *See id.* at P 22.

[61] *See* Corey Affidavit at P 10.

NPCC Directory 1 is "[t]he degree of performance of the bulk electric system that results in electricity being delivered to customers within accepted standards and in the amount desired [that] can be addressed by considering two basic and functional aspects of the electric system — Adequacy and Security."[62] "Adequacy" is defined by NPCC Directory 1 as "[t]he ability of the electric system to supply the aggregate electrical demand and energy requirements of the customers at all times, taking into account scheduled and reasonably expected unscheduled outages of system elements."[63] The concept of "Adequacy" used in NPCC Directory 1 might be categorized as a "deliverability" standard, but its purpose is clearly to maintain system reliability.

The purpose of upgrades identified under the Minimum Interconnection Standard is not to improve the delivery of power across, and the operating flexibility of, the transmission system, or to reduce congestion.[64] The purpose of the Minimum Interconnection Standard upgrades is to address adverse electrical impacts that in the worst case may result in disconnection of load. However, upgrades required for reliability may indeed have the incidental effect of improving the deliverability of power or reducing congestion.[65]

This may occur in situations where the indicated power flow issues cannot be managed under the NYISO's or Connecting Transmission Owner's normal operating procedures.[66] An example of such a situation was seen in the NYISO's Class Year Studies for 2011 and 2012 in which a project proposing to interconnect to a 345 kV tie-line between the New York and New England systems triggered adverse power flow impacts that could not be managed by the NYISO

[62] NPCC Directory 1 (emphasis added), available at: https://www.npcc.org/Standards/Directories/Forms/Public%20List.aspx.

[63] *See id.*

[64] *See* Corey Affidavit at P 11.

[65] *See id.*

[66] *See id.*

or the Connecting Transmission Owner under normal operating procedures.[67] As a result, the NYISO identified the need for System Upgrade Facilities to mitigate the indicated adverse power flow impacts caused by the project.[68] Those System Upgrade Facilities were determined to be required for reliability purposes under the Minimum Interconnection Standard, even though they had the incidental effect of improving the deliverability of power, retaining flexibility in system operations, and reducing congestion.[69]

Upgrades identified under the Minimum Interconnection Standard that have the incidental effect of improving deliverability do not transform the standards that identified them into "deliverability requirements." The 2015 LIPA Guideline has the limited purpose of seeking to prevent new generation from degrading LIPA's internal interface transfer capabilities, which are critical to supporting the system load on Long Island.[70] An interconnection guideline that is intended to protect a Transmission Owner's ability to continue to reliably serve load is not a "deliverability" requirement, even if it uses some assumptions or analyses that are also considered under a "deliverability" evaluation.

c. Comparisons to the Rejected LIPA Deliverability Guideline Do Not Alter the Reliability Purpose of the 2015 LIPA Guideline

Caithness makes much of the fact that LIPA proposed a previous guideline – the LIPA Deliverability Guideline – that, if it had been accepted by the NYISO, would have conflated the NYISO's reliability and capacity requirements. Importantly, however, the NYISO did not accept and is not proposing to apply the LIPA Deliverability Guideline. The NYISO reviewed the

[67] *See id.*

[68] *See id.*

[69] *See id.*

[70] *See* 2015 LIPA Guideline at 1-2.

proposed LIPA Deliverability Guideline and determined that it was not appropriate to incorporate that guideline to the Minimum Interconnection Standard. The NYISO reached this conclusion because, as drafted, the proposed guideline would have modified the NYISO's Deliverability Interconnection Standard, which is the standard applicable to resources seeking CRIS. The NYISO's tariff provides no mechanism for Transmission Owners to make such a modification.

Caithness insists that the LIPA Deliverability Guideline rejected by the NYISO was substantively identical or materially similar to the 2015 LIPA Guideline, implying that the only real difference between the two documents is the replacement of the term "deliverability" with "reliability."[71] In fact, the 2015 LIPA Guideline is materially different from the LIPA Deliverability Guideline rejected by the NYISO.[72] After rejecting the application of the LIPA Deliverability Guideline, the NYISO worked with LIPA to understand its legitimate reliability concerns regarding the Long Island transmission system that the LIPA Deliverability Guideline was intended to address. LIPA subsequently modified its guideline in a way that specifically addressed the issues identified by the NYISO that had caused the NYISO to reject it. In particular, LIPA eliminated the portion of the guideline that described it as a requirement for projects seeking CRIS and to participate in the NYISO-administered Installed Capacity market. The NYISO reviewed the final 2015 LIPA Guideline and determined that, as revised and supported by LIPA, it was appropriately a reliability criterion.

Contrary to Caithness's assertion, the NYISO's determination to apply the 2015 LIPA Guideline to projects proposing to interconnect to the Long Island transmission system does not

[71] *See* Complaint at 11-12, 24-27.

[72] *See* Corey Affidavit at P 18.

violate Order No. 2003's dictate to create two levels of interconnection service. Caithness's insistence that the NYISO's application of the 2015 LIPA Guideline will essentially conflate the requirements for evaluating ERIS and CRIS mischaracterizes the purpose and application of the 2015 LIPA Guideline. The NYISO's application in the Class Year 2015 Study of the 2015 LIPA Guideline to evaluate projects' reliable interconnection in Long Island under the Minimum Interconnection Standard for purposes of ERIS will not in any way supplant or displace the NYISO's distinct and separate evaluation for purposes of CRIS of projects' deliverability under the NYISO's Deliverability Interconnection Standard. The fact that significant System Upgrade Facilities might be required under the Minimum Interconnection Standard for a developer to obtain ERIS does not support a conclusion that there are not two levels of interconnection services. The NYISO will separately perform an evaluation under its Deliverability Interconnection Standard and identify whether projects requesting CRIS are deliverable under this standard or will require System Deliverability Upgrades.

B. NYISO Supports Expedited Commission Action as the Class Year 2015 Study Is Underway

The NYISO supports Caithness's request for expedited treatment and a Commission Order as soon as possible. The Class Year 2015 Study has now been underway for nearly five months. An expedited Commission order will assist in mitigating potential delays in the Class Year 2015 Study that could arise as a result of the order and would minimize the potential adverse impacts on other Class Year members.

IV. COMPLIANCE WITH COMMISSION RULE 213(c)(2)(i)

Attachment 1 to this Answer addresses the formal requirements of Commission Rule 213(c)(2) in order to ensure the NYISO's compliance with them.

V. SUPPORTING ATTACHMENTS

The NYISO attaches the following documents in support of the facts of this answer:

- Attachment 1 – Compliance with Commission Rule 213(c)(2)
- Attachment 2 – Affidavit of Steven L. Corey
- Attachment 3 – Long Island Local Reliability Interface Transfer Capability Test to be Applied as Part of Interconnection Studies" (March 1, 2015).

VII. CONCLUSION

WHEREFORE, for the foregoing reasons, the New York Independent System Operator, Inc. ("NYISO"), respectfully requests that the Commission deny the Complaint and the relief sought by Caithness.

Respectfully submitted,

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

August 10, 2015

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding in accordance with the requirements of Rule 2010 of the Rules of Practice and Procedure, 18 C.F.R. §385.2010.

Dated at Rensselaer, NY this 10th day of August, 2015.

/s/ Joy A. Zimberlin

Joy A. Zimberlin
New York Independent System Operator, Inc.
10 Krey Blvd.
Rensselaer, NY 12144
(518) 356-6207

Attachment 1

Compliance with Commission Rule 213(c)(2)

A. Specific Admissions and Denials of Material Allegations

The answer of the New York Independent System Operator ("NYISO") in this proceeding addresses each material allegation raised by Caithness Long Island II, LLC ("Caithness"). In its Complaint, Caithness also includes a list of thirty-four statements, many of which go to minor factual details and cannot possibly be considered material allegations. The NYISO is not required under Commission Rule 213(c)(2)(i) to address each of these statements. However, for the Commission's convenience, the NYISO supplements its answer by submitting this specific list of admissions, denials, and defenses. In addition to its statements in its answer, the NYISO admits or denies the factual allegations in the Caithness's Complaint, as specified below.[1] To the extent that any fact or allegation in the Complaint is not specifically admitted in its answer or below, it is denied. Except as specifically stated in its answer or below, the NYISO does not admit any facts in the form or manner stated in the Complaint. Denials of allegations made in the text of the Complaint should be understood as encompassing all related allegations and assertions in, and regarding, the attachments accompanying the Complaint.

1. Denials

- The NYISO has insufficient information on which to form a belief as to the truth or accuracy of the allegations regarding the Long Island Power Authority ("LIPA") competitive solicitation process set forth in the Complaint and therefore denies such allegations. (Complaint at 5).

- The NYISO denies all allegations and characterizations that the NYISO has violated its Open Access Transmission Tariff ("OATT" or "Tariff") interconnection requirements. (Complaint at 1-2, 4, 21, 28-31).

- The NYISO denies all allegations and characterizations that the "Long Island Local Reliability Interface Transfer Capability Test to be Applied as Part of Interconnection Studies" dated March 1, 2015 ("2015 LIPA Guideline") is in direct conflict with or violates the NYISO OATT. (Complaint at 2, 3, 12, 31-33).

- The NYISO denies all allegations and characterizations that the application of the 2015 LIPA Guideline in the NYISO's interconnection process violates Order No. 2003's requirement related to two levels of interconnection service. (Complaint at 3, 4, 12, 13-14, 38-39).

- The NYISO denies all allegations and characterizations that the application of the 2015 LIPA Guideline in the NYISO's interconnection process permits a Transmission Owner

[1] Commission Rule 213(c)(2) provides that "the answerer must, to the extent practicable: (i) Admit or deny, specifically and in detail, each material allegation of the pleading answered; and (ii) Set forth every defense relied on." 18 C.F.R. § 385.213(c)(2).

to unilaterally adopt a rule that conflicts with NYISO Tariff provisions. (Complaint at 3, 4, 37-40).

- The NYISO denies all allegations and characterizations that in December 2014 it rejected the application of a guideline substantively or materially identical to the 2015 LIPA Guideline. (Complaint at 3, 10, 25-26).

- The NYISO denies all allegations and characterizations that the NYISO or the NYISO's Operating Committee rejected the LIPA Deliverability Guideline "because it applied a deliverability test." (Complaint at 25).

- The NYISO has insufficient information on which to form a belief as to the truth or accuracy of the allegations set forth in the Complaint regarding LIPA's or PSEG-Long Island's application of tests similar to either the LIPA Deliverability Guideline or the 2015 LIPA Guideline since the NYISO implemented the Deliverability Interconnection Standard in 2008, and therefore denies such allegations. (Complaint at 10-11).

- The NYISO denies that the NYISO, under normal operating conditions, dispatches down generating resources east of the Holbrook interface on Long Island to stay within thermal limits of transmission facilities east of Holbrook, to avoid system overloads and to operate the system reliably. (Complaint at 47).

- The NYISO has insufficient information on which to form a belief as to the truth or accuracy of the allegations set forth in the Complaint regarding PSEG Long Island's re-dispatch capability or practices with regard to resources east of Holbrook, and therefore denies such allegations. (Complaint at 47).

2. Admissions

- The NYISO admits that it commenced operation in November of 1999 and is the operator of the New York State Transmission System and the administrator of the wholesale electricity markets in New York. (Complaint at 5, 10).

- The NYISO admits that it administers the NYISO Large Facility Interconnection Procedures contained in Attachment X of the NYISO OATT. (Complaint at 5, 10).

- The NYISO admits that Caithness is the developer of a proposed generating facility seeking to interconnect in the Town of Brookhaven, New York that is being studied as part of the NYISO's Class Year 2015 Interconnection Facilities Study ("Class Year 2015 Study"). (Complaint at 2, 5).

- The NYISO admits that pursuant to its OATT, the NYISO groups Developers by Class Year for purposes of conducting the Class Year Interconnection Facilities Study to determine the upgrades, including System Upgrade Facilities (or "SUFs"), required for to reliably interconnect proposed projects. (Complaint at 2).

- The NYISO admits that in the Class Year Study, it uses the Annual Transmission Baseline Assessment ("ATBA"), as the base case against which to analyze the impacts of the Class Year projects, and that the ATBA includes all existing capacity resources with CRIS rights (Complaint at 22).

- The NYISO admits that Caithness satisfied the requirements for joining and has joined the Class Year 2015 Study, and that its project is currently being evaluated as part of the Class Year 2015 Study. (Complaint at 2).

- The NYISO admits that it revised its OATT, in compliance with Order No. 2003, to add a second level of interconnection service (*i.e.*, Capacity Resource Interconnection Service) that incorporates a deliverability component. (Complaint at 6-7, 10, 16-18).

- The NYISO admits that its OATT contains both Energy Resource Interconnection Service, which provides a basic level of interconnection service, and Capacity Resource Interconnection Service, which provides interconnection customers with the ability to participate in the NYISO-administered Installed Capacity ("ICAP") market to the extent of its deliverable capacity. (Complaint at 7).

- The NYISO admits that resources that opt for Energy Resource Interconnection Service only, and not Capacity Resource Interconnection Service, need only satisfy the Minimum Interconnection Standard (or "MIS") and not the Deliverability Interconnection Standard. (Complaint at 7, 13).

- The NYISO admits that the Minimum Interconnection Standard is distinguishable from the Deliverability Interconnection Standard. (Complaint at 19).

- The NYISO admits that System Deliverability Upgrades required for CRIS are identified by application of the deliverability test contained in the Deliverability Interconnection Standard set forth in Attachment S of the OATT. (Complaint at 7, 13, 19).

- The NYISO admits that "NYCA Deliverability" is defined as the NYCA transmission system being "able to deliver the aggregate of NYCA capacity resources to the aggregate of the NYCA load under summer peak load conditions" and that this is accomplished through ensuring the deliverability of new facilities in the Capacity Region where they propose to interconnect. (Complaint at 18-19).

- The NYISO admits that one of the elements of the NYISO Deliverability Interconnection Standard is that the NYISO places all generation resources with CRIS rights in service and uses a levelized generation dispatch in each Capacity Region. Levelization dispatch is achieved by scaling generation (up or down) proportionally, in each Capacity Region to match the demand. This "levelized dispatch" process results in all generation within each Capacity Region being at a uniform percentage of Pmax (Pmax represents a CRIS value derated by equivalent forced outage rates.) (Complaint at 19, 46).

- The NYISO admits that in the SRIS it identifies System Upgrade Facilities that are "required for the proposed project to connect reliably to the system in a manner that meets the NYISO Minimum Interconnection Standard." (Complaint at 41).

- The NYISO admits that the definition of Minimum Interconnection Standard includes the following language "The Standard does not impose any deliverability test or deliverability requirement on the proposed project." (Complaint at 3, 8, 13, 41).

- The NYISO admits that under the Minimum Interconnection Standard, in order to address reliability violations, among other methods, the NYISO will use normal operating procedures of the NYISO and the Connecting Transmission Owner, including re-dispatch, to the extent possible. (Complaint at 8, 14, 19, 46).

- The NYISO admits that the 2015 LIPA Guideline dispatch assumptions are unique to the 2015 LIPA Guideline. (Complaint at 15).

- The NYISIO admits that as part of the NYISO Large Facility Interconnection Process set forth in Attachment X, the NYISO performs the following tasks: analyzes Interconnection Requests; performs Interconnection System Reliability Impact Studies to assess whether and how a facility may be interconnected to the transmission system in a reliable manner under the NYISO Minimum Interconnection Standard; identifies the System Upgrade Facilities necessary to satisfy the Minimum Interconnection Standard; performs a Class Year Interconnection Facilities Study in which it groups eligible projects; as part of the Class Year Study, applies a Minimum Interconnection Standard evaluation to identify any System Upgrade Facilities not already identified in the System Reliability Impact Study; as part of the Class Year Study, applies the NYISO Deliverability Interconnection Standard to identify any System Deliverability Upgrades necessary for the proposed interconnecting projects to receive Capacity Resource Interconnection Service. (Complaint at 8).

- The NYISO admits that it provided a draft SRIS report for the Caithness Project to Caithness on May 13, 2014, that such report included an analysis performed by PSEG Long Island, applying the LIPA Deliverability Guideline, and that such analysis identified several System Upgrade Facilities which costs were to be assigned to Caithness. (Complaint at 9, 40).

- The NYISO admits that by letter dated June 5, 2014 to the NYISO, a representative of Caithness objected to the inclusion of the alleged System Upgrade Facilities identified by applying the LIPA Deliverability Guideline and that Caithness continued to object to the identification of System Upgrade Facility triggered by evaluations under the LIPA Deliverability Guideline. (Complaint at 41, 42).

- The NYISO admits that it objected to application of the LIPA Deliverability Guideline because as written it attempted to modify standards applicable to resources requesting CRIS, and that the NYISO stated at the December 3, 2014 TPAS meeting that the LIPA Deliverability Guideline was not an appropriate guideline, as written, to apply under the Minimum Interconnection Standard. (Complaint at 9, 41, 42).

- The NYISO admits that the LIPA Deliverability Guideline includes the language quoted at pp. 46-47 of the Complaint. (Complaint at 46-47).

- The NYISO admits that several NYISO representatives held discussions with LIPA and PSEG Long Island representatives, that did not include Caithness representatives, concerning the NYISO's objections to the LIPA Deliverability Guideline and to attempt to clarify PSEG-Long Island's intent with the guideline. (Complaint at 41-42, 43).

- The NYISO admits that in the SRIS scope and report for the Caithness Project that was approved by the NYISO Operating Committee, the reference to the LIPA Deliverability Guideline was removed at the NYISO's recommendation. (Complaint at 9-10, 42, 43).

- The NYISO admits that at the December 11, 2014 Operating Committee meeting, a Caithness representative stated that Caithness wanted to work cooperatively with the NYISO and PSEG Long Island to determine whether any parts of the LIPA Deliverability Guideline contained reliability criteria that could apply, consistent with the NYISO Minimum Interconnection Standard, for the identification of System Upgrade Facilities in the Class Year 2015 Study. (Complaint at 42-43).

- The NYISO admits that in a February 17, 2015 NYISO subcommittee meeting, PSEG Long Island presented the 2015 LIPA Guideline and the NYISO indicated that the guideline was not subject to stakeholder approval, but that the NYISO had reviewed and accepted it and that it would be applied to the Class Year 2015 Study as an Applicable Reliability Requirement that may trigger System Upgrade Facilities for Class Year 2015 projects proposing to interconnect on Long Island, including Caithness. (Complaint at 2-3, 6, 10, 11-12, 43, 44, 45).

- The NYISO admits that in the February 17, 2015 TPAS meeting, PSEG-Long Island represented that the evaluations included in the 2015 LIPA Guideline had been applied for over a decade. (Complaint at 10).

- The NYISO admits that at the February 17, 2015 TPAS meeting, several market participants' representatives, including Caithness's representative, objected to the application of the 2015 LIPA Guideline under the Minimum Interconnection Standard and requested a follow up presentation that PSEG-Long Island agreed to consider. (Complaint at 44, 45).

- The NYISO admits that at the February 17, 2015 TPAS meeting, a Caithness representative read the statement quoted on pp. 44-45 of the Complaint into the record. (Complaint at 44-45).

- The NYISO admits that the follow up presentation requested from PSEG-Long Island at the February 17, 2015 was not provided. (Complaint at 45).

- The NYISO admits that it is applying the 2015 LIPA Guideline in the Class Year 2015 Study because it is both an Applicable Reliability Standard and an Applicable

Reliability Requirement, which was effective and filed with the FERC Form No. 715 prior to commencement of the Class Year 2015 ATBA. (Complaint at 33-34, 45, 47).

- The NYISO admits that the 2015 LIPA Guideline states that it is to be applied in NYISO SRISs and Class Year Facilities Studies and that "[u]pgrades identified through application of this local reliability criterion shall be considered [System Upgrade Facilities] under the NYISO MIS" and that "[b]ased on the location of the Project, all other resources within a specific Long Island region(s) will be dispatched at a level that reflects the forced outage rates" and that the purpose of the guideline is 'to assure no bottling and that all resources can reliably serve the system load…to allow the output of all resources in one load center to be transferred to the adjacent load center.'" (Complaint at 11, 45-46, 47).

- The NYISO admits that the 2015 LIPA Guideline does not use the word "deliverability" and does not state that it applies to capacity resources seeking to interconnect on Long Island, both of which statements appeared in the LIPA Deliverability Guideline. (Complaint at 11).

- The NYISO admits that it applies the NYISO Deliverability Interconnection Standard to identify upgrades necessary for Capacity Resource Interconnection Service – such upgrades are known as System Deliverability Upgrades under the NYISO Tariff. (Complaint at 46).

- The NYISO admits that the NYISO, under normal operating conditions, may dispatch down generating resources ***west*** of the Holbrook interface to stay within thermal limits of transmission facilities east of Holbrook, to avoid system overloads and to operate the system reliably. (Complaint at 47).

B. Defenses

In accordance with Commission Rule 213(c)(2)(ii), the NYISO sets forth the following defenses.

- Complainant has failed to meet its burden of proof under section 206 of the FPA, and Commission Rule 206.

- Complainant has failed to show that the NYISO did not comply with its tariffs when it recognized the 2015 LIPA Guideline as an Applicable Reliability Requirement under Attachment S of the NYISO OATT.

- Complainant has failed to show that the NYISO's application of the 2015 LIPA Guideline to the Class Year 2015 Study is a violation of the NYISO's OATT or Order No. 2003.

C. Proposed Resolution Process

Commission Rule 213(c)(4) states that an answer "is also required to describe the formal or consensual process it proposes for resolving the complaint." In compliance with that requirement, the NYISO requests that the Complaint be dismissed based solely on the pleadings in this proceeding.

Attachment 2

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Caithness Long Island II, LLC	)	
	)	
Complainant,	)	
	)	
v.	)	Docket No. EL15-84-000
	)	
New York Independent System Operator, Inc.	)	
	)	
Respondent	)	

AFFIDAVIT OF
STEVEN L. COREY

Mr. Steven L. Corey declares:

1. I have personal knowledge of the facts and opinions herein and if called to testify could and would testify competently hereto.

A. Purpose of this Affidavit

2. The purpose of this Affidavit is to describe the NYISO's Minimum Interconnection Standard and explain why it is appropriate for the 2015 LIPA Guideline to be applied under the Minimum Interconnection Standard in the NYISO's interconnection studies, including the Class Year 2015 Facilities Study, for proposed interconnections to the Long Island electric power system.[1]

B. Qualifications

3. My name is Steven Corey, and I am the Manager of Interconnection Projects for the NYISO. In this position I am responsible for overseeing the NYISO's administration

[1] Capitalized terms not defined in this Affidavit shall have the meaning set forth in Attachments X and S of the NYISO Open Access Transmission Tariff, and if not therein, in Section 1 of the OATT or Section 2 of the NYISO Market Administration and Control Area Services Tariff.

of Interconnection Requests and the performance of all interconnection studies. In this capacity, I am responsible for overseeing the NYISO's administration of Attachments S, X and Z of the NYISO's Open Access Transmission Tariff ("OATT"), including the application of the Minimum Interconnection Standard to projects in the NYISO's interconnection queue.

4. I joined the NYISO when it was formed in 1999. From December 1999 until November 2005, I was the Manager of Transmission Planning for the NYISO. In November 2005, I became the Manager, Interconnection Projects and have held that position for nine years and eight months.

5. Prior to the NYISO, I was employed for nearly 26 years by the New York Power Pool, where, among other positions, I served as Manager of Transmission Planning before the transition to the NYISO. I received a Bachelor of Science degree in Electrical Engineering from Clarkson College of Technology (now Clarkson University) and a Master of Engineering degree in Electrical Engineering, also from Clarkson University.

C. The NYISO Minimum Interconnection Standard

6. The NYISO Minimum Interconnection Standard is defined in the NYISO OATT as:

> the reliability standard that must be met by any Large Generating Facility, or a Merchant Transmission Facility, proposing to connect to the New York State Transmission System or to the Distribution System. The Standard is designed to ensure reliable access by the proposed project to the New York State Transmission System or to the Distribution System, as applicable. The Standard does not impose any deliverability

> test or deliverability requirement on the proposed interconnection.[2]

7. Every Large Facility subject to Attachment X of the NYISO OATT and Small Generating Facility subject to Attachment Z of the NYISO OATT must meet the Minimum Interconnection Standard, regardless of whether it elects Energy Resource Interconnection Service ("ERIS") only or ERIS and Capacity Resource Interconnection Service ("CRIS").

8. The Minimum Interconnection Standard is designed to ensure that the proposed project can reliably interconnect to the New York State Transmission System (or to the Distribution System, as applicable). The objective of the Minimum Interconnection Standard is to identify any potential adverse reliability impacts that would arise from the interconnection of a project. Impacts that require mitigation include those that would result in a degradation of system reliability and/or non-compliance with Applicable Reliability Requirements or Applicable Reliability Standards, which include the reliability standards of the North American Electric Reliability Corporation ("NERC"), the Northeast Power Coordinating Council, Inc. ("NPCC"), the New York State Reliability Council ("NYSRC"), or the Connecting Transmission Owner. If the NYISO identifies any adverse reliability impacts and/or potential reliability standards violations, the NYISO considers whether these potential adverse impacts are manageable through the normal operating procedures of the NYISO or the Connecting Transmission Owner in accordance with the technical assumptions of the Minimum Interconnection Standard.[3] If the NYISO identifies

[2] OATT, Attachment X, Section 30.1.
[3] *See* NYISO Transmission Expansion and Interconnection Manual, Section 3.6.1 (Minimum Interconnection Standard Technical Assumptions) (November 2012), *available at*:

adverse reliability impacts that cannot be managed through such normal operating procedures, the NYISO will identify the required System Upgrade Facilities needed to mitigate such adverse reliability impacts.

9. The basic concepts of the Minimum Interconnection Standard as summarized above were developed in the first year of the NYISO's operation and have been applied in all NYISO interconnection studies ever since. Since the NYISO's inception, interconnection studies have used power flow, short circuit, and stability analyses to evaluate the impacts of proposed facilities on the New York State Transmission System (and later, Distribution System) with respect to thermal, voltage, fault current, and stability reliability criteria. These evaluations often identify potential violations or adverse impacts relative to these reliability criteria. When such potential violations or adverse reliability impacts are indicated, the study continues on to consider whether these potential adverse impacts are manageable through the normal operating procedures of the NYISO or Connecting Transmission Owner. Generally speaking, operating procedures are not normally used to manage short circuit or stability issues, so it is usually necessary to identify System Upgrade Facilities to address such issues. Power flow (thermal or voltage criteria) issues are often manageable through the NYISO's or Connecting Transmission Owner's normal operating procedures. For example, the NYISO routinely manages limitations on transmission facilities that are under the NYISO's operational control through its security constrained unit commitment and real-time dispatch process. However, power flow issues are not always manageable through the NYISO's or Connecting Transmission Owner's

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http://www.nyiso.com/public/webdocs/markets_operations/documents/Manuals_and_Guides/Manuals/Planning/tei_mnl.pdf.

normal operating procedures, and in such instances, it is necessary to identify System Upgrade Facilities to address power flow issues.

10. As a general matter, the concept of deliverability in the context of transmission transfer capability has existed as part of reliability standards used in power system reliability evaluations for many years – well before implementation of NYISO's Deliverability Interconnection Standard in 2008, which is a very specific adaptation of the general concept of deliverability. By way of example, NPCC Directory 1 provides the following definition of "Reliability":

> Reliability - The degree of performance of the bulk electric system that results in electricity being ***delivered*** to customers within accepted standards and in the amount desired. Reliability may be measured by the frequency, duration, and magnitude of adverse effects on the electric supply. Electric system reliability can be addressed by considering two basic and functional aspects of the electric system — Adequacy and Security.[4]

"Adequacy" is defined by NPCC Directory 1 as "[t]he ability of the electric system to supply the aggregate electrical demand and energy requirements of the customers at all times, taking into account scheduled and reasonably expected unscheduled outages of system elements."[5] "Security" is defined by NPCC Directory 1 as "[t]he ability of the electric system to withstand disturbances such as electric short circuits or unanticipated loss of system elements."

11. The purpose of upgrades identified under the Minimum Interconnection Standard is not to improve the delivery of power across and the operating flexibility of the transmission system or to reduce congestion. However, System Upgrade Facilities

[4] *See* NPCC Directory 1 (emphasis added), available at: https://www.npcc.org/Standards/Directories/Forms/Public%20List.aspx.
[5] *See* id.

required for reliability in accordance with the Minimum Interconnection Standard may indeed have the incidental effect of improving the deliverability of power or reducing congestion. This may occur in situations where the indicated power flow issues cannot be managed under the NYISO's or Connecting Transmission Owner's normal operating procedures. An example of such a situation was seen in the Class Year Studies for 2011 and 2012 in which a project proposing to interconnect to a 345 kV tie-line between the New York and New England systems triggered adverse power flow impacts that could not be managed by the NYISO or the Connecting Transmission Owner under normal operating procedures. As a result, the NYISO identified the need for System Upgrade Facilities to mitigate the indicated adverse power flow impacts caused by the project. Those System Upgrade Facilities were determined to be required under the Minimum Interconnection Standard even though they would have the incidental effect of improving the deliverability of power, retaining flexibility in system operations, and reducing congestion.

12. Situations in which indicated adverse power flow impacts are manageable through the NYISO's normal operating procedures usually are fairly straightforward. Impacts on facilities that are under the NYISO's operational control are generally manageable through the NYISO's normal operating procedures (via the NYISO's security constrained unit commitment and dispatch process). Adverse power flow impacts on transmission or distribution facilities that are not under the NYISO's operational control are not manageable through the NYISO's normal operating procedures and may or may not be manageable through the Connecting Transmission Owner's normal operating procedures. A straightforward example of this situation is when the

impacted transmission or distribution facility is owned and operated by an entity other than the Connecting Transmission Owner. However, there also have been instances in which adverse power flow impacts on facilities owned by the Connecting Transmission Owner were of such complexity that they were considered to be unmanageable through the Connecting Transmission Owner's normal operating procedures.

D. Application of Reliability Standards and Applicable Reliability Requirements in the NYISO's Interconnection Process

13. Applicable Reliability Standards are the reliability requirements applicable to the Minimum Interconnection Standard evaluations in the Interconnection Feasibility Study and the Interconnection System Reliability Impact Study. These include the requirements and guidelines of the Applicable Reliability Councils – NERC, NPCC, and NYSRC – and the Transmission District to which a Developer's Large Facility is directly interconnected, as those requirements and guidelines are amended and modified and in effect from time to time.

14. Applicable Reliability Requirements are the reliability standards applicable to the Minimum Interconnection Standard evaluations in the Class Year Interconnection Facilities Study ("Class Year Study"). These include NYSRC Reliability Rules, NPCC's Basic Design and Operating Criteria, NERC Planning Standards, NYISO rules, practices and procedures, and the Connecting Transmission Owner criteria included in FERC Form No. 715.

15. As described above, the Applicable Reliability Standards and Applicable Reliability Requirements are primarily applied in the power flow, short circuit and stability analyses performed in the interconnection studies as applicable. (Stability analysis is not performed for an Interconnection Feasibility Study.) Power flow analysis is performed to evaluate potential adverse impacts relative to NERC, NPCC, NYSRC and the local Transmission Owner steady-state thermal and voltage criteria. These criteria include thermal and voltage performance standards for base case/no contingency conditions and for simulated post-contingency conditions. Interconnection studies typically evaluate on the order of several dozen to several hundred "design criteria" contingencies. A straightforward example of the applicability of the local Transmission Owner criteria is that, NERC, NPCC, NYSRC and NYISO criteria only apply to the (NERC) Bulk Electric System, the (NPCC) Bulk Power System, and/or transmission facilities under the NYISO's operational control, and do not apply to local "non-bulk" portions of the interconnected electric power systems.[6] For that reason, only the local Transmission Owner criteria apply to the facilities not covered by the other, higher level criteria. All the Applicable Reliability Standards and Applicable Reliability Requirements, including the local Transmission Owner criteria, are used to identify potential adverse reliability impacts due to a proposed interconnection project. As previously described, the technical assumptions of the Minimum Interconnection Standard are used to determine whether System

[6] The NERC, NPCC, NYSRC and local Transmission Owner criteria are hierarchical and supplemental in nature in that: the NPCC criteria recognizes the NERC criteria, but includes regional criteria that are more stringent or more specific than the NERC criteria; the NYSRC and NYISO criteria recognizes NERC and NPCC criteria, but includes criteria that are more stringent or more specific than the NERC and NPCC criteria; and the local Transmission Owner criteria recognizes the NERC, NPCC, NYSRC and NYISO criteria, but includes criteria that are more stringent or more specific than the NERC, NPCC, NYSRC and NYISO criteria.

Upgrade Facilities are required to mitigate any indicated potential adverse reliability impacts.

E. NYISO's Determination that the 2015 LIPA Guideline Is an Applicable Reliability Requirement to be Applied in Class Year 2015

16. The NYISO determined that the 2015 LIPA Guideline, in effect when Class Year 2015 commenced, and filed in the FERC 715 before the Class Year Study's Annual Transmission Baseline Assessment ("ATBA") was commenced, satisfies the definition of an "Applicable Reliability Requirement" and therefore must be applied to Class Year 2015.

17. The NYISO reviewed the 2015 LIPA Guideline and determined that it is a reliability-based criterion intended to address reliability issues unique to the Long Island transmission system. Its stated purpose is "to ensure LIPA's transmission's system reliability and integrity is not jeopardized as a result of proposed resource additions and that LIPA internal interface transfer capabilities are maintained to support the system load on Long Island (Zone K), within certain constraints."[7] The 2015 LIPA Guideline provides that any resource addition to the Long Island transmission system shall be tested as outlined in the guideline to ensure the reliability of the system is maintained. The analyses required under the 2015 LIPA Guideline will identify system reinforcements necessary on the LIPA system for a project to interconnect and to ensure LIPA's internal interface transfer capabilities are maintained to support the system load. The 2015 LIPA Guideline applies a reliability evaluation to every resource proposing to

[7] *See* Attachment 3, "Long Island Local Reliability Interface Transfer Capability Test to be Applied as Part of Interconnection Studies" (March 1, 2015).

interconnect on Long Island. It does not seek to alter or replace the NYISO's Deliverability Interconnection Standard applied to resources seeking to become Installed Capacity Suppliers. The NYISO therefore accepted the 2015 LIPA Guideline as an Applicable Reliability Standard and Applicable Reliability Requirement under the NYISO OATT.

18. The NYISO had previously reviewed and rejected an earlier guideline provided by LIPA to implement certain "Generation Deliverability Criteria" in its Transmission & Distribution Planning Criteria & Guidelines dated September 20, 2010 ("LIPA Deliverability Guideline"). The LIPA Deliverability Guideline rejected by the NYISO was materially different than the 2015 LIPA Guideline accepted by the NYISO as an "Applicable Reliability Requirement."

19. The NYISO rejected the LIPA Deliverability Guideline because, as drafted, it was beyond the scope of the Minimum Interconnection Standard. The LIPA Deliverability Guideline would have redefined the NYISO's Deliverability Interconnection Standard, setting forth requirements that would have to be satisfied for projects to participate in the NYISO-administered Installed Capacity market. These requirements are within the exclusive province of the NYISO's Class Year Deliverability Study and the NYISO's application of the Deliverability Interconnection Standard.

F. Unique Topography of the Long Island Transmission System

20. As an island, Long Island has limited interconnectivity with the rest of the New York State Transmission System or other systems (*i.e.*, New England or PJM). It, therefore,

has limitations on the amount it can rely on other systems for external help to satisfy local reliability needs.

21. Because of its unique situation, Long Island (Zone K) is a Locality and, as such, has special reliability requirements compared to portions of the NYS Power System that are not Localities. (Currently the other New York Localities are New York City (Zone J) and Lower Hudson Valley and New York City (Zones G though J)). For example, NYISO annually determines a Locational Minimum Installed Capacity Requirement ("LCR") for Long Island, which is the minimum amount of capacity required to be electrically located on Long Island. The LCR is designed so that the system will meet NPCC and NYSRC reliability criteria. This unique characteristic of Long Island serves as a legitimate basis for more stringent local transmission transfer criterion to ensure transmission is flexible enough in its local transmission operations that "electricity can be delivered to customers within accepted standards and in the amount desired," consistent with the NPCC definition of Reliability.

22. Historically, maintaining internal interface transfer capability to allow a certain level of operating flexibility has been important to Long Island because of its unique topology of Load, generation, and the use of about 500 MW of quick-start gas turbine units ("GTs") for operating reserves required by the NYISO for this Locality. Most of Long Island's Load is concentrated in the western area of the island, while much of its generation resources and GT reserves are located in the central and eastern areas of the island. Therefore, the ability to transfer power and operating reserve from east to west has been, and continues to be, of critical importance to meeting the reliability needs of the island. Also, the ability to transfer operating reserves located in central and

eastern Long Island to the west and export it to New York City has historically been of critical importance to meeting New York City reliability needs.

23. Long Island reliability issues specific to generation interconnected and interconnecting east of a local transmission interface, the Holbrook interface, relative to internal transmission limitations, cannot be addressed under the NYISO's normal operating procedures – *i.e.*, through the NYISO's security constrained unit commitment and dispatch process. The NYISO does not secure transmission elements east of the Holbrook interface because the limiting constraints involve the impact of the contingency loss of local 138 kV facilities upon local 69 kV system facilities which are not secured by the NYISO. As such, adverse reliability impacts due to internal transmission limitations on Long Island east of the Holbrook interface cannot be mitigated by the NYISO's operating procedures. Therefore, if LIPA is unable to manage through its normal operating procedures adverse reliability impacts that would arise from the interconnection of new generation behind the constrained Holbrook interface, System Upgrade Facilities are necessary to address those reliability impacts under the NYISO Minimum Interconnection Standard. If the Commission were to direct the NYISO to ignore the 2015 LIPA Guideline as an Applicable Reliability Requirement and, therefore, to not identify required System Upgrade Facilities, these local reliability issues on Long Island could go unaddressed for the reasons described above.

This concludes my Affidavit.

ATTESTATION

I am the witness identified in the foregoing affidavit. I have read the affidavit and am familiar with its contents. The facts set forth therein are true to the best of my knowledge, information, and belief.

Steven L. Corey

Subscribed and sworn to before me
this 10th day of August 2015

Notary Public

My commission expires: December 29, 2016

LINDA SLOAN
Notary Public - State of New York
No. 01SL6198599
Qualified in Schenectady County
My Commission Expires December 29, 2016

Attachment 3

Long Island Local Reliability Interface Transfer Capability Test
To be Applied as part of Interconnection Studies
Effective Date: March 1, 2015

I. Introduction

As per Attachments S, X and Z of the NYISO's Open Access Transmission Tariff ("OATT"), the NYISO offers Energy Resource Interconnection Service to proposed generation and merchant transmission facilities under the Large Facility Interconnection Procedures and Small Generator Interconnection Procedures (collectively, the "Interconnection Procedures") in compliance with the NYISO Minimum Interconnection Standard ("MIS"). All Large Facilities and Small Generating Facilities wishing to sell Energy and Ancillary Services in the NYISO markets must interconnect in compliance with the NYISO MIS. The NYISO evaluates an Interconnection Request for compliance with the MIS throughout the interconnection study process. The interconnection studies conducted under the Interconnection Procedures are conducted in accordance with requirements and guidelines of the Applicable Reliability Councils, and the Transmission District, to which the facility proposed to interconnect ("Applicable Reliability Standards"). The interconnection study process includes short circuit/fault duty, steady state (thermal and voltage) and stability analyses designed to identify the Attachment Facilities, Distribution Upgrades and System Upgrade Facilities (SUFs) required for the reliable interconnection of Large Facilities and Small Generating Facilities to the New York State Transmission System or to the Distribution System in compliance with the NYISO MIS. Note that, under the NYISO Interconnection Procedures, the term Distribution System does not include LIPA's distribution facilities.

As per Attachment S of the NYISO OATT, the Class Year Interconnection Facilities Study ("Class Year Study") is the process used to identify and cost allocate the System Upgrade Facilities that are required to ensure that New York State Transmission System facilities are sufficient to reliably serve existing load and meet load growth and changes in load patterns. The Class Year Study evaluates projects for compliance with NYSRC Reliability Rules, NPCC Basic Design and Operating Criteria, NERC Planning Standards, NYISO rules, practices and procedures, and the Connecting Transmission Owner criteria included in FERC Form No. 715 (collectively "Applicable Reliability Requirements").

This Long Island Local Reliability Interface Transfer Capability Test shall be considered as an Applicable Reliability Standard under Attachments X and Z of the NYISO OATT and as an Applicable Reliability Requirement under Attachment S of the OATT because it is a local Transmission District (i.e. Connecting Transmission Owner) reliability criterion. The Long Island Power Authority ("LIPA") considers preservation of the transfer capability of LIPA's internal interfaces to be essential to ensure the reliability and integrity of the LIPA transmission system. The purpose of this testing requirement is to ensure LIPA's transmission's system reliability and integrity is not jeopardized as a result of proposed resource additions and that LIPA internal interface transfer capabilities are maintained to support the system load on Long Island (Zone K), within certain constraints. The criterion will be used to assess proposed generation, merchant

transmission or other power resources interconnecting to the Long Island Power Authority's (LIPA's) electric transmission system. Application of this criterion will be performed in conjunction with the NYISO's Minimum Interconnection Standard (MIS) procedure as part of the NYISO interconnection study process, particularly the System Reliability Impact Study (SRIS) and the Class Year Study processes. Upgrades identified through application of this local reliability criterion shall be considered SUFs under the NYISO MIS.

This criterion and associated testing requirements do not supersede formal study requirements of the NYISO Large Facility Interconnection Process, but rather serves as an additional study requirement for any proposed interconnection within LIPA system. The analysis will identify system reinforcements necessary on the LIPA system in order for a project to interconnect and to ensure LIPA's internal interface transfer capabilities are maintained to support the system load.

II. Assumptions and Interface Definitions

1. Common study assumptions for this study are as follows:

   A. The impact of a Project will be assessed at the maximum proposed summer output level, as specified by the Project developer in their Interconnection Request (up to summer name plate rating, or Dependable Maximum Net Capability (DMNC) if available, whichever is higher) regardless of project technology. It shall consider all supplemental power output associated with facility/technology (e.g., duct firing for generators with such capability, etc.).

   B. Based on the location of the Project, all other resources within a specific Long Island region(s) will be dispatched at a level that reflects forced outage rates. Renewable type resources such as solar and wind may be dispatched at less than full output, consistent with NYISO practices.

   C. Project power factor shall be based on reactive capability curve and reactive needs of system.

   D. The impact of the proposed Project will be evaluated for summer peak load conditions.

   E. Thermal analysis will be conducted to assess the reliability impact, with and without the Project.

   F. The following thermal criteria should be utilized:

System Condition	Maximum Allowable Facility Loading
Pre-contingency	Summer Normal Rating
Post-contingency	Summer LTE Rating

   Normal transfer criteria and contingency testing (N-1) will apply.

G. Phase angle regulators (PARs), switched shunts, and load tap changing (LTC) transformers will be modeled as regulating pre-contingency and non-regulating post-contingency. PARs associated with the Lake Success to Jamaica (901) and Valley Stream to Jamaica (903) inter ties will be held constant to maintain the power wheel to Con Edison (286 MW). PARs associated with the Y49 inter tie may be adjusted, depending upon the location of the Project and the LIPA interface(s) being tested (refer to Table 1). The PAR associated with the NNC inter tie may be adjusted, depending upon the location of the Project and the LIPA interface(s) being tested (refer to Table 1). However, maximum normal Northport Interface power exit capabilities will be observed. In addition to PARs on ties, the LIPA system has several internal PARs that can be used to maximize generator exit capability (e.g., Barrett and Northport bus) and one at the Pilgrim substation that balances flows on the 138 kV and 69 kV systems. When assessing the system, the PARs schedules should be optimized to allow maximum transfers. These schedules can vary based on the transfer test being performed. Once set however, the angles shall be maintained for testing contingency impacts for that scenario.

H. HVDC Inter ties. The Neptune HVDC power flow will be held constant to a specific base case level, generally full import capability. The Cross Sound Cable (CSC) power flow will typically be dispatched at full import capability, but may be adjusted depending upon the location of the Project and the LIPA interface(s) being tested (refer to Table 1).

I. If applicable, SVC (Static VAR Compensators) and FACTS (Flexible AC Transmission Systems) devices will be set to zero pre-contingency and allowed to operate to full range post-contingency.

J. Load forecast uncertainty (LFU) is incorporated into the evaluation for Part 2 of the deterministic load flow interface transfer test to account for the future load variations. Refer to Table 1 within Section III, column entitled “Steps for Testing Process”.

K. All major assumptions will be documented in the study report.

2. Major Definitions section:

- CLR – Central Load region, geographically Eastern Nassau and Western Suffolk Counties
- NNC – Northport to Norwalk Harbor 138 kV inter tie to New England
- DMNC – Dependable Maximum Net Capability, maximum expected net capacity from the resource (excludes use by the resource not transferred to the grid, e.g., station service)
- LFU – Load Forecast Uncertainty – Increase in peak demand, according to the latest load forecast.

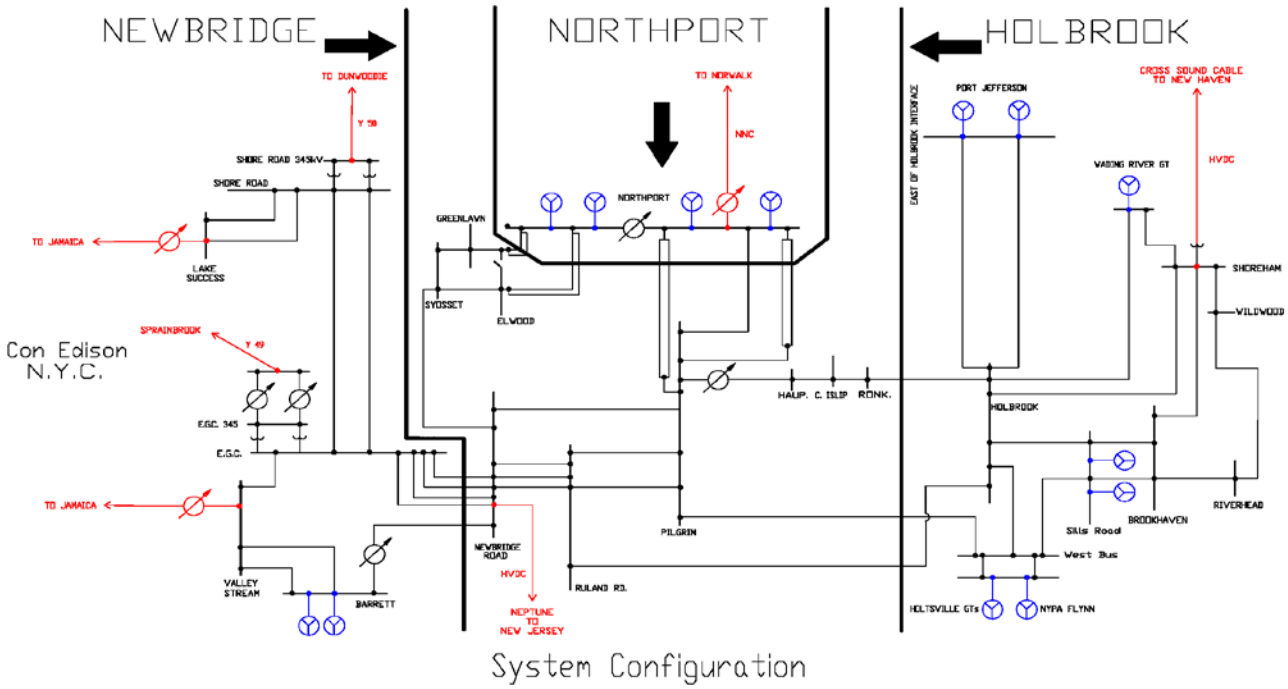
3. LIPA Interfaces - The Long Island Local Reliability Interface Transfer Capability Test is designed to insure that LIPA internal interface transfer capabilities are

maintained to support the system load on Long Island (Zone K), within certain constraints. This involves the transfer of power output of resources within LIPA's load centers (West, Central, East, and Northport), as well as tie line capability (i.e., to insure support from LIPA ties are unaffected). The Long Island Local Reliability Interface Transfer Capability Test maximizes transfer capability West to East as well as East to West (depending on location of target resource) to assure no bottling and that all resources can reliably serve the system load such that the internal interface capability is sufficient to allow the output of all resources in one load center to be transferred to the adjacent load center. When a new unit is being considered, the unit should be evaluated based on its location.

For example, a unit located East of Holbrook would be tested using two different tests. For the Part 1 test, generation East of Holbrook would be dispatched along with CSC, and generation and imports in the remaining regions would be reduced as needed. For the Part 2 test, LFU would be applied to the total system load, and all generation units in the East of Holbrook and Central and Northport region would be dispatched. Generation in the West of Newbridge region would be reduced as needed. Table 1 within Section III summarizes the required resource dispatches and application of LFU, reflecting the location of the Project.

The following diagram shows LIPA major facilities and interfaces.

LIPA System and Transmission Interfaces



4. This section offers definitions of LIPA interfaces as noted above and in the LIPA T&D Planning Criteria and Guidelines. Implementation of this procedure is based on the ability to transfer the output of resources across LIPA's internal interfaces.

    A. The Central Load Region (CLR) is generally defined as Eastern Nassau and Western Suffolk area as bounded by the Newbridge and Holbrook interfaces, where almost half of the LIPA system load is located. Interface exports and imports are defined relative to the flow of energy to and from the CLR (interface export is the flow into the CLR; interface import is a flow out of the CLR). The primary path for power transfers to LIPA's CLR is across three internal transmission interfaces: Newbridge Road, Northport and Holbrook. The paths comprising these interfaces are used to transfer power from LIPA interconnections (off-Island sources) and major generating facilities such as Northport, Barrett, Far Rockaway, Glenwood, Port Jefferson, Holtsville and Shoreham/Wading River to the LIPA CLR.

    B. The Northport Region/Interface is used to define the amount of power from the Northport Power Station and imports over the Northport to Norwalk Harbor (NNC) interconnection to New England (Northeast Utilities) that can be transferred to the LIPA system.

The Northport interface is comprised of the flow across the following circuits:

Northport – Pilgrim (138-677 A&B)
Northport – Pilgrim (138-679 A&B)
Northport – Pilgrim (138-672)
Northport – Elwood (138-678 A&B)
Northport – Elwood (138-681 A&B)

C. The Newbridge Region/Interface is defined by an imaginary north-south line running just west of the Syosset, Newbridge Road and Bellmore substations. It is used to define the amount of power from western Long Island generators and imports over the Consolidated Company of New York (Con Edison) ties that can be transferred to the LIPA CLR.

This interface is comprised of the flow across the following circuits:

East Garden City – Newbridge Road (138-462)
East Garden City – Newbridge Road (138-463)
East Garden City – Newbridge Road (138-465)
East Garden City – Newbridge Road (138-467)
Freeport – Newbridge Road (138-461)
Mitchell Gardens – Newbridge Road (69-475)
Meadowbrook – Newbridge Road (69-466)
Oyster Bay -- Syosset (69-533)
Jericho – Newbridge (69-474)
Baldwin – Bellmore (69-459)
Roosevelt – Bellmore (33-421)
Meadowbrook – Bellmore (33-432 & 33-433)
Merrick – Bellmore (33-417)

D. The Holbrook Region/Interface is used to define the amount of generation that can be transferred from generating sites located in the area east of a north-south imaginary line just west of Port Jefferson and Holbrook substations.

This interface is comprised of the flow across the following circuits:

Holbrook – Ronkonkoma (138-875)
Holbrook – Ruland Road (138-882)
West Bus – Pilgrim (138-881)
Port Jefferson – Stony Brook (69-877)
Holbrook – Nesconset (69-673)
Holbrook – MacArthur (69-859)
West Bus – Patchogue (69-841)
Holbrook – Bohemia (69-775)

III. Testing Process

Deterministic Load Flow

Table 1 below summarizes the testing process for LIPA's internal interfaces. In all cases the new resource is dispatched at the maximum proposed summer output level, as specified by the Project developer in their Interconnection Request (up to summer name plate rating, or Dependable Maximum Net Capability (DMNC) if available, whichever is higher). The testing below is based on the existing LIPA system generation and load profile and the test methodology will need to revisited if a significant shift in generation and or load pattern occurs.

TABLE 1 – LIPA Internal Interface Testing Process

Steps for Testing Process	New Resource Location (New resource dispatched at maximum proposed summer output level)											
	Newbridge Interface				Central/Northport Interface				Holbrook Interface			
	Remaining Generation Dispatch			LFU	Remaining Generation Dispatch			LFU	Remaining Generation Dispatch			LFU
	West of Newbridge	Central/ Northport	East of Holbrook		West of Newbridge	Central/ Northport	East of Holbrook		West of Newbridge	Central/ Northport	East of Holbrook	
Part 1	Reflecting forced outage rates (Y49 / Y50 Imports Max)	Reduced	Reduced	N/A	Reduced	Reflecting forced outage rates (NNC Import Optimized)	Reduced	N/A	Reduced	Reduced	Reflecting forced outage rates (CSC Import Max)	N/A
Part 2	N/A (see Note 2)			N/A	Reduced (Net Imports > 0)	Reflecting forced outage rates (NNC Import Optimized)	Reflecting forced outage rates (CSC Import Max)	Apply LFU System Wide	Reduced (Net Imports > 0)	Reflecting forced outage rates (NNC Import Optimized)	Reflecting forced outage rates (CSC Import Max)	Apply LFU System Wide

Notes:

1. Both the Part 1 test and the Part 2 test need to be performed, depending upon the location of the Project. Results and criteria violations shall be documented for both Parts. System upgrades shall be identified to mitigate the most severe of the Part 1 or Part 2 tests.
2. For the Part 2 test: Given the present LIPA system generation and load profile, stressing the Holbrook Interface and the Central/Northport Interface is not required for a Project located in the Newbridge Region. The Part 2 test is required for Projects located in the Central/Northport and Holbrook regions to ensure interface transfer capabilities are maintained to support the system load.
3. Given the conservative nature of the Part 2 test, an increase in LIPA system load will be implemented (load forecast uncertainty).
4. For Projects located in the Holbrook region or the Central/Northport region, the Part 2 test allows for a reduction in West of Newbridge generation dispatch and a reduction in Con Edison – LIPA import levels. Net Con Edison – LIPA import levels would be maintained at zero MW or greater (Y49 + Y50 flow - wheel to Con Edison shall be maintained greater than 0 MW).

Internal interface transfer capabilities shall be maintained to support the system load on Long Island (Zone K), within certain constraints, such that a new resource output can be transferred to the load without creating any system normal or contingency overloads. If thermal criteria violations are identified, or if internal interface transfer limitations are identified, then system upgrades to mitigate those limitations will be identified and considered.

IV. Summary

The Long Island Power Authority ("LIPA") considers preservation of the transfer capability of LIPA's internal interfaces to be essential to ensure the reliability and integrity of the LIPA transmission system. The purpose of this testing requirement is to ensure LIPA's transmission's system reliability and integrity is not jeopardized as a result of proposed resource additions and that LIPA internal interface transfer capabilities are maintained to support the system load on Long Island (Zone K), within certain constraints.

Any resource addition to Long Island transmission system shall be tested as outlined above to ensure the reliability of the system is maintained. Upgrades identified through application of this local reliability criterion shall be considered SUFs under the NYISO MIS.

V. References

1) LIPA T&D Planning Criteria and Guidelines

http://www.lipower.org/pdfs/company/projects/energyplan10/energyplan10-e6.pdf

2) NYISO Tariffs - Open Access Transmission Tariff (OATT) - 25 OATT Attachment S; Rules To Allocate Responsibility for the Cost of New Interconnection Facilities

http://www.nyiso.com/public/markets_operations/documents/tariffviewer/index.jsp