

## **22 Attachment P – Transmission Interconnection Procedures**

## 22.1 Definitions

Whenever used in these Transmission Interconnection Procedures with initial capitalization, the following terms shall have the meanings specified in this Section 22.1. Terms used in these procedures with initial capitalization that are not defined in this Section 22.1 shall have the meanings specified in Sections 30.1 of Attachment X, Section 25.1.2 of Attachment S, Section 31.1.1 of Attachment Y, or Section 38.1 of Attachment FF of the ISO OATT, or, if not defined therein, in Section 1 of the ISO OATT or Section 2 of the ISO Services Tariff.

**Applicable Reliability Standards** shall mean the requirements and guidelines of the Applicable Reliability Councils, and the Transmission District, to which the Developer's Transmission Project 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 Transmission Interconnection Procedures.

**Base Case** shall mean the base case power flow, short circuit, and stability data bases used for the Transmission Interconnection Studies by the ISO, Connecting Transmission Owner, or the Transmission Developer, as described in Section 22.6.1 of the Transmission Interconnection Procedures.

**Connecting Transmission Owner** shall mean the New York public utility or authority (or its designated agent) that (i) owns facilities used for the transmission of Energy in interstate commerce and provides Transmission Service under the Tariff, or (ii) owns, leases or otherwise possesses an interest in the portion of the New York State Transmission System at the Point of Interconnection. If a Transmission Project interconnects to more than one Connecting Transmission Owner, the term Connecting Transmission Owner as it appears in this Attachment P shall be read to include all of the Transmission Project's Connecting Transmission Owners.

**Facilities Study** shall mean the study conducted pursuant to Section 22.9 of this Attachment P to determine a list of facilities required to reliably interconnect the Transmission Project (including Network Upgrade Facilities) as identified in the System Impact Study, the cost of those facilities, and the time required to interconnect the Transmission Project with the New York State Transmission System.

**Facilities Study Agreement** shall mean the agreement described in Section 22.9.1 of this Attachment P.

**In-Service Date** shall mean the date upon which the Transmission Project is energized consistent with the provisions of the Transmission Project Interconnection Agreement and available to provide Transmission Service under the NYISO Tariffs.

**Network Upgrade Facilities** shall mean the least costly configuration of commercially available components of electrical equipment that can be used, consistent with good utility practice and Applicable Reliability Requirements, to make the modifications or additions to the New York State Transmission System that are required for the proposed Transmission Project to connect reliably to the system in a manner that meets the NYISO Transmission Interconnection Standard.

**NYISO Transmission Interconnection Standard** shall mean the reliability standard that must be met by any Transmission Project proposing to connect to the New York State Transmission System. The standard is designed to ensure reliable access by the proposed project to the New York State Transmission System.

**Optional Feasibility Study** shall mean the preliminary evaluation of the system impact and cost of interconnecting a Transmission Project to the New York State Transmission System conducted at the option of the Transmission Developer pursuant to Section 22.7 of this Attachment P.

**Optional Feasibility Study Agreement** shall mean the agreement described in Section 22.7.1 of this Attachment P.

**Party or Parties** shall mean any entity or entities subject to the requirements of these Transmission Interconnection Procedures.

**Point of Interconnection** shall mean the point(s) where the Transmission Project connects to the New York State Transmission System.

**Queue Position** shall mean the order of a valid Interconnection Request, Study Request, or Transmission Interconnection Application relative to all other such pending requests, that is established based upon the date and time of receipt of the valid request by NYISO, unless specifically provided otherwise in an applicable transition rule set forth in Attachment P, Attachment X or Attachment Z to the ISO OATT.

**Reasonable Efforts** shall mean, with respect to an action required to be attempted or taken by a Party under the Transmission Interconnection Procedures, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**Scoping Meeting** shall mean the meeting described in Section 22.4.2.4.

**Security** shall mean a bond, irrevocable letter of credit, parent company guarantee or other form of security from an entity with an investment grade rating, executed for the benefit of the Connecting Transmission Owner, and/or Affected System Operator, meeting the commercially reasonable requirements of the Connecting Transmission Owner, or Affected System Operator with which it is required to be posted pursuant to Section 22.9.3 of this Attachment P.

**System Impact Study** shall mean the study conducted pursuant to Section 22.8 of this Attachment P that evaluates the impact of the proposed Transmission Project on the safety and reliability of the New York State Transmission System and, if applicable, an Affected System, to determine what Network Upgrade Facilities are needed for the proposed Transmission Project to

connect reliably to the New York State Transmission System in a manner that meets the NYISO Transmission Interconnection Standard described in Section 22.6.4 of this Attachment P.

**System Impact Study Agreement** shall mean the agreement described in Section 22.8.1 of this Attachment P.

**Transmission Interconnection Application** shall mean the Transmission Developer's request, in the form of Appendix 1 to the Transmission Interconnection Procedures, to interconnect a Transmission Project to the New York State Transmission System.

**Transmission Developer** shall mean any entity, including the Connecting Transmission Owner or any of its Affiliates or subsidiaries that proposes to interconnect its Transmission Project with the New York State Transmission System.

**Transmission Interconnection Studies** shall mean any of the following studies: the Optional Feasibility Study, the System Impact Study, and the Facilities Study described in the Transmission Interconnection Procedures.

**Transmission Project** shall be a Transmission Developer's proposed transmission facility or facilities that collectively satisfy the definition of Transmission Project in Section 22.3.1.

**Transmission Project Interconnection Agreement** shall mean the interconnection agreement applicable to a Transmission Interconnection Application pertaining to a Transmission Project that is entered into in accordance with Section 22.11.

## **22.2 Scope and Application**

### **22.2.1 Application of Transmission Interconnection Procedures**

The Transmission Interconnection Procedures (“TIP”) in Sections 22.2.1 through 22.13 apply to the processing of a Transmission Interconnection Application pertaining to a Transmission Project proposing to interconnect to the New York State Transmission System.

### **22.2.2 Comparability**

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

### **22.2.3 No Applicability to Transmission Service or Other Services**

Nothing in these Transmission Interconnection Procedures shall constitute a request for Transmission Service or confer upon a Transmission Developer any right to receive Transmission Service. Nothing in these Transmission Interconnection Procedures shall constitute a request for, nor agreement to provide, any energy, Ancillary Services or Installed Capacity under the ISO Services Tariff.

## **22.3 Transmission Projects Subject to Transmission Interconnection Procedures**

### **22.3.1 Definition of a Transmission Project**

**22.3.1.1** A Transmission Project, as defined in this Section 22.3.1, shall be subject to the Transmission Interconnection Procedures in this Attachment P.

**22.3.1.2** Except as otherwise provided in Section 22.3.1.3, a Transmission Project shall include a Transmission Developer's proposed new transmission facility that will interconnect to the New York State Transmission System or a Transmission Developer's proposed upgrade – an improvement to, addition to, or replacement of a part of an existing transmission facility – to the New York State Transmission System.

**22.3.1.3** Notwithstanding the definition of Transmission Project in Section 22.3.1.2, the following transmission facilities will not be a Transmission Project that is subject to these Transmission Interconnection Procedures: (i) a Class Year Transmission Project as defined in Attachment X to the ISO OATT, or (ii) a new transmission facility or upgrade proposed by a Transmission Owner in its Local Transmission Owner Plan or NYPA transmission plan that is not subject to the ISO's competitive selection process in the ISO's Comprehensive System Planning Process in Attachment Y of the ISO OATT or the ISO's Short-Term Reliability Process in Attachment FF of the ISO OATT and for which the Transmission Owner is not seeking cost allocation under the ISO OATT. A proposed controllable line for which the proposing entity is seeking CRIS to receive UDRs shall be subject to the interconnection requirements in Attachments S and X of the ISO OATT. A Transmission Owner's proposed new transmission facility or

upgrade that is not a Transmission Project shall be subject to the transmission expansion requirements in Section 3.7 of the ISO OATT.

### **22.3.2 Entering Service Early to Maintain System Reliability**

If a Transmission Developer requests to enter into service prior to the completion of all Transmission Interconnection Studies and the completion of any required Network Upgrade Facilities, the Connecting Transmission Owner and the ISO will permit to the Transmission Project's early entry into service if: (i) there is a Transmission Project Interconnection Agreement for the Transmission Project, and (ii) the ISO and Connecting Transmission Owner(s) have determined that the Transmission Project can enter into service without violating Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and the Transmission Project Interconnection Agreement.

### **22.3.3 Procedures for Interconnection Requests and Study Requests Submitted Prior to the Effective Date of the Transmission Interconnection Procedures**

#### **22.3.3.1 Queue Position for Pending Requests**

**22.3.3.1.1** Any Transmission Developer assigned one or more Queue Position(s) for its Transmission Project prior to the effective date of these Transmission Interconnection Procedures as a Developer for an Interconnection Request submitted pursuant to Attachment X of the ISO OATT or for a Study Request submitted pursuant to Sections 3.7 or 4.5 of the OATT shall retain that Queue Position and may, as applicable, consolidate multiple Queue Positions that collectively address the Transmission Project into one Queue Position.

**22.3.3.1.2** If an agreement for one of the Interconnection Studies under Attachment X of the ISO OATT or the System Impact Study or Facilities Study under

Sections 3.7 or 4.5 of the OATT for a Transmission Project has not been executed as of the effective date of these Transmission Interconnection Procedures, then such study, and any subsequent studies, shall be processed in accordance with these Transmission Interconnection Procedures.

**22.3.3.1.3** If an agreement for one of the Interconnection Studies under Attachment X of the ISO OATT or the System Impact Study or Facilities Study under Sections 3.7 or 4.5 of the OATT for a Transmission Project has been executed prior to the effective date of these Transmission Interconnection Procedures, the Transmission Developer (previously referred to as the Developer or Eligible Customer) that executed the agreement may elect to either complete such study in accordance with the terms of such agreement or to execute the agreement for the comparable study, and to proceed, under these Transmission Interconnection Procedures. If the Transmission Developer elects to complete the study under Attachment X of the OATT or Sections 3.7 or 4.5 of the OATT, the Transmission Developer will proceed with any subsequent studies for the Transmission Project in accordance with the Transmission Interconnection Procedures.

**22.3.3.1.4** If an interconnection agreement for a facility that satisfies the definition of Transmission Project in Section 22.3.1 has been submitted to the Commission for approval before the effective date of these Transmission Interconnection Procedures, then the interconnection agreement would be grandfathered.

### **22.3.3.2 Transition Period**

To the extent necessary, the ISO and Transmission Developers with an outstanding request under Attachment X of the ISO OATT or Sections 3.7 or 4.5 of the OATT (*i.e.*, an



Interconnection Request or a Study Request) for which an interconnection agreement has not been submitted to the Commission for approval as of the effective date of these Transmission Interconnection Procedures) shall transition to these procedures within a reasonable period of time not to exceed sixty (60) Calendar Days. The use of the term “outstanding request” herein shall mean any Interconnection Request or Study Request, on the effective date of these Transmission Interconnection Procedures: (i) that has been submitted but not yet accepted by the ISO; (ii) where the related interconnection agreement has not yet been submitted to the Commission for approval in executed or unexecuted form, (iii) where the relevant agreements for Interconnection Studies under Attachment X of the ISO OATT or the System Impact Study or Facilities Study under Sections 3.7 or 4.5 of the OATT have not yet been executed, or (iv) where any of the relevant Interconnection Studies under Attachment X of the ISO OATT or the System Impact Study or Facilities Study under Sections 3.7 or 4.5 of the OATT are in process but not yet completed. Any Transmission Developer with an outstanding request as of the effective date of these Transmission Interconnection Procedures may request a reasonable extension of any deadline, otherwise applicable, if necessary to avoid undue hardship or prejudice to its Transmission Interconnection Application. A reasonable extension shall be granted by the ISO to the extent consistent with the intent and process provided for under these Transmission Interconnection Procedures.

#### **22.3.4 New Transmission Provider**

If the ISO transfers its control of the New York State Transmission System to a successor transmission provider during the period when a Transmission Interconnection Application is pending, the ISO shall transfer to the successor transmission provider any amount of the deposit or payment with interest thereon that exceeds the cost that it incurred to evaluate the request for

interconnection. Any difference between such net amount and the deposit or payment required by these Transmission Interconnection Procedures shall be paid by or refunded to the Transmission Developer, as appropriate. The ISO shall coordinate with the successor transmission provider to complete any Transmission Interconnection Applications (including Transmission Interconnection Studies), as appropriate, that the ISO has begun but has not completed. If the ISO has tendered a draft Transmission Project Interconnection Agreement to the Transmission Developer but the Transmission Developer has not either executed that interconnection agreement or requested the filing of an unexecuted Transmission Project Interconnection Agreement with FERC, unless otherwise provided, the Transmission Developer must complete negotiations with the successor transmission provider.

## **22.4 Transmission Interconnection Application**

### **22.4.1 General**

A Transmission Developer proposing to interconnect a Transmission Project to the New York State Transmission System shall submit to the ISO a Transmission Interconnection Application in the form of Appendix 1 to these Transmission Interconnection Procedures. The Transmission Interconnection Application must be accompanied by a non-refundable application fee of \$10,000. The application fee shall be divided equally between the ISO and Connecting Transmission Owner(s). If the ISO selects a Public Policy Transmission Project and designates the project or a portion of the project to a Designated Entity other than the original Developer pursuant to the provisions of Attachment Y of the ISO OATT, the Designated Entity that is not the original Developer of the project may (i) join an ongoing Transmission Interconnection Application that covers the entire Public Policy Transmission Project with the agreement of the original Transmission Developer and be jointly and severally responsible for the study costs, or (ii) submit a separate Transmission Interconnection Application for its Designated Public Policy Project pursuant to the requirements in this Article 22.4. In the event that the Designated Entity submits a separate Transmission Interconnection Application and the Designated Public Policy Project is a project component(s) of a Transmission Project with an existing Transmission Interconnection Application, such component(s) will be removed from the existing Transmission Interconnection Application and such change to the Transmission Project shall not constitute a material modification in accordance with Section 22.5.4.2.

### **22.4.2 Valid Transmission Interconnection Application**

#### **22.4.2.1 Initiating a Transmission Interconnection Application**

To initiate a Transmission Interconnection Application, a Transmission Developer must

submit a \$10,000 non-refundable application fee and a completed application in the form of Appendix 1. The expected In-Service Date of the Transmission Project provided at the time of the submission of the Transmission Interconnection Application, and updates to the In-Service Date submitted after submission of the Transmission Interconnection Application, shall be no more than ten (10) years from the date the Transmission Interconnection Application is received by the ISO, subject to demonstration of reasonable progress of development of the Transmission Project.

#### **22.4.2.2 Acknowledgment and Notification of Transmission Interconnection Application**

The ISO shall acknowledge receipt of the Transmission Interconnection Application within five (5) Business Days of receipt of the request and attach a copy of the received Transmission Interconnection Application to the acknowledgement it returns to the Transmission Developer. At the same time, the ISO shall forward a copy of the Transmission Interconnection Application and its acknowledgement to the Connecting Transmission Owner(s) with whom the Transmission Developer is proposing to connect; *provided, however*, that any Transmission Interconnection Application that is submitted for a proposed project subject to the ISO's competitive selection process in the ISO's Comprehensive System Planning Process in Attachment Y to the ISO OATT or the ISO's Short-Term Reliability Process in Attachment FF of the ISO OATT shall not be forwarded to the Connecting Transmission Owner(s) until the close of the applicable solicitation window.

#### **22.4.2.3 Deficiencies in Transmission Interconnection Application**

A Transmission Interconnection Application will not be considered to be a valid application until all items in Section 22.4.2.1 have been received by the ISO and the applicable

solicitation window has closed for any Transmission Interconnection Application that is submitted for a proposed project subject to the ISO's competitive selection process in the ISO's Comprehensive System Planning Process in Attachment Y to the ISO OATT or the ISO's Short-Term Reliability Process in Attachment FF of the ISO OATT. If a Transmission Interconnection Application fails to meet the requirements set forth in Section 22.4.2.1, the ISO shall notify the Transmission Developer and the Connecting Transmission Owner(s) within five (5) Business Days of receipt of the initial Transmission Interconnection Application of the reasons for such failure and that the Transmission Interconnection Application does not constitute a valid application. However, for any Transmission Interconnection Application that is submitted for a proposed project subject to the ISO's competitive selection process in the ISO's Comprehensive System Planning Process in Attachment Y to the ISO OATT or the ISO's Short-Term Reliability Process in Attachment FF of the ISO OATT and that fails to meet the requirements set forth in Section 22.4.2.1, the ISO shall notify the Transmission Developer and the Connecting Transmission Owner(s) no later than five (5) Business Days following the close of the applicable solicitation window. The Transmission Developer shall provide the ISO the additional requested information needed to constitute a valid application within ten (10) Business Days after receipt of such notice. The ISO shall promptly forward such information to the Connecting Transmission Owner(s); *provided, however*, for any Transmission Interconnection Application that is submitted for a proposed project subject to the ISO's competitive selection process in the ISO's Comprehensive System Planning Process in Attachment Y of the ISO OATT or the ISO's Short-Term Reliability Process in Attachment FF of the ISO OATT, such information will not be forwarded to the Connecting Transmission Owner(s) until the close of the applicable solicitation window. Failure by the Transmission Developer to comply with this Section 22.4.2.3 shall be

treated in accordance with Section 22.4.5.

#### **22.4.2.4 Scoping Meeting**

Within ten (10) Business Days after receipt of a valid Transmission Interconnection Application, the ISO shall establish a date agreeable to the Transmission Developer and the Connecting Transmission Owner(s) for the Scoping Meeting. The date shall be no later than thirty (30) Calendar Days from receipt of the valid Transmission Interconnection Application, unless otherwise mutually agreed upon by the Parties.

The purposes of the Scoping Meeting shall be to discuss whether the Transmission Developer elects to pursue an Optional Feasibility Study or proceed to a System Impact Study for its Transmission Project, to discuss alternative interconnection options, to exchange information including any transmission data that would reasonably be expected to impact such interconnection options, to analyze such information and to determine the potential feasible Points of Interconnection. The ISO, Connecting Transmission Owner(s), and the Transmission Developer will bring to the meeting such technical data, including, but not limited to: (i) general facility loadings, (ii) general stability issues, (iii) general short circuit issues, (iv) general voltage issues, (v) general reliability issues, and (vi) general system protection issues, as may be reasonably required to accomplish the purpose of the meeting. The ISO, Connecting Transmission Owner(s) and the Transmission Developer will also bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting. The Transmission Developer shall in writing within five (5) Business Days of this meeting: (i) make its election as to whether it will pursue an Optional Feasibility Study or proceed to a System Impact Study for its Transmission Project, and (ii) designate the Point(s) of Interconnection for the Transmission Project. The duration of the

meeting shall be sufficient to accomplish its purpose.

If (i) a Transmission Developer that elects pursuant to Section 22.4.1 to submit a new Transmission Interconnection Application for its Designated Public Policy Project that is a component of a Transmission Project that is already subject to a Transmission Interconnection Application; (ii) the Transmission Project subject to the original Transmission Interconnection Application has a completed SIS; and (iii) there have been no material modifications to the Transmission Project, including the Designated Public Policy Project, since the ISO performed the SIS pursuant to the original Transmission Interconnection Application, then the ISO, Transmission Developer(s) of the new Transmission Interconnection Application, and Connecting Transmission Owner can agree to proceed directly to the Facilities Study with the new Transmission Interconnection Application. Such agreement to proceed directly to the Facilities Study shall not be unreasonably withheld.

### **22.4.3 OASIS Posting**

The ISO will maintain on its OASIS a list of all valid Transmission Interconnection Applications. The list will identify, for each Transmission Interconnection Application: (i) the maximum summer and winter megawatt electrical output, if applicable; (ii) the location by county and state; (iii) the station or transmission line or lines where the interconnection will be made; (iv) the projected In-Service Date; (v) the status of the Transmission Interconnection Application, including Queue Position; (vi) the identity of the Transmission Developer; (vii) the availability of any studies related to the Transmission Interconnection Application; (viii) the date of the Transmission Interconnection Application; (ix) the type of the Transmission Project to be constructed; and (x) for Transmission Interconnection Applications that have not resulted in a completed interconnection, an explanation as to why it was not completed. Before holding a

Scoping Meeting with an Affiliate of a Connecting Transmission Owner and that Connecting Transmission Owner, the ISO shall post on its OASIS an advance notice of its intent to do so. The ISO shall post to its OASIS site any deviations from the study timelines set forth herein. Transmission Interconnection Study reports shall be posted to the ISO password-protected website subsequent to the meeting between the Transmission Developer, the ISO and the Connecting Transmission Owner(s) to discuss the applicable study results. The ISO shall also post any known deviations in date proposed by the Transmission Project in Section 22.4.3(iv), above.

#### **22.4.4 Coordination with Affected Systems**

The ISO will coordinate the conduct of any studies required to determine the impact of the Transmission Interconnection Application on Affected Systems with Affected System Operators. The ISO will include those results on Affected Systems in its applicable Transmission Interconnection Study within the time frame specified in these Transmission Interconnection Procedures. The ISO will also include results, if available, on other Affected Systems. The ISO will invite such Affected System Operators to all meetings held with the Transmission Developer as required by these Transmission Interconnection Procedures. The Transmission Developer will cooperate with the ISO in all matters related to the conduct of studies and the determination of modifications to Affected Systems. An Affected System Operator shall cooperate with the ISO and Connecting Transmission Owner(s) with whom interconnection has been requested in all matters related to the conduct of studies and the determination of modifications to Affected Systems.

#### **22.4.5 Withdrawal**

The Transmission Developer may withdraw its Transmission Interconnection Application



at any time by written notice of such withdrawal to the ISO. In addition, if the Transmission Developer fails to adhere to all requirements of these Transmission Interconnection Procedures, except as provided in Section 22.13.5 (Disputes), the ISO shall deem the Transmission Interconnection Application to be withdrawn and shall provide written notice to the Transmission Developer of the deemed withdrawal and an explanation of the reasons for such deemed withdrawal. Upon receipt of such written notice, the Transmission Developer shall have a cure period of fifteen (15) Business Days in which to either respond with information or actions that cures the deficiency or to notify the ISO of its intent to pursue Dispute Resolution.

Withdrawal following the end of the cure period shall result in the loss of the Transmission Developer's Queue Position. If a Transmission Developer disputes the withdrawal and loss of its Queue Position, then during Dispute Resolution, the Transmission Developer's Transmission Interconnection Application is eliminated from the queue until such time that the outcome of Dispute Resolution would restore its Queue Position. A Transmission Developer that withdraws or is deemed to have withdrawn its Transmission Interconnection Application shall pay to the ISO and Connecting Transmission Owner(s) all costs that the ISO and Connecting Transmission Owner(s) prudently incur with respect to that Transmission Interconnection Application prior to the receipt of notice described above. The Transmission Developer must pay all monies due to the ISO and Connecting Transmission Owner(s) before it is allowed to obtain any Transmission Interconnection Study data or results.

The ISO shall (i) update the OASIS Queue Position posting and (ii) refund to the Transmission Developer any portion of the Transmission Developer's deposit or study payments that exceeds the costs that the ISO has incurred, including interest calculated in accordance with section 35.19a(a)(2) of FERC's regulations. In the event of such withdrawal, the ISO and

Connecting Transmission Owner(s), subject to the confidentiality provisions of Section 22.13.1, shall provide, at the Transmission Developer's request, all information that the ISO and Connecting Transmission Owner(s) developed for any completed study conducted up to the date of withdrawal of the Transmission Interconnection Application.

## **22.5 Queue Position**

### **22.5.1 General**

The ISO shall assign a Queue Position based upon the date and time of receipt of the valid Transmission Interconnection Application; provided that, if the sole reason a Transmission Interconnection Application is not valid is the lack of required information on the application form, and the Transmission Developer provides such information in accordance with Section 22.4.2.3, then the ISO shall assign the Transmission Developer a Queue Position based on the date the application form was originally filed. The Queue Position of each Transmission Interconnection Application will be used to determine the order of performing the Transmission Interconnection Studies. A higher queued Transmission Interconnection Application is one that has been placed “earlier” in the queue in relation to another Transmission Interconnection Application that is lower queued.

### **22.5.2 Clustering**

At the ISO’s option, Transmission Interconnection Applications may be studied serially or in clusters for the purpose of the System Impact Study or Facilities Study.

### **22.5.3 Transferability of Queue Position**

A Transmission Developer may transfer its Queue Position to another entity only if such entity acquires the specific Transmission Project identified in the Transmission Interconnection Application and the Point(s) of Interconnection do not change. As a result of such a transfer, the acquiring entity shall become the Transmission Developer of the specific Transmission Project identified in the Transmission Interconnection Application.

#### **22.5.4 Modifications**

The Transmission Developer shall submit to the ISO, in writing, modifications to any information provided in the Transmission Interconnection Application. The Transmission Developer shall retain its Queue Position if the modifications are permitted in accordance with Section 22.5.4.1, or are determined not to be material modifications pursuant to Section 22.5.4.3.

**22.5.4.1** Prior to the parties' execution of the System Impact Study Agreement, the Transmission Developer may make any modification to the information provided in the Transmission Interconnection Application.

**22.5.4.2** Following the parties' execution of the System Impact Study Agreement, a Transmission Developer may not make any modification to the proposed Transmission Project, except for changes to the project's electrical characteristics that the ISO determines do not constitute a material modification; *provided, however,* that a Transmission Developer may modify a Transmission Project that is selected by the ISO as the more efficient or cost effective solution in the ISO's Public Policy Transmission Planning Process to remove components of the Transmission Project that were designated to a Designated Entity, as defined in Attachment Y to the ISO OATT, other than the Transmission Developer and for which the Designated Entity submits a separate Transmission Interconnection Application pursuant to Section 22.4.1 for the components of the Transmission Project requested to be removed.

**22.5.4.3** The ISO shall evaluate a modification to the Transmission Project's electrical characteristics and will inform the Transmission Developer in writing of whether the modifications constitute a material modification. The ISO shall commence and perform any necessary additional studies as soon as practicable,

but in no event shall the ISO commence such studies later than thirty (30) Calendar Days after receiving notice of Transmission Developer's request. Any additional studies resulting from such modification shall be done at Transmission Developer's cost.

**22.5.4.4** If the ISO determines that a Transmission Developer's modification to its Transmission Project constitute a material modification, the Transmission Developer must perform a new System Impact Study for its modified Transmission Project, subject to the execution of a new System Impact Study Agreement and the provision of the required study deposit.

**22.5.4.5** Modifications to a Transmission Project that are permitted under this Section 22.5.4 for the purposes of the Transmission Interconnection Procedures may not be permitted under the separate requirements of the Comprehensive System Planning Process in accordance with Attachment Y of the ISO OATT or the Short-Term Reliability Process in accordance with Attachment FF of the ISO OATT.

## **22.6 Base Case for Transmission Interconnection Procedures and NYISO Transmission Interconnection Standard**

### **22.6.1 Base Case Data**

The power flow, short circuit, and stability data bases, hereinafter referred to as Base Cases, shall include the following that will be based upon either the ISO's fifth year or tenth year case included in the most recent FERC Form No. 715: (i) all existing generation and transmission facilities identified in the ISO's most recent NYISO Load and Capacity Data Report, excluding those facilities that are subject to Class Year cost allocation but for which Class Year cost allocations have not been accepted; (ii) all planned projects subject to Attachment S of the ISO OATT that have accepted their cost allocation in a prior Class Year cost allocation process and System Upgrade Facilities and System Deliverability Upgrades associated with those projects except that System Deliverability Upgrades where construction has been deferred pursuant to Section 25.7.12.2 and 25.7.12.3 of Attachment S of the ISO OATT will only be included if construction of the System Deliverability Upgrades has been triggered under Section 25.7.12.3 of Attachment S of the ISO OATT; (iii) all generation and transmission retirements and derates identified in the NYISO Load and Capacity Data Report as scheduled to occur during the study period for the Transmission Interconnection Study; (iv) Transmission Projects that have met the following milestones: (1) have been triggered (if subject to the Reliability Planning Process), selected (if subject to the Short-Term Reliability Process), selected (if subject to the Public Policy Transmission Planning Process), or approved by beneficiaries (if subject to the Economic Planning Process); (2) have a completed System Impact Study (if applicable); (3) have a determination pursuant to Article VII that the Article VII application filed for the facility is in compliance with Public Service Law §122 (*i.e.*, "deemed complete") (if applicable); and (4) are making reasonable progress under the applicable Attachments Y or FF

planning process (if applicable); (v) transmission projects identified as “firm” by the Connecting Transmission Owner and either (1) have commenced a Facilities Study (if applicable) and have an Article VII application deemed complete (if applicable); or (2) are under construction and scheduled to be in-service within 12 months and (vi) all other changes to existing facilities, other than changes that are subject to Class Year cost allocation but that have not accepted their Class Year cost allocation, that are identified in the NYISO Load and Capacity Data Report or reported by Market Participants to the NYISO as scheduled to occur during the study period for the Transmission Interconnection Study. If the ISO has triggered multiple Transmission Projects under its Reliability Planning Process, the ISO will include in the base case the selected Transmission Project until or unless that project is halted or its Development Agreement is terminated, in which case the ISO will include in the base case the regulated backstop solution. If the proposed Transmission Project is related to or in response to a system condition not reflected in the above requirements, the ISO may, as appropriate, amend the Base Cases to take that system condition into account in evaluating the proposed Transmission Project.

#### **22.6.2 Release of Base Case Data**

The ISO or Connecting Transmission Owner, depending upon which of those Parties possesses the data requested, shall provide base power flow, short circuit and stability databases, including all underlying assumptions and contingency lists, to the Transmission Developer upon request. All Parties shall treat Confidential Information in accordance with Section 22.13.1 of these Transmission Interconnection Procedures. The ISO and Connecting Transmission Owner are permitted to require that the Transmission Developer sign a non-disclosure agreement before the release of Confidential Information or Critical Energy Infrastructure Information in the Base Case data.

### **22.6.3 The Transmission Interconnection Studies**

All Transmission Projects must interconnect in compliance with the NYISO Transmission Interconnection Standard. The ISO evaluates a Transmission Interconnection Application for compliance with the NYISO Transmission Interconnection Standard throughout the Transmission Interconnection Study process. The Transmission Interconnection Studies conducted under the Transmission Interconnection Procedures consist of short circuit/fault duty, steady state (thermal and voltage) and stability analyses designed to identify the Network Upgrade Facilities required for the reliable interconnection of Transmission Projects to the New York State Transmission System in compliance with the NYISO Transmission Interconnection Standard.

### **22.6.4 NYISO Transmission Interconnection Standard**

The NYISO Transmission Interconnection Standard is designed to ensure that a proposed Transmission Project, as it proposes to interconnect to the New York State Transmission System, is consistent with Applicable Reliability Standards and will not degrade interface transfer capability by more than 25 MW.



## **22.7 Optional Feasibility Study**

### **22.7.1 Optional Feasibility Study Agreement**

As soon as practicable after receiving the Transmission Developer's election in the Scoping Meeting in accordance with Section 22.4.2.4 to pursue an Optional Feasibility Study for its Transmission Project, the ISO shall tender to the Transmission Developer and the Connecting Transmission Owner an Optional Feasibility Study Agreement. At the Scoping Meeting, the Transmission Developer shall specify for inclusion in the attachment to the Optional Feasibility Study Agreement the Point(s) of Interconnection and any reasonable alternative configurations, not to exceed two alternative configurations. The Transmission Developer must provide a \$60,000 study deposit to the ISO for the Optional Feasibility Study. The tendered Optional Feasibility Study Agreement will include a good faith estimate of the cost for completing the Optional Feasibility Study. The Optional Feasibility Study Agreement shall specify that the Transmission Developer is responsible for the actual costs incurred by the ISO and the Connecting Transmission Owner for the Optional Feasibility Study. The Optional Feasibility Study Agreement shall provide that if actual study costs exceed the study deposit, the Transmission Developer shall pay the ISO the amount in excess of the study deposit, and if the actual study costs are less than the study deposit, the ISO shall refund the remaining deposit amount to the Transmission Developer. The Optional Feasibility Study Agreement shall also set forth the study schedule based on the study scope. The Transmission Developer, the ISO and the Connecting Transmission Owner shall execute and deliver to the ISO the Optional Feasibility Study Agreement no later than thirty (30) Calendar Days after the ISO tenders the Optional Feasibility Study Agreement. The Transmission Developer shall, on or before the return of the executed Optional Feasibility Study Agreement to the ISO, provide the required \$60,000 deposit.

On or before the return of the executed Optional Feasibility Study Agreement to the ISO,

the Transmission Developer shall provide the technical data required by the agreement. If the Transmission Developer does not provide all required technical data when it delivers the Optional Feasibility Study Agreement, the ISO shall notify the Transmission Developer of the deficiency within five (5) Business Days of the receipt of the executed Optional Feasibility Study Agreement and the Transmission Developer shall cure the deficiency within ten (10) Business Days of receipt of the notice, *provided, however*, such deficiency does not include failure to deliver the executed Optional Feasibility Study Agreement or deposit. If the Transmission Developer fails to provide the required technical data within this timeframe, the Transmission Interconnection Application shall be withdrawn in accordance with Section 22.4.5. The Transmission Developer, the ISO and the Connecting Transmission Owner shall execute the Optional Feasibility Study Agreement within thirty (30) Calendar Days after the ISO tenders the Optional Feasibility Study Agreement.

### **22.7.2 Optional Feasibility Study Scope and Procedures**

The Optional Feasibility Study shall preliminarily evaluate the feasibility of the proposed interconnection to the New York State Transmission System. The Optional Feasibility Study shall be conducted in accordance with Applicable Reliability Standards and will evaluate the Transmission Project using the Base Case described in Section 22.6.1. The Optional Feasibility Study may consist of any of the following technical analyses as described in the Optional Feasibility Study scope:

- a. Conceptual breaker-level one-line diagram of existing system where project proposes to interconnect;
- b. Review of feasibility/constructability of conceptual breaker-level one-line diagram of the proposed interconnection (e.g., space for additional breaker bay in existing

substation; identification of cable routing concerns inside existing substation; environmental concerns inside the substation);

- c. Preliminary review of local protection, communication, grounding issues associated with the proposed interconnection;
- d. Power flow, short circuit and/or bus flow analyses; and/or
- e. Identification of Network Upgrade Facilities.

The schedule for completing the Optional Feasibility Study will be documented in the Optional Feasibility Study Agreement. The ISO shall utilize existing studies to the extent practicable when it performs the study. Upon request, the ISO shall provide the Transmission Developer supporting documentation, workpapers and relevant power flow, short circuit and stability databases for the Optional Feasibility Study, subject to confidentiality arrangements consistent with Section 22.13.1.

### **22.7.3 Optional Feasibility Study Report Meeting**

As soon as practicable after completing the initial draft of the Optional Feasibility Study report, the ISO will provide the Optional Feasibility Study report to the Transmission Developer, the Connecting Transmission Owner, and any Affected Systems for review and comment. Upon completion of this review process, the ISO and the Connecting Transmission Owner shall meet with Transmission Developer and any Affected Systems to discuss the results of the Optional Feasibility Study.

## **22.8 System Impact Study**

### **22.8.1 System Impact Study Agreement**

As soon as practicable after receiving the Transmission Developer's election in the Scoping Meeting in accordance with Section 22.4.2.4 to proceed to a System Impact Study ("SIS") or simultaneously with the delivery of an Optional Feasibility Study to the Transmission Developer, the ISO shall tender the Transmission Developer and Connecting Transmission Owner a System Impact Study Agreement. Upon tendering the System Impact Study Agreement, the ISO shall provide to the Transmission Developer a non-binding good faith estimate of the cost and timeframe for completing the SIS.

The Transmission Developer must provide a \$120,000 study deposit to the ISO for the SIS if the ISO is responsible for performing the entire study; *provided, however*, that if the Transmission Developer is hiring a third-party consultant to perform the analytical portion of the study, pursuant to the requirements set forth in Section 22.13.4 of this Attachment P, the required deposit is \$40,000. The System Impact Study Agreement shall specify that the Transmission Developer is responsible for the actual costs incurred by the ISO and the Connecting Transmission Owner for the SIS. The System Impact Study Agreement shall provide that if actual study costs exceed the study deposit, the Transmission Developer shall pay the ISO the amount in excess of the study deposit, and if the actual study costs are less than the study deposit, the ISO shall refund the remaining deposit amount to the Transmission Developer. The System Impact Study Agreement shall also set forth the study schedule based on the study scope.

### **22.8.2 Execution of System Impact Study Agreement**

The Transmission Developer shall execute and deliver to the ISO the System Impact Study Agreement and the applicable study deposit set forth in Section 22.8.1 no later than thirty

(30) Calendar Days after its receipt. On or before the return of the executed System Impact Study Agreement to the ISO, the Transmission Developer shall provide the technical data required by the agreement. If the Transmission Developer does not provide all required technical data when it delivers the System Impact Study Agreement, the ISO shall notify the Transmission Developer of the deficiency within five (5) Business Days of the receipt of the executed System Impact Study Agreement and the Transmission Developer shall cure the deficiency within ten (10) Business Days of receipt of the notice, *provided, however*, such deficiency does not include failure to deliver the executed System Impact Study Agreement or deposit. If the Transmission Developer fails to provide the required technical data within this timeframe, the Transmission Interconnection Application shall be withdrawn in accordance with Section 22.4.5. The Transmission Developer, the ISO and the Connecting Transmission Owner shall execute the System Impact Study Agreement within thirty (30) Calendar Days after the ISO tenders the System Impact Study Agreement. The Transmission Developer shall, on or before the return of the executed System Impact Study Agreement to the ISO, provide the required study deposit.

### **22.8.3 Scope of System Impact Study**

The SIS shall evaluate the impact of the proposed interconnection on the reliability of the New York State Transmission System. The SIS shall be conducted in accordance with Applicable Reliability Standards. The ISO Operating Committee shall approve the specific study scope proposed for each SIS. If an Optional Feasibility Study is not performed for the project, the SIS will also evaluate the feasibility of the proposed interconnection.

Evaluation under the NYISO Transmission Interconnection Standard involves a transmission security analysis using thermal, voltage, stability and short circuit analyses, as well

as a transfer limit analysis to ensure that a Transmission Project does not degrade interface transfer capability. A Transmission Project will trigger a Network Upgrade Facility if upgrades are necessary to mitigate impacts to the controlling limit (*i.e.*, voltage, stability, thermal) as well as any impact to the thermal limit. A Transmission Project will also trigger a Network Upgrade Facility if it degrades by more than 25 MW the pre-project transfer limits of any NYISO transmission planning interface recognized in the ISO's transmission planning studies pursuant to ISO procedures. A Transmission Project that triggers an upgrade would have to fully restore the impacted transfer limits to the pre-project limits.

#### **22.8.4 System Impact Study Procedures**

The ISO shall coordinate the SIS with any Affected System that is affected by the Transmission Interconnection Application pursuant to Section 22.4.4 above. The ISO shall utilize existing studies to the extent practicable when it performs the study.

The SIS will state the assumptions upon which it is based; state the results of the analyses; and provide the requirements or potential impediments to the proposed interconnection, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the interconnection. The SIS will provide a list of Network Upgrade Facilities that are required as a result of the Transmission Project and a nonbinding good faith estimate of cost responsibility and a non-binding good faith estimated time to construct.

The ISO may evaluate Transmission Projects moving forward in the same time frame that both contribute to Network Upgrade Facilities to determine their *pro rata* cost responsibility for such Network Upgrade Facilities.

Upon request, the ISO shall provide the Transmission Developer all supporting

documentation, workpapers and relevant pre-Transmission Interconnection Application and post-Transmission Interconnection Application power flow, short circuit and stability databases for the SIS, subject to confidentiality arrangements consistent with Section 22.13.1.

#### **22.8.5 Study Report Meeting**

As soon as practicable after completing the initial draft of the System Impact Study report, the ISO will provide the System Impact Study report to the Transmission Developer, the Connecting Transmission Owner, and any Affected Systems for review and comment. Upon completion of this review process, the ISO and the Connecting Transmission Owner shall meet with Transmission Developer and any Affected Systems to discuss the results of the SIS.

The ISO Operating Committee shall approve each final SIS.

## **22.9 Facilities Study**

### **22.9.1 Facilities Study Agreement**

A Transmission Developer may request that the ISO tender a Facilities Study Agreement for its Transmission Project at any time following the ISO Operating Committee's approval of the SIS for the Transmission Project pursuant to Section 22.8.5. As soon as practicable after the ISO's receipt of the Transmission Developer's request, the ISO shall tender the Transmission Developer and Connecting Transmission Owner a Facilities Study Agreement. When the ISO tenders the Facilities Study Agreement, it shall provide to the Transmission Developer a non-binding good faith estimate of the cost and timeframe for completing the Facilities Study.

The Transmission Developer must provide a \$100,000 study deposit to the ISO for the Facilities Study. The Facilities Study Agreement shall specify that the Transmission Developer is responsible for the actual costs incurred by the ISO and the Connecting Transmission Owner for the Facilities Study Agreement. NYISO shall invoice the Transmission Developer on a monthly basis for the work to be conducted on the Facilities Study. The Transmission Developer shall pay invoiced amounts within thirty (30) Calendar Days of receipt of invoice. The ISO shall continue to hold the amounts on deposit until settlement of the final invoice. The Facilities Study Agreement shall provide that if actual study costs exceed the study deposit, the Transmission Developer shall pay the ISO the amount in excess of the study deposit, and if the actual study costs are less than the study deposit, the ISO shall refund the remaining deposit amount to the Transmission Developer. The Facilities Study Agreement shall also set forth the study schedule based on the study scope.

### **22.9.2 Execution of Facilities Study Agreement**

The Transmission Developer, the ISO and the Connecting Transmission Owner shall



execute and deliver to the ISO the Facilities Study Agreement no later than thirty (30) Calendar Days after the ISO tenders the Facilities Study Agreement. The Transmission Developer shall, on or before the return of the executed Facilities Study Agreement to the ISO, provide the deposit and technical data required by the agreement. If the Transmission Developer does not provide all required technical data when it delivers the Facilities Study Agreement, the ISO shall notify the Transmission Developer of the deficiency within five (5) Business Days of the receipt of the executed Facilities Study Agreement, and the Transmission Developer shall cure the deficiency within ten (10) Business Days of receipt of the notice, *provided, however*, such deficiency does not include failure to deliver the executed Facilities Study Agreement or deposit. If the Transmission Developer fails to provide the required technical data within this timeframe, the Transmission Interconnection Application shall be withdrawn in accordance with Section 22.4.5. The Transmission Developer, the ISO and the Connecting Transmission Owner shall execute and deliver to the ISO the Facilities Study Agreement no later than thirty (30) Calendar Days after the ISO tenders the Facilities Study Agreement. The Transmission Developer shall, on or before the return of the executed Facilities Study Agreement to the ISO, provide the required \$100,000 deposit.

### **22.9.3 Scope of Facilities Study**

The Facilities Study shall update and refine the description of Network Upgrade Facilities identified in the System Impact Study, including the equipment, work and related cost and time estimates necessary to construct the required Network Upgrade Facilities. Transmission Developer will be responsible for posting Security in the amount of the cost estimates for the Network Upgrade Facilities documented in the final Facilities Study report pursuant to Section 22.11.1 of this Attachment P. The Facilities Study shall also contain a non-binding estimate as to

the feasible TCCs resulting from the construction of the new facilities, as applicable.

#### **22.9.4 Facilities Study Procedures**

The ISO shall coordinate the Facilities Study with the Connecting Transmission Owner and Affected System Operators, and with any other Affected System pursuant to Section 22.4.4. The ISO shall utilize existing studies to the extent practicable in performing the Facilities Study.

#### **22.9.5 Study Report Meeting**

As soon as practicable after completing the initial draft of the Facilities Study report, the ISO will provide the Facilities Study report to the Transmission Developer, the Connecting Transmission Owner, and any Affected Systems for review and comment. Upon completion of this review process, the ISO and the Connecting Transmission Owner shall meet with Transmission Developer and any Affected Systems to discuss the results of the Facilities Study.

## **22.10 Engineering & Procurement (“E&P”) Agreement**

Prior to executing a Transmission Project Interconnection Agreement, a Transmission Developer may, in order to advance the implementation of its interconnection, request and Connecting Transmission Owner shall offer the Transmission Developer, an E&P Agreement that authorizes the Connecting Transmission Owner to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection. However, the Connecting Transmission Owner shall not be obligated to offer an E&P Agreement if the Transmission Developer is in Dispute Resolution as a result of an allegation that the Transmission Developer has failed to meet any milestones or comply with any prerequisites specified in other parts of these Transmission Interconnection Procedures. The E&P Agreement is an optional procedure and it will not alter the Transmission Developer’s Queue Position or In-Service Date. The E&P Agreement shall provide for the Transmission Developer to pay the cost of all activities authorized by the Transmission Developer and to make advance payments or provide other satisfactory security for such costs. The Transmission Developer shall pay the cost of such authorized activities and any cancellation costs for equipment that is already ordered for its interconnection, which cannot be mitigated as hereafter described, whether or not such items or equipment later become unnecessary. If the Transmission Developer withdraws its Transmission Interconnection Application or either Party terminates the E&P Agreement, to the extent the equipment ordered can be canceled under reasonable terms, the Transmission Developer shall be obligated to pay the associated cancellation costs. To the extent that the equipment cannot be reasonably canceled, Connecting Transmission Owner may elect: (i) to take title to the equipment, in which event Connecting Transmission Owner shall refund the Transmission Developer any amounts paid by the Transmission Developer for such equipment

and shall pay the cost of delivery of such equipment, or (ii) to transfer title to and deliver such equipment to the Transmission Developer, in which event the Transmission Developer shall pay any unpaid balance and cost of delivery of such equipment.

## **22.11 Transmission Project Interconnection Agreement**

### **22.11.1 Tender**

After completion of the Facilities Study, the Transmission Developer may request the ISO tender a draft Transmission Project Interconnection Agreement together with draft appendices completed to the extent practicable; *provided, however*, that if a Transmission Developer's proposed Transmission Project is only interconnecting to its own, existing facilities, a Transmission Project Interconnection Agreement is not required. If a Transmission Project includes more than one Designated Public Policy Project as identified in accordance with Attachment Y to the ISO OATT, the ISO may treat each Designated Public Policy Project comprising the Transmission Project as a separate Transmission Project for purposes of this Section 22.11 and tender separate draft Transmission Project Interconnection Agreements together with draft appendices to each Designated Entity, as applicable. The draft Transmission Project Interconnection Agreement shall be consistent with the NYISO's Commission-approved Standard Large Generator Interconnection Agreement located in Appendix 6 to Attachment X of the OATT, modified to address a Transmission Project. The Transmission Project Interconnection Agreement shall provide the mechanism through which a Transmission Developer shall post Security for required Network Upgrade Facilities. A Transmission Developer will be required to post Security with the applicable Connecting Transmission Owner for Network Upgrade Facilities identified in the Facilities Study; however, if the Transmission Developer and Connecting Transmission Owner are the same entity, the Transmission Developer need not post Security for Network Upgrade Facilities required on its own facilities.

### **22.11.2 Negotiation**

Notwithstanding Section 22.11.1, at the request of the Transmission Developer, the ISO

and Connecting Transmission Owner shall begin negotiations with the Transmission Developer concerning the Transmission Project Interconnection Agreement and its appendices at any time after the Transmission Developer completes the Facilities Study Agreement. The ISO, Connecting Transmission Owner and Transmission Developer shall finalize the appendices and negotiate concerning any disputed provisions of the draft Transmission Project Interconnection Agreement and its appendices subject to the six (6) month time limitation specified below in this Section 22.11.2. If the Transmission Developer determines that negotiations are at an impasse, it may request termination of the negotiations at any time after tender of the draft Transmission Project Interconnection Agreement pursuant to Section 22.11.1 and request submission of the unexecuted Transmission Project Interconnection Agreement to FERC or initiate Dispute Resolution procedures pursuant to Section 22.13.5. If the Transmission Developer requests termination of the negotiations, but within sixty (60) Calendar Days thereafter fails to request either the filing of the unexecuted Transmission Project Interconnection Agreement or initiate Dispute Resolution, it shall be deemed to have withdrawn its Transmission Interconnection Application. Unless otherwise agreed by the Parties, if the Transmission Developer has not executed the Transmission Project Interconnection Agreement, requested filing of an unexecuted Transmission Project Interconnection Agreement, or initiated Dispute Resolution procedures pursuant to Section 22.13.5 within six (6) months of tender of draft Transmission Project Interconnection Agreement, it shall be deemed to have withdrawn its Transmission Interconnection Application.

### **22.11.3 Execution and Filing**

The Transmission Developer shall either: (i) execute three (3) originals of the tendered Transmission Project Interconnection Agreement and return them to the ISO and Connecting

Transmission Owner and request in writing that the ISO and Connecting Transmission Owner file with FERC for its acceptance the agreed-upon Transmission Project Interconnection Agreement; or (ii) request in writing that the ISO and Connecting Transmission Owner file with FERC a Transmission Project Interconnection Agreement in unexecuted form. As soon as practicable, but not later than ten (10) Business Days after receiving either submission by the Transmission Developer, the ISO and Connecting Transmission Owner shall file the Transmission Project Interconnection Agreement with FERC. If the Transmission Developer has requested that the ISO file the Transmission Project Interconnection Agreement in unexecuted form, the ISO will draft the portions of the Transmission Project Interconnection Agreement and appendices that are in dispute. The ISO will provide its explanation of any matters as to which the Parties disagree and support for the costs that the Connecting Transmission Owner proposes to charge to the Transmission Developer under the Transmission Project Interconnection Agreement. An unexecuted Transmission Project Interconnection Agreement should contain terms and conditions deemed appropriate by the ISO for the Transmission Interconnection Application. The Connecting Transmission Owner will provide in a separate filing any comments it has on the unexecuted agreement, including any alternative positions, it may have with respect to the disputed provisions. If the Parties agree to proceed with design, procurement, and construction of Network Upgrade Facilities under the agreed-upon terms of the unexecuted Transmission Project Interconnection Agreement, they may proceed pending Commission action.

#### **22.11.4 Commencement of Interconnection Activities**

Upon submission of an executed or unexecuted Transmission Project Interconnection Agreement in accordance with Section 22.11.3, the ISO, Connecting Transmission Owner and

the Transmission Developer shall perform their respective obligations that are not in dispute in accordance with the terms of the Transmission Project Interconnection Agreement, subject to modification by FERC.

#### **22.11.5 Termination of the Transmission Project Interconnection Agreement**

The termination of a Transmission Project Interconnection Agreement will be effective only upon acceptance by FERC of the notice of termination and proposed effective date. Upon the effective date of the termination of the Transmission Project Interconnection Agreement, access to the Point of Interconnection of the Transmission Project will be available on a non-discriminatory basis pursuant to the ISO's applicable interconnection processes and procedures.



## **22.12 Construction of Connecting Transmission Owner's Network Upgrade Facilities**

### **22.12.1 Schedule**

The Connecting Transmission Owner, Affected System Operators and the Transmission Developer shall negotiate in good faith concerning a schedule for the construction of the Network Upgrade Facilities. In general, the In-Service Dates set forth in applicable interconnection agreements will determine the sequence of construction of required upgrade facilities.

#### **22.12.2.2 Advance Construction of Network Upgrade Facilities, System Upgrade Facilities and System Deliverability Upgrades that are an Obligation of an Entity other than the Transmission Developer**

A Transmission Developer with a Transmission Project Interconnection Agreement, in order to maintain its In-Service Date, may request that the Connecting Transmission Owner advance to the extent necessary the completion of Network Upgrade Facilities, System Upgrade Facilities, and System Deliverability Upgrades that: (i) were assumed in the Transmission Interconnection Studies for such Transmission Developer, (ii) are necessary to support such In-Service Date, and (iii) would otherwise not be completed, pursuant to a contractual obligation of an entity other than the Transmission Developer that is seeking interconnection to the New York State Transmission System, in time to support such In-Service Date. Upon such request, Connecting Transmission Owner will use Reasonable Efforts to advance the construction of such Network Upgrade Facilities, System Upgrade Facilities and System Deliverability Upgrades to accommodate such request; provided that the Transmission Developer commits in writing to pay Connecting Transmission Owner any associated expediting costs.

### **22.12.2.3 Advancing Construction of Network Upgrade Facilities, System Upgrade Facilities or System Deliverability Upgrades that are Part of an Expansion Plan of the ISO or Connecting Transmission Owner**

A Transmission Developer with a Transmission Project Interconnection Agreement, in order to maintain its In-Service Date, may request that the Connecting Transmission Owner advance to the extent necessary the completion of Network Upgrade Facilities, System Upgrade Facilities and System Deliverability Upgrades that: (i) are necessary to support such In-Service Date and (ii) would otherwise not be completed, pursuant to an expansion plan of the ISO or Connecting Transmission Owner, in time to support such In-Service Date. Upon such request, Connecting Transmission Owner will use Reasonable Efforts to advance the construction of such Network Upgrade Facilities, System Upgrade Facilities and System Deliverability Upgrades to accommodate such request; provided that the Transmission Developer commits in writing to pay Connecting Transmission Owner any associated expediting costs.

## **22.13 Miscellaneous**

### **22.13.1 Confidentiality**

Information exchanged by Parties in accordance with these Transmission Interconnection Procedures are subject to the Confidentiality provisions set forth in Section 30.13.1 of Attachment X of this ISO OATT, which requirements are incorporated into this Attachment P by reference. The terms “Standard Large Generator Interconnection Agreement,” “Developer,” and “Large Facility Interconnection Procedures” as used in Section 30.13.1 of Attachment X shall include “Transmission Project Interconnection Agreement,” “Transmission Developer,” and “Transmission Interconnection Procedures,” respectively, as those terms are defined in this Attachment P.

### **22.13.2 Delegation of Responsibility**

The ISO may use the services of subcontractors as it deems appropriate to perform its obligations under these Transmission Interconnection Procedures. The ISO shall remain primarily liable to the Transmission Developer for the performance of such subcontractors and compliance with its obligations under these Transmission Interconnection Procedures. The subcontractor shall keep all information provided confidential and shall use such information solely for the performance of such obligation for which it was provided and no other purpose.

### **22.13.3 Obligation for Study Costs and Study Deposits**

The ISO shall charge and the Transmission Developer shall pay the actual costs of the Transmission Interconnection Studies incurred by the ISO and Connecting Transmission Owner. If a number of Transmission Interconnection Studies are conducted concurrently as a combined study, each Transmission Developer shall pay an equal share of the actual cost of the combined

study. Any invoices for Transmission Interconnection Studies shall include a detailed and itemized accounting of the cost of each Transmission Interconnection Study. Transmission Developers shall pay any such undisputed costs within thirty (30) Calendar Days of receipt of an invoice therefore. Neither the ISO nor Connecting Transmission Owner shall be obligated to perform or continue to perform any studies unless the Transmission Developer has paid all undisputed amounts in compliance herewith.

#### **22.13.4 Third Parties Conducting Studies**

If at the time of the signing of a Transmission Interconnection Study agreement there is disagreement as to the estimated time to complete a Transmission Interconnection Study, then the Transmission Developer may request the ISO to utilize a consultant or other third party reasonably acceptable to the Transmission Developer and the ISO to perform such Transmission Interconnection Study under the direction of the ISO. At other times, the ISO may also utilize a Connecting Transmission Owner or other third party to perform such Transmission Interconnection Study, either in response to a general request of the Transmission Developer, or on its own volition. In all cases, use of a third party shall be in accord with Article 26 (Subcontractors) of the Standard Large Generator Interconnection Agreement located in Attachment X of the ISO OATT and limited to situations where the ISO determines that doing so will help maintain or accelerate the study process for the Transmission Developer's pending Transmission Interconnection Application and not interfere with the ISO's progress on Transmission Interconnection Studies or Interconnection Studies for other pending Transmission Interconnection Applications or Interconnection Requests. In cases where the Transmission Developer requests to use a third party to perform such Transmission Interconnection Study, the Transmission Developer, ISO and Connecting Transmission Owner shall negotiate all of the

pertinent terms and conditions, including reimbursement arrangements and the estimated study completion date and study review deadline. The ISO shall convey all workpapers, data bases, study results and all other supporting documentation prepared to date with respect to the Transmission Interconnection Application as soon as practicable upon the Transmission Developer's request subject to the confidentiality provision in Section 22.13.1. In any case, such third party contract may be entered into with either the Transmission Developer or the ISO at the ISO's discretion. If a Transmission Developer enters into a third party study contract, the Transmission Developer shall provide the study to ISO and the Connecting Transmission Owner for review, and such third party study contract shall provide for reimbursement by the Transmission Developer of ISO's and Connecting Transmission Owner's actual cost of participating in and reviewing the study. In the case of (iii) above in this Section 22.13.4, the Transmission Developer maintains its right to submit a claim to Dispute Resolution to recover the costs of such third party study. Such third party shall be required to comply with these Transmission Interconnection Procedures, Article 26 (Subcontractors) of the Standard Large Generator Interconnection Agreement located in Attachment X of the ISO OATT, and the relevant ISO OATT procedures and protocols as would apply if the ISO were to conduct the Transmission Interconnection Study and shall use the information provided to it solely for purposes of performing such services and for no other purposes. The ISO and Connecting Transmission Owner shall cooperate with such third party and Transmission Developer to complete and issue the Transmission Interconnection Study in the shortest reasonable time.

#### **22.13.5 Disputes**

In the event any Party has a dispute, or asserts a claim, that arises out of or in connection with a Transmission Project Interconnection Agreement, these Transmission Interconnection

Procedures, or their performance (a “Dispute”), such Party shall address the Dispute in accordance with the Dispute provisions in Section 30.13.5 of Attachment X of this ISO OATT, which requirements are incorporated into this Attachment P by reference. The terms “Standard Large Generator Interconnection Agreement” (or “LGIA”), “Standard Large Facility Interconnection Procedures” (or “LFIP”), and “Attachment Facilities, Distribution Upgrades or System Upgrades” as used in Section 30.13.5 shall include “Transmission Project Interconnection Agreement,” “Transmission Interconnection Procedures,” and “Network Upgrade Facilities” respectively, as those terms are defined in this Attachment P.

## **22.13.6 Local Furnishing Bonds and Other Tax-Exempt Financing**

### **22.13.6.1 Connecting Transmission Owners and Affected System Operator(s) that Own Facilities Financed by Local Furnishing Bonds or Other Tax-Exempt Bonds**

This provision is applicable only to a Connecting Transmission Owner or Affected System Operator(s) that has financed facilities with tax-exempt bonds including, but not limited to, Local Furnishing Bonds (“Tax-Exempt Bonds”). Notwithstanding any other provision of the Transmission Interconnection Procedures and a Transmission Project Interconnection Agreement, neither the Connecting Transmission Owner nor Affected System Operator shall be required to construct Network Upgrade Facilities, pursuant to the Transmission Interconnection Procedures and a Transmission Project Interconnection Agreement, if such construction would jeopardize the tax-exempt status of any Tax-Exempt Bonds or impair the ability of Connecting Transmission Owner or Affected System Operator(s) to issue future tax-exempt obligations. For purposes of this provision, Tax-Exempt Bonds shall include the obligations of the Long Island Power Authority, NYPA and Consolidated Edison Company of New York, Inc., the interest on which is not included in gross income under the Internal Revenue Code.

**Appendix 1**  
**TRANSMISSION INTERCONNECTION APPLICATION**

1. The undersigned Transmission Developer submits this request to interconnect its proposed transmission project with the New York State Transmission System pursuant to Section [\*] of the NYISO OATT.

2. This Transmission Interconnection Application is submitted by:

Name of Transmission Developer: \_\_\_\_\_

By (signature): \_\_\_\_\_

Name (type or print): \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

3. Name of project: \_\_\_\_\_

4. Description of proposed project:

a. Description of proposed Point(s) of Interconnection (*i.e.*, name of existing substation or line to which the project proposes to interconnect):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b. General description of the equipment configuration and kV level:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

c. Attach a conceptual breaker one-line diagram (*i.e.*, breaker-level details for proposed elements along with high-level depiction of proposed interconnection with existing system)

- d. Technical data/parameters: [to be provided as attachment to initial study agreement]
- e. In-Service Date (Month and Year): \_\_\_\_\_
- f. Name, title, company address, telephone number, and e-mail address of the Transmission Developer's contact person:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## **24 Attachment R - Cost Allocation and Measurement and Verification Methodologies for Demand Reductions Arising Under the Incentivized Day-Ahead Economic Load Curtailment Program**

Under the Incentivized Day-Ahead Economic Load Curtailment Program – also referred to in the ISO Tariffs and ISO Procedures as the Day-Ahead Demand Response Program – (“Program” or “DADRP”), costs incurred by the ISO in covering Demand Reduction Providers’ Curtailment Initiation Costs and making Demand Reduction Incentive Payments for scheduled and verified Demand Reductions are to be recovered under Schedule 1. Measurement and verification of actual Demand Reductions scheduled under the Program shall be conducted in accordance with subsections 24.2, 24.3, and 24.4.

### **24.1 Cost Allocation Methodology for Payments to Demand Reduction Providers under the Program Recovered Pursuant to Schedule 1**

The “Schedule 1 Program Costs” for scheduled and verified Demand Reductions shall be allocated to Transmission Customers, pursuant to the methodology set forth below, on the basis of their Load Ratio Shares and in proportion to the probability, given historical transmission congestion patterns, that a particular Demand Reduction will benefit them by reducing Energy costs in their Load Zones or “Composite Load Zones” (see below).

More specifically, Schedule 1 Program Costs shall be allocated to Transmission Customers each Billing Period as follows:

- a) Schedule 1 Program Costs shall initially be attributed to the Load Zone where the Generator Bus that was used to bid the Demand Reduction associated with them is located.
- b) In determining whether and how Transmission Customers located in particular Load Zones, or Composite Load Zones, have benefited from the Demand

Reduction, and how much they shall be required to pay a share of the associated Schedule 1 Program Costs, the ISO shall account for the effects of congestion at the most frequently constrained NYCA interfaces. When none of these interfaces are constrained Transmission Customers in all Load Zones shall be deemed to have benefited from the Demand Reduction and shall pay a share of the associated Schedule 1 Program Costs. When one or more of the most frequently constrained NYCA interfaces is constrained, then Transmission Customers located in a Load Zone, or Composite Load Zone, that is upstream of the constrained interface, shall be deemed to have benefited from an upstream Demand Reduction and shall be required to pay a share of the associated Schedule 1 Program Costs. Similarly, when one or more of the interfaces is congested, Transmission Customers located in a Load Zone, or Composite Load Zone, that is downstream of a constrained interface, shall be deemed to have benefited from a downstream Demand Reduction and shall be required to pay a share of the associated Schedule 1 Program Costs. By contrast, Transmission Customers that are “separated” from a Demand Reduction by a constrained interface shall be deemed not to have benefited from it and shall not be required to pay a share of the associated Schedule 1 Program Costs.

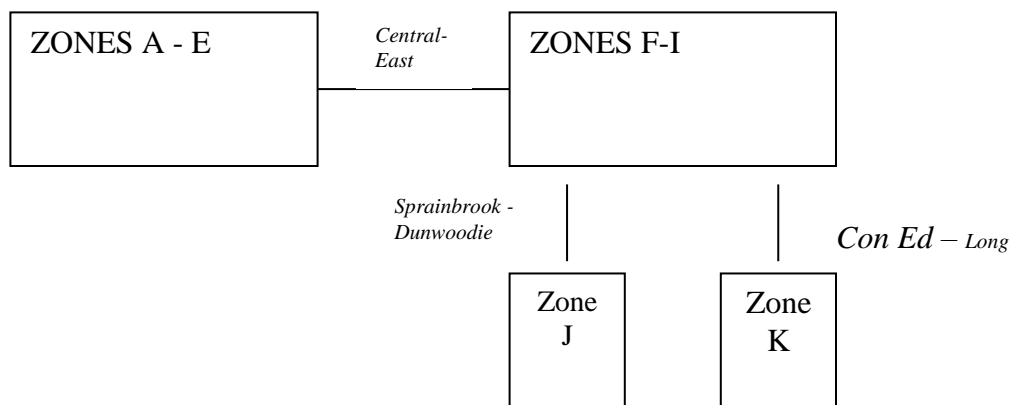
- c) The ISO shall determine the extent of congestion at the most frequently constrained interfaces using a series of equations that calculate the static probability that: (i) no constraints existed in the transmission system serving the Load Zone or Composite Load Zone; (ii) the Composite Load Zone was upstream of a constraint and curtailment pursuant to the Program occurred upstream, and

(iii) the Composite Load Zone was downstream of a constraint and curtailment pursuant to the Program occurred downstream.

Costs shall be allocated to each Transmission Customer that is deemed to have benefited from the scheduled and verified Demand Reduction on a Load Ratio Share basis, using Real-Time metered hourly Load data.

- d) The three most frequently constrained interfaces are currently the “Central-East” interface, which divides western from eastern New York State, the Sprainbrook-Dunwoodie interface, which divides New York City and Long Island from the rest of New York State, and the Consolidated Edison Company (“ConEd”) - Long Island interface (including the Y49/Y50 lines), which divides New York City from Long Island. Given these limiting interfaces, four Composite Load Zones currently exist, *i.e.*, West of Central-East (Load Zones A, B, C, D, E), East Upstate Excluding New York City and Long Island (Load Zones F, G, H, I), New York City (Load Zone J), and Long Island (Load Zone K). The geographic configuration of these Composite Load Zones is depicted in the illustration below.

**Relationship Between Frequently Constrained Interfaces and Composite Load Zones**



Based on these factors, Schedule 1 Program Costs shall be allocated to Transmission Customers as follows:

For Transmission Customer m in Load Zones A-E:

$$\begin{aligned}
 a_1 & * (\text{cost}_A + \dots + \text{cost}_K) * \text{load}_m / (\text{load}_A + \dots + \text{load}_K) + && \text{'no constraints} \\
 a_2 & * (\text{cost}_A + \dots + \text{cost}_E) * \text{load}_m / (\text{load}_A + \dots + \text{load}_E) + && \text{'Central East const} \\
 a_3 & * (\text{cost}_A + \dots + \text{cost}_I + \text{cost}_K) * \text{load}_m / (\text{load}_A + \dots + \text{load}_I + \text{load}_K) + && \text{'NYC constraint} \\
 a_4 & * (\text{cost}_A + \dots + \text{cost}_J) * \text{load}_m / (\text{load}_A + \dots + \text{load}_J) + && \text{'LI constraint} \\
 a_5 & * (\text{cost}_A + \dots + \text{cost}_E) * \text{load}_m / (\text{load}_A + \dots + \text{load}_E) + && \text{'Cent East + NYC} \\
 a_6 & * (\text{cost}_A + \dots + \text{cost}_E) * \text{load}_m / (\text{load}_A + \dots + \text{load}_E) + && \text{'Cent East + LI} \\
 a_7 & * (\text{cost}_A + \dots + \text{cost}_I) * \text{load}_m / (\text{load}_A + \dots + \text{load}_I) + && \text{'NYC + LI} \\
 a_8 & * (\text{cost}_A + \dots + \text{cost}_E) * \text{load}_m / (\text{load}_A + \dots + \text{load}_E) && \text{'Cent East + NYC + LI}
 \end{aligned}$$

For Transmission Customer m in Load Zones F-I:

$$\begin{aligned}
 a_1 & * (\text{cost}_A + \dots + \text{cost}_K) * \text{load}_m / (\text{load}_A + \dots + \text{load}_K) + && \text{'no constraints} \\
 a_2 & * (\text{cost}_F + \dots + \text{cost}_K) * \text{load}_m / (\text{load}_F + \dots + \text{load}_K) + && \text{'Central East const} \\
 a_3 & * (\text{cost}_A + \dots + \text{cost}_I + \text{cost}_K) * \text{load}_m / (\text{load}_A + \dots + \text{load}_I + \text{load}_K) + && \text{'NYC constraint} \\
 a_4 & * (\text{cost}_A + \dots + \text{cost}_J) * \text{load}_m / (\text{load}_A + \dots + \text{load}_J) + && \text{'LI constraint} \\
 a_5 & * (\text{cost}_F + \dots + \text{cost}_I + \text{cost}_K) * \text{load}_m / (\text{load}_F + \dots + \text{load}_I + \text{load}_K) + && \text{'Cent East + NYC} \\
 a_6 & * (\text{cost}_F + \dots + \text{cost}_J) * \text{load}_m / (\text{load}_F + \dots + \text{load}_J) + && \text{'Cent East + LI} \\
 a_7 & * (\text{cost}_A + \dots + \text{cost}_I) * \text{load}_m / (\text{load}_A + \dots + \text{load}_I) + && \text{'NYC + LI} \\
 a_8 & * (\text{cost}_F + \dots + \text{cost}_I) * \text{load}_m / (\text{load}_F + \dots + \text{load}_I) && \text{'Cent East + NYC + LI}
 \end{aligned}$$

For Transmission Customer m in Load Zone J:

$$\begin{aligned}
 a_1 & * (\text{cost}_A + \dots + \text{cost}_K) * \text{load}_m / (\text{load}_A + \dots + \text{load}_K) + && \text{'no constraints} \\
 a_2 & * (\text{cost}_F + \dots + \text{cost}_K) * \text{load}_m / (\text{load}_F + \dots + \text{load}_K) + && \text{'Central East const} \\
 a_3 & * \text{cost}_J * \text{load}_m / \text{load}_J + && \text{'NYC constraint} \\
 a_4 & * (\text{cost}_A + \dots + \text{cost}_J) * \text{load}_m / (\text{load}_A + \dots + \text{load}_J) + && \text{'LI constraint} \\
 a_5 & * \text{cost}_J * \text{load}_m / \text{load}_J + && \text{'Cent East + NYC} \\
 a_6 & * (\text{cost}_F + \dots + \text{cost}_J) * \text{load}_m / (\text{load}_F + \dots + \text{load}_J) + && \text{'Cent East + LI} \\
 a_7 & * \text{cost}_J * \text{load}_m / \text{load}_J + && \text{'NYC + LI} \\
 a_8 & * \text{cost}_J * \text{load}_m / \text{load}_J && \text{'Cent East + NYC + LI}
 \end{aligned}$$

For Transmission Customer m in Load Zone K:

$$\begin{aligned}
 a_1 & * (\text{cost}_A + \dots + \text{cost}_K) * \text{load}_m / (\text{load}_A + \dots + \text{load}_K) + && \text{'no constraints} \\
 a_2 & * (\text{cost}_F + \dots + \text{cost}_K) * \text{load}_m / (\text{load}_F + \dots + \text{load}_K) + && \text{'Central East const} \\
 a_3 & * (\text{cost}_A + \dots + \text{cost}_I + \text{cost}_K) * \text{load}_m / (\text{load}_A + \dots + \text{load}_I + \text{load}_K) + && \text{'NYC constraint} \\
 a_4 & * \text{cost}_K * \text{load}_m / \text{load}_K + && \text{'LI constraint} \\
 a_5 & * (\text{cost}_F + \dots + \text{cost}_I + \text{cost}_K) * \text{load}_m / (\text{load}_F + \dots + \text{load}_I + \text{load}_K) + && \text{'Cent East + NYC} \\
 a_6 & * \text{cost}_K * \text{load}_m / \text{load}_K + && \text{'Cent East + LI} \\
 a_7 & * \text{cost}_K * \text{load}_m / \text{load}_K + && \text{'NYC + LI} \\
 a_8 & * \text{cost}_K * \text{load}_m / \text{load}_K && \text{'Cent East + LI + NYC}
 \end{aligned}$$

In all cases, the variables are:

- a<sub>1</sub> = fraction of time when no constraints exist
- a<sub>2</sub> = fraction of time when Central East interface alone is constraining
- a<sub>3</sub> = fraction of time when Sprainbrook-Dunwoodie interface alone is constraining

- $a_4$  = fraction of time when Con Ed-Long Island (including the Y49/Y50 lines) interfaces are constraining, but Central East and Sprainbrook-Dunwoodie interfaces are not constraining
- $a_5$  = fraction of time when Central East and Sprainbrook-Dunwoodie interfaces are constraining
- $a_6$  = fraction of time when Central East, Con Ed-Long Island interfaces (including the Y49/Y50 lines) are constraining
- $a_7$  = fraction of time when Sprainbrook-Dunwoodie, Con Ed-Long Island interfaces (including the Y49/Y50 lines) are constraining
- $a_8$  = fraction of time when Central East, Sprainbrook-Dunwoodie, Con Ed-Long Island interfaces (including the Y49/Y50 lines) are constraining
- $cost_{A...K}$  = revenue deficiencies due to DADRP Demand Reductions in Load Zones A...K, calculated on a hourly basis
- $load_m$  = real-time Load for Transmission Customer m, calculated on an hourly basis
- $load_{A...K}$  = real-time Loads for all Transmission Customers in Load Zones A...K, calculated on an hourly basis

## **24.2 Measurement of Actual Demand Reduction Scheduled in the Program**

The measured amount of Demand Reduction supplied by a Demand Reduction Provider under the Program shall be the difference between the Demand Reduction Provider's baseline load for each scheduled hour, which shall be calculated in accordance with section 24.2.1 and ISO Procedures, and the actual metered hourly load for each scheduled hour.

### **24.2.1 Methodology for the Calculating the Economic Customer Baseline Load for a Resource Scheduled to Reduce Load Under the Program**

The ISO shall employ two different calculation methodologies of the Economic Customer Baseline Load ("ECBL") for scheduled Demand Reductions, depending on whether the Demand Reduction is scheduled on a weekend or a weekday.

#### **24.2.1.1 Definitions**

**Adjusted Weekday ECBL:** For each hour of the scheduled Demand Reduction, the Adjusted Weekday ECBL shall be equal to the ECBL multiplied by the ECBL In-Day Adjustment Factor calculated for the scheduled Demand Reduction period.

**ECBL In-Day Adjustment Factor:** The ECBL In-Day Adjustment shall be an adjustment factor that is applied to the ECBL for each hour of the scheduled Demand Reduction period.

- a) Calculate the ECBL In-Day Adjustment by dividing the average of the metered load for the two hours of the ECBL In-Day Adjustment Period on the day of the scheduled Demand Reduction by the average of the ECBL for the same two hours.
- b) The ECBL In-Day Adjustment Factor shall be limited to a minimum of 0.8 and a maximum of 1.2.

**ECBL In-Day Adjustment Period:** The ECBL Adjustment Period is the time prior to the scheduled Demand Reduction period that is used to determine the ECBL In-Day Adjustment. The hours to be used in the ECBL Adjustment Period shall be the two consecutive hours that occur four hours prior to the first hour of the scheduled Demand Reduction period, provided that the hours are part of the same calendar day.

To determine the two hours of the ECBL In-Day Adjustment Period:

- a) The fourth hour before the first hour of the scheduled Demand Reduction period shall be the first hour of the ECBL In-Day Adjustment Period, except when the fourth hour before first hour of the scheduled Demand Reduction period occurs on the previous day.
- b) The third hour before the first hour of the scheduled Demand Reduction period shall be the second hour of the ECBL In-Day Adjustment Period, except when the third hour before the first hour of the scheduled Demand Reduction period occurs on the previous day.

- c) When the third and/or fourth hour of the ECBL In-Day Adjustment Period occurs on the previous day, the ISO shall use as a substitute the hour beginning midnight on the day of the scheduled Demand Reduction. Both hours of the ECBL In-Day Adjustment Period may equal the hour beginning midnight on the day of the scheduled Demand Reduction.

**ECBL Weekday Window:** The ECBL Weekday Window is the time period reviewed in determining the ECBL for any hour of scheduled Demand Reduction that takes place on a weekday. It shall consist of the hours from the previous ten weekdays that correspond to each hourly interval of the scheduled Demand Reduction period. Treatment of NERC holidays that occur on weekdays shall be equivalent to all hours scheduled on the NERC holiday.

**ECBL Weekend Window:** The ECBL Weekend Window is the time period reviewed in determining the ECBL for any hour of scheduled Demand Reduction that takes place on a weekend. It shall consist of the hours from the previous three weekend days of the same type (Saturday or Sunday) that correspond to each hourly-interval of the scheduled Demand Reduction period. Treatment of NERC holidays that occur on weekend days shall be equivalent to all hours scheduled on the NERC holiday.

**Weekday Proxy:** The Weekday Proxy is a value that is substituted for the metered load for any hour in any ECBL Weekday Window in which a Demand Reduction was scheduled. It shall be determined by (1) establishing a new ECBL Weekday Window for that hour consisting of the corresponding hours in the ten weekdays preceding the day the Demand Reduction occurred, and (2) repeating the steps described at section 24.2.1.2 b, c, d, and e.

**Weekend Proxy:** The Weekend Proxy is a value that is substituted for the metered load for any hour in any ECBL Weekend Window in which a Demand Reduction was scheduled. It shall be

determined by (1) establishing a new ECBL Weekend Window for that hour consisting of the corresponding hours in the three weekends preceding the day the Demand Reduction occurred, and (2) repeating the steps described at section 24.2.1.2 b, c, d, and e.

#### **24.2.1.2 Methodology for the Calculating the Economic Customer Baseline Load for Demand Reductions Scheduled on a Weekday**

To determine the ECBL for an hour of scheduled Demand Reduction (a “Target Hour”) that occurs on a weekday:

- a) Select the hours that comprise the ECBL Weekday Window for that Target Hour.
- b) Select the metered load value for each hour in the ECBL Weekday Window where no scheduled Demand Reduction occurred pursuant to this Program.
- c) For each hour of the ECBL Weekday Window where a scheduled Demand Reduction occurred, select the Weekday Proxy for that hour and day in place of the actual metered load for that hour.
- d) Rank in descending order the metered load and Weekday Proxy values determined in steps b and c.
- e) Calculate the average of the fifth and sixth ranked values. The value as so calculated shall be the ECBL for the Target Hour.
- f) Apply the ECBL In-Day Adjustment Factor to the ECBL to determine the Adjusted Weekday ECBL for the Target Hour.

#### **24.2.1.3 Methodology for the Calculating the Economic Customer Baseline Load for a Resource’s Demand Reduction Scheduled Under the Program on a Weekend**

To determine the ECBL for a Target Hour that occurs on a weekend:

- a) Select the hours that comprise the ECBL Weekend Window for the Target Hour.



- b) Select the metered load value for each hour in the ECBL Weekend Window where no scheduled Demand Reduction occurred pursuant to this Program.
- c) For each hour of the ECBL Weekend Window where a Scheduled Demand Reduction occurred, select the ECBL Weekend Proxy for that hour and day in place of the actual metered load for the hour.
- d) Rank in descending order the metered load and ECBL Weekend Proxy values determined in steps b and c.
- e) Calculate the average of the metered load and ECBL Proxy values. The value so calculated is the ECBL for the Target Hour.
- f) Apply the ECBL In-Day Adjustment Factor to the ECBL to calculate the Adjusted Weekend ECBL for the Target Hour.

### **24.3 Verification of Actual Demand Reduction Scheduled in the Program**

Demand Reduction calculated using the Economic Customer Baseline Load methodology is subject to verification by the ISO. Demand Reduction Providers shall report the data at the time and in the format required by the ISO pursuant to Section 24.4. If a Demand Reduction Provider fails to report the required data to the ISO in accordance with Section 24.4, the Demand Reduction Provider will be subject to penalties associated with a failure to supply the scheduled Demand Reductions and may lose its eligibility to participate in the Program. All Demand Reduction data are subject to audit by the ISO. If the ISO determines that it has made an erroneous payment to a Demand Reduction Provider, it shall have the right to recover it either by reducing other payments to that Demand Reduction Provider or by any other lawful means.

### **24.4 Data Reporting Requirements for Demand Reduction Providers**

The Demand Reduction Provider must submit to the ISO the information specified in this

Section 24.4 for each Demand Side Resource that it has enrolled either as an individual DADRP resource or with other Demand Side Resources as part of a single, aggregated DADRP resource. The Demand Reduction Provider must submit this information for the purpose of enrolling, registering, making settlements, and verifying the participation of each Demand Side Resource in the ISO's Energy market. To enroll and participate in the DADRP, a Demand Side Resource must have NYPSC-approved, revenue-quality, hourly-interval meters sufficient to calculate its net Load. If the Demand Side Resource has a Local Generator at its site, it must also have an hourly-interval meter that measures the total output of the Local Generator within a 2% accuracy threshold, regardless of whether at initial enrollment the Local Generator is intended to be used to provide Demand Reduction in the DADRP.

#### **24.4.1 Data Reporting Requirements for Enrollment of Demand Side Resources Participating as DADRP Resources**

The Demand Reduction Provider shall provide to the ISO the following information for each Demand Side Resource that is seeking to enroll, either individually or collectively with other Demand Side Resources, as a DADRP resource participating in the ISO's Energy market, which shall include providing information regarding each of the Demand Side Resource's interval meters required under Section 24.4:

- a. As-left meter test criteria, as prescribed in the New York Department of Public Service 16 NYCRR Part 92 Operating Procedure;
- b. Documentation to validate installation of interval meter equipment;
- c. Interval metering installation individual, company, and professional engineering license information;
- d. Make and model of installed interval metering device(s);
- e. Accuracy of installed interval metering device(s);

- f. Interval meter Current Transformer (CT) and Potential Transformer (PT) type designation, if applicable;
- g. CT Ratio, if applicable;
- h. Use of pulse data recorder as an interval metering device, if applicable;
- i. Pulse data recorder multiplier, if applicable;
- j. Any other type of meter multiplier used in the translation of data collected by the device for measuring demand, kWh, and/or MWh, if applicable;
- k. Its service address;
- l. Its Load Serving Entity;
- m. Its Transmission Owner;
- n. Its meter authority/Meter Data Service Provider;
- o. Demand Side Resource's maximum Winter and Summer reduction MW;
- p. Business classification of the Demand Side Resource (based on ISO-defined categories or national standards for business classification); and
- q. A description of any Local Generator at its site, including the Local Generator's system, its primary fuel type, the year in which it was built, the year of any retrofit, its nameplate capacity, and its horsepower, if applicable.

#### **24.4.2 Data Reporting Requirements for Verification of Energy Reductions of DADRP Resources Scheduled in the ISO's Energy Market**

The meter authority or Meter Data Service Provider of the Demand Reduction Provider shall provide the ISO with the following required data from each interval meter required under Section 24.4 for each Demand Side Resource that is registered, either individually or collectively with other Demand Side Resources, as a DADRP resource, to verify the scheduled Load reduction of a DADRP resource in the ISO's Energy market:

- a) Totalized net hourly Load reduction data of the DADRP resource (*i.e.*, the net hourly Load reduction data totalized across all Demand Side Resources that are registered, either individually or collectively with other Demand Side Resources, as a DADRP resource) for the period of the scheduled Load reduction of the DADRP resource in the format required for reporting to the ISO's Settlement Data Exchange application;
- b) Hourly-interval metered Load data for each of the individual Demand Side Resources that is registered as part of a single DADRP resource, for all hours of the day on the days of the scheduled Load reduction of the DADRP resource; and
- c) Hourly-interval metered Load data for each of the individual Demand Side Resources that is registered as part of a single DADRP resource, for all hours of each of the thirty days preceding the day in which the DADRP resource is scheduled.

The meter authority or Meter Data Service Provider of the Demand Reduction Provider shall comply with the following when reporting Demand Reduction metering data to the ISO:

- a) Section 7.4.1 of the ISO Services Tariff;
- b) Section 13 of the ISO Services Tariff; and
- c) The ISO's Meter Data Management Protocols as provided on the ISO's website.

#### **24.4.3 Additional Data Required Upon Request**

To verify the participation of each Demand Side Resource that is enrolled, either individually or collectively with other Demand Side Resources, as a DADRP resource in the ISO's Energy market, Demand Reduction Providers and/or their meter authority/Meter Data Service Provider shall provide the ISO upon the ISO's request such additional information that

may be required, including, but not limited, to the following:

- a) Any data reporting requirements of Attachments H and O to the ISO Services Tariff;
- b) Any data reporting requirements of Section 3.4 of the ISO Services Tariff;
- c) Historical Load documentation;
- d) Load data history for Pre- and Post-Validation, Edit and Estimation (VEE);
- e) Up to three months of historical Load data when enrolling a Demand Side Resource to participate in the ISO's Energy market;
- f) New and existing metering documentation, including, but not limited to:
  - 1. Calibration records;
  - 2. Time check;
  - 3. Sum check;
  - 4. High/Low check; and
  - 5. Zero value check.

**35 Attachment CC – Joint Operating Agreement Among and Between New York Independent System Operator Inc. and PJM Interconnection, L.L.C.**

This Joint Operating Agreement (“Agreement”) dated this \_\_\_day of May 2007, is entered into among and between the following parties:

PJM Interconnection, L.L.C. (“PJM”) a Delaware limited liability company having a place of business at 955 Jefferson Avenue, Valley Forge Corporate Center, Norristown, Pennsylvania 19403

New York Independent System Operator Inc. (“NYISO”) a not-for-profit corporation established under the laws of New York State having a place of business at 10 Krey Boulevard, Rensselaer, New York 12144.

### **35.1 Recitals**

- 35.1.1 PJM is the regional transmission organization that provides operating and reliability functions in portions of the mid-Atlantic and Midwest States. PJM also administers an open access tariff for transmission and related services on its grid, and independently operates markets for day-ahead, real-time energy, capacity, ancillary services and financially firm transmission rights;
- 35.1.2 NYISO is a not-for-profit corporation established pursuant to the ISO Agreement, responsible for providing transmission service, maintaining the reliability of the electric power system and facilitating efficient markets for capacity, energy and ancillary services in the New York Control Area in accordance with its filed Tariffs;
- 35.1.3 In accordance with good utility practice, the Parties seek to establish or confirm other arrangements and protocols in furtherance of the reliability of their systems and efficient market operations, as provided under the terms and conditions of this Agreement;

NOW, THEREFORE, for good and valuable consideration including the Parties' mutual reliance upon the covenants contained herein, the Parties agree as follows:

## **35.2 Abbreviations, Acronyms, Definitions and Rules of Construction**

In this Agreement, the following words and terms shall have the meanings (such meanings to be equally applicable to both the singular and plural forms) ascribed to them in this Section 35.2. Any undefined, capitalized terms used in this Agreement shall have the meaning given under industry custom and, where applicable, in accordance with Good Utility Practices or the meaning given to those terms in the tariffs of PJM and NYISO on file at FERC.

### **35.2.1 Abbreviations, Acronyms and Definitions**

**“3500 PAR”** shall mean the 3500 phase angle regulator at the Ramapo station connected to the 5018 Hopatcong-Ramapo 500 kV line.

**“4500 PAR”** shall mean the 4500 phase angle regulator at the Ramapo station connected to the 5018 Hopatcong-Ramapo 500 kV line.

**“A PAR”** shall mean the phase angle regulator located at the Goethals station connected to the A2253 Linden-Goethals 230 kV line.

**“ABC Interface”** shall mean the transfer path comprised of the A2253 Linden-Goethals, B3402 Hudson-Farragut and C3403 Marion-Farragut tie lines between PJM and NYISO.

**“ABC PARs”** shall mean the A PAR, B PAR and C PAR that control flow on the ABC Interface.

**“AC”** shall mean alternating current.

**“Affected Party”** shall mean the electric system of the Party other than the Party to which a request for interconnection or long-term firm delivery service is made and that may be affected by the proposed service.

**“Agreement”** shall mean this document, as amended from time to time, including all attachments, appendices, and schedules.

**“Area Control Error”** or **“ACE”** shall mean the instantaneous difference between a Balancing Authority’s net actual and scheduled interchange, taking into account the effects of Frequency Bias and correction for meter error.



**“Available PAR”** shall mean, for purposes of Section 8.3.1 of Schedule D to this Agreement, a NY-NJ PAR that is not subject to any of the following circumstances:

- (1) a PAR that is not operational and is unable to be moved;
- (2) a PAR that is technically “in-service” but is being operated in an outage configuration and is only capable of feeding radial load;
- (3) a PAR that is tapped-out in a particular direction is not available in the tapped-out direction;
- (4) if the maximum of 400 taps/PAR/month is exceeded at an ABC PAR, Ramapo PAR or a Waldwick PAR, and the relevant asset owner restricts the RTOs from taking further taps on the affected PAR, then the affected PAR shall not be available until NYISO and PJM agree to and implement an increased bandwidth in accordance with Section 7.2 of Schedule D to this Agreement;
- (5) PJM is permitted to reserve up to three taps at each end of the PAR tap range of each Waldwick PAR to secure the facilities on a post contingency basis, a Waldwick PAR shall not be considered available if a tap move would require the use of a reserved PAR tap; or
- (6) NYISO is permitted to reserve up to two taps at each end of the tap range of each ABC PAR and Ramapo PAR to secure the facilities on a post contingency basis, an ABC or Ramapo PAR shall not be considered available if a tap move would require the use of a reserved PAR tap.

PJM or NYISO may choose to use PAR taps they are permitted to reserve to perform M2M coordination, but they are not required to do so.

**“Available Flowgate Capability”** or **“AFC”** shall mean the rating of the applicable Flowgate less the projected loading across the applicable Flowgate less TRM and CBM. The firm AFC is calculated with only the appropriate Firm Transmission Service reservations (or interchange schedules) in the model, including recognition of all roll-over Transmission Service rights. Non-firm AFC is determined with appropriate firm and non-firm reservations (or interchange schedules) modeled.

**“Available Transfer Capability”** or **“ATC”** shall mean a measure of the transfer capability remaining in the physical transmission network for further commercial activity over and above already committed uses.

**“B PAR”** shall mean the phase angle regulator located at the Farragut station connected to the B3402 Hudson-Farragut 345 kV line.

**“Balancing Authority”** or **“BA”** shall mean the responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports interconnection frequency in real-time.

**“Balancing Authority Area”** or **“BAA”** shall mean the collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

**“Bulk Electric System”** shall have the meaning provided for in the NERC Glossary of Terms used in Reliability Standards, as it may be amended, supplemented, or restated from time to time.

**“C PAR”** shall mean the phase angle regulator located at the Farragut station connected to the C3403 Marion-Farragut 345 kV line.

**“Capacity Benefit Margin”** or **“CBM”** shall mean the amount of firm transmission transfer capability preserved by the transmission provider for Load-Serving Entities (“LSEs”), whose loads are located on that Transmission Service Provider’s system, to enable access by the LSEs to generation from interconnected systems to meet generation reliability requirements. Preservation of CBM for an LSE allows that entity to reduce its installed generating capacity below that which may otherwise have been necessary without interconnections to meet its generation reliability requirements. The transmission transfer capability preserved as CBM is intended to be used by the LSE only in times of emergency generation deficiencies.

**“CIM”** shall mean Common Infrastructure Model.

**“Coordination Event”** shall mean the period when both Parties are operating under M2M as defined and set forth in Schedule D to this Agreement.

**“Confidential Information”** shall have the meaning stated in Section 35.8.1.

**“Control Area(s)”** shall mean an electric power system or combination of electric power systems to which a common automatic generation control scheme is applied.

**“Control Performance Standard”** or **“CPS”** shall mean the reliability standard that sets the limits of a Balancing Authority’s Area Control Error over a specified time period.

**“Coordinated Transaction Scheduling”** or **“CTS”** shall mean the market rules that allow transactions to be scheduled based on a bidder’s willingness to purchase energy from a source in either the NYISO or PJM Control Area and sell it at a sink in the other Control Area if the forecasted price at the sink minus the forecasted price at the corresponding source is greater than or equal to the dollar value specified in the bid.

**“Coordination Committee”** shall mean the jointly constituted PJM and NYISO committee established to administer the terms and provisions of this Agreement pursuant to Section 35.3.2.

**“CTS Interface Bid”** shall mean: (1) in PJM, a unified real-time bid to simultaneously purchase and sell energy on either side of a CTS Enabled Interface in accordance with the procedures of

Section 1.13 of Schedule 1 of the Amended and Restated Operating Agreement of PJM, L.L.C.; and (2) in NYISO, a real-time bid provided by an entity engaged in an external transaction at a CTS Enabled Interface, as more fully described in NYISO Services Tariff Section 2.3.

**“Delivery Point”** shall mean each of the points of direct Interconnection between PJM and the NYISO Balancing Authority Areas. Such Delivery Point(s) shall include the Interconnection Facilities between the PJM and the New York Balancing Authority Areas.

**“DC”** shall mean direct current.

**“Disclosing Party”** shall have the meaning stated in Section 35.8.7.

**“Dispute”** shall have the meaning stated in Section 35.15.

**“Disturbance Control Standard”** or **“DCS”** shall mean the reliability standard that sets the time limit following a disturbance within which a balancing authority must return its Area Control Error to within a specified range.

**“E PAR”** shall mean the phase angle regulator located at the Waldwick station on the E-2257 Waldwick-Hawthorne 230 kV line.

**“Economic Dispatch”** shall mean the sending of dispatch instructions to generation units to minimize the cost of reliably meeting load demands.

**“Effective Date”** shall have the meaning stated in Section 35.19.1.

**“Emergency”** shall mean any abnormal system condition that requires remedial action to prevent or limit loss of transmission or generation facilities that could adversely affect the reliability of the electricity system.

**“Emergency Energy”** shall mean energy supplied from Operating Reserve or electrical generation available for sale in New York or PJM or available from another Balancing Authority Area. Emergency Energy may be provided in cases of sudden and unforeseen outages of generating units, transmission lines or other equipment, or to meet other sudden and unforeseen circumstances such as forecast errors, or to provide sufficient Operating Reserve. Emergency Energy is provided pursuant to this Agreement and the Inter Control Area Transactions Agreement dated May 1, 2000 and priced according to Section 35.6.4 of this Agreement and said Inter Control Area Transactions Agreement.

**“EMS”** shall mean the respective Energy Management Systems utilized by the Parties to manage the flow of energy within their Regions.

**“External Capacity Resource”** shall mean: (1) for NYISO, (a) an entity (e.g., Supplier, Transmission Customer) or facility (e.g., Generator, Interface) located outside the NYCA with

the capability to generate or transmit electrical power, or the ability to control demand at the direction of the NYISO, measured in megawatts or (b) a set of Resources owned or controlled by an entity within a Control Area, not the NYCA, that also is the operator of such Control Area; and (2) for PJM, a generation resource located outside the metered boundaries of the PJM Region (as defined in the PJM Tariff) that meets the definition of Capacity Resource in the PJM Tariff or PJM's governing agreements filed with the Commission.

**"F PAR"** shall mean the phase angle regulator located at the Waldwick station on the F-2258 Waldwick-Hillsdale 230 kV line.

**"FERC"** or **"Commission"** shall mean the Federal Energy Regulatory Commission or any successor agency thereto.

**"Flowgate"** shall mean a representative modeling of facilities or groups of facilities that may act as potential constraint points. When used herein, Flowgate shall mean M2M Redispatch Flowgate, NY-NJ PAR Coordinated Flowgate, and Other Coordinated Flowgate.

**"Force Majeure"** shall mean an event of *force majeure* as described in Section 35. 20.1.

**"Generator to Load Distribution Factor"** or **"GLDF"** shall mean a generator's impact on a Flowgate while serving load in that generator's Balancing Authority Area.

**"Good Utility Practice"** shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the North American electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted by NERC.

**"Governmental Authority"** shall mean any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power.

**"ICCP"**, **"ISN"** and **"ICCP/ISN"** shall mean those common communication protocols adopted to standardize information exchange.

**"IDC"** shall mean the NERC Interchange Distribution Calculator used for identifying and requesting congestion management relief.

**“Indemnifying Party”** shall have the meaning stated in Section 35.20.3.

**“Indemnitee”** shall have the meaning stated in Section 35.20.3

**“Intellectual Property”** shall mean (i) ideas, designs, concepts, techniques, inventions, discoveries, or improvements, regardless of patentability, but including without limitation patents, patent applications, mask works, trade secrets, and know-how; (ii) works of authorship, regardless of copyright ability, including copyrights and any moral rights recognized by law; and (iii) any other similar rights, in each case on a worldwide basis.

**“Intentional Wrongdoing”** shall mean an act or omission taken or omitted by a Party with knowledge or intent that injury or damage could reasonably be expected to result.

**“Interconnected Reliability Operating Limit”** or **“IROL”** shall mean the value (such as MW, MVAR, Amperes, Frequency, or Volts) derived from, or a subset of, the System Operating Limits, which if exceeded, could expose a widespread area of the bulk electrical system to instability, uncontrolled separation(s) or cascading outages.

**“Interconnection”** shall mean a connection between two or more individual Transmission Systems that normally operate in synchronism and have interconnecting intertie(s).

**“Interconnection Facilities”** shall mean the Interconnection facilities described in Schedule A.

**“Intermediate Term Security Constrained Economic Dispatch”** shall mean PJM’s algorithm that performs various functions, including but not limited to forecasting dispatch and LMP solutions based on current and projected system conditions for up to several hours into the future.

**“ISO”** shall mean Independent System Operator.

**“JK Interface”** shall mean the transfer path comprised of the JK Ramapo-South Mahwah-Waldwick tie lines between PJM and NYISO.

**“kV”** shall mean kilovolt of electric potential.

**“LEC Adjusted Market Flow”** shall mean the real-time Market Flow incorporating the observed operation of the PARs at the Michigan-Ontario border.

**“Locational Marginal Price”** or **“LMP”** shall mean the market clearing price for energy at a given location in a Party’s RC Area, and **“Locational Marginal Pricing”** shall mean the processes related to the determination of the LMP.

**“Losses”** shall have the meaning stated in Section 35.20.3.

“**M2M**” shall mean the market-to-market coordination process set forth in Schedule D to this Agreement.

“**M2M Entitlement**” shall mean a Non-Monitoring RTO’s share of a M2M Redispatch Flowgate’s total capability to be used for settlement purposes that is calculated pursuant to Section 6 of Schedule D to this Agreement.

“**M2M Redispatch Flowgate**” shall mean Flowgates where constraints are jointly monitored and coordinated as defined and set forth in Schedule D to this Agreement.

“**Market Flows**” shall mean the calculated energy flows on a specified Flowgate as a result of dispatch of generating resources serving load within an RTO’s market.

“**Market Participant**” shall mean an entity that, for its own account, produces, transmits, sells, and/or purchases for its own consumption or resale capacity, energy, energy derivatives and ancillary services in the wholesale power markets. Market Participants include transmission service customers, power exchanges, Transmission Owners, load serving entities, loads, holders of energy derivatives, generators and other power suppliers and their designated agents.

“**Metered Quantity**” shall mean apparent power, reactive power, active power, with associated time tagging and any other quantity that may be measured by a Party’s Metering Equipment and that is reasonably required by either Party for Security reasons or revenue requirements.

“**Metering Equipment**” shall mean the potential transformers, current transformers, meters, interconnecting wiring and recorders used to meter any Metered Quantity.

“**Monitoring RTO**” shall mean the Party that has operational control of a Flowgate.

“**Multiregional Modeling Working Group**” or “**MMWG**” shall mean the NERC working group that is charged with multi-regional modeling.

“**Mutual Benefits**” shall mean the transient and steady-state support that the integrated generation and Transmission Systems in PJM and New York provide to each other inherently by virtue of being interconnected as described in Section 35.4 of this Agreement.

“**MVAR**” shall mean megavolt ampere of reactive power.

“**MW**” shall mean megawatt of capacity.

“**NAESB**” shall mean North American Energy Standards Board or its successor organization.

“**NERC**” shall mean the North American Electricity Reliability Corporation or its successor organization.

“**Network Resource**” shall have the meaning as provided in the NYISO OATT, for such resources located in New York, and the meaning as provided in the PJM OATT, for such resources located in PJM.

“**New Year Market Flow**” shall mean the Market Flow incorporating the transmission topology that includes all pre-existing Transmission Facilities and all new or upgraded Transmission Facilities whose impact on M2M Entitlements has been previously evaluated and incorporated, *and* all new or upgraded Transmission Facilities whose impact on M2M Entitlements is being evaluated in the current evaluation step.

“**Non-Monitoring RTO**” shall mean the Party that does not have operational control of a Flowgate.

“**Notice**” shall have the meaning stated in Section 35. 20.22.

“**NPCC**” shall mean the Northeast Power Coordinating Council, Inc., including the NPCC Cross Border Regional Entity (“CBRE”), or their successor organizations.

“**NY-NJ PARs**” shall mean, individually and/or collectively, the ABC PARs, the Ramapo PARs, and the Waldwick PARs, all of which are components of the NYISO – PJM interface.

“**NY-NJ PAR Coordinated Flowgate**” shall mean Flowgates where constraints, impacted by the NY-NJ PARs, are jointly monitored and coordinated as defined and set forth in Schedule D to this Agreement.

“**NYISO**” shall have the meaning stated in the preamble of this Agreement.

“**NYISO Code of Conduct**” shall mean the rules, procedures and restrictions concerning the conduct of the ISO directors and employees, contained in Attachment F to the NYISO OATT.

“**NYISO Market Monitoring Plan**” shall refer to Attachment O to the NYISO Services Tariff.

“**NYISO Tariffs**” shall mean the NYISO OATT and the NYISO Market Administration and Control Area Services Tariff (“Services Tariff”), collectively.

“**NYSRC**” shall mean the New York State Reliability Council.

“**NYSRC Reliability Rules**” shall mean the rules applicable to the operation of the New York Transmission System. These rules are based on Reliability Standards adopted by NERC and NPCC, but also include more specific and more stringent rules to reflect the particular requirements of the New York Transmission System.

**“O PAR”** shall mean the phase angle regulator located at the Waldwick station on the O-2267 Waldwick-Fairlawn 230kV line.

**“OASIS”** shall mean the Open Access Same-Time Information System required by FERC for the posting of market and transmission data on the Internet websites of PJM and NYISO.

**“OATT”** shall mean the applicable Open Access Transmission Tariffs on file with FERC for PJM and NYISO.

**“Operating Entity”** shall mean an entity that operates and controls a portion of the bulk transmission system with the goal of ensuring reliable energy interchange between generators, loads, and other operating entities.

**“Operating Instructions”** shall mean the operating procedures, steps, and instructions for the operation of the Interconnection Facilities established from time to time by the Coordination Committee or the PJM and NYISO individual procedures and processes and includes changes from time to time by the Coordination Committee to such established procedures, steps and instructions exclusive of the individual procedures.

**“Operational Base Flow”** or **“OBF”** shall mean an equal and opposite MW offset of power flows over the Waldwick PARs and ABC PARs to account for natural system flows over the JK Interface and the ABC Interface in order to facilitate the reliable operation of the NYISO and/or PJM transmission systems. The OBF is not a firm transmission service on either the NYISO transmission system or on the PJM transmission system. The OBF shall not result in charges from one Party to the other Party, or from one Party to the other Party’s Market Participants, except for the settlements described in the Real-Time Energy Market Coordination and Settlements provisions set forth in Sections 7 and 8 of Schedule D to this Agreement. In particular, the NYISO and its Market Participants shall not be subjected to PJM Regional Transmission Expansion Plan (“RTEP”) cost allocations as a result of the OBF.

**“Operating Reserve”** shall mean generation capacity or load reduction capacity which can be called upon on short notice by either Party to replace scheduled energy supply which is unavailable as a result of an unexpected outage or to augment scheduled energy as a result of unexpected demand or other contingencies.

**“Operational Control”** shall mean Security monitoring, adjustment of generation and transmission resources, coordinating and approval of changes in transmission status for maintenance, determination of changes in transmission status for reliability, coordination with other Balancing Authority Areas and Reliability Coordinators, voltage reductions and load shedding, except that each legal owner of generation and transmission resources continues to physically operate and maintain its own facilities.



“**OTDF**” shall mean the electric PTDF with one or more system facilities removed from service (*i.e.*, outaged) in the post-contingency configuration of a system under study.

“**Other Coordinated Flowgate**” shall mean a Flowgate where constraints are jointly monitored and coordinated as defined and set forth in Schedule D to this Agreement.

“**Outages**” shall mean the planned unavailability of transmission and/or generation facilities dispatched by PJM or the NYISO, as described in Section 35.9 of this Agreement.

“**PAR**” shall mean phase angle regulator.

“**PAR Shift Factor**” or “**PSF**”, shall mean the PAR’s impact on a Flowgate measured as the ratio of Flowgate flow change in MW to PAR schedule change in MW.

“**Party**” or “**Parties**” refers to each party to this Agreement or both, as applicable.

“**PJM**” has the meaning stated in the preamble of this Agreement.

“**PJM Code of Conduct**” shall mean the code of ethical standards, guidelines and expectations for PJM’s employees, officers and Board Members in their transactions and business dealings on behalf of PJM as posted on the PJM website and as may be amended from time to time.

“**PJM Tariffs**” shall mean the PJM OATT and the PJM Amended and Restated Operating Agreement, collectively.

“**Power Transfer Distribution Factor**” or “**PTDF**” shall mean a measure of the responsiveness or change in electrical loadings on Transmission Facilities due to a change in electric power transfer from one area to another, expressed in percent (up to 100%) of the change in power transfer in the pre-contingency configuration of a system under study.

“**Qualified Resource**” shall mean a generator that can be effectively committed, decommitted and/or redispatched to relieve a M2M Redispatch Flowgate or Other Coordinated Flowgate. Generators that cannot or do not follow commitment or dispatch instructions, including but not limited to generators with no difference between their historically offered minimum and maximum operating limits and generators with intermittent fuel sources, are not considered Qualified Resources.

“**Ramapo Interface**” shall mean the transfer path comprised of the 5018 Hopatcong-Ramapo 500 kV tie line between PJM and NYISO.

“**Ramapo PARs**” shall mean the 3500 PAR and 4500 PAR that control flow on the Ramapo Interface.

**“Real-Time Commitment”** shall mean NYISO’s multi-period security constrained unit commitment and dispatch model, as defined in the NYISO Tariffs.

**“Reference Year Market Flow”** shall mean the Market Flow based on a transmission topology that includes all pre-existing Transmission Facilities and all new or upgraded Transmission Facilities whose impact on M2M Entitlements has been previously evaluated and incorporated.

**“Region”** shall mean the Control Areas and Transmission Facilities with respect to which a Party serves as RTO or Reliability Coordinator under NERC policies and procedures.

**“Regulatory Body”** shall have the meaning stated in Section 35.20.21.

**“Reliability Coordinator”** or **“RC”** shall mean the entity that is the highest level of authority who is responsible for the reliable operation of the Bulk Electric System, has the wide area view of the Bulk Electric System, and has the operating tools, processes and procedures, including the authority to prevent or mitigate emergency operating situations in both next day analysis and real-time operations. The Reliability Coordinator has the purview that is broad enough to enable the calculation of Interconnection Reliability Operating Limits, which may be based on the operating parameters of transmission systems beyond any Transmission Operator’s vision.

**“Reliability Coordinator Area”** shall mean that portion of the Bulk Electric System under the purview of the Reliability Coordinator.

**“Reliability Standards”** shall mean the criteria, standards, rules and requirements relating to reliability established by a Standards Authority.

**“RFC”** shall mean ReliabilityFirst Corporation.

**“RTO”** shall mean Regional Transmission Organization. For ease of reference, the New York Independent System Operator, Inc., may be referred to as an RTO in this Agreement and the NYISO and PJM may be referred to collectively as the “RTOs” or the “participating RTOs.”

**“Schedule”** shall mean a schedule attached to this Agreement and all amendments, supplements, replacements and additions hereto.

**“SDX System”** shall mean the system used by NERC to exchange system data.

**“Security”** shall mean the ability of the electric system to withstand sudden disturbances including, without limitation, electric short circuits or unanticipated loss of system elements.

**“Security Limits”** shall mean operating electricity system voltage limits, stability limits and thermal ratings.

**“SERC”** shall mean SERC Reliability Corporation or its successor organization.

**“Shadow Price”** shall mean the marginal value of relieving a particular constraint which is determined by the reduction in system cost that would result from an incremental relaxation of that constraint.

**“Standards Authority”** shall mean NERC, and the NERC regional entities with governance over PJM and NYISO, any successor thereof, or any other agency with authority over the Parties regarding standards or criteria to either Party relating to the reliability of Transmission Systems.

**“Standards Authority Standards”** shall have the meaning stated in Section 35.5.2.

**“State Estimator”** shall mean a computer model that computes the state (voltage magnitudes and angles) of the Transmission System using the network model and real-time measurements. Line flows, transformer flows, and injections at the busses are calculated from the known state and the transmission line parameters. The State Estimator has the capability to detect and identify bad measurements.

**“Storm Watch”** shall mean actual or anticipated severe weather conditions under which region-specific portions of the New York State Transmission System are operated in a more conservative manner by reducing transmission transfer limits.

**“Supplying Party”** shall have the meaning stated in Section 35.8.2.

**“System Operating Limit”** or **“SOL”** shall mean the value (such as MW, MVAR, Amperes, Frequency, or Volts) that satisfies the most limiting of the prescribed operating criteria for a specified system configuration to ensure operation within acceptable reliability criteria.

**“Target Value”** shall have the meaning stated in Section 7.2 of Schedule D to this Agreement.

**“Third Party”** refers to any entity other than a Party to this Agreement.

**“TLR”** shall mean the NERC Transmission Loading Relief Procedures used in the Eastern Interconnection as specified in NERC Operating Policies.

**“Transmission Adjusted Market Flow”** shall mean the result of applying the M2M Entitlement Transmission Adjusted Market Flow Calculation to the New Year Market Flow. The resulting Transmission Adjusted Market Flow is then used as the Reference Year Market Flow in all subsequent, iterative, evaluations.

**“Transmission Operator”** shall mean the entity responsible for the reliability of its “local” Transmission System, and that operates or directs the operations of the Transmission Facilities.

**“Transmission Owner”** shall mean an entity that owns Transmission Facilities.

**“Transmission System”** shall mean the facilities controlled or operated by PJM or NYISO as designated by each in their respective OATTs.

**“Transmission Facility”** shall mean a facility for transmitting electricity, and includes any structures, equipment or other facilities used for that purpose as defined in the Parties respective OATTs.

**“Transmission Reliability Margin”** or **“TRM”** shall mean the amount of transmission transfer capability necessary to provide reasonable assurance that the interconnected transmission network will be secure. TRM accounts for the inherent uncertainty in system conditions and the need for operating flexibility to ensure reliable system operation as system conditions change.

**“Total Transfer Capability”** or **“TTC”** shall mean the amount of electric power that can be moved or transferred reliably from one area to another area of the interconnected Transmission Systems by way of all transmission lines (or paths) between those areas under specified system conditions.

**“Voltage and Reactive Power Coordination Procedures”** are the procedures under Section 35.11 for coordination of voltage control and reactive power requirements.

**“Waldwick PARs”** shall mean the E PAR, F PAR and O PAR that control flow on the JK Interface.

## **35.2.2 Rules of Construction.**

### **35.2.2.1 No Interpretation Against Drafter.**

In addition to their roles as RTOs/ISOs and Reliability Coordinators, and the functions and responsibilities associated therewith, the Parties agree that each Party participated in the drafting of this Agreement and was represented therein by competent legal counsel. No rule of construction or interpretation against the drafter shall be applied to the construction or in the interpretation of this Agreement.

### **35.2.2.2 Incorporation of Preamble and Recitals.**

The Preamble and Recitals of this Agreement are incorporated into the terms and conditions of this Agreement and made a part thereof.

### **35.2. 2.3 Meanings of Certain Common Words.**

The word “including” shall be understood to mean “including, but not limited to.” The word “Section” refers to the applicable section of this Agreement and, unless otherwise stated, includes all subsections thereof. The word “Article” refers to articles of this Agreement.

### **35.2. 2.4 Standards Authority Standards, Policies, and Procedures.**

All activities under this Agreement will meet or exceed the applicable Standards Authority standards, policies, or procedures as revised from time to time.

### **35.2. 2.5 Scope of Application.**

Each Party will perform this Agreement in accordance with its terms and conditions with respect to each Control Area for which it serves as ISO or RTO and, in addition, each Control Area for which it serves as Reliability Coordinator.

### **35.3 Overview, Administration, and Relationship With Other Agreements**

#### **35.3.1 Purpose of This Agreement**

This Agreement provides for the reliable operation of the interconnected PJM and NYISO Transmission Systems in accordance with the requirements of the Standards Authority and efficient market operations through M2M coordination. This Agreement establishes a structure and framework for the following functions related to the reliability of interconnected operations between the Parties and efficient joint market operations:

- 35.3.1.1 Developing and issuing Operating Instructions and Security Limits;
- 35.3.1.2 Coordinating operation of their respective Transmission Systems;
- 35.3.1.3 Developing and adopting operating criteria and standards;
- 35.3.1.4 Conducting operating performance reviews of the Interconnection Facilities;
- 35.3.1.5 Implementing each Party's respective Standards Authority requirements with regard to the PJM and NYISO Transmission Systems;
- 35.3.1.6 Exchanging information and coordination regarding system planning;
- 35.3.1.7 Providing mutual assistance in an Emergency and during system restoration;
- 35.3.1.9 Performance of certain other arrangements among the Parties for coordination of their systems, including, but not limited to performance consistent with the arrangements set forth in the existing agreements listed in Section 35.21 and the M2M transmission congestion coordination process that is set forth in the attached Market-to-Market Coordination Schedule and Section 35.12 below;  
and
- 35.3.1.9 Performance of certain other arrangements among the Parties for administration of this Agreement.

The Parties shall, consistent with Standards Authority requirements and the Parties' respective tariffs, rules and standards, including with respect to the NYISO, the NYSRC Reliability Rules, to the maximum extent consistent with the safe and proper operation of their respective Reliability Coordinator Area and Balancing Authority Area and necessary coordination with other interconnected systems, operate their systems in accordance with the procedures and principles set forth in this Agreement.

### **35.3.2 Establishment and Functions of Coordination Committee**

To administer the arrangements under this Agreement, the Parties shall establish a Coordination Committee. The Coordination Committee shall undertake to jointly develop and authorize Operating Instructions to implement the intent of this Agreement with respect to reliable Transmission System operations.

#### **35.3.2.1 The Coordination Committee shall have the following duties and responsibilities:**

35.3.2.1.1 Determine the date(s) for implementing the various parts of this Agreement and undertake to jointly develop and authorize Operating Instructions to implement the intent of this Agreement;

35.3.2.1.2 Meet periodically to address any issues associated with this Agreement that a Party may raise and to determine whether any changes to this Agreement, or procedures employed under this Agreement, would enhance reliability, efficiency or economy;

35.3.2.1.3 The matters to be addressed at all meetings shall be specified in an agenda, which shall contain items specified by either Party in advance of the meeting

and sent to the representatives of the other Party. All decisions of the  
Coordination Committee must be unanimous;

35.3.2.1.4 Conduct additional meetings upon Notice given by any Party, provided that  
the Notice specifies the reason(s) for requesting the meeting;

35.3.2.1.5 Initiate process reviews at the request of any Party for activities undertaken in  
the performance of this Agreement; and

35.3.2.1.6 In its discretion, take other actions, including the establishment of  
subcommittees and/or task forces, to address any issues that the Coordination  
Committee deems necessary consistent with this Agreement.

#### **35.3.2.2 Coordination Committee Representatives**

Within 30 days of the Effective Date, each Party shall designate a primary and alternate  
representative to the Coordination Committee and shall inform the other Parties of its designated  
representatives by Notice. A Party may change its designated Coordination Committee  
representatives at any time, provided that timely Notice is given to the other Parties. Each  
designated Coordination Committee representative shall have the authority to make decisions on  
issues that arise during the performance of this Agreement. The costs and expenses associated  
with each Party's designated Coordination Committee representatives shall be the responsibility  
of the designating Party.

#### **35.3.2.3 Limitations Upon Authority of Coordination Committee**

The Coordination Committee is not authorized to modify or amend any of the terms of  
this Agreement. The Coordination Committee is also not authorized to excuse any obligations  
under this Agreement or waive any rights pertaining to this Agreement. The Coordination



Committee has no authority to commit either Party to any expenditure that is beyond those expenses described in this Agreement.

### **35.3.3 Ongoing Review and Revisions**

As set forth in Section 35.7, the Parties have agreed to the coordination and exchange of data and information under this Agreement to enhance system reliability and efficient market operations as systems exist and are contemplated as of the Effective Date. The Parties expect that these systems and the technology applicable to these systems and to the collection and exchange of data will change from time to time throughout the term of this Agreement. The Parties agree that the objectives of this Agreement can be fulfilled efficiently and economically only if the Parties, from time to time, review and, as appropriate, revise the requirements stated herein in response to such changes, including deleting, adding, or revising requirements and protocols. Each Party will negotiate in good faith in response to such revisions the other Party may propose from time to time. Nothing in this Agreement, however, shall require any Party to reach agreement with respect to any such changes, or to purchase, install, or otherwise implement new equipment, software, or devices, or functions, except as required to perform this Agreement.

## **35.4 Mutual Benefits**

### **35.4.1 No Charge for Mutual Benefits of Interconnection.**

The PJM Transmission System and the New York Transmission System, by virtue of being connected with a much larger Interconnection, share Mutual Benefits such as transient and steady-state support. PJM and NYISO shall not charge one another for such Mutual Benefits.

### **35.4.2 Maintenance of Mutual Benefits.**

The Parties shall endeavor to operate or direct the operation of the Interconnection Facilities to realize the Mutual Benefits. The Parties recognize circumstances beyond their control, such as a result of operating configurations, contingencies, maintenance, or actions by third parties, may result in a reduction of Mutual Benefits.

## **35.5 Interconnected Operation**

### **35.5.1 Obligation to Remain Interconnected**

The Parties shall at all times during the term of this Agreement operate or direct the operation of their respective Transmission Systems so that they remain interconnected except:

35.5.1.1 During the occurrence of an event of Force Majeure which renders a Party unable to remain interconnected;

35.5.1.2 When an Interconnection is opened in accordance with the terms of an Operating Instruction or, if the Operating Instruction does not anticipate a particular circumstance where there is an imminent risk of equipment failure, or of danger to personnel or the public, or a risk to the environment, or a risk to system Security or reliability of a Transmission System, which cannot be avoided through Good Utility Practice; or

35.5.1.3 During planned maintenance where notice has been given in accordance with outage procedures as implemented by the Coordination Committee.

### **35.5.2 Adherence to Standards Authority Standards, Policies and Procedures**

The Parties are participants in multiple Standards Authorities and are required to comply with specified standards, criteria, guides and procedures (“Standards Authority Standards”).

Such Standards Authority Standards detail the many coordinating functions carried out by the parties, and this Agreement is intended to enhance those arrangements. Such Standards

Authority Standards include, and the Parties agree to, the provision of “maximum reasonable assistance” to a neighboring Balancing Authority Area. Such maximum reasonable assistance will not normally require the shedding of firm load.

### **35.5.3 Notification of Circumstances**

In the event that an Interconnection Facility is opened or if the Interconnection Facility transfer capability is changed, or if a Party plans to initiate the opening of an Interconnection Facility, or to change the transfer capability of the Interconnection Facilities, such Party shall immediately provide the other Party with notification indicating the circumstances of the opening or transfer capability change and expected restoration time, in accordance with procedures implemented by the Coordination Committee.

### **35.5.4 Compliance with Decisions of the Coordination Committee Direction**

PJM shall direct the operation of the PJM Transmission System and the NYISO shall direct the operation of the NYISO Transmission System in accordance with the obligations of their respective tariffs, rules and standards and applicable directions of the Coordination Committee that conform with their respective tariffs, rules and standards, except where prevented by Force Majeure. The Coordination Committee's scope includes making decisions and jointly developing and approving Operating Instructions for many expected circumstances within the provisions of the Parties' respective tariffs, rules and standards. If decisions of the Coordination Committee do not anticipate a particular circumstance, the Parties shall act in accordance with Good Utility Practice.

### **35.5.5 Control and Monitoring**

Each Party shall provide or arrange for 24-hour control and monitoring of their portion of the Interconnection Facilities.

### **35.5.6 Reactive Transfer and Voltage Control**

The Parties agree to determine reactive transfers and control voltages in accordance with the provisions of their respective Standards Authority Standards. Real and reactive power will be transferred over the Interconnection Facilities as described in Section 35.11.

### **35.5.7 Inadvertent Exchanges**

Inadvertent power transfers on all Interconnection Facilities shall be controlled and accounted for in accordance with the standards and procedures developed by the Standards Authorities and the system operators of each Party to this Agreement.

### **35.5.8 Adoption of Standards**

The Parties hereby agree to adopt, enforce and comply with all applicable requirements and standards that will safeguard the reliability of the interconnected Transmission Systems.

Such reliability requirements and Reliability Standards shall be:

- 35.5.8.1 Adopted and enforced for the purpose of providing reliable service;
- 35.5.8.2 Not unduly discriminatory in substance or application;
- 35.5.8.3 Applied consistently to both Parties with the exception of subsection 35.5.8.5 below;
- 35.5.8.4 Consistent with the Parties' respective obligations to applicable Standards Authorities including, without limitation, any relevant requirements or guidelines from each of NERC, or its Regional Councils' or any other Standards Authority or regional transmission group to which either of the Parties is required to adhere; and
- 35.5.8.5 With respect to the NYISO, consistent with the NYSRC Reliability Rules.

### **35.5.9 New York - PJM IROL Interface**

The Parties share a joint IROL related to transfers related to the interconnecting transmission lines between their respective Reliability Coordinator Areas and Balancing Authority Areas. This IROL is adhered to in order to maintain acceptable steady-state and transient performance of the NYISO and PJM Transmission Systems. Both Parties will monitor this limit in accordance with this Agreement and independently determine the applicable import and export transfer limits. Both Parties agree to operate the interface to the most conservative limits developed in real-time and the day-ahead planning process. These operating limits shall be determined in accordance with Standards Authority Standards. Both Parties will take coordinated corrective actions to avoid a violation of the IROL. If a violation occurs, actions will be taken to clear the violation as soon as possible, and in accordance with Standards Authority Standards.

### **35.5.10 Coordination and Exchange of Information Regarding System Planning**

The Parties shall exchange information and coordinate regarding system planning and inter-regional planning activities in a manner consistent with Standards Authority Standards and consistent with the requirements of confidentiality agreements or rules binding upon either of the Parties.

## **35.6 Emergency Assistance**

### **35.6.1 Emergency Assistance**

Both Parties shall exercise due diligence to avoid or mitigate an Emergency to the extent practical in accordance with applicable requirements imposed by the Standards Authority or contained in the PJM Tariffs and NYISO Tariffs. In avoiding or mitigating an Emergency, both Parties shall strive to allow for commercial remedies, but if commercial remedies are not successful or practical, the Parties agree to be the suppliers of last resort to maintain reliability on the system. For each hour during which Emergency conditions exist in a Party's Balancing Authority Area, that Party (while still ensuring operations within applicable Reliability Standards) shall determine what commercial remedies are available and make use of those that are practical and needed to avoid or mitigate the Emergency before any Emergency Energy is scheduled in that hour.

### **35.6.2 Emergency Operating Guides**

The Parties agree to jointly develop, maintain, and share operating guides to address credible Emergency conditions.

### **35.6.3 Emergency Energy**

Each Party shall, to the maximum extent it deems consistent with the safe and proper operation of its respective Transmission System, provide Emergency Energy to the other Party in accordance with the provisions of the Inter Control Area Transactions Agreement.

### **35.6.4 Costs of Compliance**

Each Party shall bear its own costs of compliance with this Article except that the cost of Emergency Energy purchased by one Party at the request of the other Party shall be reimbursed

in accordance with the Inter Control Area Transaction Agreement. Nothing in this Agreement shall require a Party to purchase Emergency Energy if the Party cannot recover the costs under an OATT or other agreement or lawful arrangement.

### **35.6.5 Emergency Conditions**

If an emergency condition exists in either the NYCA or PJM, the NYISO operator or PJM dispatcher may request that the NY/PJM Interconnection Facilities be adjusted to assist directing power flows between the NYCA and PJM to alleviate the emergency condition. The taps on the ABC PARs, Ramapo PARs, and Waldwick PARs may be moved either in tandem or individually as needed to mitigate the emergency condition.

The NYISO and/or PJM shall implement the appropriate emergency procedures of either the NYISO or PJM, as appropriate, during system emergencies experienced on either the NYISO or PJM system. The NYISO and PJM shall have the authority to implement their respective emergency procedures in any order required to ensure overall system reliability.



## **35.7 Exchange of Information**

### **35.7.1 Exchange of Operating Data**

PJM and NYISO agree to exchange and share such information as may be required from time to time for the Parties to perform their duties and fulfill their obligations under this Agreement, subject to the requirements of existing confidentiality agreements or rules binding upon either of the Parties, including the NYISO Code of Conduct as set forth in Attachment F to the NYISO OATT, Article 6 of the NYISO Services Tariff, the PJM Code of Conduct and PJM Data Confidentiality Regional Stakeholder Group. Such information may consist of the following:

- 35.7.1.1 Information required to develop Operating Instructions;
- 35.7.1.2 Transmission System facility specifications and modeling data required to perform Security analysis;
  - 35.7.1.2.1 The Parties will exchange their detailed EMS models in CIM format or another mutually agreed upon electronic format, and include the ICCP/ISN mapping files, identification of individual bus loads, seasonal equipment ratings and one-line drawings to expedite the model conversion process, upon request. The Parties will also exchange updates that represent the incremental changes that have occurred to the EMS model since the most recent update in an agreed upon electronic format;
- 35.7.1.3 Functional descriptions and schematic diagrams of Transmission System protective devices and communication facilities;
- 35.7.1.4 Ratings data and associated ratings methodologies for the Interconnection Facilities;

- 35.7.1.5 Telemetry points, equipment alarms and status points required for real-time monitoring of Security dispatch;
- 35.7.1.6 Data required to reconcile accounts for inadvertent energy, and for Emergency Energy transactions;
- 35.7.1.7 Transmission System information that is consistent with the information sharing requirements imposed by the Standards Authority;
- 35.7.1.8 Such other information as may be required for the Parties to maintain the reliable operation of their interconnected Transmission Systems and fulfill their obligations under this Agreement and to any Standards Authority of which either Party is a member, provided, however, that this other information will be exchanged only if that can be done in accordance with applicable restrictions on the disclosure of information to any Market Participant;
- 35.7.1.9 Additional information required for the Parties to administer the M2M coordination process set forth in Schedule D to this Agreement, including:
  - a. actual flows on Flowgates;
  - b. actual limits for Flowgates;
  - c. *ex ante* Shadow Prices on constrained Flowgates;
  - d. requested relief during a Coordination Event;
  - e. Market Flow calculation data (generator shift factors, load shift factors, interchange PTDFs, phase angle regulator OTDFs, generator output, load, net interchange);
  - f. Market Flows on M2M Redispatch Flowgates and Other Coordinated Flowgates; and

- g. binding constraint thresholds (the shift factor thresholds used to identify the resource(s) available to relieve a transmission constraint).

35.7.1.10 Additional information required for the Parties to administer CTS, including:

- a. interchange transaction offer attributes (frequency of scheduling, offer type, source and sink);
- b. forecasted interchange schedules;
- c. forecasted prices; and
- d. CTS interface limits.

### **35.7.2 Confidentiality**

The Party receiving information pursuant to this Section 35.7 shall treat such information as confidential subject to the terms and conditions of set forth in Section 35.8 of this Agreement. The obligation of each Party under this Section 35.7.2 continues and survives the termination of this Agreement by seven (7) years.

Notwithstanding anything to the contrary in this Agreement, EMS models and the data used for EMS modeling exchanged pursuant to Section 35.7.1 may be released by the receiving Party to its Transmission Owners for operational and reliability compliance purposes. The respective Party's Transmission Owners shall be required to maintain the EMS models and the data as confidential in a manner consistent with or superior to the terms and conditions contained herein.

### **35.7.3 Data Exchange Contact**

To facilitate the exchange of all such data, each Party will designate to the other Party's Vice President of Operations a contact to be available twenty-four (24) hours each day, seven (7) days per week, and an alternate contact to act in the absence or unavailability of the primary

contact, to respond to any inquiries. With respect to each contact and alternate, each Party shall provide the name, telephone number, e-mail address, and fax number. Each Party may change a designee from time to time by Notice to the other Party's Vice President of Operations.

The Parties agree to exchange data in a timely manner consistent with existing defined formats or such other formats to which the Parties may agree. Each Party shall provide notification to the other Party thirty (30) days prior to modifying an established data exchange format.

#### **35.7.4 Cost of Data and Information Exchange**

Each Party shall bear its own cost of providing information to the other Party.

#### **35.7.5 Other Data**

The Parties may share other data not listed in this Section 35.7 as mutually agreed upon by the Parties.

## **35.8 Confidential Information**

### **35.8.1 Definition**

The term “Confidential Information” shall mean: (a) all information, whether furnished before or after the mutual execution of this Agreement, whether oral, written or recorded/electronic, and regardless of the manner in which it is furnished, that is marked “confidential” or “proprietary” or which under all of the circumstances should be treated as confidential or proprietary; (b) any data or information deemed confidential under some other form of confidentiality agreement or tariff provided to a Party by a generator; (c) all reports, summaries, compilations, analyses, notes or other information of a Party hereto which are based on, contain or reflect any Confidential Information; (d) applicable material deemed Confidential Information pursuant to the PJM Data Confidentiality Regional Stakeholder Group, the PJM Code of Conduct, the NYISO Code of Conduct, or Article 6 of the NYISO’s Services Tariff; (e) Protected Information under the NYISO Market Monitoring Plan; and (f) any information which, if disclosed by a transmission function employee of a utility regulated by the FERC to a market function employee of the same utility system, other than by public posting, would violate the FERC’s Standards of Conduct set forth in 18 C.F.R. § 37 et. seq. and the Parties’ Standards of Conduct on file with the FERC.

### **35.8.2 Protection**

During the course of the Parties’ performance under this Agreement, a Party may receive or become exposed to Confidential Information. Except as set forth herein, the Parties agree to keep in confidence and not to copy, disclose, or distribute any Confidential Information or any part thereof, without the prior written permission of the Party supplying such Confidential Information (“Supplying Party”). In addition, each Party shall require that its employees, its

subcontractors and its subcontractors' employees and agents to whom Confidential Information is exposed agree to be bound by the terms and conditions contained herein. Each Party shall be responsible for any breach of this section by its employees, its subcontractors and its subcontractors' employees and agents.

### **35.8.3 Treatment of Confidential Information**

The Party receiving the Confidential Information shall treat the information in the same confidential manner as its governing documents require it to treat the confidential information of its own members and Market Participants.

### **35.8.4 Statute of Limitations**

The receiving Party shall not release the Supplying Party's Confidential Information until expiration of the time period controlling the Supplying Party's disclosure of the same information, as such period is described in the Supplying Party's governing documents from time to time. As of the Effective Date, this period is three (3) months with respect to bid or pricing data and seven (7) calendar days for transmission data after the event ends. The obligation of each Party under this Section 35.8 continues and survives the termination of this Agreement by seven (7) years.

### **35.8.5 Scope**

This obligation of confidentiality shall not extend to data and information that, at no fault of a recipient Party, is or was: (a) in the public domain or generally available or known to the public; (b) disclosed to a recipient by a non-Party who had a legal right to do so; (c) independently developed by a Party or known to such Party prior to its disclosure hereunder; and

(d) which is required to be disclosed by subpoena, law, or other directive of a Governmental Authority.

#### **35.8.6 Standard of Care**

Each Party shall protect Confidential Information from disclosure, dissemination, or publication. Each Party agrees to restrict access to all Confidential Information to only those persons authorized to view such information: (a) by the FERC's Standards of Conduct, (b) OASIS posting requirements in 18 C.F.R. § § 37.1-37.8 and, (c) if more restrictive, by such Party's board resolutions, tariff provisions, or other internal policies governing access to, and the sharing of, energy market or Transmission System information.

#### **35.8.7 Required Disclosure**

If a Governmental Authority requests or requires a Party to disclose any Confidential Information ("Disclosing Party"), such Disclosing Party shall provide the Supplying Party with prompt written notice of such request or requirement and will assist any efforts by the Supplying Party to contest disclosure, or seek an appropriate protective order or other appropriate remedy. The Supplying Party may also choose to waive compliance with the provisions of this Agreement. Notwithstanding the presence or absence of a protective order or a waiver, a Disclosing Party shall disclose only such Confidential Information as it is legally required to disclose. Each Party shall use reasonable efforts to obtain reliable assurances that confidential treatment will be accorded to Confidential Information required to be disclosed.

If a Disclosing Party is required to disclose any Confidential Information under this section, a Supplying Party shall have the right to immediately suspend supplying such Confidential Information to the Disclosing Party. In that event, the Parties shall meet as soon as practicable in an effort to resolve any and all issues associated with the required disclosure of

such Confidential Information, and the likelihood of additional disclosures of such Confidential Information.

### **35.8.8 Return of Confidential Information**

All Confidential Information provided by the Supplying Party shall be returned by the receiving Party to the Supplying Party promptly upon request. Upon termination or expiration of this Agreement, a Party shall use reasonable efforts to destroy, erase, delete or return to the Supplying Party any and all written or electronic Confidential Information. In no event shall a receiving Party retain copies of any Confidential Information provided by a Supplying Party.

### **35.8.9 Equitable Relief**

Each Party acknowledges that remedies at law are inadequate to protect against breach of the covenants and agreements in this Article, and hereby in advance agrees, without prejudice to any rights to judicial relief that it may otherwise have, to the granting of equitable relief, including injunction, in the Supplying Party's favor without proof of actual damages. In addition to the equitable relief referred to in this section, a Supplying Party shall only be entitled to recover from a receiving Party any and all gains wrongfully acquired, directly or indirectly, from a receiving Party's unauthorized disclosure of Confidential Information.

### **35.8.10 Existing Confidential Information Obligations**

Notwithstanding anything to the contrary in this Agreement, the parties shall have no obligation to disclose Confidential Information or data to the extent such disclosure of information or data would be a violation of or inconsistent with the terms and conditions of the PJM or NYISO Amended and Restated Operating Agreement, either Party's OATT, any other



agreement, or applicable state or federal regulation or law. The obligation of each Party under this section continues and survives the termination of this Agreement by seven (7) years.

## **35.9 Coordination of Scheduled Outages**

### **35.9.1 Coordinating Outages Operating Protocols**

The Parties will jointly develop protocols for coordinating transmission and generation Outages to maintain reliability. The Parties agree to the following with respect to transmission and generation Outage coordination.

#### **35.9.1.1 Exchange of Transmission and Generation Outage Schedule Data**

Upon a Party's request, the projected status of generation and transmission availability will be communicated between the Parties, subject to data confidentiality agreements. The Parties shall exchange the most current information on proposed Outage information and provide a timely response on potential impacts of proposed Outages. The Parties shall select a mutually agreeable common format for the exchange of this information.

#### **35.9.1.2 Evaluation and Coordination of Transmission and Generation Outages**

The Parties analyze planned critical facility maintenance to determine its effects on the reliability of the Transmission System. The Parties will work together to resolve Outage conflicts and work with the facility owner(s), as necessary, to provide remedial steps.

The Parties will notify each other of emergency maintenance and forced outages as soon as possible after these conditions are known. The Parties will evaluate the impact of emergency and forced outages on the Parties' systems to develop remedial steps as necessary.

Unforeseen changes in scheduled outages may require additional review. Each Party will consider the impact of these changes on the other Party's system reliability in addition to its own. The Parties will contact each other as soon as possible if these changes result in unacceptable system conditions to develop remedial steps as necessary.

## **35.10 Coordination of Transmission Planning Studies**

### **35.10.1 Scope of Activities:**

Transmission planning activities will be coordinated in accordance with the Amended and Restated Northeast ISO/RTO Planning Coordination Protocol (“Protocol”), between and among PJM Interconnection, L.L.C., the New York Independent System Operator, Inc. and ISO New England Inc., effective as of December 12, 2004 as amended on July 10, 2013.

### **35.10.2 Allocation of Costs of Approved Interregional Transmission Projects**

The costs of Interregional Transmission Projects, as defined in the Protocol, evaluated under the Protocol and selected by PJM and NYISO (the “Regions”) in their regional transmission plans for purposes of cost allocation under their respective tariffs shall, when applicable, be allocated to the PJM Region and the NYISO Region in accordance with the cost allocation principles of FERC Order No. 1000, as follows:

- (a) To be eligible for interregional cost allocation pursuant to this Section 35.10.2, an Interregional Transmission Project must be selected in both the PJM and NYISO regional transmission plans for purposes of cost allocation pursuant to agreements and tariffs on file at FERC for each Region, and must be planned for construction in both the PJM region and the NYISO Region.
- (b) The share of the costs of an Interregional Transmission Project allocated to a Region will be determined by the ratio of the present value of the estimated costs of such Region’s displaced regional transmission project or projects to the total of the present values of the estimated costs of the displaced regional transmission projects in the Regions that have selected the Interregional Transmission Project in their regional transmission plans.

- (c) The present values of the estimated costs of each Region's displaced regional transmission project shall be based on a common base date that will be the beginning of the calendar month of the cost allocation analysis for the subject Interregional Transmission Project (the "Base Date").
- (d) In order to perform the analysis in Section 35.10.2(b) above, the estimated cost of the displaced regional transmission projects shall specify the year's dollars in which those estimates are provided.
- (e) The present value analysis for all displaced regional transmission projects shall use a common discount rate. PJM and NYISO, in consultation with their respective transmission owners, and NYISO in consultation with other stakeholders, shall agree on the discount rate to be used for the present value analysis.
- (f) PJM and NYISO, in consultation with the transmission owners in their respective regions, and NYISO in consultation with other stakeholders, shall review and determine that the cost estimates of the displaced regional transmission projects have been determined in a comparable manner prior to applying this cost allocation.
- (g) No cost shall be allocated to a Region that has not selected the Interregional Transmission Project in its regional transmission plan.
- (h) When a portion of an Interregional Transmission Project evaluated under the Protocol is included by a region (Region 1) in its regional transmission plan but there is no regional need or displaced regional transmission project in Region 1 and the neighboring region (Region 2) has a regional need or displaced regional

project for the Interregional Transmission Project and selects the Interregional Transmission Project in its regional transmission plan, all of the costs of the Interregional Transmission Project shall be allocated to Region 2 in accordance with the methodology in this Section 35.10.2 and none of the costs shall be allocated to Region 1.

- (i) The portion of the costs allocated to a region pursuant to this Section 35.10.2 shall be further allocated to the transmission customers within such Region pursuant to the applicable provisions of the region's tariffs and, if applicable, agreements on file with FERC.
- (j) The following example illustrates the cost allocation for such an Interregional Transmission Project:
  - A cost allocation analysis of the costs of Interregional Transmission Project Z is to be performed during a given month establishing the beginning of that month as the Base Date.
  - Region A has identified a reliability need in its region and has selected a transmission project (Project X) as the preferred solution in its regional plan. The estimated cost of Project X is: Cost (X), provided in a given year's dollars. The number of years from the Base Date to the year associated with the cost estimate of Project (X) is: N(X).
  - Region B has identified a reliability need in its region and has selected a transmission project (Project Y) as the preferred solution in its Regional Plan. The estimated cost of Project Y is: Cost (Y), provided in a given year's dollars. The number of years from the Base Date to the year associated with the cost

estimate of Project (Y) is:  $N(Y)$ .

- Regions A and B, through the interregional planning process have determined that an Interregional Transmission Project (Project Z) will address the reliability needs in both regions more efficiently and cost-effectively than the separate regional projects. The estimated cost of Project Z is:  $\text{Cost (Z)}$ . Regions A and B have each determined that Interregional Transmission Project Z is the preferred solution to their reliability needs and have adopted that Interregional Transmission Project in their respective regional plans in lieu of Projects X and Y, respectively. If Regions A and B have agreed to bear the costs of upgrades in other affected transmission planning regions, these costs will be considered part of  $\text{Cost (Z)}$ .
- The discount rate used for all displaced regional transmission projects is:  $D$
- Based on the foregoing assumptions, the following formulas will be used:
  - Present Value of Cost (X) =  $\text{PV Cost (X)} = \text{Cost (X)} / (1+D)^{N(X)}$
  - Present Value of Cost (Y) =  $\text{PV Cost (Y)} = \text{Cost (Y)} / (1+D)^{N(Y)}$
  - Cost Allocation to Region A =  $\text{Cost (Z)} \times \text{PV Cost (X)} / [\text{PV Cost (X)} + \text{PV Cost (Y)}]$
  - Cost Allocation to Region B =  $\text{Cost (Z)} \times \text{PV Cost (Y)} / [\text{PV Cost (X)} + \text{PV Cost (Y)}]$
- Applying those formulas, if:
  - $\text{Cost (X)} = \$60 \text{ Million and } N(X) = 8.25 \text{ years}$
  - $\text{Cost (Y)} = \$40 \text{ Million and } N(Y) = 4.50 \text{ years}$
  - $\text{Cost (Z)} = \$80 \text{ Million}$
  - $D = 7.5\% \text{ per year}$
  - Then:
    - $\text{PV Cost (X)} = 60 / (1+0.075)^{8.25} = 33.039 \text{ Million}$

$$\text{PV Cost (Y)} = 40/(1+0.075)^{4.50} = 28.888 \text{ Million}$$

$$\text{Cost Allocation to Region A} = \$80 \times 33.039/(33.039 + 28.888) = \$42.681 \text{ Million}$$

$$\text{Cost Allocation to Region B} = \$80 \times 28.888/(33.039 + 28.888) = \$37.319 \text{ Million}$$

### **35.10.3 Other Cost Allocation Arrangements**

- (a) Except as provided in this Section 35.10.3(b), the methodology in Section 35.10.2 is the exclusive means by which any costs of an Interregional Transmission Project may be allocated between or among PJM and NYISO.
- (b) Subject to the filing rights described in Section 35.10.4 and any stakeholder processes required prior to the exercise of such filing rights, transmission owners and transmission developers in PJM and the NYISO and the Parties may enter into a separate agreement to allocate the cost of an Interregional Transmission Project, and other transmission projects identified pursuant to Section 6 of the Protocol in a manner other than as set forth in Section 35.10.2, provided that any such agreement is filed with and accepted by FERC in accordance with the filing rights set forth in Section 35.10.4, and such agreement shall apply only to the share of the costs of such Interregional Transmission Project or such other transmission projects allocated to the PJM Region and the NYISO Region.

### **35.10.4 Filing Rights with Respect to Approved Interregional Transmission Projects**

Solely with respect to Interregional Transmission Projects evaluated under the Protocol and selected by PJM and NYISO in their regional transmission plans for purposes of cost allocation under their respective tariffs as set forth in Section 35.10.2, PJM and NYISO agree as follows:

- (a) Nothing in Sections 35.10.2 through 35.10.6 of this Agreement or in the Protocol will convey, expand, limit or otherwise alter any rights of the Parties, transmission owners, transmission developers, other market participants, or other entities in PJM or NYISO to submit filings under Section 205 of the Federal Power Act regarding cost allocation or any other matter.
- (b) As applicable, the Parties have been authorized by entities that have cost allocation rights for their respective regions, but are not parties to this Agreement, to enter into and file the cost allocation provisions set forth in Sections 35.10.2 through 35.10.6 of this Agreement. Such cost allocation provisions shall not be modified without the mutual consent of the holders of Section 205 rights and the Long Island Power Authority and the New York Power Authority with respect to interregional cost allocation in the PJM Region and the NYISO Region.
- (c) With respect to PJM:
  - (i) The provisions in Sections 35.10.2 through 35.10.6 have been approved by the PJM Transmission Owners acting through the Consolidated Transmission Owners Agreement (“CTOA”) pursuant to Section 9.1 of the PJM Open Access Transmission Tariff (“PJM Tariff”) and Article 7 of the CTOA, and any amendment to the provisions of Sections 35.10.2 through 35.10.6 or any other provision of this Agreement allocating the costs of Interregional Transmission Projects, shall require approval by the PJM Transmission Owners acting through the CTOA pursuant to Section 9.1 of the PJM Tariff and Article 7 of the CTOA and shall be filed pursuant Section 205 of the Federal Power Act in accordance with the PJM Tariff and Article 7 of the CTOA.



- (ii) Nothing in Sections 35.10.2 through 35.10.6 of this Agreement shall limit or alter the rights of the PJM Transmission Owners set forth in the PJM Tariff and CTOA to submit filings under Section 205 of the Federal Power Act.

### **35.10.5 Merchant Transmission and Individual Transmission Owner Projects**

Nothing in this Agreement shall preclude the development of Interregional Transmission Projects that are funded solely by merchant transmission developers or by individual transmission owners.

### **35.10.6 Consequences to Other Regions from Regional or Interregional Transmission Projects**

Except as provided herein in sections 35.10.2 and 35.10.3 of this Agreement, or where cost responsibility is expressly assumed by NYISO or PJM in other documents, agreements or tariffs on file with FERC, neither the NYISO Region nor the PJM Region shall be responsible for compensating another region or each other for required upgrades or for any other consequences in another planning region associated with regional or interregional transmission facilities, including but not limited to, transmission projects identified pursuant to Section 6 of the Protocol and Interregional Transmission Projects identified pursuant to Section 7 of the Protocol.

### **35.10.7 Coordination of Transmission Planning Studies Regarding Reliability Transmission Projects Located Entirely Within One Region**

This section addresses the process through which PJM and NYISO will coordinate the study of reliability transmission projects located entirely within one Region. The Regions agree to share information and data that arise in the performance of each Region's respective planning activities as necessary or appropriate for effective coordination between the Regions, including the timely identification and notification of proposed reliability transmission projects to meet the

Region's reliability needs, according to the process set forth herein. For purposes of this section 35.10.7, the Region proposing a reliability transmission project to meet such Region's regional reliability needs is referred to as the "proposing Region" and the Region adjacent to the "proposing Region" that may potentially be impacted by such proposal is referred to as the "potentially impacted Region."

35.10.7.1 The Regions shall share their respective baseline reliability analysis undertaken as part of their regional reliability planning process no later than the time it is initially provided to the proposing Region's stakeholders through the appropriate committee.

35.10.7.2 Based on its review of the proposing Region's proposed reliability transmission project, the potentially impacted Region shall identify the potential violations, based upon planning or reliability criteria, including applicable transmission owner criteria then in effect, that, depending on how solved, including through the use of proposed regional transmission projects, could negatively impact reliability on the potentially impacted Region's system.

35.10.7.3 The Regions shall discuss identified impacts and coordinate any special studies that need to be undertaken to analyze such impacts.

- (a) Each Region shall be responsible for performing studies of potential impacts on its system. The Regions may agree on the most efficient way to perform the special studies on a case-specific basis, including which Region will conduct which study(ies).
- (b) The Regions will provide to each other all of the technical information on their respective systems that is needed for each to perform the necessary studies.

- (c) The Regions will coordinate the timing and conduct of such studies.
- (d) Each Region will be responsible for all of its respective study costs related to the studies conducted under this coordinated study process.

35.10.7.4 Results of studies of impacts on the potentially impacted Region's system will be submitted to the proposing Region no later than at the time the proposed reliability transmission project(s) are presented to the proposing Region's stakeholders for final review and prior to submitting to the Board. The Regions shall discuss with each other potential alternative solutions, including changes to operating protocols, and the mitigation of impacts on the potentially impacted Region's system. The Regions' agreed-to mitigation shall be presented to the proposing Region's stakeholders as part of the overall solution to the identified reliability need.

35.10.7.5 Other than agreed-to mitigation or operational alternatives, each Region is responsible for the costs of addressing impacts to its own system.

## **35.11 Voltage Control and Reactive Power Coordination**

### **35.11.1 Specific Voltage and Reactive Power Coordination Procedures**

The Parties will utilize the following procedures to coordinate the use of voltage control equipment to maintain a reliable bulk power Transmission System voltage profile on their respective systems.

35.11.1.1 Under normal conditions, each Party shall provide for the supply and control of the reactive regulation requirements in its own area, including reactive reserve, so that applicable emergency voltage levels can be maintained following any of the set of contingencies that are observed under normal conditions.

35.11.1.2 Under normal conditions, each Party will anticipate voltage trends and initiate corrective action in advance of critical periods of heavy and light loads.

35.11.1.3 Under an abnormal condition, either Party experiencing rapid voltage decay will immediately implement all possible actions, including the shedding of firm load, to correct the problem until such time that the decay has been corrected.

## **35.12 M2M Coordination Processes and Coordinated Transaction Scheduling**

### **35.12.1 M2M Coordination Processes**

The fundamental philosophy of the M2M coordination processes that are set forth in the attached Market-to-Market Coordination Schedule is to allow any transmission constraints that are significantly impacted by generation dispatch changes in both the NYISO and PJM markets or by the operation of the NY-NJ PARs to be jointly managed in the real-time security-constrained economic dispatch models of both Parties. This joint real-time management of transmission constraints near the market borders will provide a more efficient and lower cost transmission congestion management solution and coordinated pricing at the market boundaries.

Under normal system operating conditions, the Parties utilize the M2M coordination processes on defined Flowgates that experience congestion. The goal of redispatch coordination at M2M Redispatch Flowgates and Other Coordinated Flowgates is to utilize the more cost effective generation between the two markets to manage the congestion in accordance with Section 7.1 of the attached Market-to-Market Coordination Schedule. The goal of NY-NJ PAR coordination is to operate the NY-NJ PARs to efficiently manage the congestion in accordance with Section 7.2 of the attached Market-to-Market Coordination Schedule. NY-NJ PAR coordination can occur at any Flowgate and need not be formally invoked by either Party. It is ordinarily in effect.

The M2M coordination process include settlement rules that apply when M2M coordination is occurring.

### **35.12.2 Coordinated Transaction Scheduling**

Coordinated Transaction Scheduling or “CTS” are real time market rules implemented by NYISO and PJM that allow transactions to be scheduled based on a bidder’s willingness to

purchase energy at a source (in the PJM Control Area or the NYISO Control Area) and sell it at a sink (in the other Control Area) if the forecasted price at the sink minus the forecasted price at the corresponding source is greater than or equal to the dollar value specified in the bid.

CTS transactions are ordinarily evaluated on a 15-minute basis consistent with forecasted real-time prices from NYISO's Real-Time Commitment run and the forecasted price information from PJM's Intermediate Term Security Constrained Economic Dispatch solution. Coordinated optimization with CTS improves interregional scheduling efficiency by: (i) better ensuring that scheduling decisions take into account relative price differences between the regions; and (ii) moving the evaluation of bids and offers closer to the time scheduling decisions are implemented.

NYISO and PJM may suspend the scheduling of CTS transactions when NYISO or PJM are not able to adequately implement schedules as expected due to: (1) a failure or outage of the data link between NYISO and PJM prevents the exchange of accurate or timely data necessary to implement the CTS transactions; (2) a failure or outage of any computational or data systems preventing the actual or accurate calculation of data necessary to implement the CTS transactions; or (3) when necessary to ensure or preserve system reliability.

### **35.13 Joint Checkout Procedures**

#### **35.13.1 Scheduling Checkout Protocols**

35.13.1.1 Both Parties shall require all transaction schedules to be tagged in accord with the NERC tagging standard. For reserve sharing and other emergency schedules that are not tagged, the Parties will enter manual schedules after the fact into their respective scheduling systems.

35.13.1.2 When there is a transaction scheduling conflict, the Parties will work to modify the schedule as soon as practical.

35.13.1.3 The Parties will perform the following types of checkouts. Checkouts will be consistent with 35.13.1.1 and 35.13.1.2.

- (a) Day-ahead checkout shall be performed daily on the day before the transaction is to flow. Day-ahead checkout includes the verification of import and export totals and individual transaction schedules.
- (b) Real-time checkout shall be performed hourly during the hour before the transaction is to flow. Real-time checkout includes the verification of import and export totals and individual transaction schedules.
- (c) After-the-fact checkout of transactions shall be performed the next business day following the day of the transactions.
- (d) After-the-fact reporting of hourly scheduled energy interchanged and hourly actual energy interchanged shall be updated by each Party each day and exchanged with the other Party. Each day, month to date data shall be exchanged. Parties shall resolve discrepancies within ten (10) business days of the end of each month.

## **35.14 TTC/ATC/AFC Calculations**

### **35.14.1 TTC/ATC/AFC Protocols**

In accordance with Section 35.9, the Parties will exchange scheduled Outages of all interconnections and other Transmission Facilities.

#### **35.14.1.1 Scheduled Outages of Transmission Resources**

Each Party will provide the projected status of scheduled Outages of Transmission Facilities for a minimum of eighteen (18) months or more if available.

#### **35.14.1.2 Transmission Interchange Schedules**

Each Party will make available its interchange schedules to permit accurate calculation of TTC and ATC/AFC values.

### **35.14.2 Configuration/Facility Changes**

Transmission configuration changes and generation additions (or retirements) shall be communicated via the NERC MMWG process.

### **35.14.3 Transmission System Impacts**

35.14.3.1 The Parties shall coordinate with each other as needed and with other Reliability Coordinators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, IROL, CPS, or DCS violations.

35.14.3.2 Each Party shall operate to prevent the likelihood that a disturbance, action, or non-action in its area will result in a SOL or IROL violation for the other Party. In instances where there is a difference in derived limits, Parties shall respect the most limiting parameter.



35.14.3.3 A Party who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) that impacts the other Party shall issue an alert to the other Party without unreasonable delay.

35.14.3.4 Each Party shall confirm reliability assessment results and determine the effects within its own and the other Party's areas. The Parties shall discuss options to mitigate potential or actual SOL or IROL violations and take actions as necessary to always act in the best interests of the Interconnection at all times.

## **35.15 Dispute Resolution Procedures**

### **35.15.1 Good Faith Negotiation**

The Parties shall attempt in good faith to achieve consensus with respect to all matters arising under this Agreement and to use reasonable efforts through good faith discussion and negotiation to avoid and resolve disputes that could delay or impede a Party from receiving the benefits of this Agreement. These dispute resolution procedures apply to any dispute that arises from either Party's performance of, or failure to perform, in compliance with this Agreement and which the Parties are unable to resolve prior to invocation of these procedures.

### **35.15.2 Dispute Resolution**

In the event of a Dispute arising out of or relating to this Agreement that is not resolved by the representatives of the Parties who have been designated under Section 35.3.2.2 of this Agreement within 7 days of the reference to such representatives of such Dispute, each Party shall, within 14 days' written notice by either Party to the other, designate a senior officer with authority and responsibility to resolve the Dispute and refer the Dispute to them. The senior officer designated by each Party shall have authority to make decisions on its behalf with respect to that Party's rights and obligations under this Agreement. The senior officers, once designated, shall promptly begin discussions in a good faith effort to agree upon a resolution of the Dispute. If the senior officers do not agree upon a resolution of the Dispute within 14 days of its referral to them, or within such longer period as the senior officers mutually agree to in writing, or do not within the same 14 day period agree to refer the matter to some individual or organization for alternate Dispute resolution, then the Parties shall request that FERC's Dispute Resolution Service mediate their efforts to resolve the Dispute. Upon a Party's determination, at any point in the mediation process, that mediation has failed to resolve the Dispute, either Party may seek

formal resolution by initiating a proceeding before the FERC. If the FERC is not willing or able to consider or resolve a Dispute, then either Party shall have the right to pursue any and all remedies available to it at law or in equity.

Neither the giving of notice of a Dispute, nor the pendency of any Dispute resolution process as described in this section shall relieve a Party of its obligations under this Agreement, extend any notice period described in this Agreement or extend any period in which a Party must act as described in this Agreement. Notwithstanding the requirements of this section, either Party may terminate this Agreement in accordance with its provisions, or pursuant to an action at equity. The issue of whether such a termination is proper shall not be considered a Dispute hereunder.

## **35.16 Interconnection Revenue Metering**

### **35.16.1 Obligation to Provide Inadvertent Energy Accounting Metering**

The Parties shall require appropriate electric metering devices to be installed as required to measure electric power quantities for determining Interconnection Facilities inadvertent energy accounting.

### **35.16.2 Standards for Metering Equipment**

The parties shall cause any Metering Equipment used to meter Metered Quantities for inadvertent energy accounting to be designed, verified, sealed and maintained in accordance with the Party's respective metering standards or as otherwise agreed upon by the Coordination Committee.

### **35.16.3 Meter Compensation to the Point of Interconnection**

The metering compensation for transmission line losses to the Interconnection Facilities Delivery Point shall be determined by the Party's respective standards or otherwise agreed to by the Coordination Committee.

### **35.16.4 Metering Readings**

The Parties shall require that integrated meter readings are provided at least once each hour for Interconnection Facilities accounting purposes and meter registers are read at least monthly, as close as practical to the last hour of the month. An appropriate adjustment shall be made to register readings not taken on the last hour of the month.

## **35.17 Retained Rights of Parties**

### **35.17.1 Parties Entitled to Act Separately**

This Agreement does not create or establish, and shall not be construed to create or establish, any partnership or joint venture between or among any of the Parties. This Agreement establishes terms and conditions solely of a contractual relationship, among independent entities, to facilitate the achievement of the joint objectives described in the Agreement. The contractual relationship established hereunder implies no duties or obligations among the Parties except as specified expressly herein.

## **35.18 Representations**

### **35.18.1 Good Standing**

Each Party represents and warrants that it is duly organized, validly existing and in good standing under the laws of the state or province in which it is organized, formed, or incorporated, as applicable.

### **35.18.2 Authority to enter Into Agreement**

Each Party represents and warrants that it has the right, power, and authority to enter into this Agreement, to become a Party hereto and to perform its obligations hereunder. This Agreement is a legal, valid and binding obligation of such Party, enforceable against such Party in accordance with its terms.

### **35.18.3 Organizational Formation Documents**

Each Party represents and warrants that the execution, delivery and performance of this Agreement does not violate or conflict with its organizational or formation documents.

### **35.18.4 Regulatory Authorizations**

Each Party represents and warrants that it has, or applied for, all regulatory authorizations necessary for it to perform its obligations under this Agreement.

## **35.19 Effective Date, Implementation, Term and Termination**

### **35.19.1 Effective Date; Implementation**

This Agreement shall become effective as of the date that all of the following have occurred: (i) upon the execution hereof by both Parties, and (ii) acceptance or approval by the Federal Energy Regulatory Commission. Commencing with the Effective Date, the Parties shall commence and continue efforts to implement other provisions of this Agreement on dates determined by the Coordination Committee, which dates shall be the earliest dates reasonably feasible for both Parties.

### **35.19.2 Term**

This Agreement shall continue in full force and effect unless terminated in accordance with the provisions of this Agreement.

### **35.19.3 Right of a Party to Terminate**

35.19.3.1 NYISO may terminate this Agreement at any time upon not less than twelve (12) months' Notice to PJM.

35.19.3.2 PJM may terminate this Agreement at any time upon not less than twelve (12) months' Notice to NYISO.

35.19.3.3 This Agreement may be terminated at anytime by mutual agreement in writing.

### **35.19.4 Survival**

The applicable provisions of this Agreement shall continue in effect after any termination of this Agreement to provide for adjustments and payments under Section 35.15, dispute resolution, determination and enforcement of liability, and indemnification, arising from acts or

events that occurred during the period this Agreement was in effect. In addition, Sections 35.8.4 and 35.8.10 of this Agreement provides that the obligation to safeguard Confidential Information continues in effect for a period of seven years after any termination of this Agreement.

**35.19.5 Post-Termination Cooperation**

Following any termination of this Agreement, all Parties shall thereafter cooperate fully and work diligently in good faith to achieve an orderly resolution of all matters resulting from such termination.



## **35.20 Additional Provisions**

### **35.20.1 Force Majeure**

A Party shall not be considered to be in default or breach of this Agreement, and shall be excused from performance or liability for damages to any other party, if and to the extent it shall be delayed in or prevented from performing or carrying out any of the provisions of this Agreement, arising out of or from any act, omission, or circumstance by or in consequence of any act of God, labor disturbance, sabotage, failure of suppliers of materials, act of the public enemy, war, invasion, insurrection, riot, fire, storm, flood, ice, earthquake, explosion, epidemic, breakage or accident to machinery or equipment or any other cause or causes beyond such Party's reasonable control, including any curtailment, order, regulation, or restriction imposed by governmental, military or lawfully established civilian authorities, or by making of repairs necessitated by an emergency circumstance not limited to those listed above upon the property or equipment of the Party or property or equipment of others which is deemed under the Operational Control of the Party. A Force Majeure event does not include an act of negligence or Intentional Wrongdoing by a Party. Any Party claiming a Force Majeure event shall use reasonable diligence to remove the condition that prevents performance and shall not be entitled to suspend performance of its obligations in any greater scope or for any longer duration than is required by the Force Majeure event. Each Party shall use its best efforts to mitigate the effects of such Force Majeure event, remedy its inability to perform, and resume full performance of its obligations hereunder.

### **35.20.2 Force Majeure Notification**

A Party suffering a Force Majeure event ("Affected Party") shall notify the other Party ("Non-Affected Party") in writing ("Notice of Force Majeure Event") as soon as reasonably

practicable specifying the cause of the event, the scope of commitments under the Agreement affected by the event, and a good faith estimate of the time required to restore full performance.

Except for those commitments identified in the Notice of Force Majeure Event, the Affected Party shall not be relieved of its responsibility to fully perform as to all other commitments in the Agreement. If the Force Majeure Event continues for a period of more than 90 days from the date of the Notice of Force Majeure Event, the Non-Affected Party shall be entitled, at its sole discretion, to terminate the Agreement.

### **35.20.3 Indemnification**

“Indemnifying Party” means a Party who holds an indemnification obligation hereunder. An “Indemnitee” means a Party entitled to receive indemnification under this Agreement as to any Third Party claim. Each Party will defend, indemnify, and hold the other Party harmless from all actual losses, damages, liabilities, claims, expenses, causes of action, and judgments (collectively, “Losses”), brought or obtained by any Third Party against such other Party, only to the extent that such Losses arise directly from:

(a) Gross negligence, recklessness, or willful misconduct of the Indemnifying Party or any of its agents or employees, in the performance of this Agreement, except to the extent the Losses arise (i) from gross negligence, recklessness, willful misconduct or breach of contract or law by the Indemnitee or such Indemnitee’s agents or employees, or (ii) as a consequence of strict liability imposed as a matter of law upon the Indemnitee, or such Indemnitee’s agents or employees;

(b) Any claim arising from the transfer of Intellectual Property in violation of Section 35.20.8; or

- (c) Any claim that such Indemnitee caused bodily injury to an employee of Third Party due to gross negligence, recklessness, or willful conduct of the Indemnifying Party.
- (d) The Indemnitee shall give Notice to the Indemnifying Party as soon as reasonably practicable after the Indemnitee becomes aware of the Indemnifiable Loss or any claim, action or proceeding that may give rise to an indemnification. Such notice shall describe the nature of the loss or proceeding in reasonable detail and shall indicate, if practicable, the estimated amount of the loss that has been sustained by the Indemnitee. A delay or failure of the Indemnitee to provide the required notice shall release the Indemnifying Party (a) from any indemnification obligation to the extent that such delay or failure materially and adversely affects the Indemnifying Party's ability to defend such claim or materially and adversely increases the amount of the Indemnifiable Loss, and (b) from any responsibility for any costs or expenses of the Indemnitee in the defense of the claim during such period of delay or failure.
- (e) The indemnification by either Party shall be limited to the extent that the liability of a Party seeking indemnification would be limited by any applicable law and arises from a claim by a Party acting within the scope of this Agreement as to obligations of the other Party under this Agreement.

#### **35.20.4 Headings**

The headings used for the Articles and Sections of this Agreement are for convenience and reference purposes only, and shall not be construed to modify, expand, limit, or restrict the provisions of this Agreement.

### **35.20.5 Liability to Non-Parties**

Nothing in this Agreement, whether express or implied, is intended to confer any rights or remedies under or by reason of this Agreement on any person or entity that is not a Party or a permitted successor or assign.

### **35.20.6 Liability Between Parties**

The Parties' duties and standard of care with respect to each other, and the benefits and rights conferred on each other shall be no greater than as expressly stated herein. Neither Party, its directors, officers, trustees, employees or agents, shall be liable to the other Party for any loss, damage, claim, cost, charge or expense, whether direct, indirect, incidental, punitive, special, exemplary or consequential, arising from the other Party's performance or nonperformance under this Agreement, except to the extent that a Party, is found liable for gross negligence or willful misconduct, in which case the Party responsible shall be liable only for direct and ordinary damages and not for any lost goodwill, incidental, consequential, punitive, special, exemplary or indirect damage.

This section shall not limit amounts required to be paid under this Agreement, including any of the appendices, schedules or attachments to this Agreement. This section shall not apply to adjustments or corrections for errors in invoiced amounts due under this Agreement, including any of the appendices, schedules or attachments to this Agreement.

### **35.20.7 Limitation on Claims**

No claim seeking an adjustment in the billing for any service, transaction, or charge under this Agreement, including any of the appendices, schedules or attachments to this Agreement, may be asserted with respect to a week or month, if more than one year has elapsed (a) since the first date upon which an invoice was rendered for that week or month, or (b) since

the date upon which a changed or modified invoice was rendered for that week or month. The Party responsible for issuing an invoice may not, of its own initiative, issue a changed or modified invoice if more than one year has elapsed since the first date upon which an invoice was rendered for a week or month. A changed or modified invoice may be issued more than one year after the first date upon which an invoice was rendered for a week or month in order to correct for or address a timely-raised claim seeking an adjustment in the billing for any service, transaction, or charge under this Agreement.

### **35.20.8 Unauthorized Transfer of Third-Party Intellectual Property**

In the performance of this Agreement, no party shall transfer to another party any Intellectual Property, the use of which by another Party would constitute an infringement of the rights of any Third Party. In the event such transfer occurs, whether or not inadvertent, the transferring Party shall, promptly upon learning of the transfer, provide Notice to the receiving Party and upon receipt of such Notice the receiving Party shall take reasonable steps to avoid claims and mitigate losses.

### **35.20.9 Intellectual Property Developed Under This Agreement**

If during the term of this Agreement, the Parties mutually develop any new Intellectual Property that is reduced to writing or any tangible form, the Parties shall negotiate in good faith concerning the ownership and licensing of such Intellectual Property.

### **35.20.10 Governing Law**

This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware without giving effect to the State of Delaware's conflict of law principles.

### **35.20.11 License and Authorization**

The agreements and obligations expressed herein are subject to such initial and continuing governmental permission and authorization as may be required. Each Party shall be responsible for securing and paying for any approvals required by it from any regulatory agency of competent jurisdiction relating to its participation in this Agreement and will reasonably cooperate with the other Party in seeking such approvals.

### **35.20.12 Assignment**

This Agreement shall inure to the benefit of, and be binding upon and may be performed by, the successors and assigns of the Parties hereto respectively, but shall not be assignable by either Party without the written consent of the other.

### **35.20.13 Amendment**

#### **35.20.13.1 Authorized Representatives**

No amendment of this Agreement shall be effective unless by written instrument duly executed by the Parties' authorized representatives. For the purposes of this section, an authorized person refers to individuals designated as such by Parties in their respective corporate by-laws.

#### **35.20.13.2 Review of Agreement**

The terms of this Agreement are subject to review for potential amendment at the request of either Party. If, after such review, the Parties agree that any of the provisions hereof, or the practices or conduct of either Party impose an inequity, hardship or undue burden upon the other Party, or if the Parties agree that any of the provisions of this Agreement have become obsolete or inconsistent with changes related to the Interconnection Facilities, the Parties shall endeavor

in good faith to amend or supplement this Agreement in such a manner as will remove such inequity, hardship or undue burden, or otherwise appropriately address the cause for such change.

### **35.20.13.3 Mutual Agreement**

The Parties may amend this Agreement at any time by mutual agreement in accordance with Section 35.20.13.1 above.

### **35.20.14 Performance**

The failure of a Party to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any right held by such Party. Any waiver on any specific occasion by either Party shall not be deemed a continuing waiver of such right, nor shall it be deemed a waiver of any other right under this Agreement.

### **35.20.15 Rights, Remedies or Benefits**

This Agreement is not intended to and does not create any rights, remedies, or benefits of any kind whatsoever in favor of any entities other than the Parties, their principals and, where permitted, their assigns.

### **35.20.16 Agreement**

This Agreement, including all Attachments attached hereto, is the entire agreement between the Parties with respect to the subject matter hereof, and supersedes all prior or contemporaneous understandings or agreements, oral or written, with respect to the subject matter of this Agreement.

### **35.20.17 Governmental Authorizations**

This Agreement, including its future amendments is subject to the initial and continuing governmental authorizations, including approval of the FERC, required to establish, operate and maintain the Interconnection Facilities as herein specified. Each Party shall take all actions necessary and reasonably within its control to maintain all governmental rights and approvals required to perform its respective obligations under this Agreement.

### **35.20.18 Unenforceable Provisions**

If any provision of this Agreement is deemed unenforceable, the rest of the Agreement shall remain in effect and the Parties shall negotiate in good faith and seek to agree upon a substitute provision that will achieve the original intent of the Parties.

### **35.20.19 Execution**

This Agreement may be executed in multiple counterparts, each of which shall be considered an original instrument, but all of which shall be considered one and the same Agreement, and shall become binding when all counterparts have been signed by each of the Parties and delivered to each Party hereto. Delivery of an executed signature page counterpart by telecopier or e-mail shall be as effective as delivery of a manually executed counterpart.

### **35.20.20 Billing and Payment**

#### **35.20.20.1 General Billing and Payment Rules**

This Section 35.20.20.1 of the Agreement sets forth the billing and payment rules that apply to all charges arising under this Agreement except for charges resulting from the M2M coordination process set forth in Schedule D to this Agreement.



**35.20.20.1.1 Invoicing.** When charges arise under this Agreement, the billing RTO shall submit an invoice to the other RTO within five (5) business days after the first day of the month indicating the net amount owed by that RTO for the previous month.

**35.20.20.1.2 Payments.** Payments under this Agreement will be effected in immediately available funds of the United States of America.

The RTO owing payments on net in the invoice shall make those payments within five (5) business days after the receipt of the invoice.

In the event of a billing and payment dispute between the Parties, the dispute resolution procedures and limitation of the claims section contained in this Agreement shall apply to the review, challenge, and correction of invoices.

**35.20.20.1.3 Interest on Unpaid Balances.** Interest on any unpaid amount (including amounts placed in escrow) shall be calculated in accordance with the method specified for interest on refunds in the Commission's regulations at 18 C.F.R. § 35.19a (a)(2)(iii). Interest on unpaid amounts shall be calculated from the due date of the bill to the date of payment. Invoices shall be considered as having been paid on the date of receipt of payment.

**35.20.20.1.4 RTO Bills and Payments to their Respective Customers.** Bills or payments that either RTO is authorized to issue directly to its customer shall be invoiced, paid and/or processed in accordance with the relevant RTO's billing and payment tariff rules.

### **35.20.20.2 Billing and Payment for the M2M Coordination Process set forth in Schedule D to this Agreement**

For the limited purposes of these billing and payment rules that apply to the M2M coordination process, PJM shall be considered a “Customer” as that term is used in Section 7 of the NYISO Services Tariff where the NYISO Services Tariff applies and NYISO shall be considered a “Transmission Customer” as that term is used in Section 7 of the PJM OATT where the PJM OATT applies.

**35.20.20.2.1 Invoicing and Settlement Information.** NYISO shall provide invoice and settlement information to PJM consistent with Section 7.2.1 (*Invoices and Settlement Information*), 7.2.3.1 (*Weekly Invoice*), and 7.2.3.2 (*Monthly Invoice*) of the NYISO Services Tariff or any successor NYISO Services Tariff provision(s).

NYISO may use estimates for invoicing consistent with Section 7.2.4 (*Use of Estimated Data and Meter Data*) of the NYISO Services Tariff or any successor NYISO Services Tariff provision(s).

**35.20.20.2.2 Payments.** Unless otherwise indicated in writing by the Parties, all payments due under this Agreement will be effected in immediately available funds of the United States of America.

Payments shall be due and payable in accordance with the terms and conditions set herein and notwithstanding any invoicing disputes. In the event of a billing and payment dispute between the Parties under this Agreement, the dispute resolution procedures and limitation of the claims section contained in this Agreement shall apply to the review, challenge, and correction of invoices.

PJM shall make payments to the NYISO's Clearing Account consistent with Sections 7.2.3.3 (*Payment by the Customer*) and 7.2.5 (*Method of Payment*) of the NYISO Services Tariff or any successor NYISO Services Tariff provision(s).

NYISO shall make payments, from the NYISO's Clearing Account, to PJM consistent with Section 7.1A(a) (*Payments: Monthly Bills*), 7.1A(b) (*Payments: Weekly Bills*), 7.1A(c) (*Payments: Form of Payments*), and 7.1A(e) (*Payments: Payment Calendar*) of the PJM OATT or any successor PJM OATT provision(s).

**35.20.20.2.3 Interest on Unpaid Balances.** Interest on any unpaid amount whether owed to PJM or to NYISO (including amounts placed in escrow) shall be calculated in accordance with the methodology specified for interest on refunds in the Commission's regulations at 18 C.F.R. § 35.19a (a)(2)(iii). Interest on unpaid amounts shall be calculated from the due date of the bill to the date of payment. Invoices shall be considered as having been paid on the date of receipt of payment.

**35.20.20.2.4 Payment Obligation.** The RTOs each assume responsibility for ensuring that their respective payment obligations resulting from the M2M coordination process set forth in Schedule D to this Agreement are satisfied without regard for their ability to collect such payments from their respective customers.

#### **35.20.21 Regulatory Authority**

If any regulatory authority having jurisdiction (or any successor boards or agencies), a court of competent jurisdiction or other Governmental Authority with the appropriate jurisdiction (collectively, the "Regulatory Body") issues a rule, regulation, law or order that has the effect of cancelling, changing or superseding any term or provision of this Agreement (the "Regulatory

Requirement"), then this Agreement will be deemed modified to the extent necessary to comply with the Regulatory Requirement. Notwithstanding the foregoing, if a Regulatory Body materially modifies the terms and conditions of this Agreement and such modification(s) materially affect the benefits flowing to one or both of the Parties, as determined by either of the Parties within twenty (20) business days of the receipt of the Agreement as materially modified, the Parties agree to attempt in good faith to negotiate an amendment or amendments to this Agreement or take other appropriate action(s) so as to put each Party in effectively the same position in which the Parties would have been had such modification not been made. In the event that, within sixty (60) days or some other time period mutually agreed upon by the Parties after such modification has been made, the Parties are unable to reach agreement as to what, if any, amendments are necessary and fail to take other appropriate action to put each Party in effectively the same position in which the Parties would have been had such modification not been made, then either Party shall have the right to unilaterally terminate this Agreement forthwith.

### **35.20.22 Notices**

Except as otherwise agreed from time to time, any Notice, invoice or other communication which is required by this Agreement to be given in writing, shall be sufficiently given at the earlier of the time of receipt or deemed time of receipt if delivered personally to a senior official of the Party for whom it is intended or electronically transferred or sent by registered mail, addressed as follows:

PJM:

PJM Interconnection L.L.C.  
2750 Monroe Boulevard Audubon, PA 19403  
Attn: President & CEO

NYISO: New York Independent System Operator  
10 Krey Boulevard  
Rensselaer, New York 12144  
Attn: President & CEO

or delivered to such other person or electronically transferred or sent by registered mail to such other address as either Party may designate for itself by Notice given in accordance with this section or delivered by any other means agreed to by the Parties hereto.

Any Notice, or communication so mailed shall be deemed to have been received on the third business day following the day of mailing, or if electronically transferred shall be deemed to have been received on the same business day as the date of the electronic transfer, or if delivered personally shall be deemed to have been received on the date of delivery or if delivered by some other means shall be deemed to have been received as agreed to by the Parties hereto.

The use of a signed facsimile of future Notices and correspondence between the Parties related to this Agreement shall be accepted as proof of the matters therein set out. Follow-up with hard copy by mail will not be required unless agreed to by the Coordination Committee.

A Party may change its designated recipient of Notices, or its address, from time to time by giving Notice of such change.

**IN WITNESS WHEREOF**, the signatories hereto have caused this Agreement to be executed by their duly authorized officers.

PJM INTERCONNECTION, L.L.C.

By: Michael E. Bryson, Vice President – Operations

\_\_\_\_\_  
Date: \_\_\_\_\_

NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.

By: Wesley J. Yeomans, Vice President – Operations

\_\_\_\_\_  
Date: \_\_\_\_\_

### 35.21 Schedules A and B

#### Schedule A - Description Of Interconnection Facilities

The NYISO – PJM Joint Operating Agreement covers the PJM – NYISO *Interconnection Facilities* under the *Operational Control* of the NYISO and PJM. For *Operational Control* purposes, the point of demarcation for each of the *Interconnection Facilities* listed below is the point at which each *Interconnection Facility* crosses the PJM-New York State boundary, except as noted below.

The PJM-NYISO *Interconnection* contains twenty-five (25) alternating current (“AC”) *Interconnection Facilities*, seven (7) of which form one (1) AC pseudo-tie<sup>1</sup>; and further contains two (2) HVDC *Interconnection Facilities* as well as one (1) *Variable Frequency Transformer (VFT)*. These are tabulated below:

#### NY/PJM *Interconnection Facilities*:

<b>PJM</b>	<b>NYISO</b>	<b>Designated</b>	<b>(kV)</b>	<b>Common Meter Point(s)</b>
Hopatcong	Ramapo	5018	500	Ramapo
Cresskill	Sparkill	751	69	Cresskill
E. Sayre	N. Waverly	956	115	E. Sayre
E. Towanda	Hillside	70	230	Hillside
Erie East	South Ripley	69	230	South Ripley
Harings Corners	Corporate Drive	703	138	Harings
Harings Corners	Pearl River	45	34	Harings
Harings Corners	W. Nyack	701	69	Harings
Mainesburg	Watercure	30	345	Mainesburg
Homer City	Mainesburg	47	345	Homer & Mainesburg
Pierce Brook	Five Mile Rd.	37	345	Pierce Brook
Homer City	Pierce Brook	48	345	Homer & Pierce Brook
Marion	Farragut	C3403	345	Farragut
Hudson	Farragut	B3402	345	Farragut
Linden	Goethals	A2253	230	Goethals
Linden VFT	Linden Cogen	VFT	345	Linden VFT
Montvale	Pearl River	491	69	Montvale
Montvale	Blue Hill	44	69	Montvale
Montvale	Blue Hill	43	69	Montvale
S. Mahwah	Hilburn	65	69	S. Mahwah
S. Mahwah	S. Mahwah	BK 258	138/345	S. Mahwah
S. Mahwah	Ramapo	51	138	S. Mahwah
Waldwick	S. Mahwah	J3410	345	Waldwick
Waldwick	S. Mahwah	K3411	345	Waldwick
Tiffany	Goudey	952	115	Goudey
Warren	Falconer	171	115	Warren

<sup>1</sup> WEQ-007 “Inadvertent Interchange Payback Standards,” North American Energy Standards Board (NAESB), online at [www.naesb.org](http://www.naesb.org).

RECO	NYISO	AC Pseudo-Tie	Various	O&R EMS
Sayerville Bergen	Newbridge West 49 <sup>th</sup>	HVDC-Tie HVDC-Tie Y56	500 345	Newbridge Bergen

**NY/PJM Interfaces at which NYISO and PJM are Authorized to Consider CTS Interface Bids:**

<b>PJM Interface Name</b>	<b>PNODE ID</b>	<b>Corresponding NYISO Proxy Generator Buses<sup>2</sup></b>	<b>PTID</b>
NYIS	5413134	PJM_GEN_KEYSTONE	24065
NYIS	5413134	PJM_LOAD_KEYSTONE	55857
LindenVFT	81436855	PJM_GEN_VFT_PROXY	323633
LindenVFT	81436855	PJM_LOAD_VFT_PROXY	355723
Neptune	56958967	PJM_GEN_NEPTUNE_PROXY	323594
Neptune	56958967	PJM_LOAD_NEPTUNE_PROXY	355615
HudsonTP	1124361945	PJM_HTP_GEN	323702
HudsonTP	1124361945	HUDSONTP_345KV_HTP_LOAD	355839

**Schedule B - Other Existing Agreements:**

- 1.0 Lake Erie Emergency Redispatch (LEER)
- 2.0 RAMAPO PHASE ANGLE REGULATOR OPERATING PROCEDURE prepared by the NYPP/PJM Circulation Study Operating Committee.
- 3.0 Northeastern ISO/RTO Coordination of Planning Protocol
- 4.0 Inter Control Area Transaction Agreement.
- 5.0 Procedures to Protect for Loss of Phase II Imports (effective January 16, 2007, pursuant to Order issued January 12, 2007, in FERC Docket No. ER07-231-000).

<sup>2</sup> See NYISO Market Administration and Control Area Services Tariff Section 4.4.4 for additional information.



- 6.0 Joint Emergency Operating Protocol dated September 10, 2009, among PJM Interconnection, L.L.C., New York Independent System Operator, Inc., and Linden VFT, LLC (Filed by PJM on October 1, 2009, in FERC Docket No. ER09-996-000).

**35.22 Reserved for future use.**

**35.23      Schedule D – Market-to-Market Coordination Process – Version 1.0**

**NYISO & PJM**  
**Market-to-Market Coordination Schedule**  
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## **1 Overview of the Market-to-Market Coordination Processes**

The purpose of the M2M coordination processes are to set forth the rules that apply to M2M coordination between PJM and NYISO and the associated settlements processes.

The fundamental philosophy of the PJM/NYISO M2M coordination processes are to set up procedures to allow any transmission constraints that are significantly impacted by generation dispatch changes and/or Phase Angle Regulator (“PAR”) control actions in both markets to be jointly managed in the security-constrained economic dispatch models of both RTOs. This joint management of transmission constraints near the market borders will provide the more efficient and lower cost transmission congestion management solution, while providing coordinated pricing at the market boundaries.

The M2M coordination processes focuses on real-time market coordination to manage transmission limitations that occur on the Flowgates in a more cost effective manner. Coordination between NYISO and PJM will include not only joint redispatch, but will also incorporate coordinated operation of the NY-NJ PARs that are located at the NYISO – PJM interface. This real-time coordination will result in a more efficient economic dispatch solution across both markets to manage the real-time transmission constraints that impact both markets, focusing on the actual flows in real-time to manage constraints. Under this approach, the flow entitlements on the M2M Redispatch Flowgates do not impact the physical dispatch; the flow entitlements are used in market settlements to ensure appropriate compensation based on comparison of the actual Market Flows to the flow entitlements.

## **2 Flowgates**

Only a subset of all transmission constraints that exist in either market will require coordinated congestion management. This subset of transmission constraints will be identified as Flowgates. For the purposes of the M2M coordination process (in addition to the studies described in Section 3 of this Schedule D) the following will be used in determining Flowgates.

- 2.1 NYISO and PJM will only be performing redispatch or NY-NJ PAR coordination on Flowgates that are under the operational control of NYISO or PJM. NYISO and PJM will not be performing redispatch or NY-NJ PAR coordination on Flowgates that are owned and controlled by third party entities.
- 2.2 The Parties will make reasonable efforts to lower their generator binding threshold to match the lower generator binding threshold utilized by the other Party. The generator and NY-NJ PAR binding thresholds (the shift factor thresholds used to identify the resource(s) available to relieve a transmission constraint), will not be set below 3%, except by mutual consent. This requirement is not an additional criterion for determination of Flowgates.
- 2.3 For the purpose of determining whether a monitored element Flowgate is eligible for redispatch or NY-NJ PAR coordination, a threshold for determining a significant GLDF or NY-NJ PARs PSF will take into account the number of

monitored elements. Implementation of Flowgates will ordinarily occur through mutual agreement.

- 2.4 M2M Redispatch Flowgates and Other Coordinated Flowgates that are eligible for redispatch coordination are also eligible for coordinated operation of the NY-NJ PARs. Flowgates that are eligible for coordinated operation of the NY-NJ PARs are not necessarily also eligible for redispatch coordination.
- 2.5 The NYISO shall post a list of all of the Flowgates located in the New York Control Area (“NYCA”) on its web site. PJM shall post a list of all of the Flowgates located in its Control Area on its web site.

### **3 Flowgate Studies**

To identify Flowgates the Parties will perform an off-line study to determine if there is a significant GLDF for at least one generator within the Non-Monitoring RTO, or significant PSF for at least one NY-NJ PAR, on a potential Flowgate within the Monitoring RTO that is greater than or equal to the thresholds as described below. The study shall be based on an up-to-date power flow model representation of the Eastern Interconnection, with all normally closed Transmission Facilities in-service. The transmission modeling assumptions used in the Flowgate studies will be based on the same assumptions used for determining M2M Entitlements in Section 6 of this Schedule D.

- 3.1 Either Party may propose that a new Flowgate be added at any time. The Parties will work together to perform the necessary studies within a reasonable timeframe.
- 3.2 The GLDF thresholds for a Other Coordinated Flowgate with one or more monitored elements are defined as:
  - i. Single monitored element, 5% GLDF on any resource;
  - ii. Two monitored elements, 7.5% GLDF on any resource; and
  - iii. Three or more monitored elements, 10% GLDF on any resource.

For potential Other Coordinated Flowgates that pass the above GLDF criteria, the Parties must still mutually agree to add each Flowgate for NY-NJ PAR and redispatch coordination.

- 3.3 The GLDF thresholds for a M2M Redispatch Flowgate with one or more monitored elements are defined as:
  - i. Single monitored element, 5% GLDF on any Qualified Resource;
  - ii. Two monitored elements, 7.5% GLDF on any Qualified Resource; and

- iii. Three or more monitored elements, 10% GLDF on any Qualified Resource.

For potential M2M Redispatch Flowgates that pass the above GLDF criteria, the Parties must still mutually agree to add each Flowgate for NY-NJ PAR and redispatch coordination.

3.4 The NY-NJ PARs PSF thresholds for NY-NJ PAR Coordinated Flowgates with one or more monitored elements are defined as:

1. Single monitored element, 5% NY-NJ PARs PSF;
2. Two monitored elements, 7.5% NY-NJ PARs PSF; and
3. Three or more monitored elements, 10% NY-NJ PARs PSF.

For potential Flowgates that pass the above NY-NJ PARs PSF criteria, the Parties must still mutually agree to add each Flowgate for coordinated operation of the NY-NJ PARs.

3.5 The Parties can also mutually agree to add a Flowgate that does not satisfy the above GLDF or PSF criteria.

#### **4 Removal of Flowgates from M2M Coordination Processes**

Removal of Flowgates from the systems may be necessary under certain conditions including the following:

- 4.1 A Flowgate is no longer valid when (a) a change is implemented that affects either Party's generation impacts causing the Flowgate to no longer pass the Flowgate Studies, or (b) a change is implemented that affects the impacts from coordinated operation of the NY-NJ PARs causing the Flowgate to no longer pass the Flowgate Studies. The Parties must still mutually agree to remove a Flowgate, such agreement not to be unreasonably withheld. Once a Flowgate has been removed, it will no longer be eligible for M2M settlement.
- 4.2 A M2M Redispatch Flowgate that does not satisfy the criteria set forth in Section 3.3 above, but that is created based on the mutual agreement of the Parties pursuant to Section 3.5 above, shall be removed two weeks after either Party provides a Notice to the other Party that it withdraws its agreement to the M2M Redispatch Flowgate, or at a later or earlier date that the Parties mutually agree upon. The Notice must include an explanation of the reason(s) why the agreement to the M2M Redispatch Flowgate was withdrawn.
- 4.3 A Other Coordinated Flowgate shall be removed two weeks after either Party provides a Notice to the other party that it withdraws its agreement to the Other Coordinated Flowgate, or at a later or earlier date that the Parties mutually agree



upon. The Notice must include an explanation of the reason(s) why the agreement to the Other Coordinated Flowgate was withdrawn.

- 4.4 The Parties can mutually agree to remove a Flowgate whether or not it passes the coordination tests. A Flowgate should be removed when the Parties agree that the relevant coordination processes are not, or will not be, an effective mechanism to manage congestion on that Flowgate.

## **5 Market Flow Determination**

Each RTO will independently calculate its Market Flow for all M2M Redispatch Flowgates and Other Coordinated Flowgates using the equations set forth in this Section. The Market Flow calculation is broken down into the following steps:

- Determine Shift Factors for M2M Redispatch Flowgates and Other Coordinated Flowgates
- Compute RTO Load and Losses (less imports)
- Compute RTO Generation (less exports)
- Compute RTO Generation to Load impacts on the Market Flow
- Compute RTO interchange scheduling impacts on the Market Flow
- Compute PAR impacts on the Market Flow
- Compute Market Flow

### **5.1 Determine Shift Factors for M2M Redispatch Flowgates and Other Coordinated Flowgates**

The first step to determining the Market Flow on a Flowgate is to calculate generator, load and PAR shift factors for the each of the Flowgates. For real-time coordination, the shift factors will be based on the real-time transmission system topology.

### **5.2 Compute RTO Load Served by RTO Generation**

Using area load and losses for each load zone, compute the RTO Load, in MWs, by summing the load and losses for each load zone to determine the total zonal load for each RTO load zone. Twenty percent of RECo load shall be included in the Market Flow calculation as PJM load. See Section 6.2, of this Schedule D.

$$Zonal\_Total\_Load_{zone} = Load_{zone} + Losses_{zone}, \text{ for each RTO load zone}$$

Where:

zone = the relevant RTO load zone;

Zonal\_Total\_Load<sub>zone</sub> = the sum of the RTO’s load and transmission losses for the zone;

Load<sub>zone</sub> = the load within the zone; and

Losses<sub>zone</sub> = the transmission losses for transfers through the zone.

Next, reduce the Zonal Loads by the scheduled line real-time import transaction schedules that sink in that particular load zone:

$$Zonal\_Reduced\_Load_{zone} = Zonal\_Total\_Load_{zone} - \sum_{scheduled\_lines=1}^{all} Import\_Schedules_{scheduled\_line,zone}$$

Where:

zone = the relevant RTO load zone;

scheduled\_line = each of the Transmission Facilities identified in Table 1 below;

Zonal\_Reduced\_Load<sub>zone</sub> = the sum of the RTO’s load and transmission losses in a zone reduced by the sum of import schedules over scheduled lines to the zone;

Zonal\_Total\_Load<sub>zone</sub> = the sum of the RTO’s load and transmission losses for the zone; and

Import\_Schedules<sub>scheduled\_line,zone</sub> = import schedules over a scheduled line to a zone.

The real-time import schedules over scheduled lines will only reduce the load in the sink load zones identified in Table 1 below:

**Table 1. List of Scheduled Lines**

Scheduled Line	NYISO Load Zone	PJM Load Zone
Dennison Scheduled Line	North	Not Applicable
Cross-Sound Scheduled Line	Long Island	Not Applicable
HTP Scheduled Line	New York City	Mid-Atlantic Control

		Zone
Linden VFT Scheduled Line	New York City	Mid-Atlantic Control Zone
Neptune Scheduled Line	Long Island	Mid-Atlantic Control Zone
Northport – Norwalk Scheduled Line	Long Island	Not Applicable

Once import schedules over scheduled lines have been accounted for, it is then appropriate to reduce the net RTO Load by the remaining real-time import schedules at the proxies identified in Table 2 below:

**Table 2. List of Proxies\***

Proxy	Balancing Authorities Responsible
PJM shall post and maintain a list of its proxies on its OASIS website. PJM shall provide to NYISO notice of any new or deleted proxies prior to implementing such changes in its M2M software.	PJM
NYISO proxies are the Proxy Generator Buses that are not identified as Scheduled Lines in the table that is set forth in Section 4.4.4 of the NYISO’s Market Services Tariff. The NYISO shall provide to PJM notice of any new of deleted proxies prior to implementing such changes in its M2M software.	NYISO

\*Scheduled lines and proxies are mutually exclusive. Transmission Facilities that are components of a scheduled line are not also components of a proxy (and vice-versa).

$$RTO\_Net\_Load = \sum_{zone=1}^{all} Zonal\_Reduced\_Load_{zone}$$

Where:

zone = the relevant RTO load zone;

RTO\_Net\_Load = the sum of load and transmission losses for the entire RTO footprint reduced by the sum of import schedules over all scheduled lines; and

$Zonal\_Reduced\_Load_{zone}$  = the sum of the RTO’s load and transmission losses in a zone reduced by the sum of import schedules over scheduled lines to the zone.

$$RTO\_Final\_Load = RTO\_Net\_Load - \sum_{proxy=1}^{all} Import\_Schedules_{proxy}$$

Where:

proxy = representations of defined sets of Transmission Facilities that (i) interconnect neighboring Balancing Authorities, (ii) are collectively scheduled, and (iii) are identified in Table 2 above;

RTO\_Final\_Load = the sum of the RTO’s load and transmission losses for the entire RTO footprint, sequentially reduced by (i) the sum of import schedules over all scheduled lines, and (ii) the sum of all proxy import schedules;

RTO\_Net\_Load = the sum of load and transmission losses for the entire RTO footprint reduced by the sum of import schedules over all scheduled lines; and

Import\_Schedules<sub>proxy</sub> = the sum of import schedules at a given proxy.

Next, calculate the Zonal Load weighting factor for each RTO load zone:

$$Zonal\_Weighting_{zone} = \left( \frac{Zonal\_Reduced\_Load_{zone}}{RTO\_Net\_Load} \right)$$

Where:

zone = the relevant RTO load zone;

Zonal\_Weighting<sub>zone</sub> = the percentage of the RTO’s load contained within the zone;

RTO\_Net\_Load = the sum of load and transmission losses for the entire RTO footprint reduced by the sum of import schedules over all scheduled lines; and

Zonal\_Reduced\_Load<sub>zone</sub> = the sum of the RTO’s load and transmission losses in a zone reduced by the sum of import schedules over scheduled lines to the zone.

Using the Zonal Weighting Factor compute the zonal load reduced by RTO imports for each load zone:

$$Zonal\_Final\_Load_{zone} = Zonal\_Weighting_{zone} \times RTO\_Final\_Load$$

Where:

- zone = the relevant RTO load zone;
- Zonal\_Final\_Load<sub>zone</sub> = the final RTO load served by internal RTO generation in the zone;
- Zonal\_Weighting<sub>zone</sub> = the percentage of the RTO’s load contained within the zone; and
- RTO\_Final\_Load = the sum of the RTO’s load and transmission losses for the entire RTO footprint, sequentially reduced by (i) the sum of import schedules over all scheduled lines, and (ii) the sum of all proxy import schedules.

Using the Load Shift Factors (“LSFs”) calculated above, compute the weighted RTOLSF for each Flowgate as:

$$RTO\_LSF_{Flowgate-m} = \sum_{zone=1}^{all} \left( LSF_{(zone,Flowgate-m)} \times \left( \frac{Zonal\_Final\_Load_{zone}}{RTO\_Final\_Load} \right) \right)$$

Where:

- Flowgate-m = the relevant flowgate;
- zone = the relevant RTO load zone;
- RTO\_LSF<sub>Flowgate-m</sub> = the load shift factor for the entire RTO footprint on Flowgate m;
- LSF<sub>(zone,Flowgate-m)</sub> = the load shift factor for the RTO zone on Flowgate m;
- Zonal\_Final\_Load<sub>zone</sub> = the final RTO load served by internal RTO generation in the zone; and
- RTO\_Final\_Load = the sum of the RTO’s load and transmission losses for the entire RTO footprint, sequentially reduced by (i) the sum of import schedules over all scheduled lines, and (ii) the sum of all proxy import schedules.

### 5.3 Compute RTO Generation Serving RTO Load

Using the real-time generation output in MWs, compute the Generation serving RTO Load. Sum the output of RTO generation within each load zone:

$$RTO\_Gen_{zone} = \sum_{unit=1}^{all} Gen_{unit,zone}, \text{ for each RTO load zone}$$

Where:

zone = the relevant RTO load zone;

unit = the relevant generator;

RTO\_Gen<sub>zone</sub> = the sum of the RTO's generation in a zone; and

Gen<sub>unit,zone</sub> = the real-time output of the unit in a given zone.

Next, reduce the RTO generation located within a load zone by the scheduled line real-time export transaction schedules that source from that particular load zone:

$$RTO\_Reduced\_Gen_{zone} = RTO\_Gen_{zone} - \sum_{scheduled\_line=1}^{all} Export\_Schedules_{scheduled\_line,zone}$$

Where:

zone = the relevant RTO load zone;

scheduled\_line = each of the Transmission Facilities identified in Table 1 above;

RTO\_Reduced\_Gen<sub>zone</sub> = the sum of the RTO's generation in a zone reduced by the sum of export schedules over scheduled lines from the zone;

RTO\_Gen<sub>zone</sub> = the sum of the RTO's generation in a zone; and

Export\_Schedules<sub>scheduled\_line,zone</sub> = export schedules from a zone over a scheduled line.

The real-time export schedules over scheduled lines will only reduce the generation in the source zones identified in Table 1 above. The resulting generator output based on this reduction is defined below.

$$Reduced\ Gen_{unit} = Gen_{unit,zone} \left( \frac{RTO\_Reduced\_Gen_{zone}}{RTO\_Gen_{zone}} \right)$$

Where:

- unit** = the relevant generator;
- zone** = the relevant RTO load zone;
- Gen<sub>unit,zone</sub>** = the real-time output of the unit in a given zone;
- Reduced Gen<sub>unit</sub>** = each unit’s real-time output after reducing the RTO\_Net\_Gen by the real-time export schedules over scheduled lines;
- RTO\_Reduced\_Gen<sub>zone</sub>** = the sum of the RTO’s generation in a zone reduced by the sum of export schedules over scheduled lines from the zone; and
- RTO\_Gen<sub>zone</sub>** = the sum of the RTO’s generation in a zone.

Once export schedules over scheduled lines are accounted for, it is then appropriate to reduce the net RTO generation by the remaining real-time export schedules at the proxies identified in Table 2 above.

$$RTO\_Net\_Gen = \sum_{zone=1}^{all} RTO\_Reduced\_Gen_{zone}$$

Where:

- zone** = the relevant RTO load zone;
- RTO\_Net\_Gen** = the sum of the RTO’s generation reduced by the sum of export schedules over all scheduled lines; and
- RTO\_Reduced\_Gen<sub>zone</sub>** = the sum of the RTO’s generation in a zone reduced by the sum of export schedules over scheduled lines from the zone.

$$RTO\_Final\_Gen = RTO\_Net\_Gen - \sum_{proxy=1}^{all} Export\_Schedules_{proxy}$$

Where:

- proxy** = representation of defined sets of Transmission Facilities that (i) interconnect neighboring Balancing Authorities,

(ii) are collectively scheduled, and (iii) are identified in Table 2 above;

RTO\_Final\_Gen = the sum of the RTO’s generation output for the entire RTO footprint, sequentially reduced by (i) the sum of export schedules over all scheduled lines, and (ii) the sum of all proxy export schedules;

RTO\_Net\_Gen = the sum of the RTO’s generation reduced by the sum of export schedules over all scheduled lines; and

Export\_Schedules<sub>proxy</sub> = the sum of export schedules at a given proxy.

Finally, weight each generator’s output by the reduced RTO generation:

$$Gen\_Final_{unit} = Reduced\ Gen_{unit} \times \frac{RTO\_Final\_Gen}{RTO\_Net\_Gen}$$

Where:

unit = the relevant generator;

Gen\_Final<sub>unit</sub> = the portion of each unit’s output that is serving the RTO Net Load;

Reduced Gen<sub>unit</sub> = each unit’s real-time output after reducing the RTO\_Net\_Gen by the real-time export schedules over scheduled lines;

RTO\_Final\_Gen = the sum of the RTO’s generation output for the entire RTO footprint, sequentially reduced by (i) the sum of export schedules over all scheduled lines, and (ii) the sum of all proxy export schedules; and

RTO\_Net\_Gen = the sum of the RTO’s generation reduced by the sum of export schedules over all scheduled lines.

#### 5.4 Compute the RTO GTL for all Flowgates

The generation-to-load flow for a particular Flowgate, in MWs, will be determined as:

$$RTO\_GTL_{Flowgate-m} = \sum_{unit=1}^{all} (GSF_{(unit,Flowgate-m)} - RTO\_LSF_{Flowgate-m}) \times Gen\_Final_{unit}$$

Where:



Flowgate-m = the relevant flowgate;

unit = the relevant generator;

$RTO\_GTL_{Flowgate-m}$  = the generation to load flow for the entire RTO footprint on Flowgate m;

Gen\_Final<sub>unit</sub> = the portion of each unit’s output that is serving RTO Net Load;

$GSF_{(unit,Flowgate-m)}$  = the generator shift factor for each unit on Flowgate m; and

$RTO\_LSF_{Flowgate-m}$  = the load shift factor for the entire RTO footprint on Flowgate m.

### 5.5 Compute the RTO Interchange Scheduling Impacts for all Flowgates

For each scheduling point that the participating RTO is responsible for, determine the net interchange schedule in MWs. Table 3 below identifies both the participating RTO that is responsible for each listed scheduling point, and the “type” assigned to each listed scheduling point.

**Table 3. List of Scheduling Points**

Scheduling Point	Scheduling Point Type	Participating RTO(s) Responsible
NYISO-PJM	common	NYISO and PJM
HTP Scheduled Line	common	NYISO and PJM
Linden VFT Scheduled Line	common	NYISO and PJM
Neptune Scheduled Line	common	NYISO and PJM
PJM shall post and maintain a list of its non-common scheduling points on its OASIS website. PJM shall provide to NYISO notice of any new or deleted non-common scheduling points prior to implementing such changes in its M2M software.	non-common	PJM
NYISO non-common scheduling points include all Proxy Generator Buses and Scheduled Lines listed in the table that is set forth in Section 4.4.4 of the NYISO’s Market Services Tariff that are not identified in this Table 3 as common scheduling points. The NYISO shall	non-common	NYISO

provide to PJM notice of any new or deleted non-common scheduling points prior to implementing such changes in its M2M software.		
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$$RTO\_Transfers_{sched\_pt} = Imports_{sched\_pt} + WheelsIn_{sched\_pt} - Exports_{sched\_pt} - WheelsOut_{sched\_pt}$$

Where:

$sched\_pt$  = the relevant scheduling point. A scheduling point can be either a proxy or a scheduled line;

$RTO\_Transfers_{sched\_pt}$  = the net interchange schedule at a scheduling point;

$Imports_{sched\_pt}$  = the import component of the interchange schedule at a scheduling point;

$WheelsIn_{sched\_pt}$  = the injection of wheels-through component of the interchange schedule at a scheduling point;

$Exports_{sched\_pt}$  = the export component of the interchange schedule at a scheduling point; and

$WheelsOut_{sched\_pt}$  = the withdrawal of wheels-through component of the interchange schedule at a scheduling point.

The equation below applies to all non-common scheduling points that only one of the participating RTOs is responsible for. *Parallel\_Transfers* are applied to the Market Flow of the responsible participating RTO. For example, the *Parallel\_Transfers* computed for the IESO-NYISO non-common scheduling point are applied to the NYISO Market Flow.

$$Parallel\_Transfers_{Flowgate-m} = \sum_{nc\_sched\_pt=1}^{all} RTO\_Transfers_{nc\_sched\_pt} \times PTDF_{(nc\_sched\_pt,Flowgate-m)}$$

Where:

$Flowgate-m$  = the relevant flowgate;

$nc\_sched\_pt$  = the relevant non-common scheduling point. A non-common scheduling point can be either a proxy or a scheduled line. Non-common scheduling points are identified in Table 3, above;

$Parallel\_Transfers_{Flowgate-m}$  = the flow on Flowgate m due to the net interchange schedule at the non-common scheduling point;

$RTO\_Transfers_{nc\_sched\_pt}$  = the net interchange schedule at the non-common scheduling point, where a positive number indicates the import direction; and

$PTDF_{(nc\_sched\_pt, Flowgate-m)}$  = the power transfer distribution factor of the non-common scheduling point on Flowgate m. For NYISO, the PTDF will equal the generator shift factor of the non-common scheduling point.

The equation below applies to common scheduling points that directly interconnect the participating RTOs. *Shared\_Transfers* are applied to the Monitoring RTO's Market Flow only. NYISO to PJM transfers would be considered part of NYISO's Market Flow for NYISO-monitored Flowgates and part of PJM's Market Flow for PJM-monitored Flowgates.

$$Shared\_Transfers_{Flowgate-m} = \sum_{cmn\_sched\_pt=1}^{all} RTO\_Transfers_{cmn\_sched\_pt} \times PTDF_{(cmn\_sched\_pt, Flowgate-m)}$$

Where:

Flowgate-m = the relevant flowgate;

cmn\_sched\_pt = the relevant common scheduling point. A common scheduling point can be either a proxy or a scheduled line. Common scheduling points are identified in Table 3, above;

$Shared\_Transfers_{Flowgate-m}$  = the flow on Flowgate m due to interchange schedules on the common scheduling point;

$RTO\_Transfers_{cmn\_sched\_pt}$  = the net interchange schedule at a common scheduling point, where a positive number indicates the import direction; and

$PTDF_{(cmn\_sched\_pt, Flowgate-m)}$  = the generation shift factor of the common scheduling point on Flowgate m. For NYISO, the PTDF will equal the generator shift factor of the common scheduling point.

## 5.6 Compute the PAR Effects for all Flowgates

For the PARs listed in Table 4 below, the RTOs will determine the generation-to-load flows and interchange schedules, in MWs, that each PAR is impacting.

**Table 4. List of Phase Angle Regulators**

PAR	Description	PAR Type	Actual Schedule	Target Schedule	Responsible Participating RTO(s)
1	RAMAPO PAR3500	common	From telemetry	From telemetry*	NYISO and PJM
2	RAMAPO PAR4500	common	From telemetry	From telemetry*	NYISO and PJM
3	FARRAGUT TR11	common	From telemetry	From telemetry*	NYISO and PJM
4	FARRAGUT TR12	common	From telemetry	From telemetry*	NYISO and PJM
5	GOETHSLN BK_1N	common	From telemetry	From telemetry*	NYISO and PJM
6	WALDWICK O2267	common	From telemetry	From telemetry*	NYISO and PJM
7	WALDWICK F2258	common	From telemetry	From telemetry*	NYISO and PJM
8	WALDWICK E2257	common	From telemetry	From telemetry*	NYISO and PJM
9	STLAWRNC PS_33	non-common	From telemetry	0	NYISO
10	STLAWRNC PS_34	non-common	From telemetry	0	NYISO

\*Pursuant to the rules for implementing the M2M coordination process over the NY-NJ PARs that are set forth in this M2M Schedule.

Compute the PAR control as the actual flow less the target flow across each PAR:

$$PAR\_Control_{par} = Actual\_MW_{par} - Target\_MW_{par}$$

Where:

par = each of the phase angle regulators listed in Table 4, above;

PAR\_Control<sub>par</sub> = the flow deviation on each of the PARs;

Actual\_MW<sub>par</sub> = the actual flow on each of the PARs, determined consistent with Table 4 above; and

Target\_MW<sub>par</sub> = the target flow that each of the PARs should be achieving, determined in accordance with Table 4 above.

When the Actual\_MW and Target\_MW are both set to “From telemetry” in Table 4 above, the PAR\_Control will equal zero.

### Common PARs

In the equations below, the Non-Monitoring RTO is credited for or responsible for PAR\_Impact resulting from the common PAR effect on the Monitoring RTO’s Flowgates. The common PAR impact calculation only applies to the common PARs identified in Table 4 above.

Compute control deviation for all common PARs on Flowgate m based on the PAR\_Control<sub>par</sub> MWs calculated above:

$$Cmn\_PAR\_Control_{Flowgate-m} = \sum_{cmn\_par=1}^{all} (PSF_{(cmn\_par,Flowgate-m)} \times PAR\_Control_{cmn\_par})$$

Where:

Flowgate-m = the relevant flowgate;

cmn\_par = each of the common phase angle regulators, modeled as Flowgates, identified in Table 4, above;

Cmn\_PAR\_Control<sub>Flowgate-m</sub> = the sum of flow on Flowgate m after accounting for the operation of common PARs;

PSF<sub>(cmn\_par,Flowgate-m)</sub> = the PSF of each of the common PARs on Flowgate m; and

PAR\_Control<sub>cmn\_par</sub> = the flow deviation on each of the common PARs.

Compute the impact of generation-to-load and interchange schedules across all common PARs on Flowgate m as the Market Flow across each common PAR multiplied by that PAR’s shift factor on Flowgate m:

$$Cmn\_PAR\_MF_{Flowgate-m} = \sum_{cmn\_par=1}^{all} \left( (PSF_{(cmn\_par,Flowgate-m)}) \times (RTO\_GTL_{cmn\_par} + Parallel\_Transfers_{cmn\_par}) \right)$$

Where:

Flowgate-m = the relevant flowgate;

cmn\_par = the set of common phase angle regulators, modeled as Flowgates, identified in Table 4 above;

- $Cmn\_PAR\_MF_{Flowgate-m}$  = the sum of flow on Flowgate m due to the generation to load flows and interchange schedules on the common PARs;
- $PSF_{(cmn\_par,Flowgate-m)}$  = the PSF of each of the common PARs on Flowgate m;
- $RTO\_GTL_{cmn\_par}$  = the generation to load flow for each common par, computed in the same manner as the generation to load flow is computed for Flowgates in Section 5.4 above; and
- $Parallel\_Transfers_{cmn\_par}$  = the flow on each of the common PARs caused by interchange schedules at non-common scheduling points.

Next, compute the impact of the common PAR effect for Flowgate m as:

$$Cmn\_PAR\_Impact_{Flowgate-m} = Cmn\_PAR\_MF_{Flowgate-m} - Cmn\_PAR\_Control_{Flowgate-m}$$

Where:

- $Flowgate-m$  = the relevant flowgate;
- $Cmn\_PAR\_Impact_{Flowgate-m}$  = potential flow on Flowgate m that is affected by the operation of the common PARs;
- $Cmn\_PAR\_MF_{Flowgate-m}$  = the sum of flow on Flowgate m due to the generation to load and interchange schedules on the common PARs; and
- $Cmn\_PAR\_Control_{Flowgate-m}$  = the flow deviation on each of the common PARs.

### **Non-Common PARs**

For the equations below, the NYISO will be credited or responsible for *PAR\_Impact* on all Flowgates because the NYISO is the participating RTO that has input into the operation of these devices. The non-common PAR impact calculation only applies to the non-common PARs identified in Table 4 above.

Compute control deviation for all non-common PARs on Flowgate m based on the PAR control MW above:

$$NC\_PAR\_Control_{Flowgate-m} = \sum_{nc\_par=1}^{all} PSF_{(nc\_par,Flowgate-m)} \times PAR\_Control_{nc\_par}$$

Where:

- $Flowgate-m$  = the relevant flowgate;

$nc\_par =$  each of the non-common phase angle regulators, modeled as Flowgates, identified in Table 4 above;

$NC\_PAR\_Control_{Flowgate-m} =$  the sum of flow on Flowgate m after accounting for the operation of non-common PARs;

$PSF_{(nc\_par,Flowgate-m)} =$  the PSF of each of the non-common PARs on Flowgate m; and

$PAR\_Control_{nc\_par} =$  the flow deviation on each of the non-common PARs.

Compute the impact of generation-to-load and interchange schedules across all non-common PARs on Flowgate m as the Market Flow across each PAR multiplied by that PAR's shift factor on Flowgate m:

$$NC\_PAR\_MF_{Flowgate-m} = \sum_{nc\_par=1}^{all} \left( (PSF_{nc\_par,Flowgate-m}) \times (RTO\_GTL_{nc\_par} + Parallel\_Transfers_{nc\_par}) \right)$$

Where:

Flowgate-m = the relevant flowgate;

$nc\_par =$  the set of non-common phase angle regulators, modeled as Flowgates, identified in Table 4 above;

$NC\_PAR\_MF_{Flowgate-m} =$  the sum of flow on Flowgate m due to the generation to load flows and interchange schedules on the non-common PARs;

$PSF_{(nc\_par,Flowgate-m)} =$  the outage transfer distribution factor of each of the non-common PARs on Flowgate m;

$RTO\_GTL_{nc\_par} =$  the generation to load flow for each non-common par, computed in the same manner as the generation to load flow is computed for Flowgates in Section 5.4 above; and

$Parallel\_Transfers_{nc\_par} =$  the flow, as computed above where the Flowgate m is one of the non-common PARs, on each of the non-common PARs caused by interchange schedules at non-common scheduling points.

Next, compute the non-common PAR impact for Flowgate m as:

$$NC\_PAR\_Impact_{Flowgate-m} = NC\_PAR\_MF_{Flowgate-m} - NC\_PAR\_Control_{Flowgate-m}$$

Where:

Flowgate-m = the relevant flowgate;

$NC\_PAR\_Impact_{Flowgate-m}$  = the potential flow on Flowgate m that is affected by the operation of non-common PARs;

$NC\_PAR\_MF_{Flowgate-m}$  = the sum of flow on Flowgate m due to the generation to load and interchange schedules on the non-common PARs; and

$NC\_PAR\_Control_{Flowgate-m}$  = the sum of flow on Flowgate m after accounting for the operation of non-common PARs.

### **Aggregate all PAR Effects for Each Flowgate**

The total impacts from the PAR effects for Flowgate m is:

$$PAR\_Impact_{Flowgate-m} = Cmn\_PAR\_Impact_{Flowgate-m} + NC\_PAR\_Impact_{Flowgate-m}$$

Where:

Flowgate-m = the relevant flowgate;

$PAR\_Impact_{Flowgate-m}$  = the flow on Flowgate m that is affected after accounting for the operation of both common and non-common PARs;

$Cmn\_PAR\_Impact_{Flowgate-m}$  = potential flow on Flowgate m that is affected by the operation of the common PARs; and

$NC\_PAR\_Impact_{Flowgate-m}$  = the potential flow on Flowgate m that is affected by the operation of non-common PARs.

### **5.7 Compute the RTO Aggregate Market Flow for all Flowgates**

With the *RTO\_GTL* and *PAR\_IMPACT* known, we can now compute the *RTO\_MF* for all Flowgates as:

$$\begin{aligned} RTO\_MF_{Flowgate-m} &= RTO\_GTL_{Flowgate-m} + Parallel\_Transfers_{Flowgate-m} + Shared\_Transfers_{Flowgate-m} \\ &\quad - PAR\_Impact_{Flowgate-m} \end{aligned}$$

Where:

Flowgate-m = the relevant flowgate;



- $RTO\_MF_{Flowgate-m}$  = the Market Flow caused by RTO generation dispatch and transaction scheduling on Flowgate m after accounting for the operation of both the common and non-common PARs;
- $RTO\_GTL_{Flowgate-m}$  = the generation to load flow for the entire RTO footprint on Flowgate m;
- $Parallel\_Transfers_{Flowgate-m}$  = the flow on Flowgate m caused by interchange schedules that are not jointly scheduled by the participating RTOs;
- $Shared\_Transfers_{Flowgate-m}$  = the flow on Flowgate m caused by interchange schedules that are jointly scheduled by the participating RTOs; and
- $PAR\_Impact_{Flowgate-m}$  = the flow on Flowgate m that is affected after accounting for the operation of both the common and non-common PARs.

## **6 M2M Entitlement Determination Method**

M2M Entitlements are the equivalent of financial rights for the Non-Monitoring RTO to use the Monitoring RTO's transmission system within the confines of the M2M redispatch process. The Parties worked together to develop the M2M Entitlement determination method set forth below.

Each Party shall calculate a M2M Entitlement on each M2M Redispatch Flowgate and compare the results at least once a year on a mutually agreed upon schedule. This frequency ensures that the impact of upgrades on both parties systems are incorporated into the M2M Entitlement calculation. The parties may mutually agree to not recalculate M2M Entitlements in a given year.

### **6.1 M2M Entitlement Topology Model and Impact Calculation**

The M2M Entitlement calculation shall use both RTOs' static topological models to determine the Non-Monitoring RTO's mutually agreed upon share of a M2M Redispatch Flowgate's total capacity based on historic dispatch patterns. Both RTOs' models must include the following items:

1. a static transmission and generation model;
2. generator, load, and PAR shift factors;
3. generator output, load, and interchange schedules from the most recently completed three calendar years;
4. a PAR impact assumption that the PAR control is perfect for all PARs within the transmission models except the PARs at the Michigan-Ontario border;

5. new or upgraded Transmission Facilities; and
6. Transmission Facility retirements.

Each Party shall calculate the GLDFs using a transmission model that contains a mutually agreed upon set of: (1) transmission lines that are modeled as in-service; (2) generators; and (3) loads. Using these GLDFs, generator output data from the three year period agreed to by the Parties, and load data from the three year period agreed to by the Parties, the Parties shall calculate each Party's MW impact on each M2M Redispatch Flowgate for each hour in the three year period agreed to by the Parties.

Using these impacts, the Parties shall create a reference year consisting of twelve periods ("M2M Entitlement Periods") for each M2M Redispatch Flowgate. The M2M Entitlement Periods are as follows:

1. M2M Entitlement Period 1: January;
2. M2M Entitlement Period 2: February;
3. M2M Entitlement Period 3: March;
4. M2M Entitlement Period 4: April;
5. M2M Entitlement Period 5: May;
6. M2M Entitlement Period 6: June;
7. M2M Entitlement Period 7: July;
8. M2M Entitlement Period 8: August;
9. M2M Entitlement Period 9: September;
10. M2M Entitlement Period 10: October;
11. M2M Entitlement Period 11: November;
12. M2M Entitlement Period 12: December;

For each of the M2M Entitlement Periods listed above the Non-Monitoring RTO will calculate its M2M Entitlement on each M2M Redispatch Flowgate for four groups of hours, the grouping is described below.

1. M2M Entitlement Group 1: Hour beginning 0 through hour beginning 5;
2. M2M Entitlement Group 2: Hour beginning 9 through hour beginning 14;
3. M2M Entitlement Group 3: Hour beginning 15 through hour beginning 20 and;
4. M2M Entitlement Group 4: Hour beginning 6 through hour beginning 8 and hour beginning 21 through hour beginning 23.

The M2M Entitlement for each period/group, for each M2M Redispatch Flowgate will be calculated by averaging the Non-Monitoring RTO's Market Flow on an M2M Redispatch

Flowgate for each particular period/group. The Non-Monitoring RTO shall use the Market Flow data for all of the like period/groups, in each year contained within the three year period to calculate the Non-Monitoring RTO's average Market Flow on each M2M Redispatch Flowgate. The data within the three year period will be weighted as follows: most recent year 20%, middle year 30%, and oldest year 50%. In addition, the M2M Entitlement values should never extend beyond a facility's rating. If the calculation derives an entitlement that is above the facility's rating the parties will cap the entitlement value to remain within the facility's rating.

If either of the below upgrade scenarios occur the Parties may mutually agree to adjust the M2M Entitlement calculation method to account for the impacts of the upgrade(s):

1. If the Non-Monitoring RTO upgrades the Monitoring RTO's system resulting in a rating increase; or
2. If the Non-Monitoring RTO's market flow on the Monitoring RTO's system decreases due to a Non-Monitoring RTO upgrade on the Non-Monitoring RTO's system.

## **6.2 M2M Entitlement Calculation**

Each Party shall independently calculate the Non-Monitoring RTO's M2M Entitlement for all M2M Redispatch Flowgates using the equations set forth in this Section. The Parties shall mutually agree upon M2M Entitlement calculations. Any disputes that arise in the M2M Entitlement calculations will be resolved in accordance with the dispute resolution procedures set forth in Section 35.15 of this Agreement.

Eighty percent of the RECo load shall be excluded from the calculation of Market Flows and M2M Entitlements, and shall instead be reflected as a PJM obligation over the Ramapo PARs in accordance with Sections 7.2.1 and 8.3 of this Schedule D. The remaining twenty percent of RECo load shall be included in the M2M Entitlement and Market Flow calculations as PJM load.

The following assumptions apply to the M2M Entitlement calculation:

1. the Parties shall calculate the values in this Section using the M2M Entitlement Topology Model discussed in Section 6.1 above, unless otherwise stated;
2. the impacts from the *Parallel\_Transfers* and *Shared\_Transfers* terms of the Market Flow calculation (*see* Section 5.5) are excluded from the Market Flow that is used to calculate M2M Entitlements;
3. perfect PAR Control exists for all PARs within the transmission models except the PARs at the Ontario/Michigan border; and
4. External Capacity Resources may be included in the calculation of M2M Entitlements consistent with Section 6.2.1.1 of this Schedule D.

Once the Reference Year Market Flows have been calculated for each interval to determine the integrated hourly Market Flow for each hour of the relevant three year period agreed to by the Parties, the new M2M Entitlement will be determined for all M2M Entitlement Groups in each M2M Entitlement Period using the method established in Section 6.1 above.

## **6.2.1 Treatment of Out-of-Area Capacity Resources and Representation of Ontario/Michigan PARs in the M2M Entitlement Calculation Process**

### **6.2.1.1 Modeling of External Capacity Resources**

External Capacity Resources may be included in the M2M Entitlement calculation to the extent the Parties mutually agree to their inclusion.

For the initial implementation of this M2M coordination process that will use 2009 through 2011 data to develop M2M Entitlements, PJM will be permitted to include its External Capacity Resources in the M2M Entitlement calculation. NYISO has not requested inclusion of any External Capacity Resources in the M2M Entitlement calculation for the initial implementation of M2M. When the Parties decide to update the data used to determine M2M Entitlements:

- a. PJM will be permitted to include External Capacity Resources that have an equivalent net M2M Entitlement impact to the net M2M Entitlement impact of the PJM External Capacity Resources that were used for the initial implementation of the M2M coordination process. Inclusion of PJM External Capacity Resources that exceed the net M2M Entitlement impact of the PJM External Capacity Resources that were used for the initial implementation of the M2M coordination process must be mutually agreed to by the Parties.
- b. The Parties may mutually agree to permit the NYISO to include External Capacity Resources in the M2M Entitlement calculation.

### **6.2.1.2 Modeling of the Ontario/Michigan PARs**

The Ontario/Michigan PARs will be modeled as not controlling power flows in the M2M Entitlement calculation process. The Parties agree that this modeling treatment is only appropriate when it is paired with the rules for calculating Market Flows and M2M settlements that are set forth in Sections 5 and 8 of this Agreement. Section 7.1 specifies how the RTOs will adjust Market Flows to account for the impact of the operation of the Ontario/Michigan PARs when the PARs are in service. The referenced Market Flow and M2M settlement rules are necessary because they are designed to ensure that M2M settlement obligations based on M2M Entitlements and Market Flows will not result in compensation for M2M redispatch when no actual M2M redispatch occurs.

## **7 Real-Time Energy Market Coordination**

Operation of the NY-NJ PARs and redispatch are used by the Parties in real-time operations to effectuate this M2M coordination process. Operation of the NY-NJ PARs will permit the Parties to redirect energy to reduce the overall cost of managing transmission congestion and to converge the participating RTOs' cost of managing transmission congestion. Operation of the NY-NJ PARs to manage transmission congestion requires cooperation between the NYISO and PJM. Operation of the NY-NJ PARs shall be coordinated by the RTOs.

When a M2M Redispatch Flowgate or Other Coordinated Flowgate begins binding in the Monitoring RTOs real-time security constrained economic dispatch, the Monitoring RTO will notify the Non-Monitoring RTO of the transmission constraint and will identify the appropriate Flowgate that requires redispatch assistance. The Monitoring and Non-Monitoring RTOs will provide the economic value of the Flowgate constraint (i.e., the Shadow Price) as calculated by their respective dispatch models. Using this information, the security-constrained economic dispatch of the Non-Monitoring RTO will include the Flowgate constraint; the Monitoring RTO will evaluate the actual loading of the Flowgate constraint and request that the Non-Monitoring RTO modify its Market Flow via redispatch if it can do so more efficiently than the Monitoring RTO (i.e., if the Non-Monitoring RTO has a lower Shadow Price for that Flowgate than the Monitoring RTO).

An iterative coordination process will be supported by automated data exchanges in order to ensure the process is manageable in a real-time environment. The process of evaluating the Shadow Prices between the RTOs will continue until the Shadow Prices converge and an efficient redispatch solution is achieved. The continual interactive process over the following dispatch cycles will allow the transmission congestion to be managed in a coordinated, cost-effective manner by the RTOs. A more detailed description of this iterative procedure is discussed in Section 7.1 and the appropriate use of this iterative procedure is described in Section 10.

### **7.1 Real-Time Redispatch Coordination Procedures**

The following procedure will apply for managing redispatch for M2M Redispatch Flowgates and Other Coordinated Flowgates in the real-time Energy market:

#### **7.1.1 Flowgates shall be monitored per each RTO's internal procedures.**

- a. When (i) a Flowgate is constrained to a defined limit (actual or contingency flow) by a non-transient constraint, and (ii) Market Flows are such that the Non-Monitoring RTO may be able to provide an appreciable amount of redispatch relief to the Monitoring RTO for a M2M Redispatch Flowgate, or (iii) the Non-Monitoring RTO agrees to initiate and to continue coordination for a M2M Redispatch Flowgate or Other Coordinated Flowgate, then the Monitoring RTO shall reflect the monitored Flowgate as constrained.

- b. Flowgate limits shall be periodically verified and updated.

**7.1.2 Testing for an Appreciable Amount of Redispatch Relief and Determining the Settlement Market Flow for M2M Redispatch Flowgates:**

When the PARs at the Michigan-Ontario border are not in-service, the ability of the Non-Monitoring RTO to provide an appreciable amount of redispatch relief will be determined by comparing the Non-Monitoring RTO’s Market Flow to the Non-Monitoring RTO M2M Entitlement for the constrained M2M Redispatch Flowgate. When the Non-Monitoring RTO Market Flow (also the Market Flow used for settlement) is greater than the Non-Monitoring RTO M2M Entitlement for the constrained M2M Redispatch Flowgate, the Monitoring RTO will assume that an appreciable amount of redispatch relief is available from the Non-Monitoring RTO and will engage the redispatch coordination process for the constrained M2M Redispatch Flowgate.

When any of the PARs at the Michigan-Ontario border are in-service, the ability of the Non-Monitoring RTO to provide an appreciable amount of redispatch relief will be determined by comparing either (i) the Non-Monitoring RTO’s unadjusted Market Flow, or (ii) the Non-Monitoring RTO Market Flow adjusted to reflect the expected impact of the PARs at the Michigan-Ontario border (“LEC Adjusted Market Flow”), to the Non-Monitoring RTO M2M Entitlement for the constrained M2M Redispatch Flowgate. The rules for determining which Market Flow (unadjusted or adjusted) to compare to the Non-Monitoring RTO M2M Entitlement when any of the PARs at the Michigan-Ontario border are in-service are set forth below.

**a. Calculating the Expected Impact of the PARs at the Michigan-Ontario Border on Market Flows**

The Non-Monitoring RTO’s unadjusted Market Flow is determined as  $RTO\_MF$  in accordance with the calculation set forth in Section 5 above. The expected impact of the PARs at the Michigan-Ontario border is determined as follows:

$$MICH - OH\_PAR\_Impact_{Flowgate-m} = \sum_{MICH-OH\ Path=1}^4 \left( \frac{(PSF_{(MICH-OH\ Path, Flowgate-m)}) \times (RTO\_MF_{MICH-OH\ Path} - LEC/4)}{1} \right)$$

Where:

Flowgate-m = the relevant Flowgate;

MICH-OH Path = each of the four PAR paths connecting Michigan to Ontario, Canada;

MICH-OH\_PAR\_Impact<sub>Flowgate-m</sub> = the expected impact of the operation of the PARs at the Michigan-Ontario border on the flow on Flowgate m;

PSF<sub>(MICH-OH Path,Flowgate-m)</sub> = the PSF of each of the four Michigan-Ontario PAR paths on Flowgate m;

RTO\_MF<sub>MICH-OH Path</sub> = the Market Flow for each of the four Michigan-Ontario PAR paths, computed in the same manner as the Market Flow is computed for Flowgates in Section 5 above; and

LEC = Actual circulation around Lake Erie as measured by each RTO.

The Non-Monitoring RTO's LEC Adjusted Market Flow, reflecting the expected impact of the PARs on the Michigan-Ontario border, can be determined by adjusting the *RTO\_MF* from Section 5 to incorporate the *MICH-OH\_PAR\_Impact* calculated above.

$$\begin{aligned} \text{LEC Adjusted Market Flow}_{\text{Flowgate-m}} \\ = \text{RTO\_MF}_{\text{Flowgate-m}} - \text{MICH} - \text{OH\_PAR\_Impact}_{\text{Flowgate-m}} \end{aligned}$$

Where:

Flowgate-m = the relevant flowgate;

MICH-OH Path = each of the four PAR paths connecting Michigan to Ontario, Canada;

MICH-OH\_PAR\_Impact<sub>Flowgate-m</sub> = the expected impact of the operation of the PARs at the Michigan-Ontario border on the flow on Flowgate m;

RTO\_MF<sub>Flowgate-m</sub> = the Market Flow caused by RTO generation dispatch and transaction scheduling on Flowgate m after accounting for the operation of both the common and non-common PARs; and

LEC Adjusted Market Flow<sub>Flowgate-m</sub> = the Market Flow caused by RTO generation dispatch and transaction scheduling on Flowgate m after accounting for the operation of the common PARs, the

non-common PARs, and the PARs at the Michigan-Ontario border.

**b. Determining Whether to Use Unadjusted Market Flow or LEC Adjusted Market Flow; Determining if Appreciable Redispatch Relief is Available**

- 1) When the Non-Monitoring RTO's LEC Adjusted Market Flow equals the Non-Monitoring RTO's unadjusted Market Flow and the Non-Monitoring RTO's Market Flow (also the Market Flow used for settlement) is greater than the Non-Monitoring RTO M2M Entitlement for the constrained M2M Redispatch Flowgate, the Monitoring RTO will assume that an appreciable amount of redispatch relief is available from the Non-Monitoring RTO and will engage the M2M coordination process for the constrained M2M Flowgate.
- 2) When the Non-Monitoring RTO's unadjusted Market Flow is greater than the Non-Monitoring RTO's LEC Adjusted Market Flow, then the following calculation shall be performed to determine if an appreciable amount of redispatch relief is expected to be available:
  - A. Determine the minimum of (a) the Non-Monitoring RTO's unadjusted Market Flow, and (b) the Non-Monitoring RTO's M2M Entitlement, for the constrained M2M Redispatch Flowgate; and
  - B. Determine the maximum of (x) the value from step A above, and (y) the Non-Monitoring RTO's LEC Adjusted Market Flow

When the value from B above (the Market Flow used for settlement), is greater than the Non-Monitoring RTO's M2M Entitlement for the constrained M2M Redispatch Flowgate, the Monitoring RTO will assume that an appreciable amount of redispatch relief is available from the Non-Monitoring RTO and will engage the coordination process for the constrained M2M Redispatch Flowgate.
- 3) When the Non-Monitoring RTO's unadjusted Market Flow is less than the Non-Monitoring RTO LEC Adjusted Market Flow, the following calculation shall be performed to determine if an appreciable amount of redispatch relief is expected to be available:
  - A. Determine the maximum of (a) the Non-Monitoring RTO's unadjusted Market Flow, and (b) the Non-Monitoring RTO M2M Entitlement, for the constrained M2M Redispatch Flowgate; and



B. Determine the minimum of (x) the value from A above, and (y) the Non-Monitoring RTO's LEC Adjusted Market Flow

When the value from B above (the Market Flow used for settlement), is greater than the Non-Monitoring RTO's M2M Entitlement for the constrained M2M Redispatch Flowgate, the Monitoring RTO will assume that an appreciable amount of redispatch relief is available from the Non-Monitoring RTO and will engage the coordination process for the constrained M2M Redispatch Flowgate.

- 7.1.3 The Monitoring RTO initiates redispatch coordination, notifies the Non-Monitoring RTO of the M2M Redispatch Flowgates or Other Coordinated Flowgates that are subject to coordination and updates required information.
- 7.1.4 The Non-Monitoring RTO shall acknowledge receipt of the notification and one of the following shall occur:
- a. The Non-Monitoring RTO refuses to activate redispatch coordination:
    - i. The Non-Monitoring RTO notifies the Monitoring RTO of the reason for refusal; and
    - ii. The M2M State is set to "Refused"; or
  - b. The Non-Monitoring RTO agrees to activate redispatch coordination:
    - i. Such an agreement shall be considered an initiation of the redispatch process; and
    - ii. The M2M State is set to "Activated".
    - iii. If the Non-Monitoring RTO later withdraws its agreement to activate redispatch coordination at a Flowgate, then the Non-Monitoring RTO notifies the Monitoring RTO of the reason for its decision and the Monitoring RTO shall terminate the redispatch coordination process and set the M2M State to "Refused".
- 7.1.5 The Parties have agreed to transmit information required for the administration of this procedure, as per Section 35.7.1 of this Agreement.
- 7.1.6 As Shadow Prices converge and approach zero or the Non-Monitoring RTO's Market Flows and Shadow Prices are such that an appreciable amount of redispatch relief can no longer be provided to the Monitoring RTO, the Monitoring RTO shall be responsible for the continuation or termination of the redispatch process. Current and forecasted future system conditions shall be considered. Termination of redispatch coordination may be requested by either RTO in the event of a system emergency.

When the Monitoring RTO's Shadow Price is not approaching zero the Monitoring RTO can (1) use the procedure called *Testing for an Appreciable Amount of Relief and Determining the Settlement Market Flow* from step 2b above, and (2) compare the Non-Monitoring RTO's Shadow Price to the Monitoring RTO's Shadow Price, to determine whether there is an appreciable amount of market flow relief being provided.

When the *Testing for an Appreciable Amount of Relief and Determining the Settlement Market Flow* procedure indicates there is not an appreciable amount of relief being provided, and the Non-Monitoring RTO Shadow Price is not less than the Monitoring RTO Shadow Price, then the Monitoring RTO may terminate the M2M coordination process.

- 7.1.7 Upon termination of redispatch coordination, the Monitoring RTO shall
- a. Notify the Non-Monitoring RTO; and
  - b. Transmit data to the Non-Monitoring RTO with the M2M State set to "Closed". The timestamp with this transmission shall be considered termination of the redispatch process for operational and, where applicable, settlement purposes.

## **7.2 Real-Time NY-NJ PAR Coordination**

The NY-NJ PARs will be operated to facilitate interchange schedules while minimizing regional congestion costs. When congestion is not present, the NY-NJ PARs will be operated to achieve the target flows as established below in Section 7.2.1.

PJM and the NYISO have operational control of the NY-NJ PARs and direct the operation of the NY-NJ PARs, while Public Service Electric and Gas Company ("PSE&G") and Consolidated Edison Company of New York ("Con Edison") have physical control of the NY-NJ PARs. The Con Edison dispatcher sets the PAR taps for the ABC PARs and Ramapo PARs at the direction of the NYISO. The PSE&G dispatchers set the PAR taps for the Waldwick PARs at the direction of PJM.

PJM and the NYISO have the responsibility to direct the operation of the NY-NJ PARs to maintain compliance with the requirements of this Agreement. PJM and the NYISO shall make reasonable efforts to minimize movement of the NY-NJ PARs while implementing the NY-NJ PAR target flows and the NY-NJ PAR coordination process. PJM and the NYISO will employ a +/- 50 MW operational bandwidth around each NY-NJ PAR's target flow to limit tap movements and to maintain actual flows at acceptable levels. This operational bandwidth shall not impact or change the NY-NJ PAR Settlement rules in Section 8.3 of this Agreement. The

operational bandwidth provides a guideline to assist the RTOs' efforts to avoid unnecessary NY-NJ PAR tap movements.

In order to preserve the long-term availability of the NY-NJ PARs, a maximum number of 20 PAR tap changes per NY-NJ PAR per day, and a maximum number of 400 PAR tap changes per NY-NJ PAR per calendar month will normally be observed. If the number of PAR tap changes exceed these limits, then the operational bandwidth shall be increased in 50 MW increments until the total number of PAR tap changes no longer exceed 400 PAR tap changes per NY-NJ PAR per month, unless PJM and the NYISO mutually agree otherwise.

In order to implement the NY-NJ PAR coordination process, including the establishment and continuation of the initial and any future OBF as defined in this Section and Section 35.2 of this Agreement, on the ABC PARs and the Waldwick PARs, the facilities comprising the ABC Interface and JK Interface shall be functional and operational at all times, consistent with Good Utility Practice, except when they are taken out-of-service to perform maintenance or are subject to a forced outage.

### 7.2.1 NY-NJ PAR Target Values

A Target Value for flow between the NYISO and PJM shall be determined for each NY-NJ PAR based on the net interchange schedule between the Parties. These Target Values shall be used for settlement purposes as:

$$Target_{PARx} = (InterchangeFactor_{PARx}) + (Operational\ Base\ Flow_{PARx}) + (RECo\_Load_{PARx})$$

Where:

$Target_{PARx}$  = Calculated Target Value for the flow on each NY-NJ PAR For purposes of this equation, a positive value\* indicates a flow from PJM to the NYISO.

\* The sign conventions apply to the formulas used in this Agreement. The Parties may utilize different sign conventions in their market software so long as the software produces results that are consistent with the rules set forth in this Agreement.

$InterchangeFactor_{PARx}$  = The MW value of the net interchange schedule between PJM and NYISO over the AC tie lines distributed across each in-service NY-NJ PAR calculated as net interchange schedule times the interchange percentage. The interchange percentage for each NY-NJ PAR is listed in Table 5.

If a NY-NJ PAR is out-of-service or is bypassed, or if the RTOs mutually agree that a NY-NJ PAR is incapable of facilitating interchange, the percentage of net interchange normally assigned to that NY-NJ PAR will be transferred over the western AC tie lines between the NYISO and

PJM. The remaining in-service NY-NJ PARs will continue to be assigned the interchange percentages specified in Table 5.

$OperationalBaseFlow_{PARx} =$

The MW value of OBF distributed across each of the in-service ABC PARs and Waldwick PARs.

Either Party may establish a temporary OBF to address a reliability issue until a long-term solution to the identified reliability issue can be implemented. Any temporary OBF that is established shall be at a level that both Parties can reliably support. The Party that establishes the OBF shall: (1) explain the reliability need to the other Party; (2) describe how the OBF addresses the identified reliability need; and (3) identify the expected long-term solution to address the reliability need.

The initial 400 MW OBF, effective on May 1, 2017, is expected to be reduced to zero MW by June 1, 2021.

The Parties may mutually agree to modify an established OBF value that normally applies when all of the ABC PARs and Waldwick PARs are in service. Modification of the normally applied OBF value will be implemented no sooner than two years after mutual agreement on such modification has been reached, unless NYISO and PJM mutually agree to an earlier implementation date.

The NYISO and PJM shall post the OBF values, in MW, normally applied to each ABC PAR and Waldwick PAR when all of the ABC PARs and Waldwick PARs are in service, on their respective websites. The NYISO and PJM shall also post the methodology used to reduce the OBF under certain outage conditions on their respective websites. The NYISO and PJM shall review the OBF MW value at least annually.

$RECo\_Load_{PARx} =$

The MW value of the telemetered real-time Rockland Electric Company Load to be delivered over a NY-NJ PAR shall be calculated as real-time RECo Load times the RECo Load percentage listed in Table 5. RECo Load is the portion of Orange and Rockland load that is part of PJM.

The primary objective of the NY-NJ PARs is the delivery of scheduled interchange. Deliveries to serve RECo Load over the Ramapo PARs will only be permitted to the extent there is unused transfer capability on the Ramapo PARs after accounting for interchange. Subject to the foregoing limitation, when one of the Ramapo PARs is out of service the full RECo Load percentage (80%) will be applied to the in-service Ramapo PAR. The RECo Load percentage ordinarily used for each NY-NJ PAR is listed in Table 5:

Table 5

PAR Name	Description	Interchange Percentage	RECo Load Percentage
3500	RAMAPO PAR3500	16%	40%^
4500	RAMAPO PAR4500	16%	40%^
E	WALDWICK E2257	5%	0%
F	WALDWICK F2258	5%	0%
O	WALDWICK O2267	5%	0%
A	GOETHSLN BK_1N	7%	0%
B	FARRAGUT TR11	7%	0%
C	FARRAGUT TR12	7%	0%

^ Subject to the foregoing limitation, when one of the Ramapo PARs is out of service the full RECo Load Percentage (80%) will be applied to the in-service Ramapo PAR.

### 7.2.2 Determination of the Cost of Congestion at each NY-NJ PAR

The incremental cost of congestion relief provided by each NY-NJ PAR shall be determined by each of the Parties. These costs shall be determined by multiplying each Party's Shadow Price on each of its NY-NJ PAR Coordinated Flowgates by the PSF for each NY-NJ PAR for the relevant NY-NJ PAR Coordinated Flowgates.

The incremental cost of congestion relief provided by each NY-NJ PAR shall be determined by the following formula:

$$Congestion\$_{(PARx,RTO)} =$$

$$\sum_{m \in \text{NY-NJ PAR Coordinated Flowgates}_{RTO}} (PSF_{(\text{NY-NJ PAR Coordinated Flowgate}-m, PARx)} \times \text{Shadow}_{\text{NY-NJ PAR Coordinated Flowgate}-m})$$

Where:

$\text{Congestion}_{(PARx, RTO)}$  = Cost of congestion at each NY-NJ PAR for the relevant participating RTO, where a negative cost of congestion indicates taps in the direction of the relevant participating RTO would alleviate that RTO's congestion;

$\text{NY-NJ PAR Coordinated Flowgates}_{RTO}$  = Set of NY-NJ PAR Coordinated Flowgates for the relevant participating RTO;

$PSF_{(\text{NY-NJ PAR Coordinated Flowgate}-m, PARx)}$  = The PSF for each NY-NJ PAR on NY-NJ PAR Coordinated Flowgate-m; and

$\text{Shadow}_{\text{NY-NJ PAR Coordinated Flowgate}-m}$  = The Shadow Price on the relevant participating RTO's NY-NJ PAR Coordinated Flowgate m.

### 7.2.3 Desired PAR Changes

Consistent with the congestion cost calculation established in Section 7.2.2 above, if the NYISO congestion costs associated with a NY-NJ PAR are less than the PJM congestion costs associated with the same NY-NJ PAR, then hold or take taps into NYISO.

Similarly, if the PJM congestion costs associated with a NY-NJ PAR are less than NYISO congestion costs associated with the same NY-NJ PAR, then hold or take taps into PJM.

Any action on the NY-NJ PARs will be coordinated between the Parties and taken into consideration other PAR actions.

## 8 Real-Time Energy Market Settlements

### 8.1 Information Used to Calculate M2M Settlements

For each Flowgate there are two components of the M2M settlement, a redispatch component and a NY-NJ PAR coordination component. Both M2M settlement components are defined below.

For the redispatch component, market settlements under this M2M Schedule will be calculated based on the following:

1. the Non-Monitoring RTO's real-time Market Flow, determined in accordance with Section 7.1 above, on each M2M Redispatch Flowgate compared to its M2M Entitlement for M2M Redispatch Flowgates eligible for redispatch on each M2M Redispatch Flowgate; and
2. the *ex-ante* Shadow Price at each M2M Redispatch Flowgate.

When determining M2M settlements for a M2M Redispatch Flowgate, each Party will use the M2M Entitlement that corresponds to the period/group for which the real-time Market Flow is being calculated except for the following scenarios:

1. When the Non-Monitoring RTO's M2M Entitlement is negative and the net market flow of the Non-Monitoring RTO is greater than or equal to zero the M2M Entitlement will be set to zero.
2. When the Non-Monitoring RTO's M2M Entitlement is negative and the net market flow of the Non-Monitoring RTO is also negative, but exceeds the M2M Entitlement, both the M2M Entitlement and market flow will be set to zero.

Redispatch coordination for Other Coordinated Flowgates is not subject to redispatch settlement under Section 8.2 of this Schedule D. NY-NJ PAR coordination for Other Coordinated Flowgates is subject to NY-NJ PAR coordination settlement under Section 8.3 of this Schedule D .

For the NY-NJ PARs coordination component, Market settlements under this M2M Schedule will be calculated based on the following:

1. actual real-time flow on each of the NY-NJ PARs compared to its target flow ( $Target_{PARx}$ );
2. PSF for each NY-NJ PAR onto each M2M Flowgate; and
3. the *ex-ante* Shadow Price at each M2M Flowgate.

Either or both of the Parties shall be excused from paying an *M2MPARSettlement* (described in Section 8.3 of this Schedule D) to the other Party at times when a Storm Watch is in effect in New York and the operating requirements and other criteria set forth in Section 8.3.1 below are satisfied.

## **8.2 Real-Time Redispatch Settlement**

For each M2M Redispatch Flowgate compute the real-time redispatch settlement for each interval as specified below.

When  $RT\_MktFlow_{M2M\ Redispatch\ Flowgate-m_i} > M2M\_Ent_{M2M\ Redispatch\ Flowgate-m_i}$ ,

$$\begin{aligned}
 \text{MonRTO\_Payment}_{M2M \text{ Redispatch Flowgate-}m_i} & \\
 &= \text{Mon\_Shadow}_{M2M \text{ Redispatch Flowgate-}m_i} \\
 &\times \left( \text{RT\_MktFlow}_{M2M \text{ Redispatch Flowgate-}m_i} - \text{M2M\_Ent}_{M2M \text{ Redispatch Flowgate-}m_i} \right) \\
 &\times \frac{s_i}{3600\text{sec}}
 \end{aligned}$$

When  $\text{RT\_MktFlow}_{M2M \text{ Redispatch Flowgate-}m_i} < \text{M2M\_Ent}_{M2M \text{ Redispatch Flowgate-}m_i}$ ,

$$\begin{aligned}
 \text{Non\_MonRTO\_Payment}_{M2M \text{ Redispatch Flowgate-}m_i} & \\
 &= \text{Non\_Mon\_Shadow}_{M2M \text{ Redispatch Flowgate-}m_i} \\
 &\times \left( \text{M2M\_Ent}_{M2M \text{ Redispatch Flowgate-}m_i} - \text{RT\_MktFlow}_{M2M \text{ Redispatch Flowgate-}m_i} \right) \\
 &\times \frac{s_i}{3600\text{sec}}
 \end{aligned}$$

Where:

$\text{Non\_MonRTO\_Payment}_{M2M \text{ Redispatch Flowgate-}m_i}$  = M2M redispatch settlement, in the form of a payment to the Non-Monitoring RTO from the Monitoring RTO, for M2M Redispatch Flowgate m and interval i;

$\text{MonRTO\_Payment}_{M2M \text{ Redispatch Flowgate-}m_i}$  = M2M redispatch settlement, in the form of a payment to the Monitoring RTO from the Non-Monitoring RTO, for M2M Redispatch Flowgate m and interval i;

$\text{RT\_MktFlow}_{M2M \text{ Redispatch Flowgate-}m_i}$  = real-time RTO\_MF, determined for settlement in accordance with Section 7.1 above, for M2M Redispatch Flowgate m and interval i;

$\text{M2M\_Ent}_{M2M \text{ Redispatch Flowgate-}m_i}$  = Non-Monitoring RTO M2M Entitlement for M2M Redispatch Flowgate m and interval i;

$\text{Mon\_Shadow}_{M2M \text{ Redispatch Flowgate-}m_i}$  = Monitoring RTO's Shadow Price for M2M Redispatch Flowgate m and interval i;

$\text{Non\_Mon\_Shadow}_{M2M \text{ Redispatch Flowgate-}m_i}$  = Non-Monitoring RTO's Shadow Price for M2M Redispatch Flowgate m and interval i; and

$s_i$  = number of seconds in interval i.

### 8.3 NY-NJ PARs Settlements

Compute the real-time NY-NJ PARs settlement for each interval as specified below.

When



$$\begin{aligned}
 & \text{Actual}_{PARx_i} > \text{Target}_{PARx_i}, \\
 & \text{NYImpact}_{PARx_i} \\
 & = \text{Max}\left(\left(\text{Congestion}\$_{(PARx,NY)_i} \right. \right. \\
 & \quad \left. \left. \times \left(\text{Target}_{PARx_i} - \text{Actual}_{PARx_i}\right)\right), 0\right) \times S_i/3600\text{sec}
 \end{aligned}$$

$$\begin{aligned}
 & \text{PJMImpact}_{PARx_i} \\
 & = \left(\text{Congestion}\$_{(PARx,PJM)_i} \times \left(\text{Actual}_{PARx_i} - \text{Target}_{PARx_i}\right)\right) \\
 & \quad \times S_i/3600\text{sec}
 \end{aligned}$$

When

$$\text{Actual}_{PARx_i} < \text{Target}_{PARx_i},$$

$$\begin{aligned}
 & \text{NYImpact}_{PARx_i} \\
 & = \left(\text{Congestion}\$_{(PARx,NY)_i} \times \left(\text{Target}_{PARx_i} - \text{Actual}_{PARx_i}\right)\right) \\
 & \quad \times S_i/3600\text{sec}
 \end{aligned}$$

$$\begin{aligned}
 & \text{PJMImpact}_{PARx_i} \\
 & = \text{Max}\left(\left(\text{Congestion}\$_{(PARx,PJM)_i} \right. \right. \\
 & \quad \left. \left. \times \left(\text{Actual}_{PARx_i} - \text{Target}_{PARx_i}\right)\right), 0\right) \times S_i/3600\text{sec}
 \end{aligned}$$

$$\begin{aligned}
 & \text{M2MPARSettlement}_i \\
 & = \left(\text{Min}\left(\sum^{ALL NY-NJ PARS} \text{NYImpact}_{PARx_i}, 0\right) - \text{Min}\left(\sum^{ALL NY-NJ PARS} \text{PJMImpact}_{PARx_i}, 0\right)\right)
 \end{aligned}$$

Where:

$\text{Actual}_{PARx_i}$  = Measured real-time actual flow on each of the NY-NJ PARs for interval  $i$ . For purposes of this equation, a positive value indicates a flow from PJM to the NYISO;

$\text{Target}_{PARx_i}$  = Calculated Target Value for the flow on each NY-NJ PAR as described in Section 7.2.1 above for interval  $i$ . For purposes of this

equation, a positive value indicates a flow from PJM to the NYISO;

$PJMImpact_{PARx_i} =$  PJM Impact, defined as the impact that the current NY-NJ PAR flow relative to target flow is having on PJM's system congestion for interval  $i$ . For purposes of this equation, a positive value indicates that the PAR flow relative to target flow is reducing PJM's system congestion, whereas a negative value indicates that the PAR flow relative to target flow is increasing PJM's system congestion.

$NYImpact_{PARx_i} =$  NYISO Impact, defined as the impact that the current NY-NJ PAR flow relative to target flow is having on NYISO's system congestion for interval  $i$ . For purposes of this equation, a positive value indicates that the PAR flow relative to target flow is reducing NYISO's system congestion, whereas a negative value indicates that the PAR flow relative to the target flow is increasing NYISO's system congestion system.

$Congestion\$_{(PARx,PJM)_i} =$  Cost of congestion at each NY-NJ PAR for PJM, calculated in accordance with Section 7.2.2 above for interval  $i$ ;

$Congestion\$_{(PARx,NY)_i} =$  Cost of congestion at each NY-NJ PAR for NYISO, calculated in accordance with Section 7.2.2 above for interval  $i$ , and

$M2MPARSettlement_i =$  M2M PAR Settlement across all NY-NJ PARs, defined as a payment from NYISO to PJM when the value is positive, and a payment from PJM to NYISO when the value is negative for interval  $i$ .

$s_i =$  number of seconds in interval  $i$ .

### **8.3.1 NY-NJ PAR Settlements During Storm Watch Events**

PJM shall not be required to pay a M2MPARSettlement (calculated in accordance with Section 8.3 of this Schedule D) to NYISO when a Storm Watch is in effect and PJM has taken the actions required below to assist the NYISO, or when NYISO has not taken the actions required below to address power flows resulting from the redispatch of generation to address the Storm Watch.

NYISO shall not be required to pay a M2MPARSettlement to PJM when a Storm Watch is in effect and NYISO has taken the actions required of it below to address power flows resulting from the redispatch of generation to address the Storm Watch.

When a Storm Watch is in effect, the RTOs will determine whether PJM and/or NYISO are required to pay a M2MPARSettlement to the other RTO based on three Storm Watch compliance requirements that address the operation of (a) the JK transmission lines and associated Waldwick PARs, (b) the ABC transmission lines and associated ABC PARs, and (c) the 5018 transmission line and associated Ramapo PARs. Compliance shall be determined as follows:

- a. *JK Storm Watch compliance*: Subject to the exceptions that follow, PJM will be “Compliant” at the JK interface when either of the following two conditions are satisfied, otherwise it will be “Non-compliant”:
  - i. Flow on the JK interface was at or above the sum of the Target flows for each Available Waldwick PAR at any point in the trailing (rolling) 15-minutes<sup>3</sup>; or
  - ii. PJM took at least two taps on each Available Waldwick PAR in the direction to reduce flow into PJM at any point in the trailing (rolling) 15-minutes.

If NYISO denies PJM’s request to take one or more taps at a Waldwick PAR to reduce flow into PJM and achieve compliance at the JK interface, then PJM shall be considered “Compliant” at the JK interface.

If PJM cannot take a required tap at a Waldwick PAR because the change will result in an overload on PJM’s system unless NYISO first takes a tap at an ABC PAR increasing flow into New York, and flow on the ABC interface is not at or above the sum of the Target flows for each Available ABC PAR, then PJM may request that NYISO take a tap at an ABC PAR increasing flow into New York. PJM will be “Compliant” at the JK interface if NYISO does not take the requested tap within five minutes of receiving PJM’s request. “Compliant” status achieved pursuant to this paragraph shall continue until NYISO takes the requested PAR tap, or the Parties agree that NYISO not taking the requested PAR tap is no longer preventing PJM from taking the PAR tap(s) (if any) PJM needs to achieve compliance at the JK interface.

If PJM cannot take a required tap at a Waldwick PAR because the change will result in an overload on PJM’s system unless NYISO first takes a tap at a Ramapo PAR increasing flow into New York, and flow on the 5018 interface is not at or above the sum of the Target flows for each Available Ramapo PAR, then PJM may request that NYISO take a tap at a Ramapo PAR increasing flow into New York. PJM will be “Compliant” at the JK interface if NYISO does not either (i) take the requested tap within five minutes of

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<sup>3</sup> For example, if the sum of the Target flows for Available Waldwick PARs is +200 MW, then PJM will be “Compliant” if flow into PJM on JK was at or above +200 MW during any six second measurement interval over the trailing (rolling) 15 minutes.

receiving PJM's request, or (ii) inform PJM that NYISO is unable to take the requested tap at Ramapo because the change would result in an actual or post-contingency overload on the 5018 lines, or on either of the Ramapo PARs (NYISO will be responsible for demonstrating both the occurrence and duration of the condition). "Compliant" status achieved pursuant to this paragraph shall continue until NYISO takes the requested PAR tap, or the Parties agree that NYISO not taking the requested PAR tap is no longer preventing PJM from taking the PAR tap(s) (if any) PJM needs to achieve compliance at the JK interface.

If PJM cannot take a required tap at a Waldwick PAR because the change would result in an actual or post-contingency overload on either or both of the JK lines, or on any of the Waldwick PARs, and the overload cannot be addressed through NYISO taking taps at ABC or Ramapo, then PJM will be considered "Compliant" at the JK interface until the condition is resolved. PJM will be responsible for demonstrating both the occurrence and duration of the condition.

- b. ABC Storm Watch compliance: Subject to the exceptions that follow, NYISO will be "Compliant" at the ABC interface when either of the following two conditions are satisfied, otherwise it will be "Non-compliant":
- i. Flow on the ABC interface was at or above the sum of the Target values for each Available ABC PAR at any point in the trailing (rolling) 15-minutes<sup>4</sup>; or
  - ii. NYISO took at least two taps on each Available ABC PAR in the direction to increase flow into New York at any point in the trailing (rolling) 15-minutes.

If PJM denies NYISO's request to take one or more taps at an ABC PAR to increase flow into New York and achieve compliance at the ABC interface, then NYISO shall be considered "Compliant" at the ABC interface.

If NYISO cannot take a required tap at an ABC PAR because the change will result in an overload on NYISO's system unless PJM first takes a tap at a Waldwick PAR reducing flow into PJM, and flow on the JK interface is not at or below the sum of the Target values for each Available Waldwick PAR, then NYISO may request that PJM take a tap at a Waldwick PAR reducing flow into PJM. NYISO will be "Compliant" at the ABC interface if PJM does not take the requested tap within five minutes of receiving NYISO's request. "Compliant" status achieved pursuant to this paragraph shall continue until PJM takes the requested PAR tap, or the Parties agree that PJM not taking the

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<sup>4</sup> For example, if the sum of the Target values for each Available ABC PAR is +200 MW, then NYISO will be "Compliant" if flow into New York on ABC was at or above +200 MW during any six second measurement interval over the trailing (rolling) 15 minutes.

requested PAR tap is no longer preventing NYISO from taking the PAR tap(s) (if any) NYISO needs to achieve compliance at the ABC interface.

If NYISO cannot take a required tap at an ABC PAR because the change would result in an actual or post-contingency overload on one or more of the ABC lines, or on any of the ABC PARs, and the overload cannot be addressed through NYISO taking taps at Ramapo or PJM taking taps at Waldwick, then NYISO will be considered “Compliant” at the ABC interface until the condition is resolved. NYISO will be responsible for demonstrating both the occurrence and duration of the condition.

- c. 5018 Storm Watch compliance: Subject to the exceptions that follow, NYISO will be “Compliant” at the 5018 interface when either of the following two conditions are satisfied, otherwise it will be “Non-compliant”:
- i. Flow on the 5018 interface was at or above the sum of the Target values for each Available Ramapo PAR described in Section 7.2.1 of this Schedule D at any point in the trailing (rolling) 15-minutes; or
  - ii. NYISO took at least two taps on each Available Ramapo PAR in the direction to increase flow into New York at any point in the trailing (rolling) 15-minutes.

If PJM denies NYISO’s request to take one or more taps at a Ramapo PAR to increase flow into New York and achieve compliance at the 5018 interface, then NYISO shall be considered “Compliant” at the 5018 interface.

If NYISO cannot take a required tap at a Ramapo PAR because it will result in an overload on NYISO’s system unless PJM first takes a tap at a Waldwick PAR reducing flow into PJM, and flow on the JK interface is not at or below the sum of the Target values for each Available Waldwick PAR, then NYISO may request that PJM take a tap at a Waldwick PAR reducing flow into PJM. NYISO will be “Compliant” at the 5018 interface if PJM does not take the requested tap within five minutes of receiving NYISO’s request. “Compliant” status achieved pursuant to this paragraph shall continue until PJM takes the requested PAR tap, or the Parties agree that PJM not taking the requested PAR tap is no longer preventing NYISO from taking the PAR tap(s) (if any) NYISO needs to achieve compliance at the Ramapo interface.

If NYISO cannot take a required tap at a Ramapo PAR because the change would result in an actual or post-contingency overload on the 5018 line, or on either of the Ramapo PARs, and the overload cannot be addressed through NYISO taking taps at ABC or PJM taking taps at Waldwick, then NYISO will be considered “Compliant” at the 5018 interface until the condition is resolved. NYISO will be responsible for demonstrating both the occurrence and duration of the condition.

When a Storm Watch is in effect in New York, PJM shall only be required to pay a M2MPARSettlement to NYISO when PJM is “Non-compliant” at the JK interface, while NYISO is “Compliant” at both the ABC and 5018 interfaces. Otherwise, PJM shall not be required to pay a M2MPARSettlement to NYISO at times when a Storm Watch is in effect in New York.

When a Storm Watch is in effect in New York, NYISO shall only be required to pay a M2MPARSettlement to PJM when NYISO is “Non-compliant” at the ABC interface or the 5018 interface, or both of those interfaces. When NYISO is “Compliant” at both the ABC and 5018 interfaces, NYISO shall not be required to pay a M2MPARSettlement to PJM at times when a Storm Watch is in effect in New York.

When all three interfaces (JK, ABC, 5018) are “Compliant,” or during the first 15-minutes in which a Storm Watch is in effect, this Section 8.3.1 excuses the Parties from paying a M2MPARSettlement to each other at times when a Storm Watch is in effect in New York.

Compliance and Non-compliance shall be determined for each interval of the NYISO settlement cycle (normally, every 5-minutes) that a Storm Watch is in effect.

#### 8.4 Calculating a Combined M2M Settlement

The M2M settlement shall be the sum of the real-time redispatch settlement for each M2M Flowgate and M2MPARSettlement for each interval

$$\begin{aligned} \text{Redispatch NY Settlement}_i &= \left( \sum_{\text{M2M Flowgate } m}^{\text{all NY M2M Redispatch Flowgates}} \left( \text{MonRTO Payment}_{\text{M2M Redispatch Flowgate } m_i} \right. \right. \\ &\quad \left. \left. - \text{Non MonRTO Payment}_{\text{M2M Redispatch Flowgate } m_i} \right) \right) \end{aligned}$$

$$\begin{aligned} \text{Redispatch PJM Settlement} &= \\ &\left( \sum_{\text{M2M Redispatch Flowgate } m}^{\text{all PJM M2M Redispatch Flowgates}} \left( \text{MonRTO Payment}_{\text{M2M Redispatch Flowgate } m_i} \right. \right. \\ &\quad \left. \left. - \text{Non MonRTO Payment}_{\text{M2M Redispatch Flowgate } m_i} \right) \right) \end{aligned}$$

Where:

$\text{Redispatch NY Settlement}_i =$  M2M NYISO settlement, defined as a payment from PJM to NYISO when the value is positive, and a payment from the NYISO to PJM when the value is negative for interval  $i$ ;

$Redispatch\ PJM\ Settlement_i =$  M2M PJM settlement, defined as a payment from NYISO to PJM when the value is positive, and a payment from the PJM to NYISO when the value is negative for interval  $i$ ;

$Non\ MonRTO\ Payment_{M2M\ Redispatch\ Flowgate\ m_i} =$  Monitoring RTO payment to Non-Monitoring RTO for congestion on M2M Redispatch Flowgate  $m$  for interval  $i$ ; and

$MonRTO\ Payment_{M2M\ Redispatch\ Flowgate\ m_i} =$  Non-Monitoring RTO payment to Monitoring RTO for congestion on M2M Redispatch Flowgate  $m$  for interval  $i$ .

$$M2M\ Settlement_i = Redispatch\ PJM\ Settlement_i - Redispatch\ NY\ Settlement_i + M2MPARSettlement_i$$

Where:

$M2M\ Settlement_i =$  M2M settlement, defined as a payment from the NYISO to PJM when the value is positive, and a payment from PJM to the NYISO when the value is negative for interval  $i$ ;

$Redispatch\ NY\ Settlement_i =$  M2M NYISO settlement, defined as a payment from PJM to NYISO when the value is positive, and a payment from the NYISO to PJM when the value is negative for interval  $i$ ;

$Redispatch\ PJM\ Settlement_i =$  M2M PJM settlement, defined as a payment from NYISO to PJM when the value is positive, and a payment from the PJM to NYISO when the value is negative for interval  $i$ ;

$M2MPARSettlement_i =$  M2M PAR Settlement across all NY-NJ PARs, defined as a payment from NYISO to PJM when the value is positive, and a payment from PJM to NYISO when the value is negative for interval  $i$ .

For the purpose of settlements calculations, each interval will be calculated separately and then integrated to an hourly value:

$$M2M\_Settlement_h = \sum_{i=1}^n M2M\_Settlement_i$$

Where:

$M2M\_Settlement_h$  = M2M settlement for hour  $h$ ; and

$n$  = Number of intervals in hour  $h$ .

Section 10.1 of this Schedule D sets forth circumstances under which the M2M coordination process and M2M settlements may be temporarily suspended.

## **9 When One of the RTOs Does Not Have Sufficient Redispatch**

It is possible that sufficient redispatch for a M2M Redispatch Flowgate or Other Coordinated Flowgate may not be available to the Monitoring RTO. In these scenarios, the Monitoring RTO will price the flowgate using rules specific to that RTO's Tariff language.

However, subject to Section 10.1.2 of this Schedule D, if the Non-Monitoring RTO cannot provide sufficient relief to reach the shadow price of the Monitoring RTO, any constraint relaxation logic will be deactivated. The Non-Monitoring RTO will then be able to use the Monitoring RTO's shadow price without limiting the shadow price to the maximum shadow price associated with a physical control action inside the Non-Monitoring RTO. With the M2M Redispatch Flowgate shadow prices being the same in both RTOs, their resulting bus LMPs will converge in a consistent price profile.

## **10 Appropriate Use of the M2M Coordination Process**

Under normal operating conditions, the Parties will model all M2M Flowgates in their respective real-time EMSs. M2M Flowgates will be controlled using M2M tools for coordinated redispatch and coordinated operation of the NY-NJ PARs, and will be eligible for M2M settlements.

### **10.1 Qualifying Conditions for M2M Settlement**

**10.1.1 Purpose of M2M.** M2M was established to address regional, not local issues. The intent is to implement the M2M coordination process and settle on such coordination where both Parties have significant impact.

**10.1.2 Minimizing Less than Optimal Dispatch.** The Parties agree that, as a general matter, they should minimize financial harm to one RTO that results from the M2M coordination process initiated by the other RTO that produces less than optimal dispatch.

**10.1.3 Use M2M Whenever Binding a M2M Flowgate.** During normal operating conditions, the M2M redispatch process will be initiated by the Monitoring RTO whenever an M2M Flowgate that is eligible for redispatch is constrained and therefore binding in its dispatch. Coordinated operation of the NY-NJ PARs is the default condition and does not require initiation by either Party to occur.



**10.1.4 Most Limiting Flowgate.** Generally, controlling to the most limiting Flowgate provides the preferable operational and financial outcome. In principle and as much as practicable, the M2M coordination process will take place on the most limiting Flowgate, and to that Flowgate's actual limit (thermal, reactive, stability).

**10.1.5 Abnormal Operating Conditions.**

- a. A Party that is experiencing system conditions that require the system operators' immediate attention may temporarily delay implementation of the M2M redispatch process or cease an active M2M redispatch event until a reasonable time after the system condition that required the system operators' immediate attention is resolved.
- b. Either Party may temporarily suspend an active M2M coordination process or delay implementation of the M2M coordination process if a Party is experiencing, or acting in good faith suspects it may be experiencing, (1) a failure or outage of the data link between the Parties prevents the exchange of accurate or timely real-time data necessary to implement the M2M coordination process; or (2) a failure or outage of any computational or data systems preventing the actual or accurate calculation of data necessary to implement the M2M coordination process. The Parties shall resolve the issue causing the failure or outage of the data link, computational systems, or data systems as soon as possible in accordance with Good Utility Practice. The Parties shall resume implementation of the M2M coordination process following the successful testing of the data link or relevant system(s) after the failure or outage condition is resolved.

**10.1.6 Transient System Conditions.** A Party that is experiencing intermittent congestion due to transient system conditions including, but not limited to, interchange ramping or transmission switching, is not required to implement the M2M redispatch process unless the congestion continues after the transient condition(s) have concluded.

**10.1.7 Temporary Cessation of M2M Coordination Process Pending Review.** If the net charges to a Party resulting from implementation of the M2M coordination process for a market-day exceed five hundred thousand dollars, then the Party that is responsible for paying the charges may (but is not required to) suspend implementation of this M2M coordination process (for a particular M2M Flowgate, or of the entire M2M coordination process) until the Parties are able to complete a review to ensure that both the process and the calculation of settlements resulting from the M2M coordination process are occurring in a manner that is both (a) consistent with this M2M Coordination Schedule, and (b) producing a just and reasonable result. The Party requesting suspension must identify specific concerns that require investigation within one business day of

requesting suspension of the M2M coordination process. If, following their investigation, the Parties mutually agree that the M2M coordination process is (i) being implemented in a manner that is consistent with this M2M Coordination Schedule and (ii) producing a just and reasonable result, then the M2M coordination process shall be re-initiated as quickly as practicable. If the Parties are unable to mutually agree that the M2M coordination process was being implemented appropriately, or of the Parties are unable to mutually agree that the M2M coordination process was producing a just and reasonable result, the suspension (for a particular M2M Flowgate, or of the entire M2M coordination process) shall continue while the Parties engage in dispute resolution in accordance with Section 35.15 of this Agreement.

**10.1.8 Suspension of M2M Settlement when a Request for Taps on NY-NJ PARs to Prevent Overuse is Refused.** If a Party requests that taps be taken on any NY-NJ PAR to reduce the requesting Party's overuse of the other Party's transmission system, refusal by the other Party or its Transmission Owner(s) to permit taps to be taken to reduce overuse shall result in the NY-NJ PAR settlement component of M2M (*see* Section 8.3 above) being suspended until the tap request is granted.

**10.1.9 Suspension of NY-NJ PAR Settlement due to Transmission Facility Outage(s).** The Parties shall suspend PAR settlements for a NY-NJ PAR when that NY-NJ PAR is out of service, is bypassed, or the RTOs mutually agree that a NY-NJ PAR is incapable of facilitating interchange.

No other Transmission Facility outage(s) will trigger suspension of NY-NJ PAR settlements under this Section 10.1.9.

**10.1.10 Suspension of NY-NJ PAR Settlement due to a Stuck PAR**  
The Parties shall suspend PAR settlements for a NY-NJ PAR when the NY-NJ PAR cannot be adjusted due to physical or SCADA failure and either of the following two conditions occur:

1. The failure is on one of the A, B, C, 3500, or 4500 PARs, the flow on the PAR is below the Target flow for that PAR, or
2. The failure is on one of the E, F or O PARs, the flow on the PAR is above the Target flow for that PAR.

## **10.2 After-the-Fact Review to Determine M2M Settlement**

Based on the communication and data exchange that has occurred in real-time between the Parties, there will be an opportunity to review the use of the M2M coordination process to verify it was an appropriate use of the M2M coordination process and subject to M2M settlement. The Parties will initiate the review as necessary to apply these conditions and settlements adjustments. The Parties will cooperate to review the data exchanged and used to determine M2M settlements and will mutually identify and resolve errors and anomalies in the calculations that determine the M2M settlements.

If the data exchanged for the M2M redispatch process was relied on by the Non-Monitoring RTO's dispatch to determine the shadow cost the Non-Monitoring RTO was dispatching to when providing relief at an M2M Flowgate, the data transmitted by the Monitoring RTO that was used to determine the Non-Monitoring RTO's shadow cost shall not be modified except by mutual agreement prior to calculating M2M settlements. Any necessary corrections to the data exchange shall be made for future M2M coordination.

### **10.3 Access to Data to Verify Market Flow Calculations**

Each Party shall provide the other Party with data to enable the other Party independently to verify the results of the calculations that determine the M2M settlements under this M2M Coordination Schedule. A Party supplying data shall retain that data for two years from the date of the settlement invoice to which the data relates, unless there is a legal or regulatory requirement for a longer retention period. The method of exchange and the type of information to be exchanged pursuant to Section 35.7.1 of this Agreement shall be specified in writing. The Parties will cooperate to review the data and mutually identify or resolve errors and anomalies in the calculations that determine the M2M settlements. If one Party determines that it is required to self report a potential violation to the Commission's Office of Enforcement regarding its compliance with this M2M Coordination Schedule, the reporting Party shall inform, and provide a copy of the self report to, the other Party. Any such report provided by one Party to the other shall be Confidential Information.

## **11 M2M Change Management Process**

### **11.1 Notice**

Prior to changing any process that implements this M2M Schedule, the Party desiring the change shall notify the other Party in writing or via email of the proposed change. The notice shall include a complete and detailed description of the proposed change, the reason for the proposed change, and the impacts the proposed change is expected to have on the implementation of the M2M coordination process, including M2M settlements under this M2M Schedule.

### **11.2 Opportunity to Request Additional Information**

Following receipt of the Notice described in Section 11.1, the receiving Party may make reasonable requests for additional information/documentation from the other Party. Absent mutual agreement of the Parties, the submission of a request for additional information under this Section shall not delay the obligation to timely note any objection pursuant to Section 11.3, below.

### **11.3 Objection to Change**

Within ten business days after receipt of the Notice described in Section 11.1 (or within such longer period of time as the Parties mutually agree), the receiving Party may notify in writing or via email the other Party of its disagreement with the proposed change. Any such notice must specifically identify and describe the concern(s) that required the receiving Party to object to the described change.

### **11.4 Implementation of Change**

The Party proposing a change to its implementation of the M2M coordination process shall not implement such change until (a) it receives written or email notification from the other Party that the other Party concurs with the change, or (b) the ten business day notice period specified in Section 11.3 expires, or (c) completion of any dispute resolution process initiated pursuant to this Agreement.

**37 Attachment EE – Coordination Agreement Between ISO New England Inc. and  
The New York Independent System Operator, Inc.**

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#### **EMERGENCY ENERGY PRICING**

THIS AGREEMENT was made the 1<sup>st</sup> day of January 2006 and is hereby restated on the 1<sup>st</sup> day of August 2017

BETWEEN:

NEW YORK INDEPENDENT SYSTEM OPERATOR, INC., a not-for-profit corporation established under the laws of New York State, hereinafter called the "NYISO".

and

ISO NEW ENGLAND INC., a not-for-profit, private corporation established under the laws of the State of Delaware, hereinafter called "ISO-NE".

### RECITALS

WHEREAS, capitalized terms not otherwise defined herein shall have the meanings ascribed to them in Section 1.0 hereof;

WHEREAS, ISO-NE and the NYISO are sometimes hereinafter referred to, collectively, as the "Parties" and, individually, as a "Party";

WHEREAS, the NYISO is an independent, not-for-profit corporation established pursuant to the ISO Agreement, responsible for providing transmission service, maintaining the Reliability of the electric power system and facilitating efficient markets for capacity, energy and ancillary services in the New York Balancing Authority Area in accordance with its filed NYISO Tariffs;

WHEREAS, ISO-NE is a not-for-profit, independent corporation that serves as the RTO for New England, in which capacity it operates New England's wholesale electricity markets, manages a comprehensive regional bulk power system planning process and is responsible for the day-to-day reliable operation of New England's bulk power system;

WHEREAS, ISO-NE, as RTO for the New England Transmission System and administrator of the New England markets, and the NYISO as the ISO for the New York Transmission System, enter into coordination agreements and operating arrangements with the operators of neighboring Reliability Coordinator Areas and Balancing Authority Areas, and coordinate system operation and Emergency procedures with neighboring Reliability Coordinator Areas and Balancing Authority Areas;

WHEREAS, the NYISO and ISO-NE desire to coordinate interconnected operation to maintain Reliability for both of the power systems of New York State and the New England States, recognizing the Parties' desire to maximize interconnected capability under the terms and conditions contained in this Agreement; and

WHEREAS, related to the Interconnection Facilities:

- A. ISO-NE is the Reliability Coordinator, Balancing Authority, Transmission Operator, market operator, and Planning Authority for the six New England States

and operates and is responsible for the secure operation of the New England Transmission System in accordance with its Transmission Operating Agreements with New England Transmission Owners and in compliance with the FERC-accepted ISO-NE Tariff, and the requirements and criteria set forth by NERC or NPCC and, as such, has the power and authority to enter into this Agreement and perform its obligations under it;

- B. NYISO is the Reliability Coordinator, Balancing Authority, Transmission Operator, market operator, and Planning Authority for New York State and operates and is responsible for the secure operation of the New York Transmission System in accordance with its Transmission Operating Agreements with New York Transmission Owners and in compliance with the FERC-accepted New York Independent System Operator Agreement (“ISO Agreement”), the Agreement Between New York Independent System Operator and Transmission Owners (“ISO/TO Agreement”), the Agreement Between New York Independent System Operator and the New York State Reliability Council (“ISO/NYSRC Agreement”), NYISO Tariffs, and the requirements and criteria set forth by NERC, NPCC and the NYSRC and, as such, has the power and authority to enter into this Agreement and perform its obligations under it; and
- C. The New England Transmission System and the New York Transmission System interconnect by way of the Interconnection Facilities, which are described in Schedule A of this Agreement; and
- D. The Parties wish to record their agreement as to the operational and other matters addressed herein and pertaining to the Interconnection Facilities; and

WHEREAS the Parties desire to manage the operational aspects of their interconnected operations by developing, administering and implementing practices, procedures and sharing information relating to Reliability coordination and power system operation that will be managed and approved by a committee formed under this Agreement;

NOW, THEREFORE, THIS AGREEMENT WITNESSES THAT in consideration of the mutual agreements and obligations between the Parties and for other good and valuable consideration ISO-NE and the NYISO agree as follows:



## **ARTICLE 1.0: DEFINITIONS**

In this Agreement, the following words and terms shall have the meanings (such meanings to be equally applicable to both the singular and the plural forms) ascribed to them in this Article 1.0.

“Adequacy” means the ability of the electric system to supply the aggregate electrical demand and energy requirements of the end-use customers at all times, taking into account scheduled and reasonably expected unscheduled outages of system elements.

“Agreement” means this Agreement and the Schedule(s) attached hereto and incorporated herein.

“Balancing Authority” means the responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time.

“Balancing Authority Area” means the collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

“Confidential Information” has the meaning stated in Section 6.5 of this Agreement.

“Confirmed Trust Relationship” means that one Responsible Settlement Party has granted another Responsible Settlement Party permission to confirm, modify or withdraw its CTS Interface Bids.

“Control Area” means an electric system or combination of electric power systems to which a common automatic generation control scheme is applied in order to: (1) match, at all times, the power output of the Generators within the electric power system(s) and capacity and energy purchased from entities outside the electric power system(s), with the Load within the electric power system(s); (2) maintain scheduled interchange with other Control Areas, within the limits of Good Utility Practice; (3) maintain the frequency of the electric power system(s) within reasonable limits in accordance with Good Utility Practice and the criteria of the applicable regional reliability council or the North American Electric Reliability Corporation; and (4) provide sufficient capacity to maintain Operating Reserves in accordance with Good Utility Practice.

“Coordination Committee” means the jointly constituted ISO-NE and NYISO committee established to administer the terms and provisions of this Agreement pursuant to Article 7.0 of this Agreement.

“Coordinated Transaction Scheduling” or “CTS” means an external transaction scheduling process between the NYCA and NECA in which Market Participants’ bids, to buy energy in one region and sell in another region, are economically and simultaneously cleared by ISO-NE and NYISO. This process takes place pursuant to market rules in the Parties’ respective tariffs that allow transactions to be scheduled over a CTS Enabled Interface based on a bidder’s willingness to purchase energy from the NYCA or NECA (the source) and sell it to the other Control Area

(the sink) if the bid price is less than or equal to the expected LMP difference across the interface in the requested direction, as of the time the interface is scheduled.

“CTS Enabled External Proxy Bus” shall mean an External Proxy Bus at which the Parties accept CTS Interface Bids to schedule external transactions in the real-time energy market.

“CTS Enabled Interface” means an Interconnection at which the Parties accept CTS Interface Bids for all import offers, for all export bids, and for wheels through the NECA. The CTS Enabled Interfaces are specified in Section 4.4.4 of the NYISO’s Market Administration and Control Area Services Tariff and in Section III.1.10.7.A of the ISO-NE Tariff.

“CTS Interface Bid” means: (1) in ISO-NE, an Interface Bid as defined in the ISO-NE Tariff, and an hourly spread bid associated with the wheeling of energy through the NECA, and (2) in NYISO, a CTS Interface Bid as defined in the NYISO Tariff.

“Delivery Point” means a point on each of the three Interconnections between the New England Balancing Authority Area and the NYISO Balancing Authority Area and such other points of Interconnection as may be established. Such Delivery Point(s) shall include the Interconnection Facilities between ISO-NE and the NYISO.

“Dispute” has the meaning attributed thereto in Article 19.0 of this Agreement.

“Effective Date” means the reference date of this Agreement as shown on the first page of this Agreement.

“Emergency” means any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the Reliability of the Bulk Electric System (as defined by NERC).

“Emergency Energy” means energy supplied from Operating Reserve or electrical generation available for sale in New York or New England or available from another Balancing Authority Area. Emergency Energy may be provided in cases of sudden and unforeseen outages of generating units, transmission lines or other equipment, or to meet other sudden and unforeseen circumstances such as forecast errors, or to provide sufficient Operating Reserve. Emergency Energy is provided pursuant to this Agreement and priced according to Attachment A of Schedule C of this Agreement.

“External Interface Congestion” means the portion of the congestion component of the LMP at an External Proxy Bus that is associated with an External Proxy Bus Constraint.

“External Proxy Bus” means a location that is selected to represent an Interconnection with a Party’s Control Area for which LMPs are calculated. In NYISO, this is a Proxy Generator Bus as defined in the NYISO Services Tariff. In ISO-NE, this is an External Node as defined in the ISO-NE Tariff.

“External Proxy Bus Constraint” has the meaning set forth in Section 4.2 of Schedule D to this Agreement.

“FERC” means the Federal Energy Regulatory Commission.

“Force Majeure” means an event of force majeure as described in Section 13.1 of this Agreement.

“Good Utility Practice” means any of the practices, methods and acts engaged in or approved by a significant portion of the North American electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result consistent with good business practices, Reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted by NERC and the FERC.

“Intentional Wrongdoing” means an act or omission taken or omitted by a Party with knowledge or intent that injury or damage could reasonably be expected to result.

“Interconnection” means a connection(s) between two or more individual Transmission Systems that have interconnecting Intertie(s).

“Interconnection Facilities” means the Interconnections described in Schedule A.

“Interconnection Reliability Operating Limit” or “IROL” means a System Operating Limit that, if violated, could lead to instability, uncontrolled separation, or Cascading Outages (as defined by NERC) that adversely impact the reliability of the Bulk Electric System.

“Intertie” means a transmission line that forms part of an Interconnection.

“ISO” means independent system operator, as designated by FERC.

“ISO Agreement” means the agreement that establishes the NYISO.

“ISO-NE Supply Price Points” means a set of increasing MW and price pairs, as described in Section 3 of Schedule D.

“ISO-NE Tariff” means the ISO New England Inc. Transmission, Markets and Services Tariff, which includes the ISO-NE Open Access Transmission Tariff and ISO-NE market rules.

“Locational Marginal Price” or “LMP” shall mean the market price for energy at a given location in a Party’s Control Area, calculated in accordance with the requirements of the Party’s tariff, and “Locational Marginal Pricing” shall mean the processes related to the determination of the LMP.

“Market Participant” means a participant in either the ISO-NE- or NYISO-administered wholesale power markets. Market Participants include transmission service customers, power exchanges, Transmission Owners, load serving entities, loads, holders of energy derivatives, generators and other power suppliers and their designated agents.

“Metered Quantity” means apparent power, reactive power, active power, with associated time tagging and any other quantity that may be measured by a Party’s Metering Equipment and that is reasonably required by either Party for Security reasons or revenue requirements.

“Metering Equipment” means the potential transformers, current transformers, meters, interconnecting wiring and recorders used to meter any Metered Quantity.

“Mutual Benefits” as described in Article 3.0 of this Agreement, means the transient and steady-state support that the integrated generation and transmission facilities in the New England and New York Transmission Systems provide to each other inherently by virtue of being interconnected.

“NERC” means the North American Electric Reliability Corporation or the successor organization.

“New England Control Area” or “NECA” is the Control Area for New England as defined in the ISO-NE Tariff.

“New England Transmission System” for the purpose of this Agreement means the entire system of transmission facilities, within the New England Reliability Coordinator Area and Balancing Authority Area that are under ISO-NE’s operational jurisdiction, as defined in Transmission Operating Agreements and the ISO-NE Tariff.

“New York Control Area” or “NYCA” means the Control Area that is under the operational control of the NYISO, as defined in the NYISO Tariffs.

“New York State Reliability Council” or “NYSRC” means the organization that promotes and preserves the Reliability of electric service on the New York Transmission System by developing and maintaining NYSRC Reliability Rules which are complied with by the NYISO, and for monitoring and assuring compliance with such rules.

“New York Transmission System” for the purpose of this Agreement means the “NYS Transmission System” as that term is defined in the NYISO OATT.

"NPCC" means the Northeast Power Coordinating Council Inc. or its successor organization.

“NPCC Criteria, Guides and Procedures” are documents, or the successor of these documents, that contain the Reliability Standards of the NPCC and which detail the principles of interconnected planning and operations that define and direct the efforts of the NPCC and its members. These documents are essential to maintaining the Security, Adequacy, Reliability and efficient operation of the interconnected bulk power supply system of NPCC members.

“NYISO Open Access Transmission Tariff” or “NYISO OATT” means the NYISO Open Access Transmission Tariff accepted by FERC.

“NYISO Services Tariff” means the NYISO Market Administration and Control Area Services Tariff accepted by FERC.

“NYISO Tariffs” means the NYISO OATT and the NYISO Services Tariff, collectively.

“NYSRC Reliability Rules” means the rules applicable to the operation of the New York Transmission System by the NYISO. These rules are based on Reliability Standards adopted by NERC and NPCC, but also include more specific and more stringent rules to reflect the particular requirements of the New York Transmission System.

“Operating Instructions” means the joint operating procedures, steps, and instructions that are to be utilized by both Parties for the operation of the Interconnection Facilities established and modified from time to time by the Coordination Committee in accordance with (a) the ISO-NE Tariff and the NYISO Tariffs, (b) Schedule B of this Agreement and (c) the ISO-NE and NYISO individual procedures and processes. Operating Instructions are separate from the ISO-NE and NYISO individual procedures and processes.

“Operating Reserve” means: (1) in ISO-NE, an Operating Reserve as defined in Section I.2.2 of the ISO-NE Tariff, and (2) in NYISO, an Operating Reserve as defined in Section 2.2 of the NYISO Services Tariff. For purposes of Schedule D to this Agreement, 10-minute Operating Reserve is considered a higher quality product than 30-minute Operating Reserve.

“Operational Control” for the purpose of this Agreement, means Security monitoring, adjustment of generation and transmission resources, coordinating and approval of changes in transmission status for maintenance, determination of changes in transmission status for Reliability, coordination with other Balancing Authority Areas and Reliability Coordinators, voltage reductions and load shedding, except that each legal owner of generation and transmission resources continues to physically operate and maintain its own facilities.

“Parties” means ISO-NE and NYISO, and “Party” means either one of them.

“Planning Authority” means the responsible entity that coordinates and integrates transmission facility and service plans, resource plans, and protection systems.

“Ramp Limit” means, for purposes of Schedule D to this Agreement, either: (1) the maximum allowable amount of change in net interchange at a CTS Enabled Interface over a defined period of time, established in accordance with Section 5.1 of Schedule D; or (2) the maximum allowable amount of change in net interchange across all NYISO Proxy Generator Buses over a defined period of time, established in accordance with the NYISO Tariffs.

“Real-Time Commitment” or “RTC” means the NYISO’s multi-period security constrained unit commitment and dispatch model, as defined in the NYISO Tariffs.

“Reliability” means the degree of performance of the bulk electric system that results in electricity being delivered within Reliability Standards and in the amount desired. Electric system Reliability can be addressed by considering two basic and functional aspects of electric systems, which are Adequacy and Security.

“Reliability Coordinator” means the entity that is the highest level of authority who is responsible for the reliable operation of the Bulk Electric System, has the Wide Area (as defined by NERC) view of the Bulk Electric System, and has the operating tools, processes and

procedures, including the authority, to prevent or mitigate emergency operating situations in both next-day analysis and real-time operations. The Reliability Coordinator has the purview that is broad enough to enable the calculation of Interconnection Reliability Operating Limits, which may be based on the operating parameters of transmission systems beyond any Transmission Operator's vision.

"Reliability Coordinator Area" means the collection of generation, transmission, and loads within the boundaries of the Reliability Coordinator. Its boundary coincides with one or more Balancing Authority Areas.

"Reliability Standards" means the criteria, standards and requirements relating to Reliability established by a Standards Authority.

"Responsible Settlement Party" or "RSP" means a Market Participant that is responsible for the financial settlement of one or more transactions at a CTS Enabled Interface, as determined in accordance with the requirements of the Parties' respective tariffs that address the settlement of external transactions at CTS Enabled Interfaces.

"RTO" means a regional transmission organization, as designated by FERC.

"Schedule" means a schedule attached to this Agreement and all amendments, attachments, supplements, replacements and/or additions thereto.

"Security" means the ability of the electric system to withstand sudden disturbances including, without limitation, electric short circuits or unanticipated loss of system elements.

"Standards Authority" means NERC, NPCC, NYSRC or any other agency with authority over either Party regarding standards or criteria relating to the Reliability of Transmission Systems.

"System Operating Limit" means the value (such as MW, MVar, Amperes, Frequency or Volts) that satisfies the most limiting of the prescribed operating criteria for a specified system configuration to ensure operation within acceptable Reliability criteria. System Operating Limits are based upon certain operating criteria. These include, but are not limited to the following NERC-defined ratings or limits: Facility Ratings (applicable pre- and post-Contingency equipment or facility ratings); Transient Stability Ratings (applicable pre- and post-Contingency Stability Limits); Voltage Stability Ratings (applicable pre- and post-Contingency Voltage Stability); and System Voltage Limits (applicable pre- and post-Contingency Voltage Limits).

"Third Party" means a person or entity that is not a Party to this Agreement.

"Transfer Limit" means the minimum or maximum net interchange that can be scheduled on a CTS Enabled Interface and is established in accordance with Section 5.0 of Schedule D.

"Transmission Operating Agreement(s)" means the respective agreements that establish the terms and conditions under which the Transmission Owners transferred to the NYISO and ISO-NE Operational Control over the Interconnection Facilities. For the NYISO, these agreements are the ISO Agreement, the ISO/TO Agreement, and the ISO/NYSRC Agreement. For ISO-NE, this is the Transmission Operating Agreement, which provides operating authority over certain

Interconnection Facilities (i.e., the NY/NE Northern AC Interconnection and the NNC Interconnection), and Attachment K to Section II of the ISO-NE Tariff, which provides operating authority over other Interconnection Facilities (i.e., the CSC Interconnection).

“Transmission Operator” means the entity responsible for the Reliability of its “local” transmission system, and that operates or directs the operations of the transmission facilities in accordance with applicable Transmission Operating Agreements.

“Transmission Owner” means the entity that owns and maintains transmission facilities.

“Transmission System” means a system for transmitting electricity, and includes any structures, equipment or other facilities used for that purpose.

## **ARTICLE 2.0: SCOPE OF AGREEMENT**

### **2.1 Restatement of Prior Agreement**

The terms of the prior agreement made between the Parties dated January 1, 2006, are hereby amended, restated and superseded by the terms of this Agreement, to be effective on the Effective Date of this Agreement.

### **2.2 Purpose of This Agreement**

This Agreement provides for the reliable operation of the interconnected New England and New York Transmission Systems in accordance with the requirements of the Standards Authority.

This Agreement establishes a structure and framework for the following functions related to the Reliability of interconnected operations between the Parties:

- (a) developing and issuing Operating Instructions and System Operating Limits;
- (b) coordinating operation of their respective Transmission Systems;
- (c) developing and adopting operating criteria and standards;
- (d) conducting operating performance reviews of the Interconnection Facilities;
- (e) considering matters related to transmission service and access;
- (f) implementing each Party's respective NERC and NPCC requirements with regard to the New England Transmission System and New York Transmission System;
- (g) exchanging operations information regarding the Interconnection;
- (h) exchanging information and coordinating regarding system planning;
- (i) providing mutual assistance in an Emergency and during system restoration;
- (j) administering Coordinated Transaction Scheduling; and
- (k) implementing other arrangements between the Parties for the coordination of their systems.

The Parties shall, consistent with NPCC Criteria, Guides and Procedures and the Parties' respective tariffs, rules and standards, including with respect to the NYISO, the NYSRC Reliability Rules, to the maximum extent they deem consistent with the safe and proper operation of their respective Reliability Coordinator Area and Balancing Authority Area and necessary coordination with other interconnected systems, and with the furnishing of dependable and satisfactory service to their own customers, operate their systems in accordance with the following procedures and principles.



## **ARTICLE 3.0: MUTUAL BENEFITS**

### **3.1 No Charge for Mutual Benefits of Interconnection**

Both the New England Transmission System and New York Transmission System, by virtue of being connected to each other and with a much larger Interconnection, share Mutual Benefits such as transient and steady-state support. NYISO and ISO-NE shall not charge one another for such Mutual Benefits.

### **3.2 Maintenance of Mutual Benefits**

The Parties shall endeavor to operate or direct the operation of the Interconnection Facilities to realize the Mutual Benefits. The Parties recognize circumstances beyond their control, such as a result of operating configurations, contingencies, maintenance, or actions by Third Parties, may result in a reduction of Mutual Benefits.

## **ARTICLE 4.0: INTERCONNECTED OPERATION**

### **4.1 Obligation to Remain Interconnected**

The Parties shall at all times during the term of this Agreement operate or direct the operation of their respective Transmission Systems so that they remain interconnected except:

- (a) during the occurrence of an event of Force Majeure which renders a Party unable to remain interconnected;
- (b) when an Interconnection is opened in accordance with the terms of an Operating Instruction;
- (c) when an Interconnection is opened in accordance with Good Utility Practice in a particular circumstance where there is an imminent risk of equipment failure, or of danger to personnel or the public, or a risk to the environment, or risk to the Reliability of a Transmission System that is not anticipated and addressed within an Operating Instruction; or
- (d) during planned maintenance where notice has been given in accordance with outage procedures as implemented by the Coordination Committee.

### **4.2 Adherence to NPCC Criteria, Guides and Procedures**

The Parties are participants in the NPCC and are required to comply with NPCC Criteria, Guides and Procedures. Such NPCC Criteria, Guides and Procedures detail the many coordinating functions carried out by the Parties and this Agreement is intended to enhance this arrangement.

Such NPCC Criteria include, and the Parties agree to comply with, “Emergency Operation Criteria” (Document A-3), which describes the basic factors to be considered by a Reliability Coordinator and Balancing Authority in formulating plans and procedures to be followed in an Emergency. A principle of operation in this NPCC Criterion is that upon receiving a request for assistance to avoid or mitigate an Emergency, a Balancing Authority Area would provide “maximum reasonable assistance” to a neighboring Balancing Authority Area. Such reasonable assistance would not normally require the shedding of firm load.

### **4.3 Notification of Circumstances**

In the event that a component of the Interconnection Facilities is opened or if the transfer capability of a component of the Interconnection Facilities is changed, or if a Party plans to initiate the opening of any component of the Interconnection Facilities, or to change the transfer capability of any component of the Interconnection Facilities, such Party shall immediately provide the other Party with notification indicating the circumstances of the opening or transfer capability change and expected restoration time, in accordance with procedures implemented by the Coordination Committee or applicable NPCC Criteria, Guides and Procedures.

#### **4.4 Compliance with Coordination Committee Direction**

ISO-NE shall direct the operation of the New England Transmission System and the NYISO shall direct the operation of the New York Transmission System in accordance with the obligations of their respective tariffs, rules and standards and applicable directions of the Coordination Committee that conform with their respective tariffs, rules and standards, including with respect to the NYISO, the NYSRC Reliability Rules, except where prevented by Force Majeure. The Coordination Committee direction includes decisions and jointly developed and approved Operating Instructions. If decisions or Operating Instructions of the Coordination Committee do not anticipate a particular circumstance, the Parties shall act in accordance with Good Utility Practice.

#### **4.5 Control and Monitoring**

Each Party shall provide or arrange for 24-hour control and monitoring of their portion of the Interconnection Facilities.

#### **4.6 Reactive Transfer and Voltage Control**

The Parties agree to determine reactive transfers and control voltages in accordance with the provisions of NPCC “Guidelines for Inter-Area Voltage Control” (Document B-03). Real and reactive power will be transferred over the Interconnection Facilities, which are described in Schedule A of this Agreement.

#### **4.7 Inadvertent**

Inadvertent power transfers on all Interconnection Facilities shall be controlled and accounted for in accordance with the standards and procedures developed by NERC and NPCC and implemented by the Coordination Committee and the system operators of each Party to this Agreement.

#### **4.8 Adoption of Standards**

The Parties hereby agree to adopt, enforce and comply with requirements and standards that will safeguard Reliability of the interconnected Transmission Systems. Such Reliability requirements and Reliability Standards shall be:

- (a) adopted and enforced for the purpose of providing reliable service;
- (b) not unduly discriminatory in substance or application;
- (c) applied consistently to both Parties (with the exception of subsection (e) below);
- (d) consistent with the Parties’ respective obligations to applicable Standards Authorities including, without limitation, any relevant requirements or guidelines from each of NERC, NPCC or any other Standards Authority to which the Parties are required to adhere; and

(e) with respect to the NYISO, consistent with the NYSRC Reliability Rules.

#### **4.9 New York - New England IROL Interface**

The Parties share a joint Interconnection Reliability Operating Limit (“IROL”) related to transfers on the interconnecting transmission lines between their respective Reliability Coordinator Areas and Balancing Authority Areas. This IROL is adhered to in order to ensure acceptable steady-state and transient performance of the New York and New England Transmission Systems. Both Parties will monitor this limit in accordance with this Agreement and independently determine the applicable import and export transfer limits. Both Parties agree to operate the interface to the most conservative limits developed in real-time and the day-ahead planning process. These operating limits shall be determined in accordance with NERC Reliability Standards and NPCC Criteria, Guides and Procedures. Both Parties will take coordinated corrective actions to avoid a violation of the IROL. If a violation occurs, coordinated corrective actions shall be taken to ensure that the violation is cleared as soon as possible, and in accordance with NERC Reliability Standards.

#### **4.10 Coordination and Exchange of Information Regarding System Operations and Planning**

Each Party shall have operating procedures, processes or plans in place for activities that require notification, exchange of information or coordination of actions with the other Party to support Interconnection reliability. Each Party shall have communications capabilities with the other Party, for both voice and data exchange as required to meet reliability needs of the Interconnection.

The Parties shall exchange information and coordinate regarding system operations and planning and inter-regional planning activities in a manner consistent with NERC and NPCC requirements, and consistent with the requirements of Section 6 of this Coordination Agreement.

## **ARTICLE 5.0: EMERGENCY ASSISTANCE**

### **5.1 Emergency Assistance**

Both Parties shall exercise due diligence to avoid or mitigate an Emergency to the extent practicable as per each Party's requirements related to the mitigation of an Emergency, in applicable policies and procedures imposed by NERC, NPCC, or (for the NYISO) the NYSRC, or contained in the ISO-NE Tariff and NYISO Tariffs. In avoiding or mitigating an Emergency, both Parties shall strive to allow for commercial remedies, but if commercial remedies are not successful, the Parties agree to be the suppliers of last resort to ensure Reliability on the system. For each hour during which Emergency conditions exist in a Party's Balancing Authority Area, that Party (while still ensuring operations within applicable Reliability Standards) shall determine what commercial remedies are available and make use of those that are available and needed to avoid or mitigate the Emergency before any Emergency Energy is scheduled in that hour.

### **5.2 Emergency Energy Transactions**

Each Party shall, to the maximum extent it deems consistent with the safe and proper operation of its respective Transmission System, provide Emergency Energy to the other Party in accordance with the provisions of Schedule C of this Agreement.

## **ARTICLE 6.0: EXCHANGE OF INFORMATION AND CONFIDENTIALITY**

ISO-NE and NYISO are authorized and agree to exchange and share such information as is required for the Coordination Committee to perform its duties and for the Parties to fulfill their obligations under this Agreement.

Any Party that receives Confidential Information or Critical Energy Infrastructure Information (“CEII”) pursuant to this Article 6 (the “Receiving Party”) shall treat such information as confidential subject to the terms and conditions set forth in Section 6.5 of this Agreement.

### **6.1 Information**

The Parties are authorized and agree to share the following information:

- (a) Information required to develop Operating Instructions;
- (b) Transmission System facility specifications and modeling data required to perform Security analysis;
- (c) Functional descriptions and schematic diagrams of Transmission System protective devices and communication facilities;
- (d) Ratings data and associated ratings methodologies for the Interconnection Facilities;
- (e) Telemetry points, equipment alarms and status points required for real-time monitoring of Security dispatch;
- (f) Data required to reconcile accounts for inadvertent energy, and for Emergency Energy transactions;
- (g) Transmission System information that is consistent with the information sharing requirements imposed by the NERC and NPCC;
- (h) Such other information as may be required for the Parties to maintain the reliable operation of their interconnected Transmission Systems and fulfill their obligations under this Agreement and to any Standards Authority of which either Party is a member, provided, however, that this other information will be exchanged only if it can be done in accordance with applicable restrictions on the disclosure of information to any Market Participant; and
- (i) Information related to the administration of CTS including:
  - ISO-NE Market Participant user and organization information;
  - ISO-NE Supply Price Points for each CTS Enabled Interface;
  - ISO-NE Transfer Limits for each CTS Enabled Interface;

- NYISO and ISO-NE Operating Reserves and reserve requirements;
- Day-ahead schedules, and real-time actual output and limits for NYCA generators that have capacity obligations in the ISO-NE market and for NECA generators that have capacity obligations in the NYISO market;
- Real-time bids, including real-time bids to wheel energy, submitted at a CTS Enabled Interface between the NYCA and the NECA (to be provided by NYISO);
- NYISO Day Ahead Operating Plan; and
- NYISO RTC results, including cleared MWs for all bids at a CTS Enabled Interface between the NYCA and the NECA, as well as LMPs, Transfer Limits and constraint information related to the scheduling of real-time energy transactions between the NYCA and the NECA.

## **6.2 Data Exchange Contact**

To facilitate the exchange of all such data, each Party will designate to the other Party's Vice President in charge of operations a contact(s), plus one or more alternate contacts, to be available twenty-four (24) hours each day, seven (7) days per week to respond to data inquiries. An alternate contact of each Party shall be its Operations Control Room. Each Party shall provide the name, telephone number, e-mail address, and fax number of each contact and alternate. Each Party may change the designated contact by notifying the other Party's Vice President in charge of operations in advance of the change.

The Parties agree to exchange data in a timely manner consistent with existing defined formats or such other formats to which the Parties may agree. Each Party shall provide notification to the other Party thirty (30) days prior to modifying an established data exchange format.

## **6.3 Cost of Data and Information Exchange**

Each Party shall bear its own cost of providing information to the other Party.

## **6.4 Other Data**

The Parties may share Confidential Information not listed in this Article 6 that is necessary for the coordinated operation of their systems, subject to the protections set forth in Section 6.5, below.

## **6.5 Treatment of Confidential Information and Critical Energy Infrastructure Information**

- (a) Definitions. For purposes of addressing information shared or exchanged pursuant to this Agreement, the term "Confidential Information" shall mean: (i) all information, whether furnished before or after the mutual execution of this Agreement, whether oral, written or recorded/electronic, and regardless of the

manner in which it is furnished, that is marked “confidential” or “proprietary” or which under all of the circumstances should be treated as confidential or proprietary; (ii) information that is Confidential Information or Strategic Information under the ISO New England Information Policy or the NYISO Code of Conduct; (iii) information that is Protected Information under the NYISO Market Monitoring Plan; (iv) all reports, summaries, compilations, analyses, notes or other information of a Party hereto which are based on, contain or reflect any Confidential Information; or (v) any information which, if disclosed by a transmission function employee of a utility regulated by the FERC to a market function employee of the same utility system, other than by public posting, would violate the FERC’s Standards of Conduct set forth in 18 C.F.R. § 37 *et. seq.* and the Parties’ Standards of Conduct on file with the FERC.

- (b) **Labeling of Confidential Information.** In circumstances where it may not be clear that information that is provided or exchanged between the Parties pursuant to the authority provided in this Agreement is Confidential Information, the information being provided should be clearly marked “confidential” or “proprietary.” Such labeling is not required for the regular, automated exchange of Confidential Information that occurs, for example, to permit the Parties to administer CTS.
- (c) **Protection.** Except as set forth herein, the Receiving Party shall not, at any time during or after the term of this Agreement, in any manner, either directly or indirectly, divulge, disclose, or communicate to any person, firm, corporation or other entity, or use for any purposes other than those set forth herein, any Confidential Information acquired from the party disclosing the information (the “Disclosing Party”), without the express prior written consent of the Disclosing Party. The Receiving Party shall not disclose any Confidential Information to anyone except to officers and employees of the Receiving Party and to its outside consultants, advisers and/or attorneys, in each case who have a need to know to further the purposes set forth herein and who have been advised of the confidential nature of the Confidential Information and who have agreed to abide by the terms of this Agreement or are bound by equally restrictive covenants (collectively, “Authorized Representatives”). The Receiving Party agrees that it shall be liable for any breach of this Agreement by its Authorized Representatives.
- (d) **Survival.** The obligation of each Party and each Authorized Representative under this Article 6 continues and survives the termination of this Agreement.
- (e) **Scope.** This obligation of confidentiality shall not extend to data and information that, at no fault of the Receiving Party, is or becomes: (a) in the public domain or generally available or known to the public; (b) disclosed to a recipient by a non-Party who had a legal right to do so; or (c) independently developed by the Receiving Party or known to such Party prior to its disclosure hereunder.
- (f) **Required Disclosure or Submission on a Confidential Basis.** If a governmental authority requests or requires the Receiving Party to publicly disclose any of the Disclosing Party’s Confidential Information, or if a request from another person or



entity is made in writing pursuant to a legal discovery process, the Receiving Party shall provide the Disclosing Party with prompt notice of such request or requirement. The Disclosing Party shall in turn, to the extent required by the terms of its tariff, provide any Market Participant whose Confidential Information is the subject of possible disclosure with prompt written notice of the circumstances that may require such disclosure so that the Market Participant has a reasonable opportunity to seek a protective order or other appropriate remedy to prevent disclosure.

If a Receiving Party is required to publicly disclose any Confidential Information under this Section, the Parties shall meet as soon as practicable in an effort to resolve any and all issues associated with the required disclosure, and the possibility of further requested or required disclosures of the Disclosing Party's Confidential Information.

The process described above shall also be followed if a governmental authority requests or requires the Receiving Party to submit any of the Disclosing Party's Confidential Information on a confidential basis (with the exception of requests for Confidential Information from FERC or the Commodity Futures Trading Commission ("CFTC") to the NYISO). The Receiving Party shall notify the governmental authority that the requested or required information contains NYISO or ISO-NE Market Participant specific Confidential Information, if applicable, and shall use reasonable efforts to protect the Confidential Information from public disclosure.

If FERC or the CFTC request or require the NYISO to submit any Confidential Information it received from ISO-NE on a confidential basis, the NYISO will seek permission to inform ISO-NE of the requirement or request and, if granted, will follow the procedures outlined above. In the event FERC or the CFTC does not permit the NYISO to notify ISO-NE of the request, NYISO shall inform FERC or the CFTC in writing that the disclosed information includes Confidential Information, and shall request that FERC or the CFTC inform NYISO before releasing to a third party any of the Confidential Information.

If a governmental authority (including FERC and the CFTC) that requested or required the submission, on a confidential basis, of Confidential Information by a Receiving Party issues a notice indicating that it is considering disclosing, or intends to disclose any Confidential Information provided by the Disclosing Party, or if the governmental authority (including FERC and the CFTC) receives a public records demand or other legal discovery request seeking disclosure of any Confidential Information provided by the Disclosing Party, the Receiving Party shall notify the Disclosing Party so that the Disclosing Party may seek an appropriate protective order or other appropriate remedy. The Disclosing Party shall in turn, to the extent required by the terms of its tariff, provide any Market Participant whose Confidential Information is the subject of possible disclosure under this provision with prompt written notice of the circumstances that may

require such disclosure so that the Market Participant has a reasonable opportunity to seek a protective order or other appropriate remedy to prevent disclosure.

- (g) Return of Confidential Information. Information provided pursuant to this Section 6 is deemed to be on loan, and remains the property of the Disclosing Party notwithstanding the disclosure of such Confidential Information to the Receiving Party hereunder. All Confidential Information provided by the Disclosing Party shall be returned by the Receiving Party to the Disclosing Party or destroyed, erased or deleted by the Receiving Party, with written confirmation provided to the Disclosing Party, promptly upon request. Upon termination of this Agreement, a Party shall use reasonable efforts to destroy, erase, delete or return to the Disclosing Party any and all written or electronic Confidential Information. Unless otherwise expressly agreed in a separate license agreement, the disclosure of Confidential Information to the Receiving Party will not be deemed to constitute a grant, by implication or otherwise, of a right or license to the Confidential Information or in any patents or patent applications of the Disclosing Party.
- (h) Relief. Each Party acknowledges that remedies at law are inadequate to protect against breach of the covenants and agreements in this Article, and hereby in advance agrees, without prejudice to any rights to judicial relief that it may otherwise have, to the granting of equitable relief, including injunction, in the Disclosing Party's favor without proof of actual damages. In addition to the equitable relief referred to in this Section, a Disclosing Party shall only be entitled to recover from a Receiving Party any and all gains wrongfully acquired, directly or indirectly, from a Receiving Party's unauthorized disclosure of Confidential Information.
- (i) Existing Confidential Information Obligations. Notwithstanding anything to the contrary in this Agreement, the Parties shall have no obligation to disclose Confidential Information or data to the extent such disclosure of information or data would be a violation of or inconsistent with applicable state or federal regulation or law. This Agreement requires the Parties to exchange Confidential Information that is necessary for the Coordination Committee to perform its duties, or for the Parties to fulfill their obligations under this Agreement. The Parties are not obligated to share Confidential Information for other purposes.
- (j) The term "CEII" or "Critical Energy Infrastructure Information" shall mean all information, whether furnished before or after the mutual execution of this Agreement, whether oral, written or recorded/electronic, and regardless of the manner in which it is furnished, that is marked "CEII" or "Critical Energy Infrastructure Information" or which under all of the circumstances should be treated as such in accordance with the definition of CEII in 18 C.F.R. § 388.13(c)(1). The Receiving Party shall maintain all CEII in a secure place. The Receiving Party shall treat CEII received under this agreement in accordance with its own procedures for protecting CEII and shall not disclose CEII to anyone except its Authorized Representatives.

## **6.6 Unauthorized Transfer of Third-Party Intellectual Property**

In the performance of this Agreement, no Party shall transfer to the other Party any Intellectual Property, the use of which by the other Party would constitute an infringement of the rights of another entity (including the Parties). In the event such transfer occurs, whether or not inadvertent, the transferring Party shall, promptly upon learning of the transfer, provide Notice to the receiving Party and upon receipt of such Notice the receiving Party shall take reasonable steps to avoid claims and mitigate losses.

## **ARTICLE 7.0: COORDINATION COMMITTEE**

### **7.1 Coordination Committee Inauguration and Authorization**

The Parties shall form a Coordination Committee under this Agreement. Within 30 days of the Effective Date, each of the Parties shall appoint two representatives, a principal and an alternate, to serve as members of the Coordination Committee with the authority to act on their behalf with respect to actions or decisions taken by the Coordination Committee. A Party may, at any time upon providing prior notice to the other Party, designate a replacement principal member or alternate member to the Coordination Committee.

### **7.2 Coordination Committee Duties and Responsibilities**

The Coordination Committee exists to administer or assist the Parties' implementation of the provisions of this Agreement. The Coordination Committee shall develop and adopt policies, instructions, and recommendations relating to the Parties' performance of their obligations under this Agreement, attempt to resolve Disputes between the Parties pursuant to Article 17.0 of this Agreement, and shall undertake any other actions specifically delegated to it pursuant to this Agreement.

The Coordination Committee shall undertake to assist the Parties' efforts to jointly develop Operating Instructions to implement the intent of this Agreement in accordance with Schedule B of this Agreement, 'Procedures for Development and Authorization of Operating Instructions'. The Coordination Committee shall authorize such Operating Instructions once developed. To the extent that the Operating Instructions require participation by local control centers and Transmission Owners in the New England or the New York Reliability Coordinator Areas, those entities will be involved in the development process.

Should the terms and conditions contained in this Agreement be found to conflict with or fail to recognize obligations of a Standards Authority of which either Party is a member or other regulatory requirements, the Parties agree to amend this Agreement accordingly.

Any recommendations on revisions to this Agreement shall be provided to each Party's appropriate corporate officers for approval.

### **7.3 Limitations of Coordination Committee Authority**

The Coordination Committee is not authorized to modify or amend any of the terms of this Agreement. The Coordination Committee is also not authorized to excuse any obligations under this Agreement or waive any rights pertaining to this Agreement. The Coordination Committee has no authority to commit either Party to any expenditure that is beyond those expenses described herein.

### **7.4 Exercise of Coordination Committee Duties**

The Coordination Committee shall hold meetings no less frequently than once each calendar year. The matters to be addressed at all meetings shall be specified in an agenda, which

shall contain items specified by either Party in advance of the meeting and sent to the representatives of the other Party. All decisions of the Coordination Committee must be unanimous. Special meetings may be called at any time if the Coordination Committee deems such meetings to be necessary or appropriate.

Subject to the limitations on its authority as described in Section 7.3 of this Agreement, the Coordination Committee has the responsibility and authority to take action on all aspects of this Agreement, including, but not limited to the following:

- (a) amending, adding or canceling Operating Instructions and providing written notice in accordance with Article 18.0 of this Agreement;
- (b) assessment of non-compliance with this Agreement and, subject to Article 19.0 of this Agreement, the taking of appropriate action in respect thereof;
- (c) documentation of decisions related to the initial resolution of Disputes as set out in Article 19.0 of this Agreement, or in cases of unresolved Disputes, the circumstances relevant to the Dispute in question as contemplated by the requirements of Article 19.0 of this Agreement; and
- (d) preparation, documentation, retention and distribution of Coordination Committee meeting minutes and agendas.

**ARTICLE 8.0: RELIABILITY COORDINATION AND RELIABILITY ASSESSMENT  
OF OUTAGES**

Both Parties agree to provide each other with updates on planned outage schedules and other activities in accordance with NPCC Criteria, Guides and Procedures that may impact on the Reliability or availability of the interconnected New York Transmission System and New England Transmission System. As Reliability Coordinators and Balancing Authorities, the NYISO and ISO-NE, shall interact with each other as required, and with other Balancing Authorities and Reliability Coordinators, to establish System Operating Limits and to perform Reliability coordination and Reliability assessments of outages.

## **ARTICLE 9.0: OPERATIONAL INFORMATION**

### **9.1 Obligation to Provide Operational Data and Status Points**

The Parties shall ensure that appropriate monitoring facilities are installed as required to provide for electric power quantities or equipment loading to enable monitoring of System Operating Limits, meet requirements of each of NERC and NPCC, and for determining Interconnection Facilities inadvertent energy accounting.

## **ARTICLE 10.0: INTERCONNECTION REVENUE METERING**

### **10.1 Obligation to Provide Inadvertent Energy Accounting Metering**

The Parties shall ensure appropriate electric metering devices are installed as required to measure electric power quantities for determining Interconnection Facilities inadvertent energy accounting.

### **10.2 Standards for Metering Equipment**

Any Metering Equipment used to meter Metered Quantities for inadvertent energy accounting shall be designed, verified, sealed and maintained in accordance with the Party's respective metering standards or as otherwise agreed to by the Coordination Committee.

### **10.3 Meter Compensation to the Point of Interconnection**

The metering compensation for transmission line losses to the Interconnection Facilities Delivery Point shall be determined by the Party's respective standards or otherwise agreed to by the Coordination Committee.

### **10.4 Metering Readings**

The Parties shall ensure that integrated meter readings are provided at least once each hour for Interconnection Facilities accounting purposes and meter registers are read at least monthly, as close as practicable to the last hour of the month. An appropriate adjustment shall be made to register readings not taken on the last hour of the month.



## **ARTICLE 11.0: JOINT CHECKOUT PROCEDURES**

### **11.1 Scheduling Checkout Protocols**

Both Parties shall require all real-time energy market transaction schedules over Interconnections to be tagged in accord with the NERC tagging standard. For Simultaneous Activation of Reserves (“SAR”) and other emergency schedules that are not tagged, the Parties will enter manual schedules into their respective operating systems.

When there is a real-time energy market transaction scheduling conflict, the Parties will work to modify the schedule as soon as practical.

Consistent with the foregoing requirements, the Parties will perform the following types of checkouts:

- (a) Day-ahead checkout shall be performed daily on the day before the transaction is to flow. Day-ahead checkout includes the verification of net interchange totals and individual transaction schedules;
- (b) Real-time checkout shall be performed during the period before the transaction is to flow. Real-time checkout includes the verification of net interchange totals and individual transaction schedules;
- (c) After-the-fact checkout of real-time transactions shall be performed the next business day following the day of the transactions;
- (d) After-the-fact reporting of scheduled energy interchange and actual energy interchange shall be updated by each Party each day and exchanged with the other Party. Within ten (10) business days of the end of each month, the previous month’s data shall be reconciled.

**ARTICLE 12.0: COORDINATED TRANSACTION SCHEDULING**

CTS is addressed in Schedule D to this Agreement and in the ISO-NE and NYISO Tariffs.

## **ARTICLE 13.0: LIABILITY**

### **13.1 Force Majeure**

A Party shall not be considered to be in default or breach of this Agreement, and shall be excused from performance or liability for damages to the other Party, if and to the extent it shall be delayed in or prevented from performing or carrying out any of the provisions of this Agreement, arising out of or from any act, omission, or circumstance by or in consequence of any act of God, labor disturbance, sabotage, failure of contractors or suppliers of materials, act of the public enemy, war, invasion, insurrection, riot, fire, storm, flood, ice, earthquake, explosion, epidemic, breakage or accident to machinery or equipment or any other cause or causes beyond such Party's reasonable control, including any curtailment, order, regulation, or restriction imposed by governmental, military or lawfully established civilian authorities, or by making of repairs necessitated by an emergency circumstance not limited to those listed above upon the property or equipment of the Party or property or equipment of others which is deemed under the Operational Control of the Party. A Force Majeure event does not include an act of negligence or Intentional Wrongdoing by a Party. Any Party claiming a Force Majeure event shall use reasonable diligence to remove the condition that prevents performance and shall not be entitled to suspend performance of its obligations in any greater scope or for any longer duration than is required by the Force Majeure event. Each Party shall use its best efforts to mitigate the effects of such Force Majeure event, remedy its inability to perform, and resume full performance of its obligations hereunder.

A Party suffering a Force Majeure event ("Affected Party") shall notify the other Party ("Non-Affected Party") in writing ("Notice of Force Majeure Event") as soon as reasonably practicable specifying the cause of the event, the scope of commitments under the Agreement affected by the event, and a good faith estimate of the time required to restore full performance. Except for those commitments identified in the Notice of Force Majeure Event, the Affected Party shall not be relieved of its responsibility to fully perform as to all other commitments in the Agreement. If the Force Majeure event continues for a period of more than 90 days from the date of the Notice of Force Majeure Event, the Non-Affected Party shall be entitled, at its sole discretion, to terminate the Agreement.

### **13.2 Liability to Third Parties**

Nothing in this Agreement, whether express or implied, is intended to confer any rights or remedies under or by reason of this Agreement on any person or entity that is not a Party or a permitted successor or assign.

### **13.3 Indemnification**

- (a) **Definitions.** An "Indemnifying Party" means a Party who holds an indemnification obligation hereunder. An "Indemnitee" means a Party entitled to receive indemnification under this Agreement.
- (b) **Third Party Losses.** Each Party will defend, indemnify, and hold the other Party harmless from all losses, damages, liabilities, obligations, claims, demands, suits,

proceedings, recoveries, settlements, costs and expenses, court costs, attorney fees, causes of action, judgments and other obligations (collectively, "Losses") brought or obtained by any Third Party against such other Party, only to the extent that such Losses arise directly from the:

- (i) Gross negligence, recklessness, or willful misconduct of the Indemnifying Party or any of its agents or employees, in the performance of this Agreement; except to the extent such Losses arise (i) from gross negligence, recklessness, willful misconduct or breach of contract or law by the Indemnitee or such Indemnitee's agents or employees, or (ii) as a consequence of strict liability imposed as a matter of law upon the Indemnitee, or such Indemnitee's agents or employees; or
  - (ii) Breach of the Parties' obligations in Article 6 hereof.
- (c) Process. The Indemnitee shall give Notice to the Indemnifying Party as soon as reasonably practicable after the Indemnitee becomes aware of the indemnifiable Losses or any claim, action or proceeding that may give rise to an indemnification. Such notice shall describe the nature of the Losses or proceeding in reasonable detail, explain how the Losses relate to the performance of this Agreement, and shall indicate, if practicable, the estimated amount of the Losses that has been sustained by the Indemnitee. A delay or failure of the Indemnitee to provide the required notice shall release the Indemnifying Party (i) from any indemnification obligation to the extent that such delay or failure materially and adversely affects the Indemnifying Party's ability to defend such claim or materially and adversely increases the amount of the indemnifiable Losses, and (ii) from any responsibility for any costs or expenses of the Indemnitee in the defense of the claim during such period of delay or failure.
- (d) Indemnification shall be limited to the extent that the liability of the Indemnitee would be limited by any applicable law.

#### **13.4 Liability Between the Parties**

The Parties' duties and standard of care with respect to each other, and the benefits and rights conferred on each other shall be no greater than as expressly stated herein. Neither Party, its directors, officers, trustees, employees or agents, shall be liable to the other Party for any Losses, whether direct, indirect, incidental, punitive, special, exemplary or consequential, arising from that Party's performance or nonperformance under this Agreement, except to the extent that the Party is found liable for gross negligence or willful misconduct, in which case the Party responsible shall be liable only for direct and ordinary damages and not for any incidental, consequential, punitive, special, exemplary or indirect damages.

This section shall not limit amounts required to be paid for Emergency Energy under Schedule C to this Agreement. This section shall not apply to adjustments or corrections for errors in invoiced amounts due under Schedule C to this Agreement.

### **13.5 Liability for Interruptions**

Except as set forth herein, neither Party shall be liable to the other Party for any Losses or damage, whether direct, indirect, incidental, punitive, special, exemplary or consequential, resulting from an occurrence on the circuits and system that are under the Operational Control of the other Party and which results in damage to or renders inoperative such circuits and system, or the separation of the systems in an Emergency, or interrupts or diminishes service, or increases, decreases or in any way affects for whatever length of time the voltage or frequency of the energy delivered hereunder to the other Party.

**ARTICLE 14.0: APPLICABLE LAW**

This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware.

## **ARTICLE 15.0: LICENSE AND AUTHORIZATION**

The agreements and obligations expressed herein are subject to such initial and continuing governmental permission and authorization as may be required. Each Party shall be responsible for securing and paying for any approvals required by it from any regulatory agency of competent jurisdiction relating to its participation in this Agreement and will reasonably cooperate with the other Party in seeking such approvals.

## **ARTICLE 16.0: ASSIGNMENT**

This Agreement shall inure to the benefit of, and be binding upon and may be performed by, the successors and assigns of the Parties hereto respectively, but shall not be assignable by either Party without the written consent of the other.



## **ARTICLE 17.0: AMENDMENT**

### **17.1 Review of Agreement**

The terms of this Agreement are subject to review for potential amendment at the request of either Party. If, consequent to such review, the Parties agree that any of the provisions hereof, or the practices or conduct of either Party impose an inequity, hardship or undue burden upon the other Party, or if the Parties agree that any of the provisions of this Agreement have become obsolete or inconsistent with changes related to the Interconnection Facilities, the Parties shall endeavor in good faith to amend or supplement this Agreement in such a manner as will remove such inequity, hardship or undue burden, or otherwise appropriately address the cause for such change. Any amendment of this Agreement by the Parties must be done in accordance with Section 17.2.

### **17.2 Authorized Representatives**

No amendment of this Agreement shall be effective unless effected by written instrument duly executed by the Parties' authorized representatives. For the purposes of this Section, an authorized person refers to individuals designated as such by Parties in their respective corporate by-laws.

## **ARTICLE 18.0: NOTICES**

Except as otherwise agreed from time to time, any notice, invoice or other communication which is required by this Agreement to be given in writing, shall be sufficiently given at the earlier of the time of actual receipt or deemed time of receipt if delivered personally to a senior official of the Party for whom it is intended or electronically transferred or sent by registered mail, addressed as follows:

In the case of the NYISO to:

New York Independent System Operator, Inc.  
10 Krey Boulevard  
Rensselaer, New York 12144  
Attention: Vice President of Operations

In the case of ISO-NE to:

ISO New England Inc.  
One Sullivan Road  
Holyoke, Massachusetts 01040-2841  
Attention: Vice President of System Operations

or delivered to such other person or electronically transferred or sent by registered mail to such other address as either Party may designate for itself by notice given in accordance with this Section or delivered by any other means agreed to by the Parties hereto.

Any notice, or communication so mailed shall be deemed to have been received on the third business day following the day of mailing, or if electronically transferred shall be deemed to have been received on the same business day as the date of the electronic transfer, or if delivered personally shall be deemed to have been received on the date of delivery or if delivered by some other means shall be deemed to have been received as agreed to by the Parties hereto.

The use of a signed facsimile of notices and correspondence between the Parties related to this Agreement shall be accepted as proof of the matters therein set out. Follow-up with hard copy by mail will not be required unless agreed to by the Coordination Committee.

## **ARTICLE 19.0: DISPUTE RESOLUTION**

In the event of a dispute arising out of or relating to this Agreement (a “Dispute”) that is not resolved by the representatives of the Parties who have been designated under Section 7.1 of this Agreement within 7 days of the reference to such representatives of such Dispute, each Party shall, within 14 days’ written notice by either Party to the other, designate a senior officer with authority and responsibility to resolve the Dispute and refer the Dispute to them. The senior officer designated by each Party shall have authority to make decisions on its behalf with respect to that Party’s rights and obligations under this Agreement. The senior officers, once designated, shall promptly begin discussions in a good faith effort to agree upon a resolution of the Dispute. If the senior officers do not agree upon a resolution of the Dispute within 30 days of its referral to them (or within such longer period as the senior officers mutually agree to in writing), or do not mutually agree to submit their Dispute for binding or non-binding arbitration by the Federal Energy Regulatory Commission’s Dispute Resolution Service, then the Parties shall request that the Federal Energy Regulatory Commission’s Dispute Resolution Service mediate their efforts to resolve the Dispute. At any point in the mediation process, either Party may terminate the mediation and may pursue any and all remedies available to it at law or in equity.

Neither the giving of notice of a Dispute, nor the pendency of any Dispute resolution process as described in this Section shall relieve a Party of its obligations under this Agreement, extend any notice period described in this Agreement or extend any period in which a Party must act as described in this Agreement. Notwithstanding the requirements of this Section, either Party may terminate this Agreement in accordance with its provisions, or pursuant to an order of FERC or a court at equity. The issue of whether such a termination is proper shall not be considered a Dispute hereunder.

## **ARTICLE 20.0: REPRESENTATIONS**

### **20.1 Good Standing**

Each Party represents and warrants that it is duly organized, validly existing and in good standing under the laws of the state in which it is organized, formed, or incorporated, as applicable.

### **20.2 Authority to Enter Into Agreement**

Each Party represents and warrants that it has the right, power and authority to enter into this Agreement, to become a Party hereto and to perform its obligations hereunder. This Agreement is a legal, valid and binding obligation of such Party, enforceable against such Party in accordance with its terms.

### **20.3 Organizational Formation Documents**

Each Party represents and warrants that the execution, delivery and performance of this Agreement does not violate or conflict with the organizational or formation documents, bylaws, operating agreement, or agency agreement of such Party, or any judgment, license, permit, regulatory order, or governmental authorization applicable to such Party.

### **20.4 Regulatory Authorizations**

Each Party represents and warrants that it has, or applied for, all regulatory authorizations necessary for it to perform its obligations under this Agreement.

## **ARTICLE 21.0: EFFECTIVE DATE AND TERM**

Subject to the conditions of Article 13.0 (License and Authorization) above, this Agreement shall take effect as of the date that all of the following have occurred: (i) upon the execution hereof by both Parties on the date set forth above; and (ii) acceptance or approval by the FERC. This Agreement shall continue in force until terminated in accordance with this Article.

This Agreement may be terminated at any time by mutual agreement in writing. It may also be terminated by either Party with prior written notice of at least ninety (90) days to the other Party of its intention to terminate.

## **ARTICLE 22.0: MISCELLANEOUS**

### **22.1 Performance**

The failure of a Party to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any right held by such Party. Any waiver on any specific occasion by either Party shall not be deemed a continuing waiver of such right, nor shall it be deemed a waiver of any other right under this Agreement.

### **22.2 Agreement**

This Agreement, including all Schedules and Attachments hereto, is the entire agreement between the Parties with respect to the subject matter hereof, and supersedes all prior or contemporaneous understandings or agreements, oral or written, with respect to the subject matter of this Agreement.

### **22.3 Governmental Authorizations**

This Agreement, including its future amendments is subject to the initial and continuing Federal Energy Regulatory Commission authorizations required to establish, operate and maintain the Interconnection Facilities as herein specified. Each Party shall take all actions necessary and reasonably within its control to maintain all rights and Federal Energy Regulatory Commission approvals required to perform its respective obligations under this Agreement.

If one Party determines that it is required to self-report a potential violation to the Commission's Office of Enforcement regarding its compliance with this Agreement or the administration of CTS, the reporting Party shall inform, and provide a copy of the self-report to the other Party. Any such report provided by one Party to the other shall be Confidential Information. Each Party shall make reasonable efforts to cooperate and assist in remedying any such violation, to the extent such assistance is necessary to resolve the matter and to the extent doing so is consistent with maintaining the Party's legal privilege.

### **22.4 Unenforceable Provisions**

If any provision of this Agreement is deemed unenforceable, the rest of the Agreement shall remain in effect and the Parties shall negotiate in good faith and seek to agree upon a substitute provision that will achieve the original intent of the Parties.

### **22.5 Execution**

This Agreement may be executed in multiple counterparts, each of which shall be considered an original instrument, but all of which shall be considered one and the same Agreement, and shall become binding when all counterparts have been signed by each of the Parties and delivered to each Party hereto. Delivery of an executed signature page counterpart by telecopier shall be as effective as delivery of a manually executed counterpart.

## **22.6 Regulatory Authority**

If any Regulatory Authority having jurisdiction (or any successor boards or agencies), a court of competent jurisdiction or other governmental entity with the appropriate jurisdiction (collectively, the "Regulatory Bodies") issues a rule, regulation, law or order that has the effect of cancelling, changing or superseding any term or provision of this Agreement, including changes to section headings or numbering (the "Regulatory Requirement"), then this Agreement will be deemed modified to the extent necessary to comply with the Regulatory Requirement. Notwithstanding the foregoing, if the Regulatory Authority materially modifies the terms and conditions of this Agreement and such modification(s) materially affect the benefits flowing to one or both of the Parties, as determined by either of the Parties within twenty (20) business days of the receipt of the Agreement as materially modified, the Parties agree to attempt in good faith to negotiate an amendment or amendments to this Agreement or take other appropriate action(s) so as to put each Party in effectively the same position in which the Parties would have been had such modification not been made. In the event that, within sixty (60) days or some other time period mutually agreed upon by the Parties after such modification has been made, the Parties are unable to reach agreement as to what, if any, amendments are necessary and fail to take other appropriate action to put each Party in effectively the same position in which the Parties would have been had such modification not been made, then either Party shall have the right to unilaterally terminate this Agreement forthwith.

## **22.7 Headings**

The headings used for the Articles and Sections of this Agreement are for convenience and reference purposes only, and shall not be construed to modify, expand, limit, or restrict the provisions of this Agreement.

**IN WITNESS WHEREOF**

IN WITNESS WHEREOF the Parties hereto have caused this Agreement to be executed in duplicate as of the day and year first written above.

NEW YORK INDEPENDENT SYSTEM OPERATOR

By Rick Gonzales Date: March 4, 2021

Ricardo T. Gonzales, Senior Vice President and Chief Operating Officer

EO NEW ENGLAND INC.

By  Date: March 4, 2021

Vamsi Chakalapudi, Vice President and Chief Operating Officer



### **Schedule A: Description of Interconnection Facilities**

The Coordination Agreement between ISO-NE and the NYISO covers the New England – NYISO Interconnection Facilities under the Operational Control of the NYISO and ISO-NE.

ISO-NE and NYISO shall jointly develop and maintain an ‘ISO-NE / NYISO List of Interconnection Facilities’ (including a description of the associated Interties and metering points) and post the most current mutually agreed upon list on their respective public websites. The Parties may jointly revise the list by mutual written agreement. After the Parties mutually agree to changes, ISO-NE and NYISO shall post an updated list on their respective websites. The ISO-NE / NYISO List of Interconnection Facilities shall not be modified if either Party objects to a proposed change. The most current list developed by mutual agreement shall remain the official version of the list and neither Party shall knowingly post a list that includes changes that are not the product of mutual agreement.

There are three (3) ISO-NE/NYISO Interconnections: the “NY/NE Northern AC Interconnection,” the Northport-Norwalk Harbor Cable (“NNC Interconnection”), and the Cross Sound Cable (“CSC Interconnection”). For each Interconnection, NYISO and ISO-NE have identified respective associated Interties, Intertie metering points, and external nodes for scheduling and pricing purposes.

For Operational Control purposes, the point of demarcation for each of the Interconnections is the point at which the Interconnection (and its individual Interties) crosses the New England-New York State boundary, except as otherwise noted in the ISO-NE / NYISO List of Interconnection Facilities. The external nodes associated with each of the Interconnections are listed in Table 1 of Attachment A of Schedule C of this Agreement.

## **Schedule B: Procedures for Development and Authorization of Operating Instructions**

### **Overview**

Operating Instructions (a) will be developed and recorded by the Parties, with assistance from the Coordination Committee, in accordance with this Schedule B, (b) will be contained in a document separate from this Agreement, and (c) may be modified by the Parties, with assistance from the Coordination Committee, without amending this Agreement.

The Parties, with assistance from the Coordination Committee, shall jointly develop Operating Instructions and review them at least annually. The Parties, with assistance from the Coordination Committee, shall submit draft material to one another for review and comment. The Parties, with assistance from the Coordination Committee, shall provide comment on the draft material promptly. The Parties, with assistance from the Coordination Committee, shall promptly provide such information as may reasonably be required in connection with establishing, or reviewing, the material. The Coordination Committee shall be responsible for approving final versions of Operating Instructions.

In the event that any conflicts arise or are made apparent to a Party regarding any Operating Instructions, they shall notify the other Party and engage the Coordination Committee, if necessary, to resolve such conflicts.

The Coordination Committee will periodically review applicable ISO-NE and NYISO individual procedures and processes to determine any benefits of sharing these procedures and processes. These benefits may be for the purpose of training or to satisfy Reliability Standards. The Coordination Committee will determine how best to share these individual procedures and processes.

A list of Operating Instructions and applicable ISO-NE and NYISO individual procedures will be maintained by the Coordination Committee.

Outlined below are the key principles and items of methodology to be observed while the Parties, with assistance from the Coordination Committee, are engaged in developing Operating Instructions, and issuing them to their respective operations staff.

### **Principles**

Given that the Parties' respective operations staff benefit from following a single instruction for all aspects of their execution of interconnected operations, it is an acceptable practice to combine this content to achieve the single Operating Instructions for use by a respective Party's operations staff. The preferred methodology when appropriate is to use the NPCC Criteria, Guides and Procedures for the coordination and operation of the interconnected Transmission Systems. When the NPCC documentation is insufficient to accomplish this task separate instructions will be developed in accordance with this Schedule.

Each Party shall coordinate the issuance internally of any Operating Instructions developed and agreed to by the Parties, with assistance from the Coordination Committee, to ensure that their respective operations staff has these

Operating Instructions. In addition, annual review of the Operating Instructions and the Parties' internal procedures associated with the Operating Instructions shall be conducted by the Parties, with assistance from the Coordination Committee, to ensure consistency.

Operating Instructions, when approved by the Parties, shall be binding on the Parties insofar as they relate to the Interconnection Facilities until they expire, are changed, deleted, or superseded by authority of the Parties, with assistance from the Coordination Committee.

### **Items of Methodology**

By mutual agreement of the Coordination Committee, one of the Parties shall be designated by the Coordination Committee to control the revision process of the Operating Instruction from the initial drafting of material through to the conversion of the Operating Instruction into its final form.

### **Schedule C: Emergency Energy Transactions Schedule**

WHEREAS, ISO-NE, as the regional transmission organization for the New England Transmission System and the administrator of the New England markets, arranges for the sale and purchase of Emergency capacity and energy on behalf of Market Participants with neighboring Balancing Authority Areas, all in accordance with the ISO-NE Tariff, which includes the Open Access Transmission Tariff and ISO-NE market rules;

WHEREAS, ISO-NE is the responsible for, among other matters, procuring and acting as supplier of last resort of ancillary services (including arranging for the sale and purchase of Emergency capacity and energy with neighboring Balancing Authority Areas), in accordance with the ISO-NE Tariff;

WHEREAS, the NYISO, as the independent system operator of the New York Transmission System and the administrator of the New York wholesale electricity markets, arranges for the sale and purchase of Emergency capacity and energy on behalf of Market Participants with neighboring Balancing Authority Areas, all in accordance with the NYISO Tariffs;

WHEREAS, the NYISO is the administrator of the NYISO Tariffs and is responsible for, among other matters, procuring and acting as supplier of last resort of ancillary services (including arranging for the sale and purchase of Emergency capacity and energy with neighboring Balancing Authority Areas), in accordance with the NYISO Tariffs;

WHEREAS, either of the Parties may, from time to time, have insufficient Operating Reserve available on the respective systems that they operate, or need to supplement available resources to cover sudden and unforeseen circumstances such as loss of equipment or forecast errors, and such conditions could result in the need to arrange for the purchase of Emergency Energy for Reliability reasons;

NOW, THEREFORE, in consideration of the premises and of the mutual covenants herein set forth, the Parties mutually agree as follows:

## **ARTICLE I**

### **1.0 DELIVERY POINT**

The Delivery Point for energy delivered pursuant to the terms of this Schedule shall be at one of three points of Interconnection between the NYISO Balancing Authority Area and the ISO-NE Balancing Authority Area, and at such other points of Interconnection as may be established.

These three points of Interconnection are as follows: (1) the NY/NE Northern AC Interconnection<sup>1</sup>; (2) the NNC Interconnection; and (3) the Cross Sound Cable (CSC) Interconnection, which is a HVDC facility.

Unless otherwise agreed by the Coordination Committee, the price for energy for an hour delivered pursuant to this Schedule shall include all transmission costs of delivering such energy to the Delivery Point in that hour, and the Party taking delivery of such energy for the hour shall be responsible for all transmission costs beyond the Delivery Point for that hour.

<sup>1</sup> The NY/NE Northern AC *Interconnection*, as defined in *Schedule A – Interconnection Facilities* (“*Schedule A*”) to the Coordination Agreement between ISO-NE Inc and the NYISO Inc.

## **ARTICLE II**

### **2.0 CHARACTERISTICS OF EMERGENCY ENERGY**

2.1 All Emergency Energy made available under this Schedule shall be three phase, 60 Hz alternating current at operating voltages established at the Delivery Point in accordance with system requirements and appropriate to the Interconnection Facilities or other such characteristics as may be agreed upon by the Parties.

## **ARTICLE III**

### **3.0 NATURE OF SERVICE**

3.1 ISO-NE and the NYISO shall, to the maximum extent each deems consistent with the safe and proper operation of its system, the furnishing of economical, dependable and satisfactory services by its participants, and the obligations of its participants to other parties, make available to the other Party when a system Emergency exists on the other Party's system, Emergency Energy from its system's available generating capability in excess of the system's load requirements (i.e., load requirements alone, not load plus reserve requirements) up to the transfer limits in use between the two Balancing Authority Areas. Emergency Energy is provided in cases of emergency outages of generating units, transmission lines or other equipment, or to meet other sudden and unforeseen circumstances such as forecast errors, or to provide sufficient Operating Reserve. Normally, a Party requests Emergency Energy from the other Party as a last resort, when market-based real-time energy transactions are not available, or not available in a timely fashion in order to maintain its ten-minute reserve requirement. At the time the Emergency Energy sale is being initiated, the Party delivering such

Emergency Energy shall describe the Emergency Energy transaction as being one of the following: (1) “delivered out of ten-minute reserve”; (2) “delivered out of thirty-minute reserve” where such a delivery could reasonably be expected to be recalled if the Party delivering the Emergency Energy needed the generation for a reserve pick-up or other Emergency; or (3) “delivered above and beyond ten-minute and thirty-minute reserves” where the Party delivering such Emergency Energy is normally expected to be able to continue delivering the energy following a reserve pick-up.

- 3.2 The Parties are participants in the NPCC and are expected to comply with NPCC Criteria, Guides and Procedures. Such NPCC Criteria, Guides and Procedures include “Emergency Operation Criteria” (Document A-3), which describes the basic factors to be considered by a Balancing Authority Area in formulating plans and procedures to be followed in an Emergency. A principle of operation in this NPCC Criteria is that upon receiving a request for assistance to mitigate an Emergency, a Balancing Authority Area would provide “maximum reasonable assistance” to a neighboring Balancing Authority Area. Such reasonable assistance would not normally require the shedding of firm load.
- 3.3 Normally, the Party experiencing or anticipating an Emergency would request Emergency Energy from the other Party in accordance with this Schedule and applicable NPCC Criteria, Guides and Procedures after all market-based real-time transactions have been scheduled, unless there is an immediate need for such Emergency Energy in order to maintain system Reliability.
- 3.4 In the event a Party is unable to provide Emergency Energy to the other when needed, but there is energy available from a Third Party Balancing Authority Area supplier, the Party will use reasonable efforts to acquire and transmit such energy to the other Party where feasible.

## **ARTICLE IV**

### **4.0 RATES AND CHARGES**

- 4.1 The charge for Emergency Energy delivered to the NYISO or to ISO-NE shall be as set forth in Attachment A, attached hereto.
- 4.2 Should activations of reserve sharing be required by either of the Parties, inadvertent interchanges will intentionally be accumulated with each Balancing Authority Area providing assistance. In accordance with the NPCC “Procedures for Shared Activation of Ten Minute Reserve” (Document C-12), such inadvertent accumulations shall be treated as part of ordinary inadvertent energy.

## **ARTICLE V**

### **5.0 MEASUREMENT OF ENERGY INTERCHANGED**

- 5.1 All energy supplied at the Delivery Point shall be metered. The metered amounts shall be adjusted for actual losses to the Delivery Point on each of the Interconnection Facilities. This adjustment will be done to compensate for the difference in location between the Delivery Point and the meter.
- 5.2 Any properly designated representative of either of the Parties hereto shall have access, through coordination with the meter owner, during normal business hours, to all of the billing meters for the purpose of reading the same. The accuracy of the meters shall be verified by proper tests periodically and at any other time upon reasonable notice given by either of the Parties to the other, and each of the Parties shall be entitled to have a representative present at such verification, subject to coordination with the meter owner. In the event errors greater than +/-2% should be discovered, retroactive billing adjustments, if any, shall be determined by the Coordination Committee.

## **ARTICLE VI**

### **6.0 BILLING AND PAYMENT**

- 6.1 The procedure for rendering and payment of invoices for transactions pursuant to this Schedule shall be as set out hereunder unless otherwise agreed by the Coordination Committee.
- 6.2 The Party delivering energy pursuant to this Schedule shall promptly prepare, or cause to be prepared, and render an invoice to the other Party covering all transactions conducted under the terms of this Schedule. All transactions will be billed based on the schedule of energy agreed to by the Parties.
- 6.3 All invoices rendered by a Party shall be payable by the other Party in currency of the United States of America by electronic bank transfer within five (5) business days after the issuance of an invoice (the "Due Date").
- 6.4 If the rendering of an invoice is unavoidably delayed, a Party may issue an interim invoice based on estimated charges. Each invoice shall be subject to adjustment for any errors in calculation, meter readings, estimating or otherwise. Any such billing adjustments shall be made as promptly as practical, but in no event later than six months after issuing the invoice.
- 6.5 Any amount not paid by the Due Date shall be subject to interest, calculated from the due date of the invoice to the date of payment, in accordance with the methodology specified for interest on refunds in the FERC's regulations at 18 C.F.R. § 35.19a (a) (2) (iii).
- 6.6 If any invoice remains unpaid by a Party for thirty (30) days after the Due Date, the Party rendering the invoice may, in addition to all other remedies available to it, and after giving the other Party at least five days written notice of its intention to do so, present

the issue in question to that Party's Board of Directors. The Party's Board of Directors shall contact the other Party's Board of Directors or its designee to develop a solution to a billing Dispute pursuant to Article 17 of this Agreement. The Boards of Directors may also choose to submit the billing Dispute to a form of alternative Dispute resolution to which the Boards of Directors may agree. Such action shall not be construed as a breach of contract by the Party rendering the invoice and shall not relieve the other Party of its obligations to pay for energy in accordance with the provisions of this Schedule.

- 6.7 The applicable provisions of this Schedule shall continue in effect after termination of this Schedule to the extent necessary to provide for final billing, billing adjustments, payments and disposition of any claims outstanding.
- 6.8 Each Party warrants that it has, or will have, the agreements and procedures in place to ensure the collection of payments from its participants for the delivery of Emergency Energy to it from the other Party.

## **ARTICLE VII**

### **7.0 RECORDS**

- 7.1 Each Party hereto shall keep or cause to be kept complete and accurate records and memoranda of its operations hereunder and shall maintain such data as may be necessary to determine with reasonable accuracy any item required hereunder. With respect to invoicing records, each Party shall maintain or cause to be maintained such records, memoranda and data for the current calendar year plus the previous calendar year. The Coordination Committee shall have the right to examine all such records and memoranda that are not confidential in so far as may be reasonably necessary for the purpose of ascertaining the reasonableness and accuracy of any statements of costs relating to transactions hereunder.



**Attachment A**  
**To the Emergency Energy Transactions Schedule**

**Emergency Energy Pricing**

In accordance with the Emergency Energy Transactions Schedule between the NYISO and ISO-NE, the charge for Emergency Energy delivered to the Delivery Point by the NYISO or ISO-NE to the other shall be as defined within this Attachment A.

**A.1. Direct NYISO/ISO-NE Emergency Energy Transaction**

These are requests made by either the NYISO or ISO-NE to receive Emergency Energy in support of Emergency conditions and to protect Reliability in the event that there is a need for energy on its system that could not be supplied through the market.

The charge for Emergency Energy shall be calculated using the following two-part formula. The first part of the formula calculates the Energy Charge portion of the charge and the second part incorporates any Transmission Charge reasonably associated with the delivery of the Emergency Energy to the Delivery Point.

**The Energy Charge portion of the Emergency Energy Charge (for an hour)**

**For NYISO as the delivering Party:**

The Energy Charge portion of the Emergency Energy Charge for an hour equals the sum of the Energy Charges for each real-time interval in the hour. The Energy Charge for each real-time interval =

(Emergency Energy supplied in the real-time interval in megawatt hour(s) (“MWh”))  
\* (Delivering Party’s Cost of Energy in \$/MWh)  
\* 110%

The Cost of Energy shall be the NYISO final real-time Locational Based Marginal Price (“LBMP”) at the external node associated with the Delivery Point (as used in the NYISO market system for energy exports from the NYISO Balancing Authority Area into the New England Balancing Authority Area, as such pricing node is defined in NYISO Tariffs and as summarized in Table 1), for the real-time interval of the Emergency Energy delivery. For purposes of this calculation, a real-time LBMP for an interval is set to \$0.00 if the real-time LBMP in that interval was negative.

**For ISO-NE as the delivering Party:**

The Energy Charge portion of the Emergency Energy Charge for an hour equals the sum of the Energy Charges for each five minute settlement interval in the hour \* 110%. For purposes of this calculation:

- (1) The Energy Charge for a five-minute settlement interval equals the amount of Emergency Energy (in MWh) scheduled in the settlement interval at the external node associated with the Delivery Point (as used in the New England market system for energy exports from the New England Balancing Authority Area into the NYISO Balancing Authority Area), adjusted for any curtailment, multiplied by the Cost of Emergency Energy in the settlement interval.
- (2) The Cost of Emergency Energy in a five-minute settlement interval equals the LMP at the external node associated with the Delivery Point for the settlement interval.

For purposes of this calculation, an LMP in a settlement interval is set to \$0.00 if the LMP in the settlement interval was negative.

**Table 1**

<b>Delivery Points and Associated Pricing Nodes, as Modeled by the Delivering Party</b>		
	External Nodes for Pricing Node for the Delivering Party (as modeled in the Delivering Party's system)	
Delivery Point	Delivering Party: ISO-NE	Delivering Party: NYISO
NY/NE Northern AC Interconnection  (excludes the NNC (or 1385 Cable) Intertie)	.I.ROSETON 345 1 (4011)	N.E._GEN_SANDY PD (24062)
NNC Interconnection	.I.NRTHPORT 1385 (4017)	NPX_1385_GEN (323591)
CSC Interconnection	.I.SHOREHAM138 99 (4014)	NPX_GEN_CSC (323557)

The Transmission Charge portion of the Emergency Energy Charge (for an hour)

The Transmission charge portion of the Emergency Energy Charge to the Delivery Point for an hour shall equal the actual ancillary services costs and any transmission costs reasonably associated with the delivery of such Emergency Energy for an hour by the delivering Party to the Delivery Point pursuant to the applicable tariff of the delivering Party, as filed with and accepted by the governmental agency with jurisdiction over such tariff.

## **A.2. NYISO/ISO-NE Emergency Energy Transaction From Third Party Balancing Authority Area Supplier**

These are requests made by NYISO or ISO-NE to deliver Energy to the other to address system balancing or other Reliability conditions present on the exporting system, which could not be accomplished through the market.

The charge for Emergency Energy supplied to a Party from a Third Party Balancing Authority Area supplier shall be calculated using the following two-part formula. The first part of the formula calculates the Energy Charge portion of the charge, which in this case includes the total charge (energy and transmission) that the Third Party Balancing Authority Area supplier charges for delivery of the Emergency Energy to the delivering Party's Balancing Authority Area border. The second part of the formula incorporates any Transmission Charges reasonably associated with the delivery of the Emergency Energy by the delivering Party through its system to the Delivery Point. It is expected that that all such Third Party Balancing Authority Area supplier charges will be in accordance with rates filed and accepted by the governmental body with jurisdiction over such rates.

### The Energy Charge portion of the Emergency Energy Charge (for an hour)

The Energy Charge portion of the Emergency Energy Charge for an hour =  
(Emergency Energy supplied in the hour in MWh)  
\* (Third Party Balancing Authority Area supplier's total charge for such energy in  
\$/MWh)

(Note: 10% adder does not apply to pricing of Emergency Energy from Third Party Balancing Authority Area suppliers.)

### The Transmission Charge portion of the Emergency Energy Charge (for an hour)

The Transmission Charge portion of the Emergency Energy Charge to the Delivery Point for an hour shall equal the actual ancillary services costs and any transmission costs reasonably associated with the delivery of such energy for an hour to the Delivery Point pursuant to the applicable tariff of the delivering Party, as filed with and accepted by the governmental agency with jurisdiction over such tariff. Transmission costs would include, but not be limited to, any costs for congestion and losses that are associated with the delivery of such Emergency Energy through the delivering Party's Balancing Authority Area for an hour to the Delivery Point, as calculated by the amount of Emergency Energy supplied multiplied by: (1) when NYISO is the delivering Party, (the NYISO real-time LBMP of the external node at which the Emergency Energy exits the NYISO Balancing Authority Area minus the NYISO real-time LBMP of the external node at which the Emergency Energy enters the NYISO Balancing Authority Area); or (2) when ISO-NE is the delivering Party, (the ISO-NE real-time LMP of the external node at which the Emergency Energy exits the ISO-NE Balancing Authority Area minus the ISO-NE real-time LMP of the external node at which the Emergency Energy enters the ISO-NE Balancing Authority Area).

### **Schedule D: Coordinated Transaction Scheduling**

WHEREAS, ISO-NE, as the regional transmission organization for the New England Transmission System and the administrator of the New England wholesale electricity markets, schedules the sale of energy by its Market Participants to, and the purchase of energy by its Market Participants from, neighboring Balancing Authority Areas, all in accordance with the ISO-NE Tariff, which includes the Open Access Transmission Tariff and ISO-NE market rules;

WHEREAS, ISO-NE is the administrator of the ISO-NE Tariff and is responsible for, among other matters, ensuring sufficient reserves are available to provide reliable service in its Balancing Authority Area, in accordance with the ISO-NE Tariff;

WHEREAS, the NYISO, as the independent system operator of the New York Transmission System and the administrator of the New York wholesale electricity markets, schedules the sale of energy by its Market Participants to, and the purchase of energy by its Market Participants from, neighboring Balancing Authority Areas, all in accordance with the NYISO Tariffs;

WHEREAS, the NYISO is the administrator of the NYISO Tariffs and is responsible for, among other matters, ensuring sufficient reserves are available to provide reliable service in its Balancing Authority Area, in accordance with the NYISO Tariffs;

WHEREAS, Coordinated Transaction Scheduling will improve interregional scheduling efficiency by taking into account relative price differences between the regions and scheduling bids and offers on a 15 minute basis at CTS Enabled Interfaces; and

WHEREAS, the Parties desire to schedule energy between their Balancing Authority Areas more efficiently, while continuing to ensure that each Party will maintain sufficient Operating Reserve available on its respective system to ensure the reliable operation thereof;

NOW, THEREFORE, in consideration of the premises and of the mutual covenants herein set forth, the Parties mutually agree as follows:

## **ARTICLE I**

### **1.0 OVERVIEW OF COORDINATED TRANSACTION SCHEDULING**

Coordinated Transaction Scheduling or “CTS” is an external transaction scheduling process implemented by the Parties at designated CTS Enabled Interfaces that allow real-time energy transactions to be scheduled based on a Market Participant’s willingness to purchase energy at a source External Proxy Bus (in the NECA, or in the NYCA) and sell it at a sink External Proxy Bus in the other Control Area if the forecasted price at the sink minus the forecasted price at the corresponding source is greater than or equal to the bid price. The rules set forth in this Schedule D only apply at CTS Enabled Interfaces.

In accordance with the terms of this Schedule D and the Parties’ respective tariffs, CTS Interface Bids are ordinarily evaluated on a 15-minute basis utilizing forecasted real-time prices and forecasted system information from NYISO and forecasted real-time prices and forecasted system information from ISO-NE. The evaluation will be performed by the NYISO’s Real-Time Commitment (RTC) optimization consistent with the rules specified in the NYISO Services Tariff and this Schedule D.

As part of the iterative CTS process, NYISO will share forward looking RTC interchange schedules with ISO-NE and these schedules will be used by ISO-NE as an input to develop a new set of forecasted prices and system information, which ISO-NE will then provide to NYISO for use in the next RTC optimization.

In accordance with Section 4 below, the RTC optimization will determine the External Interface Congestion component of the RTC LMP at a CTS Enabled Interface, which will subsequently be incorporated into the Parties’ real-time settlement LMPs.

Wheel-through transactions across a CTS Enabled Interface will be scheduled on an hourly basis. Wheels through the NYCA will use decremental or sink price cap bids at CTS Enabled Interfaces. Wheels through the NECA will use hourly CTS Interface Bids at CTS Enabled Interfaces for scheduling by the NYISO.

The Parties agree that CTS and its components will operate in accordance with this Schedule D and the terms of the Parties’ respective tariffs.

## **ARTICLE II**

### **2.0 SUBMITTAL OF CTS INTERFACE BIDS**

#### **2.1 CTS Interface Bid Submittal by New England Responsible Settlement Parties and their Representatives**

NYISO is hosting the platform used by both New York and New England Responsible Settlement Parties to submit CTS Interface Bids. New York RSPs shall submit and confirm bids at CTS Enabled Interfaces in accordance with the NYISO Tariffs.

Authorized New England RSPs shall have access to the bidding platform for purposes of submitting bids at CTS Enabled Interfaces between the NECA and the NYCA. Such access will be provided under equivalent terms and conditions to New York RSPs.

On an hourly or more frequent basis ISO-NE shall provide NYISO with: (a) a list of all New England RSPs that are authorized to submit or confirm bids at CTS Enabled Interfaces and (b) identification information for each representative (*i.e.*, an individual) that is authorized to submit or confirm bids at CTS Enabled Interfaces on behalf of a New England RSP. Only representatives designated by ISO-NE shall be permitted access to the platform that is used to submit bids at CTS Enabled Interfaces on behalf of a New England RSP. NYISO shall verify the authorization of a New England RSP and its representative at the time a bid is submitted, confirmed, modified or deleted. If it has been more than two hours since the NYISO last received from ISO-NE an updated list of all authorized New England RSPs and identification information for each representative that is authorized to submit or confirm bids at CTS Enabled Interfaces on behalf of a New England RSP, then NYISO shall not allow any New England RSP to access the platform that is used to submit bids at CTS Enabled Interfaces until an updated list is received.

In the event NYISO is not able to implement a new or changed status in a timely fashion, NYISO will inform ISO-NE of any delay it is aware of and the reason for the delay, and will implement the new or changed status as soon as possible.

## 2.2 Confirmation of New England Responsible Settlement Parties

A representative submitting an initial or revised CTS Interface Bid, or a bid to schedule a wheel through the NYCA at a CTS Enabled External Proxy Bus must belong to an authorized RSP in either NYISO or ISO-NE. In that submittal, the representative must identify the participating RSP in the other area. The other participating RSP must confirm the submittal of the CTS Interface Bid or bid to wheel through the NYCA, in order for the bid to be valid. A CTS Interface Bid or a bid to wheel through the NYCA can be withdrawn by either participating RSP; no confirmation is required.

An RSP may establish a Confirmed Trust Relationship with another RSP such that the required confirmation will be automatically granted for any submittal of a CTS Interface Bid or bid to wheel through the NYCA at a CTS Enabled External Proxy Bus that is submitted by the trusted RSP and includes both RSPs as parties to the transaction. Upon representative action to submit, update or revoke a Confirmed Trust Relationship, NYISO shall verify that (i) the submittal identifies two authorized RSPs, one in New York and one in New England and (ii) the representative belongs to the RSP that is granting the Confirmed Trust Relationship to the other RSP.

Upon representative action to submit or confirm an initial or revised CTS Interface Bid or bid to wheel through the NYCA, or to withdraw a CTS Interface Bid or bid to wheel through the NYCA at a CTS Enabled External Proxy Bus, the NYISO shall verify that (i) the submittal identifies two valid RSPs, one in New York and one in New England, and (ii) the representative belongs to an RSP that is identified on the submittal. If a Confirmed Trust Relationship exists between the two authorized RSPs and the action is taken by a representative that is associated

with a trusted RSP to submit or confirm an initial or revised CTS Interface Bid or bid to wheel through the NYCA, the bid shall be deemed submitted and confirmed, or the revision confirmed.

Upon receiving ISO-NE's notice of suspension or termination of a New England RSP, which ISO-NE shall do consistent with its authority under the ISO-NE Tariff, NYISO will promptly:

1. cease honoring Confirmed Trust Relationships associated with the suspended or terminated New England RSP;
2. within the real-time market day on which NYISO receives the instruction from ISO-NE, remove the suspended or terminated New England RSP's bids at CTS Enabled Interfaces that are offered in the NECA to NYCA direction;
3. within the real-time market day on which NYISO receives the instruction from ISO-NE, remove bids at CTS Enabled Interfaces that are offered in the NECA to NYCA direction that include the New England RSP as a trusted RSP;
4. for all real-time market days subsequent to the real-time market day on which NYISO receives the instruction from ISO-NE, remove all of the suspended or terminated New England RSP's bids at CTS Enabled Interfaces; and
5. for all real-time market days subsequent to the real-time market day on which NYISO receives the instruction from ISO-NE, remove all bids at CTS Enabled Interfaces that include the suspended or terminated New England RSP as a trusted RSP.

The five changes enumerated above will be effectuated prospectively. The Parties will not effectuate changes one through three for a real-time market hour in which RSPs are no longer able to submit or modify bids.

ISO-NE will curtail the e-tags for the transactions associated with the bids NYISO is required to remove under the rules set forth above.

In the event NYISO is not able to implement a new or changed status that is addressed in this Section 2.2 in a timely fashion, NYISO will inform ISO-NE of any delay it is aware of and the reasons for the delay, and will implement the new or changed status as soon as possible.

If the NYISO is unable to verify that the required confirmations have been received, then the CTS Interface Bid or bid to wheel through the NYCA shall not be considered in the RTC optimization.

If the NYISO is not able to validate an RSP or a representative, then that entity or person will not be able to submit, modify, confirm or delete a CTS Interface Bid or a bid to wheel through the NYCA.

### **ARTICLE III**

#### **3.0 CALCULATION OF ISO-NE SUPPLY PRICE POINTS**

Each quarter-hour, ISO-NE shall calculate a set of forecast energy prices at its External Proxy Buses for each CTS Enabled Interface corresponding to varying interchange levels on that interface. The results will be provided to NYISO as increasing MW-price pairs, where the MW value represents a net interchange level on the CTS Enabled Interface and the price value represents ISO-NE's forecast of its real-time LMP for its External Proxy Bus at that net interchange MW level. ISO-NE will provide no fewer than one and no more than 11 MW-price pairs for each of ten consecutive quarter-hour intervals, which are referred to as the "ISO-NE Supply Price Points."

The ISO-NE Supply Price Points are created with a forward-looking, security-constrained economic dispatch system that co-optimizes energy and reserve requirements. This forward-looking co-optimization will assume the same units are committed as are previously committed, or scheduled to be committed, in ISO-NE's real-time production system. The energy from currently uncommitted fast-start generation will also be considered for dispatch in the forward-looking co-optimization. ISO-NE Supply Price Points shall be calculated using the current production data for load forecasts, active transmission constraints, state estimator data, Market Participant energy re-offers, wind forecasts, forecasted net interchange on all Interconnections (including forward looking RTC interchange schedules provided by NYISO), and operator updates to resource limits.

### **ARTICLE IV**

#### **4.0 SCHEDULING EXTERNAL TRANSACTIONS AT CTS ENABLED INTERFACES**

##### **4.1 Evaluation of CTS Interface Bids**

The RTC will use the CTS Interface Bids and the ISO-NE Supply Price Points to economically schedule the CTS Interface Bids and determine the net interchange schedules. The economic scheduling of the CTS Interface Bids will be performed simultaneously with the scheduling of internal NYCA resources and external transactions at other NYCA Interconnections.

For an RTC optimization that schedules hourly CTS Interface Bids, the RTC will use the ISO-NE Supply Price Points for each 15-minute interval of the hour. An hourly CTS Interface Bid will be scheduled if it is economic for the hour.

For an RTC optimization that schedules CTS Interface Bids at 15-minute intervals, the RTC optimization will use ISO-NE Supply Price Points that have been adjusted to account for the hourly RTC external transaction schedules established at CTS Enabled Interfaces, including any scheduled Emergency Energy.



When there are multiple CTS Interface Bids at the same bid price but not all of them can be economically scheduled, the CTS Interface Bids with the same price will be scheduled pro-rata.

The RTC optimization incorporates Ramp Limits and Transfer Limits in the manner described in Section 5 of this Schedule D to economically schedule CTS Interface Bids and shall determine: (1) the net interchange schedule for each CTS Enabled Interface, (2) the RTC LMP for each CTS Enabled External Proxy Bus, and (3) the External Interface Congestion at each CTS Enabled Interface.

#### 4.2 External Interface Congestion Price Assignment

The RTC optimization will determine the External Interface Congestion at an External Proxy Bus for a CTS Enabled Interface if the net interchange schedule is limited in the RTC solution due to one or more of the following four reasons: (i) there are more economic transactions offered in a common direction (import or export) than the Transfer Limit of the External Proxy Bus can accommodate, or (ii) there are fewer economic transactions offered in a common direction (import or export) than the Transfer Limit requires, or (iii) the NYCA (system-wide) Ramp Limit prevents the RTC from scheduling one or more external transactions at the External Proxy Bus consistent with the economics of the underlying bids, or (iv) a Ramp Limit prevents the RTC from scheduling one or more external transactions consistent with the economics of the underlying bids (collectively, the “External Proxy Bus Constraints”).

Whenever an External Proxy Bus Constraint at a CTS Enabled Interface is limiting in the RTC optimization, the External Interface Congestion at the External Proxy Bus will be assigned, in whole or in part, as set forth below.

**ISO-NE Limiting:** If the RTC optimization is limited by a Transfer Limit determined by an ISO-NE Operating Reserve limitation, an ISO-NE minimum generation limitation, or an ISO-NE capacity deliverability limit, including when the Transfer Limit is adjusted in accordance with Section 5.4 of this Schedule D to accommodate the Ramp Limit while implementing one of these limitations, then the portion of the External Interface Congestion associated with the External Proxy Bus Constraint shall be assigned to ISO-NE.

**NYISO Limiting:** If the RTC optimization is limited by NYCA-wide Ramp Limits, then the portion of the External Interface Congestion associated with the External Proxy Bus Constraint shall be assigned to NYISO.

**NYISO and ISO-NE Limiting:** If the RTC optimization is limited by any Ramp Limit or Transfer Limit that is not specifically addressed in the “ISO-NE Limiting” or “NYISO Limiting” paragraphs above, or by any Transfer Limit or Ramp Limit that results from an operator override, as described in Section 5.2.5 of this Schedule D, the portion of the External Interface Congestion for a CTS Enabled Interface that is associated with an External Proxy Bus Constraint shall be assigned to both Parties equally.

The RTC solution may be limited by multiple External Proxy Bus Constraints simultaneously. If this occurs, the foregoing rules will apply to each External Proxy Bus Constraint.

If there are not sufficient CTS Interface Bid MWs offered to achieve a Transfer Limit, RTC will schedule the available MWs. In these circumstances, RTC will determine the External Interface Congestion at the External Proxy Bus based on the NYISO's Transmission Shortage Costs as defined in the NYISO Tariff.

In order to provide consistent price signals between their respective real-time energy markets, the Parties shall each incorporate the foregoing process into the real-time settlement LMP at their External Proxy Bus for each CTS Enabled Interface.

## **ARTICLE V**

### **5.0 CTS ENABLED INTERFACE OPERATING RULES**

#### **5.1 CTS Enabled Interface Ramp Limits**

The default quarter-hour Ramp Limit for the NY/NE Northern AC Interconnection will be mutually agreed to by the Parties and posted on the NYISO's OASIS.

The default top-of-the-hour Ramp Limit for the NY/NE Northern AC Interconnection (for use when quarter-hour scheduling is unavailable) will be mutually agreed to by the Parties and posted on the NYISO's OASIS.

In real-time operations, when necessary to protect reliability, the Parties may mutually agree to temporarily change the Ramp Limit(s) at any CTS Enabled Interface. The Parties shall restore the modified Ramp Limit to the posted default Ramp Limit as soon as reliable system operations permit and it is practicable to do so.

#### **5.2 Transfer Limits Reflecting Reliability Conditions**

A Transfer Limit sets the minimum or maximum net interchange that can be scheduled on a CTS Enabled Interface in the RTC solution. Factors that can set the Transfer Limits include the following:

1. normal scheduling limits;
2. Operating Reserve limitations;
3. minimum generation limitations;
4. capacity requests;
5. operator overrides.

##### *5.2.1 Normal Scheduling Limits*

The normal scheduling limit for a CTS Enabled Interface is the amount of electric power that can normally be transferred over a CTS Enabled Interface. The Parties may mutually agree to change the normal scheduling limits that are used at CTS Enabled Interfaces due to

transmission outages, generation outages or other changes in system conditions. In the event the change to a normal scheduling limit is planned in advance, the Parties will make reasonable efforts to change the values in time to be included in the clearing of their respective day-ahead energy markets and be publicly posted prior to implementation. For the real-time operating day, ISO-NE will send its normal scheduling limits at each CTS Enabled Interface to the NYISO via the electronic data exchange to cover the same ten consecutive quarter-hour intervals as ISO-NE's Supply Price Points.

### 5.2.2 *Operating Reserve Limitations*

If one Control Area experiences an Operating Reserve deficiency, the other Control Area is not obligated to go deficient in its reserves of the same or a higher quality product, but may go deficient in a lower-quality reserve product in order to prevent an Operating Reserve deficiency of a higher quality reserve product in the other Control Area. To ensure these mutual reliability objectives can be satisfied, the Parties may modify the Transfer Limits in certain conditions as described below.

The RTC optimization procures reserves to meet the NYISO's reserve requirements and prices shortages of reserves using the NYISO's Operating Reserve demand curves. The RTC does not have information on the amount of Operating Reserve in the NECA. Therefore, at CTS Enabled Interfaces, ISO-NE will use the electronic data exchange to provide to NYISO both the ISO-NE Supply Price Points and Transfer Limit values that reflect the net interchange required to meet ISO-NE's 10-minute and 30-minute reserve requirements. When calculated, these values will reflect the net interchange required to meet ISO-NE's 10-minute and 30-minute reserve requirements for the same ten consecutive quarter-hour intervals for which ISO-NE's Supply Price Points are provided. ISO-NE will calculate these Transfer Limit values for each interval based on the Operating Reserve surplus in the NECA when applying the forecasted RTC net interchange on the CTS Enabled Interface. For the purposes of Schedule D, the ISO-NE Transfer Limit associated with the 10-minute reserve requirement will always be less restrictive than the Transfer Limit associated with the ISO-NE 30-minute reserve requirement. When ISO-NE sends Transfer Limits that are associated with Operating Reserve requirements, the ISO-NE Supply Price Points must also reflect those expected reserve shortage prices. RTC will evaluate whether the ISO-NE Transfer Limit would preclude NYISO from meeting its reserve requirements for an equal or higher quality reserve product. If so, RTC may adjust the Transfer Limit in accordance with Section 5.3 of this Schedule D, based on the principles set forth in the preceding paragraph.

### 5.2.3 *Minimum Generation Limitations*

The RTC optimization dispatches the NYISO system's internal generation as needed when the NYCA approaches minimum generation conditions. The RTC does not have information to assess minimum generation conditions within the NECA. Therefore, at CTS Enabled Interfaces, ISO-NE will use the electronic data exchange to provide to NYISO Transfer Limit values that reflect the net interchange level beyond which ISO-NE cannot further dispatch down internal generation while maintaining reliable operations. When ISO-NE sends Transfer Limits for this purpose, the ISO-NE Supply Price Points must also reflect these requirements.

ISO-NE shall not send, and NYISO is not required to enforce, a minimum generation Transfer Limit that would require the NYCA to accept energy from the NECA.

ISO-NE shall not send both a minimum generation Transfer Limit and Operating Reserve Transfer Limits at the same time.

#### 5.2.4 *Capacity Transfer Limits*

##### Day-Ahead Coordination

NYISO will provide its day-ahead operating plan to ISO-NE. Once ISO-NE determines that it expects to count on capacity resources located in New York to meet its reserve requirements, ISO-NE shall inform NYISO of the expected capacity call.

##### Real-Time Coordination

###### ISO-NE Capacity Requests at CTS Enabled Interfaces:

ISO-NE may request delivery of energy from capacity resources located in the NYCA that have obligations in the ISO-NE capacity market over a CTS Enabled Interface. The ISO-NE operator will call the NYISO operator to initiate the capacity request. Upon receiving the request, the NYISO operator will confirm what amount of the capacity request is deliverable based on projected transmission constraints (“Capacity Deliverable to ISO-NE”). If the Capacity Deliverable to ISO-NE is non-zero, RTC will determine the ISO-NE capacity that is available based on offers submitted by NYCA generators that have sold their capacity to ISO-NE and are projected to be available in real-time, subject to any real-time derates (“Capacity Available to ISO-NE”).

Transactions to wheel capacity through the NYCA will be excluded from the ISO-NE/NYISO capacity request process.

###### NYISO Capacity Requests at CTS Enabled Interfaces:

If the NYISO projects the ISO-NE real-time capacity request could cause the NYISO to become capacity deficient, the NYISO may request delivery of energy associated with capacity resources located in ISO-NE that have an obligation in the NYISO capacity market over a CTS Enabled Interface. The NYISO operator will call the ISO-NE operator to initiate the capacity request. The NYISO will require that its eligible New England-based capacity submit CTS Interface Bids to be evaluated by RTC. It will be up to the supplier of New England-based capacity to ensure that the resource(s) backing capacity transactions are available to deliver their capacity to New York when they are called on to do so. At the time of the request, the ISO-NE operator will determine whether all or any part of the generation supporting the capacity is available and deliverable (“Capacity Available to NYISO”).

Section 5.3 of this Schedule D sets forth how capacity data and Operating Reserve limitations are used to establish a Transfer Limit.

### 5.2.5 *Operator Override Transfer Limits*

Real-time system conditions may require that a NYISO or ISO-NE operator override the Transfer Limit to establish the flow that can be transferred over a CTS Enabled Interface in a reliable manner. Except when necessary to protect reliability, an operator override shall not be used to submit limits that can be submitted via the electronic data exchange.

### 5.3 Establishing Transfer Limits for RTC

RTC determines a net interchange for each interval that must be a value between an upper bound and lower bound. In this section, the high Transfer Limit is the upper bound on that range and the low Transfer Limit is the lower bound on that range. The rules in this Section 5.3 detail how the inputs from Section 5.2, which are first tested against the criteria set forth in Section 7.2, are used to determine the high and low Transfer Limits in RTC for each quarter-hour interval. For purposes of this Section 5.3, a positive value represents flow from New England to New York, and a negative value represents flow from New York to New England. The values associated with an ISO-NE capacity request, Capacity Deliverable to ISO-NE and Capacity Available to ISO-NE are all negative.

1. When a Minimum Generation Transfer Limit is provided by ISO-NE in accordance with Section 5.2.3, that value is the low Transfer Limit at a CTS Enabled Interface.
2. When ISO-NE provides Operating Reserve Transfer Limits but has not requested capacity from NYISO, the following rules are applied to determine the high Transfer Limit at a CTS Enabled Interface:
  - a) If the ISO-NE 30-minute Operating Reserve Transfer Limit is greater than or equal to zero, then:
    - i. If enforcing the ISO-NE 30-minute Operating Reserve Transfer Limit is projected to cause the NYISO to have a deficiency of 10-minute Operating Reserve, the high Transfer Limit is the minimum value that is not projected to result in a NYISO 10-minute Operating Reserve deficiency;
    - ii. Otherwise the high Transfer Limit is the ISO-NE 30-minute Operating Reserve Transfer Limit.
  - b) If the ISO-NE 30-minute Operating Reserve Transfer Limit is less than zero, then:
    - i. If enforcing the ISO-NE 30-minute Operating Reserve Transfer Limit is projected to cause the NYISO to have a deficiency of 30-minute Operating Reserve but is not projected to cause the NYISO to have a deficiency of 10-minute Operating Reserve, then the high Transfer Limit is the lesser of (a) the minimum value that is not projected to result in a NYISO 30-minute Operating Reserve deficiency, or (b) zero;

- ii. If enforcing the ISO-NE 30-minute Operating Reserve Transfer Limit is projected to cause the NYISO to have a deficiency of 10-minute Operating Reserve, then the high Transfer Limit is the minimum value that is not projected to result in a NYISO 10-minute Operating Reserve deficiency;
    - iii. Otherwise the high Transfer Limit is the ISO-NE 30-minute Operating Reserve Transfer Limit.
3. When ISO-NE has requested capacity from NYISO, the high Transfer Limit at a CTS Enabled Interface shall be the greater of:
  - a) the ISO-NE 30-minute Operating Reserve Transfer Limit, or
  - b) [the minimum of (i) the total quantity of CTS Interface Bids backing Capacity Available to NYISO or (ii) the Capacity Available to NYISO] plus [the maximum of (iii) the ISO-NE capacity request, (iv) the Capacity Deliverable to ISO-NE or (v) the Capacity Available to ISO-NE].
4. When system conditions require that either a low or high Transfer Limit be overridden by the NYISO or ISO-NE operator to establish the flow that can be transferred over a CTS Enabled Interface in a reliable manner, the override shall establish the low or high Transfer Limit.
5. Otherwise, the NYISO shall use the normal scheduling Transfer Limit at a CTS Enabled Interface, as described in Section 5.2.1.

#### 5.4. Interaction Between Transfer Limits and Ramp Limits

- a) Except as provided in 5.4(b), when the NYISO's RTC is provided Transfer Limits that would cause it to develop net interchange schedules at a CTS Enabled Interface with ISO-NE that exceed the Ramp Limits, RTC will reset the provided Transfer Limits to ensure the agreed Ramp Limits are not exceeded.
- b) If any Transfer Limit, other than a normal scheduling limit, is implemented via an operator override, then RTC shall permit the agreed Ramp Limits to be exceeded in order to enforce the Transfer Limit.

### ARTICLE VI

#### **6.0 SETTLEMENT PROVISIONS**

ISO-NE shall settle CTS Interface Bids and other bids and offers scheduled at CTS Enabled Interfaces with its Market Participants in accordance with the rules set forth in the ISO-NE Tariff.

The NYISO shall settle CTS Interface Bids and other bids scheduled at CTS Enabled Interfaces, with its Market Participants in accordance with the rules set forth in the NYISO Tariffs.

Each Party shall address settlement-related corrections and disputes regarding that Party's settlement of CTS transactions in accordance with the settlement correction and dispute resolution provisions set forth in that Party's tariff(s).

Each Party agrees to provide support, including information and data that isn't otherwise available to the other Party, when the requested information is necessary to assist the requesting Party in addressing a settlement (but not price) correction or a settlement-related dispute between the requesting Party and one or more of its Market Participants regarding the settlement of CTS transactions.

If an erroneous price is determined at a CTS Enabled External Proxy Bus, independent of any price correction process ISO-NE may utilize, the NYISO shall follow the price correction process set forth in Attachment E to its Market Administration and Control Area Services Tariff.

If an erroneous price is determined at a CTS Enabled External Proxy Bus, independent of any price correction process NYISO may utilize, ISO-NE shall follow the price correction process set forth in the ISO-NE Tariff.

## **ARTICLE VII**

### **7.0 NON-STANDARD CTS OPERATION**

#### **7.1 Permitted Modifications to ISO-NE Supply Price Points**

In the event NYISO does not receive the ISO-NE Supply Price Points before it commences the RTC optimization, then the last set of ISO-NE Supply Price Points used to perform an RTC optimization will be used in the RTC optimization to determine the net interchange schedule until the NYISO receives and successfully validates a new set of ISO-NE Supply Price Points.

If one or more quarter-hour intervals within the ISO-NE Supply Price Points fail the NYISO's input checks, the last set of ISO-NE Supply Price Points used to perform an RTC optimization will be used in the RTC optimization.

When ISO-NE Supply Price Points do not cover the full quantity (in MWs) of bids that are evaluated by RTC, then the last pricing point on either end of the ISO-NE Supply Price Points will be extended by NYISO to cover all the bids and offers that are evaluated by RTC.

#### **7.2 Permitted Modifications to ISO-NE Transfer Limits**

In the event NYISO does not receive ISO-NE Transfer Limits or operator override values have not been entered before an RTC optimization commences, then the last set of ISO-NE Transfer Limits used to perform an RTC optimization will be used in the current RTC optimization.

If one or more quarter-hour intervals within the ISO-NE Transfer Limits fail any of the NYISO's input checks, including the input checks listed below, the last set of ISO-NE Transfer Limits used to perform an RTC optimization will be used in the RTC optimization.

- A Minimum Generation Transfer Limit and Operating Reserve Transfer Limits will not be sent at the same time.
- The Minimum Generation Transfer Limit will be less than or equal to zero.
- If an ISO-NE 10-minute Operating Reserve Transfer Limit is provided, an ISO-NE 30-minute Operating Reserve Transfer Limit will also be provided.
- The ISO-NE 30-minute Operating Reserve Transfer Limit will be less than the ISO-NE 10-minute Operating Reserve Transfer Limit.

### 7.3 Hourly Scheduling Under CTS

The Parties may agree to temporarily employ hourly scheduling in RTC on a CTS Enabled Interface when necessary to ensure or preserve system reliability or when not able to implement schedules as expected due to software or communication issues.

## **ARTICLE VIII**

### **8.0 JOINT ENERGY SCHEDULING SYSTEM CUSTOMER SERVICE; MAINTENANCE; SUSPENSION OF CTS; COOPERATION**

#### 8.1 Joint Energy Scheduling System Customer Service

The NYISO developed and maintains the Joint Energy Scheduling System (“JESS”) platform that both New York RSPs and New England RSPs use to submit bids at CTS Enabled Interfaces.

1. Each Party is the primary customer service contact for its respective Market Participants.
2. ISO-NE will have read-only access to bids associated with New England Market Participants at CTS Enabled Interfaces on the JESS platform.

#### 8.2 Maintenance

Subject to reasonable expectations, it is the Parties’ goal that the data links, software, and other systems necessary to implement CTS are available continuously. The Parties agree to employ regular maintenance, including scheduled maintenance outages when needed, to meet that goal.

In the event of a problem with a data link, software, computational system or data system, the responsible Party will use reasonable efforts to promptly address the problem. The Parties shall work together and shall keep each other informed regarding the problem and its resolution.

The Parties shall inform each other in advance of any scheduled testing activities or maintenance outages that will affect a CTS Enabled Interface. Notice shall be provided sufficiently in advance to allow each ISO to inform its Market Participants of any impacts on the operation of CTS.



### 8.3 Suspension of CTS

The Parties may suspend the scheduling of CTS transactions at CTS Enabled Interfaces due to: (1) the inability of the NYISO to receive bids for a CTS Enabled Interface; (2) a failure or outage of the data link between the Parties that prevents the timely exchange of information necessary to implement CTS transactions; (3) the actual or suspected failure of any software, computational, or data system that is necessary to implement CTS transactions; (4) the need to verify the functionality of the tools that are necessary to implement CTS; or (5) when necessary to ensure or preserve NYISO or ISO-NE system reliability.

A Party that determines that any of the foregoing conditions have occurred shall, as soon as practicable, notify the other Party.

The Parties shall resolve issues causing the failure or outage of the data link, software, computational systems, or data systems as soon as possible, and will use reasonable efforts to promptly address the problem. The Parties shall work together and shall keep each other informed regarding the problem and its resolution. The Parties shall resume implementation of CTS following, as applicable, the successful testing of the data link or relevant system(s) after the inability to receive offers or bids, failure, or condition is resolved, or after the resolution of the system reliability issue.

When CTS is suspended the Parties shall mutually agree to interchange schedules at CTS Enabled Interfaces.

### 8.4 Cooperation

The Parties will cooperate to review the data and mutually identify or resolve errors and anomalies. If one Party determines that it is required to self-report a potential violation to the Commission's Office of Enforcement regarding its compliance with this Schedule D, the reporting Party shall inform, and provide a copy of the self-report to the other Party. Any such report provided by one Party to the other shall be Confidential Information.

## **ARTICLE IX**

### **9.0 CTS CHANGE MANAGEMENT PROCESS**

#### 9.1 Notice

Prior to materially changing any tariff language, software or process that is directly involved in implementing this Schedule D, the Party desiring the change shall notify the other Party's data exchange contact appointed under the Coordination Agreement, in writing or via email, of the proposed change. The notice shall include a complete and detailed description of the proposed change, the reason for the proposed change, and the impacts the proposed change is expected to have on the implementation of CTS.

## 9.2 Opportunity to Request Additional Information

Following receipt of the Notice described in Section 9.1, the receiving Party may make reasonable requests for additional information/documentation from the other Party. This may include a request by a Party to be involved in the testing of the changes. Absent mutual agreement of the Parties, the submission of a request for additional information under this Section shall not delay the obligation to timely note any objection pursuant to Section 9.3, below.

## 9.3 Objection to Change

Within ten business days after receipt of the Notice described in Section 9.1 (or within such longer period of time as the Parties mutually agree), the receiving Party may notify in writing or via email the other Party of its disagreement with the proposed change. Any such notice must specifically identify and describe the concern(s) that required the receiving Party to object to the described change.

## 9.4 Implementation of Change

The Party proposing a change to a process that is directly involved in implementing this Schedule D shall not implement such change until (a) it receives written or email notification from the other Party that the other Party concurs with the change, or (b) the receiving Party fails to notify in writing or via email the other Party of its disagreement with the proposed change within the notice period specified in Section 9.3, or (c) completion of any dispute resolution process initiated pursuant to this Agreement.

# **ARTICLE X**

## **10.0 AUDITS, CERTIFICATION AND TESTING**

Each Party shall provide to the other Party the results of any certification or audit it procures regarding CTS-related software functions, subject to the following conditions: (1) the disclosure may be limited to the portions of the certification or audit that addresses the CTS-related software, and need only include the portions of the certification or audit that address the CTS-related functioning of the software; (2) if the providing Party indicates that the certification or audit is Confidential Information it shall be treated as such by the receiving party; and (3) this provision does not require a Party to disclose information that is subject to a legal privilege.

Before CTS is implemented, and upon any material changes to any components thereof, the Parties shall test the processes and component software.

Each Party shall, at its sole expense, take appropriate actions to address any actual or apparent breach of cyber security related to CTS, and shall provide prompt notification to the other Party of any such incident.

Each party will undertake an annual Service Organization Controls report that covers CTS process-related controls prepared and opined by its external auditors in accordance with Statement on Standards for Attestation Engagements No. 16 or AICPA/CICA Principles and

Criterion for System Reliability (SSAE 16 engagement). The NYISO report will include controls related to the Joint Energy Scheduling System bidding platform.

Each Party shall promptly provide to the other Party the results of its annual Service Organization Controls report, subject to the following conditions: (1) the disclosure may be limited to the portions of the report or audit that address CTS, and need only include the portions of the report or audit that address CTS; (2) if the providing Party indicates that the certification or audit is Confidential Information it shall be treated as such by the receiving party; and (3) this provision does not require a Party to disclose information that is subject to a legal privilege.