

## **1. Definitions**

## 1.1 Definitions - A

**Accepted Revision:** A change to the terms of an Existing Transmission Agreement for purposes of ISO Settlements, which change is related to a Grandfathered Right or Grandfathered TCC and is made pursuant to the procedures prescribed in Section 17 Attachment K of the ISO OATT.

**Actual Energy Injections:** Energy injections that are measured using a revenue-quality real-time meter.

**Actual Energy Withdrawals:** Energy withdrawals which are either: (1) measured with a revenue-quality real-time meter; (2) assessed (in the case of LSEs serving retail customers where withdrawals are not measured by revenue-quality real-time meters) on the basis provided for in a Transmission Owner's retail access program; or (3) calculated (in the case of wholesale customers where withdrawals are not measured by revenue-quality real-time meters), until such time as revenue-quality real-time metering is available on a basis agreed upon by the unmetered wholesale customers. For purposes of the allocation of the ISO annual budgeted costs and the annual FERC fee pursuant to Rate Schedule 1 of this ISO OATT, withdrawals shall also include the absolute value of negative withdrawals by Load for behind the meter generation. For purposes of assessing TSC and NTAC, Actual Energy Withdrawals shall include the absolute value of negative injections by Energy Storage Resources in accordance with Section 2.7 of the OATT.

**Advance Reservation:** (1) A reservation of transmission service over the Cross-Sound Scheduled Line that is obtained in accordance with the applicable terms of Schedule 18 and the Schedule 18 Implementation Rule of the ISO New England Inc. Transmission, Markets and Services Tariff, or in accordance with any successors thereto; or (2) A right to schedule transmission service over the Neptune Scheduled Line that is obtained in accordance with the rules and procedures established pursuant to Section 38 of the PJM Interconnection, L.L.C. Open Access Transmission Tariff and set forth in a separate service schedule under the PJM Interconnection, L.L.C. Open Access Transmission Tariff; or (3) A right to schedule transmission service over the Linden VFT Scheduled Line that is obtained in accordance with the rules and procedures established pursuant to Section 38 of the PJM Interconnection, L.L.C. Open Access Transmission Tariff and set forth in a separate service schedule under the PJM Interconnection, L.L.C. Open Access Transmission Tariff; or (4) A right to schedule transmission service over the HTP Scheduled Line that is obtained in accordance with the rules and procedures established pursuant to Section 38 of the PJM Interconnection, L.L.C. Open Access Transmission Tariff and set forth in a separate service schedule under the PJM Interconnection, L.L.C. Open Access Transmission Tariff.

**Affiliate:** With respect to a person or entity, any individual, corporation, partnership, firm, joint venture, association, joint-stock company, trust or unincorporated organization, directly or indirectly controlling, controlled by, or under common control with, such person or entity. The term "control" shall mean the possession, directly or indirectly, of the power to direct the management or policies of a person or an entity. A voting interest of ten percent or more shall create a rebuttable presumption of control.

**Ancillary Services:** Those services that are necessary to support the transmission of Capacity and Energy from resources to Loads while maintaining reliable operation of the NYS Transmission System in accordance with Good Utility Practice.

**Annual Transmission Costs:** The total annual cost of the Transmission System for purposes of Network Integration and Point-to-Point Transmission Services shall be the amount specified in Attachment H until amended by the Transmission Owners or modified by the Commission.

**Annual Transmission Revenue Requirement:** The total annual cost for each Transmission Owner (other than LIPA) to provide transmission service subject to review and acceptance by FERC or other authority.

**Application:** A request to receive Transmission Service by an Eligible Customer pursuant to the provisions of this Tariff that includes all information reasonably requested by the ISO.

**Automatic Generation Control (“AGC”):** The automatic regulation of the power output of electric generating facilities within a prescribed range in response to a change in system frequency, or tie-line loading, to maintain system frequency or scheduled interchange with other areas within predetermined limits.

**Availability:** A measure of time that a generating facility, transmission line, interconnection or other facility is capable of providing service.

**Available Generating Capacity:** Generating Capacity that is on line to serve Load and/or provide Ancillary Services, or is capable of initiating start-up for the purpose of serving Transmission Customers or providing Ancillary Services, within thirty (30) minutes.

**Available Operating Capacity:** For purposes of determining a Scarcity Reserve Requirement, the capability of all Suppliers that are eligible to provide Operating Reserves and have submitted Energy Bids in the Real-Time Market representing the capability to provide Energy in greater than 30 minutes but less than or equal to 60 minutes; provided, however, that this value shall not include any quantity of Energy and Operating Reserves scheduled to be provided by all such Suppliers. The Available Operating Capacity value (in MW) shall be calculated by the RTD software for each normal RTD run. For purposes of calculating a Scarcity Reserve Requirement in accordance with Section 15.4.6.2 of Rate Schedule 4 of the NYISO Services Tariff, each RTD run shall utilize the value of Available Operating Capacity calculated during the immediately preceding normal RTD run and each RTC run shall utilize the value of Available Operating Capacity calculated during the most recently-completed normal RTD run prior to the RTC run.

**Available Transfer Capability (“ATC”):** A measure of the Transfer Capability remaining in the physical transmission network for further commercial activity, over and above already committed uses, calculated using the methodology described in Attachment C in the OATT.

## 1.2 Definitions - B

**Back-Up Operation:** The procedures for operating the NYCA in a safe and reliable manner when the ISO's normal communication or computer systems are not fully functional as set forth in Section 2.12 of this ISO OATT and Section 5.3 of the ISO Services Tariff.

**Balance-of-Period Auction:** An auction administered by the ISO in which Transmission Customers may purchase and sell TCCs valid for a future month or months in the same Capability Period in which the auction is conducted; provided, however, that the Balance-of-Period Auction conducted in the last month of a Capability Period will allow for the purchase and sale of TCCs valid for a future month or months in the next Capability Period.

**Base Point Signals:** Electronic signals sent from the ISO and ultimately received by Generators specifying the scheduled MW output for the Generator. Real-Time Dispatch ("RTD") Base Point Signals are typically sent to Generators on a nominal five (5) minute basis. AGC Base Point Signals are typically sent to Generators on a nominal six (6) second basis.

**Basis Amount:** As defined in the ISO Services Tariff.

**Behind-the-Meter Net Generation Resource ("BTM:NG Resource"):** As defined in the ISO Services Tariff.

**Basis Month:** As defined in the ISO Services Tariff.

**Bid/Post System:** An electronic information system used to allow the posting of proposed transmission schedules and Bids for Energy and Ancillary Services by Market Participants for use by the ISO and to allow the ISO to post Locational Based Marginal Prices and schedules.

**Bid:** Offer to sell or bid to purchase Energy, Demand Reductions or Transmission Congestion Contracts and an offer to sell Ancillary Services at a specified price that is duly submitted to the ISO pursuant to ISO Procedures. Bid shall mean mitigated Bid where appropriate.

**Bid Price:** The price at which the Customer offering the Bid is willing to provide the product or service, or is willing to pay to receive such product or service, as applicable. In the case of a CTS Interface Bid, the Bid Price is a dollar value that indicates the bidder's willingness to purchase Energy at a CTS Source and sell it at a CTS Sink across a CTS Enabled Interface if, at the time of scheduling, the forecasted CTS Sink Price minus the forecasted CTS Source Price is greater than, or equal to, the dollar value specified in the bid.

**Bid Production Cost:** Total cost of the Generators required to meet Load and reliability Constraints based upon Bids corresponding to the usual measures of Generator production cost (e.g., running and Minimum Generation Bid, and Start-Up Bid).

**Bidding Requirement:** As defined in the ISO Services Tariff.

**Bilateral Transaction:** A Transaction between two or more parties for the purchase and/or sale of Capacity or Energy other than those in the ISO Administered Markets. A request to schedule

a Bilateral Transaction in the Energy Market shall be considered a request to schedule Point-to-Point Transmission Service.

**Billing Period:** The period of time designated in Sections 2.7.3.2.1, or 2.7.3.2.2 of this ISO OATT over which the ISO will aggregate and settle a charge or a payment for services furnished under this ISO OATT or the ISO Services Tariff.

**Board of Directors (“Board”):** The governing body of the ISO which is comprised of ten (10) persons (Directors) that are unaffiliated with any Market Participants, as described in the ISO Agreement.

**Business Issues Committee:** A standing committee of the ISO created pursuant to the ISO Agreement to establish rules related to business issues and provide a forum for discussion of those rules and issues.

### 1.3 Definitions - C

**Capability Period:** Six-month periods which are established as follows: (1) from May 1 through October 31 of each year (“Summer Capability Period”); and (2) from November 1 of each year through April 30 of the following year (“Winter Capability Period”); or such other periods as may be determined by the Operating Committee of the ISO. A Summer Capability Period followed by a Winter Capability Period shall be referred to as a “Capability Year”. Each Capability Period shall consist of On-Peak and Off-Peak periods.

**Capacity:** The capability to generate or transmit electrical power, or the ability to reduce demand at the direction of the ISO, measured in megawatts (“MW”).

**Capacity Benefit Margin (“CBM”):** That amount of Total Transfer Capability reserved by the ISO on the NYS Transmission System to ensure access to generation from interconnected systems to meet generation reliability requirements.

**Capacity Reservation Cap:** The maximum percentage of transmission Capacity from a Transmission Owner’s sets of ETCNL that may be converted into ETCNL TCCs or the maximum percentage of a Member System’s RCRRs that may be converted into RCRR TCCs, as the case may be, as established by the ISO pursuant to Section 19.4.3 of Attachment M.

**Centralized TCC Auction:** The auction in which TCCs are released for sale for one or more Capability Periods through a bidding process administered by the ISO.

**Code of Conduct:** The rules, procedures and restrictions concerning the conduct of the ISO directors and employees, contained in Attachment F to the ISO Open Access Transmission Tariff.

**Co-located Storage Resources (“CSR”):** A wind or solar Intermittent Power Resource and an Energy Storage Resource that: (a) are both located behind a single Point of Injection (as defined in Section 1.16 of the OATT); (b) participate in the ISO Administered Markets as two distinct Generators; and (c) share a set of CSR Scheduling Limits. Resources that serve a Host Load may not participate in the ISO-Administered Markets as components of a CSR.

**Commenced Repair:** As defined in the ISO Services Tariff.

**Commission (“FERC”):** The Federal Energy Regulatory Commission, or any successor agency.

**Completed Application:** An Application that satisfies all of the information and other requirements of the Tariff.

**Confidential Information:** Information and/or data which has been designated by a Transmission Customer to be proprietary and confidential, provided that such designation is consistent with the ISO Procedures and this Tariff, including the attached Code of Conduct.

**Congestion:** A characteristic of the transmission system produced by a constraint on the optimum economic operation of the power system, such that the marginal price of Energy to

serve the next increment of Load, exclusive of losses, at different locations on the Transmission System is unequal.

**Congestion Component:** The component of the LBMP measured at a location or the Transmission Usage Charge between two locations that is attributable to the cost of transmission Congestion as is more completely defined in Attachment B of the Services Tariff.

**Congestion Rent:** The opportunity costs of transmission Constraints on the NYS Transmission System. Congestion Rents are collected by the ISO through its facilitation of LBMP Market Transactions and the collection of Transmission Usage Charges from Bilateral Transactions.

**Congestion Rent Shortfall:** A condition in which the Congestion Rent revenue collected by the ISO in the Day-Ahead Market for Energy is less than the amount of Congestion Rent revenue in the Day-Ahead Market for Energy that the ISO is obligated under the Tariff to pay out to the Primary Holders of TCCs.

**Constraint:** An upper or lower limit placed on a variable or set of variables that are used by the ISO in its SCUC, RTC or RTD programs to control and/or facilitate the operation of the NYS Transmission Systems.

**Contingency:** An actual or potential unexpected failure or outage of a system component, such as a Generator, transmission line, circuit breaker, switch or other electrical element. A Contingency also may include multiple components, which are related by situations leading to simultaneous component outages.

**Contract Establishment Date:** The date, listed in Attachment L, on which the listed existing agreements which are the source of Grandfathered Rights and Grandfathered TCCs were executed.

**Control Area:** An electric power 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
- (4) provide sufficient capacity to maintain Operating Reserves in accordance with Good Utility Practice.

**Credible Repair Plan:** As defined in the ISO Services Tariff.

**Credit Assessment:** As defined in the ISO Services Tariff.

**Cross-Sound Scheduled Line:** A transmission facility that interconnects the NYCA to the New England Control Area at Shoreham, New York and terminates near New Haven, Connecticut.

**CSR Scheduling Limits:** The CSR injection Scheduling Limit is used to determine the combined Regulation Capacity, Operating Reserve and Energy injection schedules for, and the maximum permitted net injection by a CSR's Generators. The CSR withdrawal Scheduling Limit is used to determine the combined Regulation Capacity and Energy withdrawal schedules for, and the maximum permitted net withdrawal by a CSR's Generators.

The Market Participant that is responsible for submitting Bids for a set of CSR Generators shall submit a CSR injection Scheduling Limit and a CSR withdrawal Scheduling Limit with the hourly Day-Ahead and Real-Time Market Bids it submits for each of the CSR Generators. The CSR Scheduling Limit values that the Market Participant submits must reflect the physical capability to inject or withdraw Energy at the Point of Injection/Point of Withdrawal.

To address the real-time variability of Energy deliveries from wind and solar Intermittent Power Resources that participate as Co-located Storage Resources, when the participating Energy Storage Resource has a non-zero Regulation and/or Operating Reserves schedule or is dispatched to inject Energy, and the sum of the participating Energy Storage Resource's and the participating wind or solar Intermittent Power Resource's Energy, Regulation Service and Operating Reserves Schedules is greater than or equal to a specified percentage of the CSR injection Scheduling Limit, then the ISO will issue a Wind and Solar Output Limit to the Intermittent Power Resource to not exceed its Base Point Signal. The specified percentage that is ordinarily used will be posted on the ISO's website.

**CTS Enabled Interface:** An External Interface at which the ISO has authorized the use of Coordinated Transaction Scheduling ("CTS") market rules and which includes a CTS Enabled Proxy Generator Bus for New York and a CTS Enabled Proxy Generator Bus for the neighboring Control Area.

**CTS Enabled Proxy Generator Bus:** A Proxy Generator Bus at which the ISO either requires or permits the use of CTS Interface Bids for Import and Export Transactions in the Real-Time Market and requires the use of Decremental Bids for Wheels Through in the Real-Time Market. A CTS Enabled Proxy Generator Bus at which the ISO permits CTS Interface Bids will also permit Decremental and Sink Price Cap Bids.

**CTS Interface Bid:** A Real-Time Bid provided by an entity engaged in an External Transaction at a CTS Enabled Interface. CTS Interface Bids shall include a MW amount, a direction indicating whether the proposed Transaction is to Import Energy to, or Export Energy from, the New York Control Area, and a Bid Price.

**CTS Sink:** Representation of the location(s) within a Control Area where energy associated with a CTS Interface Bid is withdrawn. The NYCA CTS Sinks are Proxy Generator Buses.

**CTS Sink Price:** The price at a CTS Sink.

**CTS Source:** Representation of the location(s) within a Control Area where energy associated with a CTS Interface Bid is injected. The NYCA CTS Sources are Proxy Generator Buses.



**CTS Source Price:** The price at a CTS Source.

**Curtailement or Curtail:** A reduction in Transmission Service in response to a transmission capacity shortage as a result of system reliability conditions.

**Customer:** An entity which has complied with the requirements contained in the ISO Services Tariff, including having signed a Service Agreement, and is qualified to utilize the Market Services and the Control Area Services provided by the ISO under the ISO Services Tariff; provided, however, that a party taking services under the ISO Services Tariff pursuant to an unsigned Service Agreement filed with the Commission by the ISO shall be deemed a Customer.

## 1.4 Definitions - D

**DADRP Component:** As defined in the ISO Services Tariff.

**Day-Ahead:** Nominally, the twenty-four (24) hour period directly preceding the Dispatch Day, except when this period may be extended by the ISO to accommodate weekends and holidays.

**Day-Ahead LBMP:** The LBMPs calculated based upon the ISO's Day-Ahead Security Constrained Unit Commitment process.

**Day-Ahead Market:** The ISO Administered Market in which Capacity, Energy and/or Ancillary Services are scheduled and sold Day-Ahead consisting of the Day-Ahead scheduling process, price calculations and Settlements.

**Day-Ahead Reliability Unit:** As defined in the ISO Services Tariff.

**Decremental Bid:** A monotonically increasing Bid Price curve provided by an entity engaged in a Bilateral Import, other than an entity submitting a CTS Interface Bid, or Internal Transaction to indicate the LBMP below which that entity is willing to reduce its Generator's output and purchase Energy in the LBMP Markets, or by an entity engaged in a Wheel Through transaction to indicate the Congestion Component cost at or below which that entity is willing to accept Transmission Service.

**Demand Side Resource:** As defined in the ISO Services Tariff.

**Dennison Scheduled Line:** A transmission facility that interconnects the NYCA to the Hydro Quebec Control Area at the Dennison substation, located near Massena, New York and extends through the province of Ontario, Canada (near the City of Cornwall) to the Cedars substation in Quebec, Canada.

**Dependable Maximum Gross Capability ("DMGC"):** As defined in the ISO Services Tariff.

**Dependable Maximum Net Capability ("DMNC"):** The sustained maximum net output of a Generator, as demonstrated by the performance of a test or through actual operation, averaged over a continuous time period as defined in the ISO Procedures.

**Designated Agent:** Any entity that performs actions or functions on behalf of the Transmission Owner, an Eligible Customer, or the Transmission Customer required under the Tariff.

**Desired Net Interchange ("DNI"):** A mechanism used to set and maintain the desired Energy interchange (or transfer) between two Control Areas; it is scheduled ahead of time and can be changed manually in real-time.

**Developer:** An Eligible Customer developing a generation project larger than 20 megawatts, or a Class Year Transmission Project, proposing to interconnect to the New York State Transmission System, in compliance with the NYISO Minimum Interconnection Standard and, depending on the Developer's interconnection service election, also in compliance with the NYISO Deliverability Interconnection Standard.

**Direct Assignment Facilities:** Facilities or portions of facilities that are constructed by the Transmission Owner(s) for the sole use/benefit of a particular Transmission Customer requesting service under the ISO OATT. Direct Assignment Facilities shall be specified in the Service Agreement that governs service to the Transmission Customer and shall be subject to Commission approval.

**Direct Sale:** The sale of Original Residual TCCs, ETCNL, and Grandfathered TCCs directly to a buyer by the Transmission Owner that is the Primary Holder through a non-discriminatory auditable sale conducted on the ISO's OASIS, in compliance with the requirements and restrictions set forth in Commission Orders 888 et seq. and 889 et seq.

**Dispatchable:** A bidding mode in which Generators or Demand Side Resources indicate that they are willing to respond to real-time control from the ISO. Dispatchable Resources, not including the Generator of a BTM:NG Resource, may either be ISO-Committed Flexible or Self Committed Flexible. Dispatchable Generators that are the Generator serving a BTM:NG Resource must be Self-Committed Flexible. Dispatchable Demand Side Resources must be ISO Committed Flexible. Dispatchable Resources that are not providing Regulation Service will follow five-minute RTD Base Point Signals. Dispatchable Resources that are providing Regulation Service will follow six-second AGC Base Point Signals.

**Dispatch Day:** The twenty-four (24) hour (or, if appropriate, the twenty-three (23) or twenty-five (25) hour) period commencing at the beginning of each day (0000 hour).

**DSASP Component:** As defined in the ISO Services Tariff.

**Dynamically Scheduled Proxy Generator Bus:** A Proxy Generator Bus for which the ISO may schedule Transactions at 5 minute intervals in real time. Dynamically Scheduled Proxy Generator Buses are identified in Section 4.4.4 of the Services Tariff.

## 1.5 Definitions - E

**East of Central-East:** An electrical area comprised of Lead Zones F, G, H, I, J, and K, as identifies in the ISO Procedures.

**East of Central-East Excluding Long Island:** An electrical area comprised of Lead Zones F, G, H, I, and J, as identified in the ISO Procedures.

**East of Central-East Excluding New York City and Long Island:** An electrical area comprised of Land Zones F, G, H, I, as identifies in the ISO Procedures.

**Economic Operating Point:** The megawatt quantity which is a function of: i) the real-time LBMP at the Resource bus; and ii) the Supplier's real-time eleven constant cost step Energy Bid, for the Resource, such that (a) the offer price associated with Energy offers below that megawatt quantity (if that megawatt quantity is not that Resource's minimum output level) must be less than or equal to the real-time LBMP at the Resource bus, and (b) the offer price associated with Energy offers above that megawatt quantity (if that megawatt quantity is not that Resource's maximum output level) must be greater than or equal to the real-time LBMP at the Resource bus. In cases where multiple megawatt values meet conditions (a) and (b), the Economic Operating Point is the megawatt value meeting these conditions that is closest to the Resource's real-time scheduled Energy injection. In cases where the Economic Operating Point would be less than the minimum output level, the Economic Operating Point will be set equal to the MW value of the first point on the Energy Bid curve and in cases where the Economic Operating Point would be greater than the maximum output level, the Economic Operating Point will be set equal to the MW value of the last point on the Energy Bid curve. When evaluating the Economic Operating Point of a BTM:NG Resource, only Energy offers corresponding to quantities in excess of its Host Load will be considered.

**Eligible Customer:** (i) An entity that is engaged, or proposes to engage, in the wholesale or retail electric power business including any electric utility, power marketer, Federal power marketing agency, or any person generating Energy for sale for resale is an Eligible Customer under the Tariff. Electric energy sold or produced by such entity may be electric energy produced in the United States, Canada or Mexico. However, with respect to transmission service that the Commission is prohibited from ordering by Section 212(h) of the Federal Power Act, such entity is eligible only if the service is provided pursuant to a state requirement that the Transmission Owner offer the unbundled Transmission Service, or pursuant to a voluntary offer of such service by the Transmission Owner. (ii) Any retail customer taking unbundled transmission service pursuant to a state requirement that the Transmission Owner offer the transmission service, or pursuant to a voluntary offer of such service by the Transmission Owner, is an Eligible Customer under the Tariff.

**Emergency:** Any abnormal system condition that requires immediate automatic or manual action to prevent or limit loss of transmission facilities or Generators that could adversely affect the reliability of an electric system.

**Emergency State:** The state that the NYS Power System is in when an abnormal condition occurs that requires automatic or immediate, manual action to prevent or limit loss of the NYS

Transmission System or Generators that could adversely affect the reliability of the NYS Power System.

**End-State Centralized TCC Auction:** A Centralized TCC Auction that the ISO will conduct after the ISO develops the necessary software.

**Energy (“MWh”):** A quantity of electricity that is Bid, produced, purchased, consumed, sold, or transmitted over a period of time, and measured or calculated in megawatt hours.

**Energy and Ancillary Services Component:** As defined in the ISO Services Tariff.

**Energy Storage Resource:** As defined in the ISO Services Tariff.

**Equivalency Rating:** As defined in the ISO Services Tariff.

**ETA Agent:** A Transmission Customer of the ISO that has been appointed by a Load Serving Entity and approved by the ISO in accordance with ISO Procedures for the purpose of enabling that Transmission Customer to hold all of the rights and obligations associated with Fixed Price TCCs, as provided for in Attachment M of this OATT.

**ETCNL TCC:** A TCC created when a Transmission Owner with ETCNL exercises its right to convert a megawatt of ETCNL into a TCC pursuant to Section 19.4.1 of Attachment M of this ISO OATT.

**Excess Congestion Rents:** Congestion revenues in the Day-Ahead Market for Energy collected by the ISO that are in excess of its Day-Ahead payment obligations. Excess Congestion Rents may arise if Congestion occurs in the Day- Ahead Market for Energy and if the Day-Ahead Transfer Capability of the Transmission System is not exhausted by the set of already-outstanding TCCs and Grandfathered Rights that are valid.

**Existing Transmission Agreement (“ETA”):** An agreement between two or more Transmission Owners, or between a Transmission Owner and another entity, in existence at the time of ISO start-up and providing for transmission service by a Transmission Owner to another Transmission Owner or another entity. Table 1A of Attachment L lists all ETAs. ETAs include Transmission Wheeling Agreements (including MWAs and Third Party TWAs) and Transmission Facility Agreements.

**Existing Transmission Capacity for Native Load (“ETCNL”):** Transmission capacity identified on a Transmission Owner’s transmission system to serve the Native Load customers of the current Transmission Owners (as of the filing date of the original ISO Tariff-January 31, 1997) for the purposes of allocating revenues from the sale of TCCs related to that capacity. This includes transmission capacity required: (1) to deliver the output from Generators located out of a Transmission Owner’s Transmission District; (2) to deliver power purchased under power supply contracts; and (3) to deliver power purchased under third party agreements (i.e., Non-Utility Generators). Existing Transmission Capacity for Native Load is listed in Attachment L, Table 3, “Existing Transmission Capacity Reservations for Native Load Table.”

**Expected EDRP/SCR MW:** The aggregate Load reduction (in MW) expected to be realized from EDRP and/or SCRs during the real-time intervals that the ISO has called upon EDRP and/or SCRs to provide Load reduction in a Scarcity Reserve Region, as determined based on the ISO's calculation of the historical performance of EDRP and SCRs. There will be separate values for voluntary and mandatory Load reductions. When determining the historical performance of SCRs, provision of Load reduction shall be deemed mandatory if the ISO has satisfied the notification requirements set forth in Section 5.12.11.1 of the NYISO Services Tariff as it relates to the SCRs in the applicable Load Zone, otherwise provision of such Load reduction shall be deemed voluntary. When determining the historical performance of the EDRP, provision of Load reduction by EDRP shall be deemed voluntary.

**Expected Load Reduction:** For purposes of determining the Real-Time Locational Based Marginal Price, the reduction in Load expected to be realized in real-time from activation of the Emergency Demand Response Program and from Load reductions requested from Special Case Resources, as established pursuant to ISO Procedures.

**Export:** A Bilateral Transaction or purchase from the LBMP Market where the Energy is delivered to an NYCA interconnection with another Control Area.

**External:** An entity (e.g., Supplier, Transmission Customer) or facility (e.g., Generator, Interface) located outside the Control Area being referenced or between two or more Control Areas. Where a specific Control Area is not referenced, the NYCA is the intended reference.

**External Transactions:** Purchases, sales or exchanges of Energy, Capacity or Ancillary Services for which either the Point of Injection ("POI") or Point of Withdrawal ("POW") or both are located outside the NYCA (i.e., Exports, Imports or Wheels Through).

## 1.6 Definitions - F

**Federal Power Act ("FPA"):** The Federal Power Act, as may be amended from time-to-time (See 16 U.S.C. § 796 et seq.)

**Facilities Study:** An engineering study conducted by the ISO and/or a Transmission Owner to determine the required modifications to the Transmission Owner's Transmission System, including the cost and scheduled completion date for such modifications, that will be required to provide the requested facilities.

**Facility Flow-Based Methodology:** The methodology, as described in Section 20.3.7 of Attachment N, used to allocate Net Auction Revenue among Transmission Owners.

**Fast-Start Resource:** As defined in the ISO Services Tariff.

**Firm Point-To-Point Transmission Service:** Transmission Service under this Tariff that is scheduled between specified Points of Receipt and Delivery pursuant to Part II of this Tariff. Firm Point-To-Point Transmission Service is service for which the Transmission Customer has agreed to pay the Congestion associated with its service. A Transmission Customer may fix the price of Congestion associated with its Firm Point-To-Point Transmission Service by acquiring sufficient TCCs with the same Points of Receipt and Delivery as its Transmission Service.

**Firm Transmission Service:** Transmission Service requested by a Transmission Customer willing to pay Congestion Rent.

**First Settlement:** The process of establishing binding financial commitments on the part of Customers participating in the Day-Ahead Market based on Day-Ahead LBMP.

**Fixed Block Unit:** As defined in the ISO Services Tariff.

**Fixed Price TCC:** TCCs obtained pursuant to Section 19.2.1 (including Section 19.2.1.4) or Section 19.2.2 of Attachment M of this OATT. If a TCC is obtained pursuant to Section 19.2.1 (including Section 19.2.1.4) of Attachment M of this OATT, it is a Historic Fixed Price TCC. If a TCC is awarded to an LSE pursuant to the provisions of Section 19.2.2 of Attachment M of this OATT, it is a Non-Historic Fixed Price TCC.

**Forced Outage:** As defined in the ISO Services Tariff.

## 1.7 Definitions - G

**Gap Solution:** This term shall have the meaning given in Attachment Y to the OATT.

**Generator:** A facility, including the Generator of a BTM:NG Resource, capable of supplying Energy, Capacity and/or Ancillary Services that is accessible to the NYCA. A Generator comprised of a group of generating units at a single location, which grouped generating units are separately committed and dispatched by the ISO, and for which Energy injections are measured at a single location, and each unit within that group, shall be considered a Generator.

**Generator Classes:** The type of Generator (e.g., nuclear, gas turbine, fossil, hydro) which is used by the ISO to determine criteria that must be met for that Generator to qualify as a source of Installed Capacity.

**Good Utility Practice:** Any of the practices, methods or acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods or 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 at a reasonable cost 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 delineate acceptable practices, methods, or acts generally accepted in the region, including those practices required by Federal Power Act Section 215(a)(4).

**Government Bonds:** Tax-exempt bonds issued by the New York Power Authority pursuant to Section 103 and related provisions of the Internal Revenue Code. 26 U.S.C. § 103.

**Grandfathered Rights:** The transmission rights associated with: (1) Modified Wheeling Agreements; (2) Transmission Facility Agreements; and (3) Third Party Transmission Wheeling Agreements where the party entitled to exercise the transmission rights associated with such Agreements has chosen, as provided in the Tariff, to retain those rights rather than to convert them to Grandfathered TCCs.

**Grandfathered TCCs:** The TCCs associated with: (1) Modified Wheeling Agreements; (2) Transmission Facility Agreements with transmission wheeling provisions; and (3) Third Party TWAs where the party entitled to exercise the transmission rights associated with such agreements, has chosen, as provided for in the Tariff, to convert those rights to TCCs.



## **1.8 Definitions - H**

**Host Load:** As defined in the ISO Services Tariff.

**HTP Scheduled Line:** A transmission facility that interconnects the NYCA to the PJM Interconnection, L.L.C. Control Area at the West 49<sup>th</sup> Street Substation, New York, NY and terminates in Ridgefield, New Jersey.

## 1.9 Definitions - I

**ICAP Ineligible Forced Outage:** As defined in the ISO Services Tariff.

**Import Curtailment Guarantee Payment:** A payment made in accordance with Section 4.5.2.2 and Attachment J of the ISO Services Tariff to compensate a Supplier whose Import is Curtailed by the ISO.

**Imports:** A Bilateral Transaction or sale to the LBMP Market where Energy is delivered to a NYCA Interconnection from another Control Area.

**Imputed Revenue:** The Congestion Rents that owners of Grandfathered Rights do not have to pay due to their own use of those Grandfathered Rights.

**Inactive Reserves:** As defined in the ISO Services Tariff.

**Inadvertent Energy Accounting:** The accounting performed to track and reconcile the difference between net actual Energy interchange and scheduled Energy interchange of a Control Area with adjacent Control Areas.

**Incremental Energy Bid:** A series of monotonically increasing constant cost incremental Energy steps that indicate the quantities of Energy for a given price that an entity is willing to supply to the ISO Administered Markets.

**Incremental TCC:** A set of point-to-point Transmission Congestion Contract(s) that is awarded pursuant to Section 19.2.2 of Attachment M to this ISO OATT.

**Independent System Operator, Inc. (“ISO”):** The New York Independent System Operator, a not-for-profit corporation established pursuant to the ISO Agreement.

**Independent System Operator Agreement (“ISO Agreement”):** The agreement that establishes the New York ISO.

**Independent System Operator/New York State Reliability Council (“ISO/NYSRC Agreement”):** The agreement between the ISO and the New York State Reliability Council governing the relationship between the two organizations.

**Independent System Operator/Transmission Owner Agreement (“ISO/TO Agreement”):** The agreement that establishes the terms and conditions under which the Member Systems transferred to the ISO Operational Control over designated transmission facilities.

**Injection Billing Units:** A Transmission Customer’s Actual Energy Injections (for all internal injections) or Scheduled Energy Injections (for all Import Energy injections) in the New York Control Area, including injections for Wheels Through. For purposes of Rate Schedule 1 and Rate Schedule 11 of this ISO OATT, (i) a Limited Energy Storage Resource shall be responsible for charges or eligible for payments on the basis only of its Actual Energy Injections and (ii) a Day-Ahead Demand Reduction Provider’s Demand Reduction shall be included as Injection Billing Units. For purposes of recovering the ISO annual budgeted costs and the annual FERC

fee pursuant to Rate Schedule 1 of this ISO OATT, Injection Billing Units shall include the absolute value of negative injections by Withdrawal-Eligible Generators.

**Injection Limit:** As defined in the ISO Services Tariff.

**Installed Capacity:** A Generator or Load facility that complies with the requirements in the Reliability Rules and is capable of supplying and/or reducing the demand for Energy in the NYCA for the purpose of ensuring that sufficient Energy and Capacity are available to meet the Reliability Rules. The Installed Capacity requirement, established by the NYSRC, includes a margin of reserve in accordance with the Reliability Rules.

**Interconnection or Interconnection Points (“IP”):** The point(s) at which the NYCA connects with a distribution system or adjacent Control Area. The IP may be a single tie line or several tie lines that are operated in parallel.

**Interface:** A defined set of transmission facilities that separate Load Zones and that separate the NYCA from adjacent Control Areas.

**Interface MW - Mile Methodology:** The procedure used to allocate Original Residual TCCs determined prior to the first Centralized TCC Auction to Transmission Owners.

**Interim Service Provider (“ISP”):** As defined in Attachment FF to the OATT.

**Intermittent Power Resource:** A device for the production of electricity that is characterized by an energy source that: (1) is renewable; (2) cannot be stored by the producing device; and (3) has variability that is beyond the control of the facility owner or operator. In New York, resources that depend upon wind, or solar energy or landfill gas for their fuel have been classified as Intermittent Power Resources. Each Intermittent Power Resource that depends on wind as its fuel shall include all turbines metered at a single scheduling point identifier (PTID).

**Internal:** An entity (*e.g.*, Supplier, Transmission Customer) or facility (*e.g.*, Generator, Interface) located within the Control Area being referenced. Where a specific Control Area is not referenced, internal means the NYCA.

**Internal Transactions:** Purchases, sales or exchanges of Energy, Capacity or Ancillary Services where the Generator and Load are located within the NYCA.

**Investment Grade Customer:** As defined in the ISO Services Tariff.

**Investor-Owned Transmission Owners:** At the present time these include: Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation.

**ISO Administered Markets:** The Day-Ahead Market and the Real-Time Market (collectively the LBMP Markets) and any other market administered by the ISO.

**ISO-Committed Fixed:** In the Day-Ahead, a bidding mode in which a Generator requests that the ISO commit and schedule it. In the Real-Time Market, a bidding mode in which a Generator, with ISO approval, requests that the ISO schedule it no more frequently than every 15 minutes. A Generator scheduled in the Day-Ahead Market as ISO-Committed Fixed will participate as a Self-Committed Fixed Generator in the Real-Time Market unless it changes bidding mode, with ISO approval, to participate as an ISO-Committed Fixed Generator. A BTM:NG Resource is not permitted to utilize the ISO-Committed Fixed bidding mode.

**ISO-Committed Flexible:** A bidding mode in which a Dispatchable Generator Demand Side Resource follows Base Point Signals and is committed by the ISO. A BTM:NG Resource is not permitted to utilize the ISO-Committed Flexible bidding mode.

**ISO Market Power Monitoring Program:** The monitoring program approved by the Commission and administered by the ISO designed to monitor the possible exercise of market power in ISO Administered Markets.

**ISO OATT (the “Tariff”):** The ISO Open Access Transmission Tariff.

**ISO Procedures:** The procedures adopted by the ISO in order to fulfill its responsibilities under the ISO OATT, the ISO Services Tariff and the ISO Related Agreements.

**ISO Related Agreements:** Collectively, the ISO Agreement, the NYSRC Agreement, the ISO/NYSRC Agreement, the ISO/TO Agreement, and Operating Agreements.

**NYISO Services Tariff:** The ISO Market Administration and Control Area Services Tariff.

**ISO Tariffs:** The ISO OATT and the ISO Services Tariff, collectively.

## **1.10 Definitions - J**

## **1.11 Definitions - K**

## 1.12 Definitions - L

**LBMP Markets:** A term that collectively refers to both the Real-Time Market and the Day-Ahead Market.

**Linden VFT Scheduled Line:** A transmission facility that interconnects the NYCA to the PJM Interconnection, L.L.C. Control Area in Linden, New Jersey.

**LIPA Tax-Exempt Bonds:** Obligations issued by the Long Island Power Authority, the interest in which is not included in gross income under the Internal Revenue Code.

**Load:** A term that refers to either a consumer of Energy or the amount of Energy (MWh) or demand (MW) consumed by certain consumers.

**Load Ratio Share:** The ratio of an LSE's Load to Load within the NYCA during a specified time period.

**Load Serving Entity ("LSE"):** An entity, including a municipal electric system and an electric cooperative, authorized or required by law, regulatory authorization or requirement, agreement, or contractual obligation to supply Energy, Capacity and/or Ancillary Services to retail customers located within the NYCA, including an entity that takes service directly from the ISO to supply its own load in the NYCA.

**Load Shedding:** The systematic reduction of system demand by temporarily decreasing Load in response to Transmission System or area Capacity shortages, system instability, or voltage control considerations under Part 4 of the Tariff.

**Load Zone:** One (1) of eleven (11) geographical areas located within the NYCA that is bounded by one (1) or more of the fourteen (14) New York State Interfaces.

**Local Furnishing Bonds:** Tax-exempt bonds issued by a Transmissions Owner under an agreement between the Transmission Owner and the New York State Energy Research and Development Authority ("NYSERDA"), or its successor, or by a Transmission Owner itself, and pursuant to Section 142(f) of the Internal Revenue Code, 26 U.S.C. § 142(f).

**Locality:** Shall have the meaning set forth in §2.12 of the ISO Services Tariff.

**Local Generator:** Shall have the meaning set forth in §2.12 of the ISO Services Tariff.

**Local Reliability Rule:** A Reliability Rule established by a Transmission Owner and adopted by the NYSRC to meet specific reliability concerns in limited areas of the NYCA, including without limitation, special requirements and conditions that apply to nuclear plants and special requirements applicable to the New York City metropolitan area.

**Locational Based Marginal Pricing ("LBMP"):** The price of Energy at each location in the NYS Transmission System as calculated pursuant to Attachment J.

**Locational Minimum Installed Capacity Requirement:** The determination by the ISO in accordance with the ISO Services Tariff of that portion of the NYCA Minimum Installed Capacity Requirement (as defined in the ISO Services Tariff) that must be electrically located within a Locality.

**Long-Island (“L.I.”):** An electrical area comprised of Load Zone K, as identified in the ISO Procedures.

**Long-Term Firm Point-To-Point Transmission Service:** Firm Point-to-Point Service, the price of which is fixed for a long term by a Transmission Customer acquiring sufficient TCCs with the same Points of Receipt and Delivery as its Transmission Service.

**Lost Opportunity Cost:** The foregone profit associated with the provision of Ancillary Services, which is equal to the product of: (1) the difference between (a) the Energy that a Generator could have sold at the specific LBMP and (b) the Energy sold as a result of reducing the Generator’s output to provide an Ancillary Service under the direction of the ISO; and (2) the LBMP existing at the time the Generator was instructed to provide the Ancillary Service, less the Generator’s Energy bid for the same MW segment.



## 1.13 Definitions - M

**Major Emergency State:** An Emergency accompanied by abnormal frequency, abnormal voltage and/or equipment overloads that create a serious risk that the reliability of the NYS Power System could be adversely affected.

**Manual Dispatch:** A dispatch of the NYS Transmission System performed by the ISO when the ISO's RTD is unavailable.

**Marginal Losses:** The NYS Transmission System Real Power Losses associated with each additional MWh of consumption by Load, or each additional MWh transmitted under a Bilateral Transaction as measured at the Points of Withdrawal.

**Marginal Losses Component:** The component of LBMP at a bus that accounts for the Marginal Losses, as measured between that bus and the Reference Bus.

**Market Participant:** An entity, excluding the ISO, that produces, transmits, sells, and/or purchases for resale Capacity, Energy and Ancillary Services in the Wholesale Market. Market Participants include: Transmission Customers under the ISO OATT, Customers under the ISO Services Tariff, Power Exchanges, Transmission Owners, Primary Holders, LSEs, Suppliers and their designated agents. Market Participants also include entities buying or selling TCCs.

**Market Services:** Services provided by the ISO under the ISO Services Tariff related to the ISO Administered Markets for Energy, Capacity and Ancillary Services.

**Member Systems:** The eight Transmission Owners that comprised the membership of the New York Power Pool, which are: (1) Central Hudson Gas & Electric Corporation, (2) Consolidated Edison Company of New York, Inc., (3) New York State Electric & Gas Corporation, (4) Niagara Mohawk Power Corporation d/b/a National Grid, (5) Orange and Rockland Utilities, Inc., (6) Rochester Gas and Electric Corporation, (7) the Power Authority of the State of New York, and (8) Long Island Lighting Company d/b/a Long Island Power Authority.

**Minimum Generation Bid:** A Bid parameter that identifies the payment a Supplier requires to operate a Generator at its specific minimum operating level or to provide a Demand Side Resource's specified minimum quantity of Demand Reduction. If the Supplier is a BTM:NG Resource, it shall not submit a Minimum Generation Bid.

**Minimum Generation Level:** For purposes of describing the eligibility of ten minute Resources to be committed by the Real Time Dispatch for pricing purposes pursuant to the Services Tariff, Section 4.4.3.3, an upper bound, established by the ISO, on the physical minimum generation limits specified by ten minute Resources. Ten minute Resources with physical minimum generation limits that exceed this upper bound will not be committed by the Real Time Dispatch for pricing purposes. The ISO shall establish a Minimum Generation Level based on its evaluation of the extent to which it is meeting its reliability criteria including Control Performance. The Minimum Generation Level, in megawatts, and the ISO's rationale for that level, shall be made available through the ISO's website or comparable means. If the Supplier is a BTM:NG Resource, it shall not submit a Minimum Generation Level.

**Modified Wheeling Agreements (“MWA”):** A Transmission Wheeling Agreement between Transmission Owners that was in existence at the time of ISO start-up, as amended and modified as described in Attachment K. Modified Wheeling Agreements are associated with Generators or power supply contracts existing at ISO start-up. All Modified Wheeling Agreements are listed in Attachment L, Table 1A, and are designated in the “Treatment” column of Table 1A, as “MWA.”

**Mothball Outage:** As defined in the ISO Services Tariff.

## 1.14 Definitions - N

**Native Load Customers:** The wholesale and retail power customers of the Transmission Owners on whose behalf the Transmission Owners, by statute, franchise, regulatory requirement, or contract, have undertaken an obligation to construct and operate the Transmission Owners' systems to meet the reliable electric needs of such customers.

**Neptune Scheduled Line:** A transmission facility that interconnects the NYCA to the PJM Interconnection LLC Control Area at Levittown, Town of Hempstead, New York and terminates in Sayerville, New Jersey.

**NERC:** The North American Electric Reliability Council or, as applicable, the North American Electric Reliability Corporation.

**NERC Transaction Priorities:** The reservation and scheduling priority applied to a Transaction under the NERC Transmission Loading Relief Procedure.

**NERC Transmission Loading Relief ("TLR") Procedure:** "Standard IRO-006-3 – Reliability Coordination – Transmission Loading Relief" as approved in Docket No. ER06-1545, and any amendments thereto. See [www.nerc.com](http://www.nerc.com) for the current version of the NERC TLR Procedure.

**Net Auction Revenue:** The total amount, in dollars, as calculated pursuant to Section 20.3.1 of Attachment N, remaining after collection of all charges and allocation of all payments associated with a round of a Centralized TCC Auction or a Reconfiguration Auction. Net Auction Revenue takes into account: (i) revenues from and payments for the award of TCCs in a Centralized TCC Auction or Reconfiguration Auction, (ii) payments to Transmission Owners releasing ETCNL, (iii) payments or charges to Primary Holders selling TCCs, (iv) payments to Transmission Owners releasing Original Residual TCCs, (v) O/R-t-S Auction Revenue Surplus Payments and U/D Auction Revenue Surplus Payments, and (vi) O/R-t-S Auction Revenue Shortfall Charges and U/D Auction Revenue Shortfall Charges. Net Auction Revenue may be positive or negative.

**Net Congestion Rent:** The total amount, in dollars, as calculated pursuant to Section 20.2.1 of Attachment N, remaining after collection of all Congestion-related charges and allocation of all Congestion-related payments associated with the Day-Ahead Market. Net Congestion Rent takes into account: (i) charges and payments for Congestion Rents, (ii) settlements with TCC Primary Holders, (iii) O/R-t-S Congestion Rent Shortfall Charges and U/D Congestion Rent Shortfall Charges, and (iv) O/R-t-S Rent Congestion Surplus Payments and U/D Congestion Rent Surplus Payments. Net Congestion Rent may be positive or negative.

**Net Installed Capacity ("Net-ICAP"):** As defined in the ISO Services Tariff.

**Net Unforced Capacity ("Net-UCAP"):** As defined in the ISO Services Tariff.

**Network Customer:** An entity receiving Transmission Service pursuant to the terms of the ISO's Network Integration Transmission Service under Part 4 of the Tariff.

**Network Integration Transmission Service:** The Transmission Service provided under Part 4 of the Tariff.

**Network Load:** The Load that a Network Customer designates for Network Integration Transmission Service under Part 4 of the Tariff. The Network Customer's Network Load shall include all Load served by the output of any Network Resources designated by the Network Customer. A Network Customer may elect to designate less than its total Load as Network Load but may not designate only part of the Load at a discrete Point of Delivery. Where an Eligible Customer has elected not to designate a particular Load at discrete points of delivery as Network Load, the Eligible Customer is responsible for making separate arrangements under Part 3 of the Tariff for any Point-To-Point Transmission Service that may be necessary for such non-designated Load.

**Network Operating Agreement:** An executed agreement that contains the terms and conditions under which the Network Customer shall operate its facilities and the technical and operational matters associated with the implementation of Network Integration Transmission Service under Part 4 of the Tariff. For Eligible Customers that take service under the ISO Services Tariff, that Tariff shall function as their Network Operating Agreement.

**Network Operating Committee:** The ISO Operating Committee will serve this function.

**Network Resource:** Any generating resource that provides Installed Capacity to the NYCA designated under the Network Integration Transmission Service provisions of the Tariff. Network Resources do not include any resource, or any portion thereof, that is committed for sale to third parties or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis, except for purposes of fulfilling obligations under a reserve sharing program.

**Network Upgrades:** Modifications or additions to transmission facilities that are integrated with and support the Transmission Owner's overall Transmission System for the general benefit of all users of such Transmission System.

**Network Upgrade Agreement:** An agreement entered into between a Transmission Customer and a Transmission Owner that identifies the rights and obligations of each party with respect to the Network Upgrade, as described in this Tariff.

**New York City:** The electrical area comprised of Load Zone J, as identified in the ISO Procedures.

**New York Control Area ("NYCA"):** The Control Area that is under the control of the ISO which includes transmission facilities listed in the ISO/TO Agreement Appendices A-1 and A-2, as amended from time-to-time, and Generation located outside the NYS Power System that is subject to protocols (e.g., telemetry signal biasing) which allow the ISO and other Control Area operator(s) to treat some or all of that Generation as though it were part of the NYS Power System.

**New York Power Pool ("NYPP"):** An organization established by agreement (the "New York Power Pool Agreement") made as of July 21, 1966, and amended as of July 16, 1991, by and among Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., Long Island Lighting Company, New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation, Orange and Rockland Utilities, Inc., Rochester Gas and

Electric Corporation, and the Power Authority of the State of New York. LIPA became a Member of the NYPP on May 28, 1998 as a result of the acquisition of the Long Island Lighting Company by the Long Island Power Authority.

**New York State Bulk Power Transmission Facility:** This term shall have the meaning given in Attachment Y to the OATT.

**New York State Power System (“NYS Power System”):** All facilities of the NYS Transmission System, and all those Generators located within the NYCA or outside the NYCA, some of which may from time-to-time be subject to operational control by the ISO.

**New York State Reliability Council (“NYSRC”):** An organization established by agreement among the Member Systems of the New York Power Pool (the “NYSRC Agreement”).

**New York State Transmission System (“NYS Transmission System”):** The entire New York State electric transmission system, which includes: (1) the Transmission Facilities Under ISO Operational Control; (2) the Transmission Facilities Requiring ISO Notification; and (3) all remaining transmission facilities within the NYCA.

**Non-Competitive Proxy Generator Bus:** A Proxy Generator Bus for an area outside of the New York Control Area that has been identified by the ISO as characterized by non-competitive Import or Export prices, and that has been approved by the Commission for designation as a Non-Competitive Proxy Generator Bus. Non-Competitive Proxy Generator Buses are identified in Section 4.4.4 of the Services Tariff.

**Non-Firm Point-To-Point Transmission Service:** Point-To-Point Transmission Service for which a Transmission Customer is not willing to pay Congestion. Such service is not available in the markets that the NYISO administers.

**Non-Investment Grade Customer:** As defined in the ISO Services Tariff.

**Non-Utility Generator (“NUG,” “Independent Power Producer” or “IPP”):** Any entity that owns or operates an electric generating facility that is not included in an electric utility’s rate base. This term includes, but is not limited to, cogenerators and small power producers and all other non-utility electricity producers, such as exempt wholesale generators that sell electricity.

**Normal State:** The condition that the NYS Power System is in when the Transmission Facilities Under ISO Operational Control are operated within the parameters listed for Normal State in the Reliability Rules. These parameters include, but are not limited to, thermal, voltage, stability, frequency, operating reserve and Pool Control Error limitations.

**Northport-Norwalk Scheduled Line:** A transmission facility that originates at the Northport substation in New York and interconnects the NYCA to the ISO New England Control Area at the Norwalk Harbor substation in Connecticut.

**Notice of Intent to Return:** As defined in the ISO Services Tariff.

**Notification:** Informing the ISO of all changes in status of the Transmission Facilities Requiring ISO Notification. Notification includes the Transmission Owners informing the ISO of all changes in the status of the designated transmission facilities.

**Nuclear Regulatory Commission (“NRC”):** Nuclear Regulatory Commission, or any successor thereto.

**NYPA:** The Power Authority of the State of New York.

**NYPA Transmission Adjustment Charge (“NTAC”):** A surcharge on all Energy Transactions designed to recover the Annual Transmission Revenue Requirement of NYPA which cannot be recovered through its TSC, TCCs, or other transmission revenues, including, but not limited to, its ETA revenues. This charge will be assessed to all Load statewide, as well as Transmission Customers in Wheels Through and Exports.

## 1.15 Definitions - O

**Off-Peak:** The hours between 11:00 p.m. and 7:00 a.m., prevailing Eastern Time, Monday through Friday, and all day Saturday and Sunday, and NERC-defined holidays, or as otherwise decided by ISO.

**On-Peak:** The hours between 7:00 a.m. and 11:00 p.m. inclusive, prevailing Eastern Time, Monday through Friday, except for NERC-defined holidays, or as otherwise decided by the ISO.

**Open Access Same-Time Information System (“OASIS”):** The information system and standards of conduct contained in Part 37 of the Commission’s regulations and all additional requirements implemented by subsequent Commission orders dealing with OASIS.

**Operating Agreement:** An agreement between the ISO and a non-incumbent owner of transmission facilities in the New York Control Area concerning the operation of the transmission facilities in the form of the agreement set forth in Appendix H (Section 31.11) of Attachment Y.

**Operating Capacity:** Capacity that is readily converted to Energy and is measured in MW.

**Operating Committee:** A standing committee of the ISO created pursuant to the ISO Agreement, which coordinates operations, develops procedures, evaluates proposed system expansions and acts as a liaison to the NYSRC.

**Operating Requirement:** As defined in the ISO Services Tariff.

**Operating Reserves:** As defined in the NYISO Services Tariff.

**Operating Reserve Demand Curve:** As defined in the NYISO Services Tariff.

**Operating Study Power Flow:** A Power Flow analysis that is performed at least once before each Capability Period that is used to determine each Interface Transfer Capability for the Capability Period (See Attachment M).

**Operational Control:** Directing the operation of the Transmission Facilities Under ISO Operational Control to maintain these facilities in a reliable state, as defined by the Reliability Rules. The ISO shall approve operational decisions concerning these facilities, made by each Transmission Owner before the Transmission Owner implements those decisions. In accordance with ISO Procedures, the ISO shall direct each Transmission Owner to take certain actions to restore the system to the Normal State. Operational Control includes security monitoring, adjustment of generation and transmission resources, coordination and approval of changes in transmission status for maintenance, determination of changes in transmission status for reliability, coordination with other Control Areas, voltage reductions and Load Shedding, except that each Transmission Owner continues to physically operate and maintain its facilities.

**Optimal Power Flow (“OPF”):** The Power Flow analysis that is performed during the administration of the Centralized TCC Auction and Reconfiguration Auction to determine the most efficient simultaneously feasible allocation of TCCs to bidders.

**Original Residual TCC:** A TCC converted from Residual Transmission Capacity estimated prior to the first Centralized TCC Auction and allocated among the Transmission Owners utilizing the Interface MW-Mile Methodology prior to the first Centralized TCC Auction.

**Order Nos. 888 et seq.:** The Final Rule entitled Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, issued by the Commission on April 24, 1996, in Docket Nos. RM95-8-000 and RM94-7-001, as modified on rehearing, or upon appeal. (See FERC Stats. & Regs. [Regs. Preambles 1991-1996] ¶ 31,036 (1996) (“Order No. 888”), on reh’g, III FERC Stats. & Regs. ¶ 31,048 (1997) (“Order No. 888-A”), on reh’g, 81 FERC ¶ 61,248 (1997) (“Order No. 888-B”) (Order on reh’g 82 FERC ¶ 61,046 (1998) (“Order No. 888- C”).

**Order Nos. 889 et seq.:** The Final Rule entitled Open Access Same-Time Information System (formerly Real-Time Information Networks) and Standards of Conduct, issued by the Commission on April 24, 1996, in Docket No. RM95-9-000, as modified on rehearing, or upon appeal. (See FERC Stats. & Regs. [Regs. Preambles 1991-1996] ¶ 31,035 (1996) (“Order No. 889”), on reh’g, III FERC Stats. & Regs. ¶ 31,049 (1997) (“Order No. 889-A”), on reh’g, 81 FERC ¶ 61,253 (1997) (“Order No. 889-B”).

**Out-of-Merit Generation:** Resources committed and/or dispatched by the ISO at specified output limits for specified time periods to meet Load and/or reliability requirements that differ from or supplement the ISO’s security constrained economic commitment and/or dispatch.

The ISO may also use Out-of-Merit to reduce the CSR injection Scheduling Limit and/or the CSR withdrawal Scheduling Limit to protect NYCA or local reliability. When the ISO does so the Out-of-Merit for NYCA or local reliability designation shall apply to each of the Generators that is subject to the affected CSR Scheduling Limit.



## **1.16 Definitions - P**

**Part 1:** Tariff Section 1 pertaining to Definitions.

**Part 2:** Tariff Section 2 pertaining to Common Service Provisions.

**Part 3:** Tariff Section 3 pertaining to Point-To-Point Transmission Service in conjunction with the applicable Common Service Provisions of Part 2 and appropriate Schedules and Attachments.

**Part 4:** Tariff Section 4 pertaining to Network Integration Transmission Service in conjunction with the applicable Common Service Provisions of Part 2 and appropriate Schedules and Attachments.

**Part 5:** OATT Section 5 – Special Provisions for retail access and the Individual Retail Access Plans

**Party or Parties:** The ISO and the Transmission Customer receiving service under the Tariff.

**Performance Tracking System:** A system designed to report metrics for Generators and Loads which include but are not limited to actual output and schedules (See Rate Schedule 3 of the ISO Services Tariff). This system is used by the ISO to measure compliance with criteria associated with the provision of Energy and Ancillary Services.

**Point(s) of Delivery:** Point(s) on the NYS Transmission System or Proxy Generator Buses where Energy transmitted by the ISO will be made available to the Transmission Customer under the ISO Tariffs. The Point(s) of Delivery shall be specified in the Bid, Bilateral Transaction schedule, or similar entry.

**Point(s) of Injection (“POI”):** The point(s) on the NYS Transmission System or Proxy Generator Buses where Energy and Ancillary Services will be made available to the ISO by the Customer or Transmission Customer under the ISO Tariffs. The Point(s) of Injection shall be specified in the Bid, Bilateral Transaction schedule, or similar entry. (May be referred to as “Point of Receipt” or similar in some Existing Transmission Agreements.)

**Point(s) of Receipt:** Point(s) of interconnection on the NYS Transmission System or Proxy Generator Buses where Energy will be made available to the ISO by the Transmission Customer under the ISO Tariffs. The Point(s) of Receipt shall be specified in the Bid, Bilateral Transaction schedule, or similar entry.

**Point(s) of Withdrawal (“POW”):** The point(s) on the NYS Transmission System or Proxy Generator Buses where Energy will be made available to the Transmission Customer or Customer under the ISO Tariffs. The Point(s) of Withdrawal shall be specified in the Bid, Bilateral Transaction Schedule, or other similar entry. (May be referred to as “Point of Delivery” or similar in some Existing Transmission Agreements.)

**Point-to-Point Transmission Service:** The reservation and transmission of Capacity and Energy on a firm basis from the Point(s) of Receipt to the Point(s) of Delivery under the ISO Tariffs.

**Pool Control Error (“PCE”):** The difference between the actual and scheduled interchange with other Control Areas, adjusted for frequency bias.

**Post Contingency:** Conditions existing on a system immediately following a Contingency.

**Power Exchange (“PE”):** A commercial entity meeting the requirements for service under the ISO OATT or the ISO Services Tariff that facilitates the purchase and/or sale of Energy, Capacity and/or Ancillary Services in the New York Wholesale Market. A PE may transact with the ISO on its own behalf or as an agent for others.

**Power Factor:** The ratio of real power to apparent power (the product of volts and amperes, expressed in megavolt-amperes, MVA).

**Power Factor Criteria:** Criteria to be established by the ISO to monitor a Load’s use of Reactive Power.

**Power Flow:** A simulation which determines the Energy flows on the NYS Transmission System and adjacent transmission systems.

**Power Purchaser:** The entity that is purchasing the Capacity and Energy to be transmitted under the Tariff.

**Primary Holder:** The Transmission Customer that is the recognized holder of a TCC, as described in Attachment M of this ISO OATT.

**Prior Equivalent Capability Period:** The previous same-season Capability Period.

**Proxy Generator Bus:** A proxy bus located outside the NYCA that is selected by the ISO to represent a typical bus in an adjacent Control Area and at which LBMP prices are calculated. The ISO may establish more than one Proxy Generator Bus at a particular Interface with a neighboring Control Area to enable the NYISO to distinguish the bidding, treatment and pricing of products and services available at the Interface.

**PSC:** The Public Service Commission of the State of New York or any successor agency thereto.

**PSL:** The New York Public Service Law, N.Y. Pub. Serv. Law § 1 et seq. (McKinney 1989 & Supp. 1997-98).

## **1.17 Definitions - Q**

**Qualified Non-Generator Voltage Support Resource:** A resource that is neither a Generator nor a synchronous condenser but that is capable of providing the ISO with Reactive Power on a dynamic basis, that is energized and under the operational control of the ISO, or a Transmission Owner, that meets the resource-specific technical and testing criteria specified in the ISO Procedures, and that is ineligible to receive Reactive Power compensation other than as a Qualified Non-Generator Voltage Support Resource. The Cross-Sound Scheduled Line shall be a Qualified Non-Generator Voltage Support Resource, provided that it meets the technical and testing criteria specified in the ISO Procedures.

## 1.18 Definitions - R

**RCRR TCC:** A Load Zone-to-Load Zone TCC created when a Member System with a RCRR exercises its right to convert the RCRR into a TCC pursuant to Section 19.5.4 of Attachment M of this ISO OATT.

**Reactive Power (MVar):** The product of voltage and the out-of-phase component of alternating current. Reactive Power, usually measured in MVar, is produced by capacitors (synchronous condensers), over-excited Generators, and Qualified Non-Generator Voltage Support Resources, and absorbed by reactors or under-excited Generators and other inductive devices including the inductive portion of Loads.

**Ramp Capacity:** The amount of change in the Desired Net Interchange that generation located in the NYCA can support at any given time. Ramp Capacity may be calculated for all Interfaces between the NYCA and neighboring Control Areas as a whole or for any individual Interface between the NYCA and an adjoining Control Area.

**Real Power Losses:** The loss of Energy, resulting from transporting power over the NYS Transmission System, between the Point of Injection and Point of Withdrawal of that Energy.

**Real-Time Bid:** A Bid submitted into the Real-Time Commitment before the close of the Real-Time Scheduling Window. A Real-Time Bid shall also include a CTS Interface Bid.

**Real-Time Commitment (“RTC”):** A multi-period security constrained unit commitment and dispatch model that co-optimizes to solve simultaneously for Load, Operating Reserves and Regulation Service on a least as-bid production cost basis over a two hour and fifteen minute optimization period. The optimization evaluates the next ten points in time separated by fifteen minute intervals. Each RTC run within an hour shall have a designation indicating the time at which its results are posted: “RTC<sub>00</sub>,” RTC<sub>30</sub>, and “RTC<sub>45</sub>,” post on the hour, and at fifteen, thirty, and forty-five minutes after the hour, respectively. Each RTC run will produce binding commitment instructions for the periods beginning fifteen and thirty minutes after its scheduled posting time and will produce advisory commitment guidance for the remainder of the optimization period, RTC<sub>15</sub> will also establish hourly External Transaction schedules, while all RTC runs may establish 15 minute External Transaction schedules at Variably Scheduled Proxy Generator Buses. Additional information about RTC’s functions is provided in Section 4.4.2 of the ISO Services Tariff.

**Real-Time Dispatch (“RTD”):** A multi-period security constrained dispatch model that co-optimizes to solve simultaneously for Load, Operating Reserves, and Regulation Service on a least-as-bid production cost basis over a fifty, fifty-five or sixty-minute period (depending on when each RTD run covers within an hour). The Real-Time Dispatch dispatches, but does not commit, Resources, except that RTD may commit, for pricing purposes, Resources meeting Minimum Generation Levels and capable of starting in ten minutes. RTD may also establish 5-minute External Transaction schedules at Dynamically Scheduled Proxy Generator Buses. Real-Time Dispatch runs will normally occur every five minutes. Additional information about RTD’s functions is provided in Section 4.4.3 of the ISO Services Tariff. Throughout the ISO

Services Tariff the term “RTD” will normally be used to refer to both the Real-Time Dispatch and to the specialized Real-Time Dispatch Corrective Action Mode software.

**Real-Time Dispatch-Corrective Action Mode (“RTD-CAM”):** A specialized version of the Real-Time Dispatch software that will be activated when it is needed to address unanticipated system conditions. RTD-CAM is described in Section 4.4.4 of the ISO Services Tariff.

**Real-Time LBMP:** The LBMPs established through the ISO Administered Real- Time Market.

**Real-Time Market:** The ISO Administered Markets for Energy and Ancillary Services resulting from the operation of the RTC and the RTD.

**Real-Time Scheduling Window:** The period of time within which the ISO accepts offers and Bids to sell and purchase Energy and Ancillary Services in the real-time market which period closes seventy-five (75) minutes before each hour, or eighty-five (85) minutes before each hour for Bids to schedule External Transactions at the Proxy Generator Buses associated with the Cross-Sound Scheduled Line, the Neptune Scheduled Line, the Linden VFT Scheduled Line, or the HTP Scheduled Line.

**Reconfiguration Auction:** The monthly auction administered by the ISO which will either be: (i) a Balance-of-Period Auction; or (ii) an auction in which Transmission Customers may purchase and sell one-month TCCs; provided, however, that the ISO shall only conduct one Reconfiguration Auction type in a month.

**Reference Bus:** The location on the NYS Transmission System relative to which all mathematical quantities, including Shift Factors and penalty factors relating to physical operation, will be calculated. The NYPA Marcy 345 kV transmission substation is designated as the Reference Bus.

**Regional Transmission Group (RTG):** A voluntary organization of transmission owners, transmission users and other entities approved by the Commission to efficiently coordinate transmission planning (and expansion), operation and use on a regional (and interregional) basis.

**Regulation Service Demand Curve:** A series of quantity/price points that defines the maximum Shadow Price for Regulation Service corresponding to each possible quantity of Resources that the ISO’s software may schedule to satisfy the ISO’s Regulation Service constraint. A single Regulation Service Demand Curve will apply to both the Day-Ahead Market and the Real-Time Market for Regulation Service. The Shadow Price for Regulation Service shall be used to calculate Regulation Service payments under Rate Schedule 3 of the Service Tariff.

**Reliability Rules:** Those rules, standards, procedures and protocols developed and promulgated by the NYSRC, including Local Reliability Rules, in accordance with NERC, NPCC, FERC, PSC and NRC standards, rules and regulations, and other criteria and pursuant to the NYSRC Agreement.

**Repair Plan:** As defined in the ISO Services Tariff.

**Required System Capability:** Generation capability required to meet an LSE's peak Load plus Installed Capacity reserve obligation as defined in the Reliability Rules.

**Reserved Capacity:** The maximum amount of Capacity and Energy that the ISO agrees to transmit for the Transmission Customer over the NYS Transmission System between the Point(s) of Receipt and the Point(s) of Delivery under Part 3 of this Tariff. Reserved Capacity shall be expressed in terms of whole megawatts on a sixty (60) minute interval (commencing on the clock hour) basis.

**Residual Adjustment:** The adjustment made to ISO costs that are recovered through Schedule 1. The Residual Adjustment is calculated pursuant to Schedule 1.

**Residual Capacity Reservation Right ("RCRR"):** A megawatt of transmission capacity from one Load Zone to an electrically contiguous Load Zone, each of which is internal to the NYCA, that may be converted into an RCRR TCC by a Member System allocated the RCRR pursuant to Section 19.5 of Attachment M.

**Residual Transmission Capacity:** The transmission capacity determined by the ISO before, during and after the Centralized TCC Auction which is conceptually equal to the following:

$$\text{Residual Transmission Capacity} = \text{TTC} - \text{TRM} - \text{CBM} - \text{GTR} - \text{GTCC} - \text{ETCNL}$$

The TCCs associated with Residual Transmission Capacity cannot be accurately determined until the Centralized TCC Auction is conducted.

TTC is the Total Transfer Capability that can only be determined after the Residual Transmission Capacity is known.

GTR is the transmission capacity associated with Grandfathered Rights.

GTCC is the transmission capacity associated with Grandfathered TCCs.

ETCNL is the transmission capacity associated with Existing Transmission Capacity for Native Load.

TRM is the Transmission Reliability Margin.

CBM is the Capacity Benefit Margin.

**Retired:** As defined in the ISO Services Tariff.

**RMR Agreement:** An agreement of limited duration that provides for the continued operation of one or more RMR Generator(s) to satisfy one or more Generator Deactivation Reliability Need(s) entered into between the ISO and an entity or entities that own or have operational control over the RMR Generator(s).

**RMR Avoidable Costs:** The (a) fixed costs of an Initiating Generator that would be avoided if it were to exit the ISO-Administered Markets in the manner specified in its Generator Deactivation Notice, (b) the fixed costs of a Generator already in a Mothball Outage, an ICAP Ineligible Forced Outage, or that has been mothballed since before May 1, 2015 that would be incurred if it were to re-enter the ISO-Administered Markets pursuant to an RMR Agreement that would be avoided if it remained in such state, or (c) the costs necessary for a new Generator

proposed as a Short-Term Reliability Process Solution to enter service. RMR Avoidable Costs include mandatory capital expenditures, fixed operating and maintenance costs, and forgone opportunity costs, determined by the ISO in accordance with Section 38.8 of Attachment FF, as modified by the Commission. RMR Avoidable Costs do not include variable costs or any other type of cost that are included in the Generator's Energy or Ancillary Services reference levels, or that are ordinarily included in Energy or Ancillary Services reference levels.

**RMR Generator:** The Generator or Generators operating under an RMR Agreement.

**Rolling RTC:** The RTC run that is used to schedule a given 15-minute External Transaction. The Rolling RTC may be an RTC<sub>00</sub>, RTC<sub>15</sub>, RTC<sub>30</sub> or RTC<sub>45</sub> run.

## 1.19 Definitions - S

**Safe Operations:** Actions which avoid placing personnel and equipment in peril with regard to the safety of life and equipment damage.

**Scarcity Reserve Demand Curve:** A series of quantity/price points that defines the maximum Shadow Price for Operating Reserves to meet a Scarcity Reserve Requirement for which the pricing rules established in Section 15.4.6.1.1(b) of Rate Schedule 4 of the NYISO Services Tariff apply corresponding to each possible quantity of Resources that the ISO's software may schedule to satisfy that requirement. A single Scarcity Reserve Demand Curve will apply to the Real-Time Market for each such Scarcity Reserve Requirement.

**Scarcity Reserve Region:** A Load Zone or group of Load Zones containing EDRP and/or SCRs that have been called by the ISO to address the same reliability need, as such reliability need is determined by the ISO.

**Scarcity Reserve Requirement:** A 30-Minute Reserve requirement established by the ISO for a Scarcity Reserve Region in accordance with Rate Schedule 4 of the NYISO Services Tariff.

**Scheduled Energy Injection:** Energy injections which are scheduled on a real-time basis by RTC.

**Scheduled Energy Withdrawal:** Energy Withdrawals which are scheduled on a real-time basis by RTC.

**Scheduled Line:** A transmission facility or set of transmission facilities: (a) that provide a distinct scheduling path interconnecting the ISO with an adjacent control area, (b) over which Customers are permitted to schedule External Transactions, (c) for which the NYISO separately posts TTC and ATC, and (d) for which there is the capability to maintain the Scheduled Line actual interchange at the DNI, or within the tolerances dictated by Good Utility Practice. Each Scheduled Line is associated with a distinct Proxy Generator Bus. Transmission facilities shall only become Scheduled Lines after the Commission accepts for filing revisions to the NYISO's tariffs that identify a specific set or group of transmission facilities as a Scheduled Line. The transmission facilities that are Scheduled Lines are identified in Section 4.4.4 of the Services Tariff.

**SCUC:** Security Constrained Unit Commitment, described in Attachment C of the Tariff.

**Second Contingency Design and Operation:** The planning, design and operation of a power system such that the loss of any two (2) facilities will not result in a service interruption to either native load customers or contracted firm Transmission Customers. Second Contingency Design and Operation criteria do not include the simultaneous loss of two (2) facilities, but rather consider the loss of one (1) facility and the restoration of the system to within acceptable operating parameters, prior to the loss of a second facility. These criteria apply to thermal, voltage and stability limits and are generally equal to or more stringent than NYPP, NPCC and NERC criteria.



**Second Settlement:** The process of: (1) identifying differences between Energy production, Energy consumption or NYS Transmission System usage scheduled in a First Settlement, and the actual production, consumption, or NYS Transmission System usage during the Dispatch Day; and (2) assigning financial responsibility for those differences to the appropriate Customers and Market Participants. Charges for Energy supplied (to replace Generation deficiencies or unscheduled consumption), and payments for Energy consumed (to absorb consumption deficiencies or excess Energy supply) or changes in transmission usage will be based on the Real-Time LBMPs.

**Secondary Holder:** Entities that purchase TCCs and have not been certified as a Primary Holder by the ISO.

**Secondary Market:** A market in which Primary and Secondary Holders sell TCCs by mechanisms other than through the Centralized TCC Auction, Reconfiguration Auction, or by Direct Sale.

**Security Coordinator:** An entity that provides the security assessment and Emergency operations coordination for a group of Control Areas. A Security Coordinator must not participate in the wholesale or retail merchant functions.

**Self-Committed Fixed:** A bidding mode in which a Generator is self-committed and opts not to be Dispatchable over any portion of its operating range.

**Self-Committed Flexible:** A bidding mode in which a dispatchable Generator follows Base Point Signals within a portion of its operating range, but self-commits.

**Self-Supply:** The provision of certain Ancillary Services, or the provision of Energy to replace Marginal Losses by a Transmission Customer using either the Transmission Customer's own Generators or generation obtained from an entity other than the ISO.

**Service Agreement:** The initial agreement and any amendments or supplements thereto entered into by the Transmission Customer and the ISO for service under the Tariff or any unexecuted Service Agreement, amendments on supplements thereto, that the ISO unilaterally files with the Commission.

**Service Commencement Date:** The date the ISO begins to provide service pursuant to the terms of an executed Service Agreement, or the date the ISO begins to provide service in accordance with Section 3.3.3 or Section 4.2.1 under the Tariff.

**Settlement:** The process of determining the charges to be paid to, or by a Transmission Customer to satisfy its obligations

**Shadow Price:** The marginal value of relieving a particular Constraint which is determined by the reduction in system cost that results from an incremental relaxation of that Constraint.

**Shift Factor ("SF"):** A ratio, calculated by the ISO, that compares the change in power flow through a transmission facility resulting from the incremental injection and withdrawal of power on the NYS Transmission System.

**Short-Term Firm Point-To-Point Transmission Service:** Firm Point-to-Point Service, the price of which is fixed for a short term by a Transmission Customer acquiring sufficient TCCs with the same Points of Receipt and Delivery as its Transmission Service.

**Sink Price Cap Bid:** A monotonically increasing Bid curve provided by an entity engaged in an Export to indicate the relevant Proxy Generator Bus LBMP below which that entity is willing to either purchase Energy in the LBMP Markets or, in the case of Bilateral Transactions, to accept Transmission Service, where the MW amounts on the Bid curve represent the desired increments of Energy that the entity is willing to purchase at various price points.

**Southeastern New York (“SENY”):** An electrical area comprised of Load Zones G, H, I, J, and K, as identified in the ISO Procedures.

**Special Test Transactions:** The revenues or costs from purchases and/or sales of Energy that may occur pursuant to virtual regional dispatch/intra-hour transaction pilot tests conducted by the ISO to analyze potential solutions for, or approaches to resolving inter-market “seams” issues with neighboring control area operators.

**Start-Up Bid:** A Bid parameter that may vary hourly and that identifies the payment a Supplier requires to bring a Generator up to its specified minimum operating level from an offline state or a Demand Side Resource from a level of no Demand Reduction to its specified minimum level of Demand Reduction. If the Supplier is a BTM:NG Resource, it shall not submit a Start-Up Bid.

Start-Up Bids submitted for a Generator that is not able to complete its specified minimum run time (of up to a maximum of 24 hours) within the Dispatch Day are expected to include expected net costs related to the hour(s) that a Generator needs to run on the day following the Dispatch Day in order to complete its minimum run time. The component of the Start-Up Bid that incorporates costs that the Generator expects to incur on the day following the Dispatch Day is expected to reflect the operating costs that the Supplier does not expect to be able to recover through LBMP revenues while operating to meet the Generator’s minimum run time, at the minimum operating level Bid for that Generator for the hour of the Dispatch Day in which the Generator is scheduled to start-up. Settlement rules addressing Start-Up Bids that incorporates costs related to the hours that a Generator needs to run on the day following the Dispatch Day on which the Generator is committed are set forth in Attachment C to the ISO Services Tariff.

**Storm Watch:** Actual or anticipated severe weather conditions under which region-specific portions of the NYS Transmission System are operated in a more conservative manner by reducing transmission transfer limits.

**Strandable Costs:** Prudent and verifiable expenditures and commitments made pursuant to a Transmission Owner’s legal obligations that are currently recovered in the Transmission Owner’s retail or wholesale rate that could become unrecoverable as a result of a restructuring of the electric utility industry and/or electricity market, or as a result of retail-turned-wholesale customers, or customers switching generation or transmission service suppliers.

**Stranded Investment Recovery Charge (“SIRC”):** A charge established by a Transmission Owner to recover Strandable Costs.

**Sub-Auction:** The round or set of rounds in a given Centralized TCC Auction in which TCCs of a given start date and duration may be purchased.

**Subzone:** That portion of a Load Zone in a Transmission Owner's Transmission District.

**Supplier:** A Party that is supplying the Capacity, Energy and/or associated Ancillary Services to be made available under the ISO OATT or the ISO Services Tariff, including Generators, BTM:NG Resources, and Demand Side Resources that satisfy all applicable ISO requirements.

**Supplemental Event Interval:** Any RTD interval in which there is a maximum generation pickup or a large event reserve pickup or which is one of the three RTD intervals following the termination of the maximum generation pickup or the large event reserve pickup.

**Supplemental Resource Evaluation ("SRE"):** A determination of the least cost selection of additional Generators, which are to be committed, to meet: (i) changed or local system conditions for the Dispatch Day that may cause the Day-Ahead schedules for the Dispatch Day to be inadequate to meet the reliability requirements of the Transmission Owner's local system or to meet Load or reliability requirements of the ISO; or (ii) forecast Load and reserve requirements over the six-day period that follows the Dispatch Day.

**System Impact Study:** An assessment by the ISO of (i) the adequacy of the NYS Transmission System to accommodate a request to build facilities in order to create incremental transfer capability, resulting in incremental TCCs, in connection with a request for either Firm Point-To-Point Transmission Service or Network Integration Transmission Service; and (ii) the additional costs to be incurred in order to provide the incremental transfer capability.

## 1.20 Definitions - T

**Tangible Net Worth:** The value, determined by the ISO, of all of a Customer's assets less both: (i) the amount of the Customer's liabilities and (ii) all of the Customer's intangible assets, including, but not limited to, patents, trademarks, franchises, intellectual property, and goodwill.

**Third Party Sale:** Any sale for resale in interstate commerce to a power purchaser that is not designated as part of Network Load under the Network Integration Transmission Service.

**Third Party Transmission Wheeling Agreements ("Third Party TWAs"):** A Transmission Wheeling Agreement, as amended, between Transmission Owners or between a Transmission Owner and an entity that is not a Transmission Owner. Third Party TWAs are associated with the purchase (or sale) of Energy, Capacity, and/or Ancillary Services for the benefit of an entity that is not a Transmission Owner. All Third Party TWAs are listed in Attachment L, Table 1A, and are designated in the "Treatment" column of Table 1A, as "Third Party TWA."

**Total Transfer Capability ("TTC"):** The amount of electric power that can be transferred over the interconnected transmission network in a reliable manner.

**Trading Hub:** A virtual location in a given Load Zone, modeled as a Generator bus and/or Load bus, for scheduling Bilateral Transactions in which both the POI and POW are located within the NYCA.

**Trading Hub Energy Owner:** A Customer who buys energy in a Bilateral Transaction in which the POW is a Trading Hub, or who sells energy in a Bilateral Transaction in which the POI is a Trading Hub.

**Transaction:** The purchase and/or sale of Energy or Capacity, or the sale of Ancillary Services. A Transaction bid into the Energy market to sell or purchase Energy or to schedule a Bilateral Transaction includes a Point of Injection and a Point of Withdrawal.

**Transfer Capability:** The measure of the ability of interconnected electrical systems to reliably move or transfer power from one area to another over all transmission facilities (or paths) between those areas under specified system conditions.

**Transmission Congestion Contract Component ("TCC Component"):** As defined in the ISO Services Tariff.

**Transmission Congestion Contracts ("TCCs"):** The right to collect or obligation to pay Congestion Rents in the Day-Ahead Market for Energy associated with a single MW of transmission between a specified POI and POW. TCCs are financial instruments that enable Energy buyers and sellers to hedge fluctuations in the price of transmission.

**Transmission Customer:** Any Eligible Customer (or its designated agent) that (i) executes a Service Agreement, or (ii) requests in writing that the ISO file with the Commission a proposed unexecuted Service Agreement to receive Transmission Service under Part 3, 4 and/or 5 of the Tariff.

**Transmission District:** The geographic area in which a Transmission Owner, including LIPA, is obligated to serve Load, as well as the customers directly interconnected with the transmission facilities of the Power Authority of the State of New York.

**Transmission Facility Agreement (“TFA”):** Agreements governing the use of specific or designated transmission facilities charges to cover all, or a portion, of the costs to install, own, operate, or maintain transmission facilities, to the customer under the agreement and that have provisions to provide Transmission Service utilizing said transmission facilities. All Transmission Facility Agreements are listed in Attachment L. Table 1A, and are designated in the “Treatment” column as “Facility Agmt. – MWA.”

**Transmission Facilities Under ISO Operational Control:** The transmission facilities of the Transmission Owners listed in Appendix A-1 of the ISO/TO Agreement (“Listing of Transmission Facilities Under ISO Operational Control”) and listed in Appendix A-1 of an Operating Agreement (“NTO Transmission Facilities Under ISO Operational Control”) that are subject to the Operational Control of the ISO. This listing may be amended from time-to-time as specified in the ISO/TO Agreement and Operating Agreements.

**Transmission Facilities Requiring ISO Notification:** The transmission facilities of the Transmission Owners listed in Appendix A-2 of the ISO/TO Agreement (“Listing of Transmission Facilities Requiring ISO Notification”) and listed in Appendix A-2 of an Operating Agreement (“NTO Transmission Facilities Requiring ISO Notification”) whose status of operation must be provided to the ISO by the Transmission Owners (for the purposes stated in the ISO Tariffs and in accordance with the ISO OATT, ISO/TO Agreement, and/or Operating Agreements) prior to the Transmission Owners making operational changes to the state of these facilities. This listing may be amended from time-to-time as specified in the ISO/TO Agreement and Operating Agreements.

**Transmission Fund:** The mechanism used under the current NYPP Agreement to compensate the Member Systems for providing Transmission Service for economy Energy Transactions over their transmission systems. Each Member System is allocated a share of the economy Energy savings in dollars assigned to the fund that is based on the ratio of their investment in transmission facilities to the sum of investments in transmission and generation facilities.

**Transmission Owner:** The public utility or authority (or its designated agent) that owns facilities used for the transmission of Energy in interstate commerce and provides Transmission Service under the Tariff.

**Transmission Owner’s Monthly Transmission System Peak:** The maximum hourly firm usage as measured in megawatts (MW) of the Transmission Owner’s transmission system in a calendar month.

**Transmission Plan:** A plan developed by the ISO staff with Transmission Owner’s support that is a compilation of transmission projects proposed by the Transmission Owners and others, that are found to meet all applicable criteria.

**Transmission Reliability Margin (“TRM”):** The amount of TTC reserved by the ISO to ensure the interconnected transmission network is secure under a reasonable range of uncertainties in system conditions.

**Transmission Service:** Point-To-Point, Network Integration or Retail Access Transmission Service provided under Parts 3, 4 and 5 of the Tariff.

**Transmission Service Charge (“TSC”):** A charge designed to ensure recovery of the embedded cost of a transmission system owned by a Member System.

**Transmission Shortage Cost:** As defined in the NYISO Services Tariff.

**Transmission System:** The facilities operated by the ISO that are used to provide Transmission Services under Part 3, Part 4 or Part 5 of this Tariff.

**Transmission Usage Charge (“TUC”):** Payments made by the Transmission Customer to cover the cost of Marginal Losses and, during periods of time when the transmission system is Constrained, the marginal cost of Congestion. The TUC is equal to the product of: (1) the LBMP at the POW minus the LBMP at the POI (in \$/MWh); and (2) the scheduled or delivered Energy (in MWh).

**Transmission Wheeling Agreement (“TWA”):** The agreements listed in Table 1A of Attachment L to the ISO OATT governing the use of specific or designated transmission facilities that are owned, controlled or operated by an entity for the transmission of Energy in interstate commerce. TWAs between Transmission Owners have been modified such that all TWAs between Transmission Owners are now MWAs.

## **1.21 Definitions - U**

**UCAP Component:** As defined in the ISO Services Tariff.

**Unrated Customer:** As defined in the ISO Services Tariff.

**Unsecured Credit:** As defined in the ISO Services Tariff.

## **1.22 Definitions - V**

**Variably Scheduled Proxy Generator Bus:** A Proxy Generator Bus for which the ISO may schedule Transactions at 15 minute intervals in real time. Variably Scheduled Proxy Generator Buses are identified in Section 4.4.4 of the Services Tariff.

**Virtual Load:** As defined in the ISO Services Tariff.

**Virtual Supply:** As defined in the ISO Services Tariff.

**Virtual Transaction:** As defined in the ISO Services Tariff.

**Virtual Transaction Component:** As defined in the ISO Services Tariff.

**Voting Share:** The method used in the ISO Agreement to allocate voting rights among the members of the Management Committee. The formula for calculating a Party's Voting Share is provided in the ISO Agreement.



## **1.23 Definitions - W**

**West of Central-East (“West” or “Western”):** An electrical area comprised of Lead Zones A, B, C, D, and E, as identified in the ISO Procedures.

**Wheels Through:** Transmission Service, originating in another Control Area that is wheeled through the NYCA to another Control Area.

**Withdrawal-Eligible Generator:** As defined in the ISO Services Tariff.

**Wholesale Market:** The sum of purchases and sales of Energy and Capacity for resale along with Ancillary Services needed to maintain reliability and power quality at the transmission level coordinated together through the ISO and Power Exchanges. A party who purchases Energy, Capacity or Ancillary Services in the Wholesale Market to serve its own Load is considered to be a participant in the Wholesale Market.

**Wholesale Transmission Services Charges (“WTSC”):** Those charges calculated pursuant to Attachment H of the OATT, incurred or declared overdue by a Transmission Owner pursuant to Section 26.11.2 of Attachment K to the ISO Services Tariff, after the effective date of these revisions; provided, however, that these provisions will not apply to pre-petition bankruptcy debts for a company that is currently in bankruptcy.

**Wind Energy Forecast:** The ISO’s forecast of Energy that is expected to be supplied over a specified interval of time by an Intermittent Power Resource that depends on wind as its fuel and which is used in ISO’s Energy market commitment and dispatch.

**Withdrawal Billing Units:** A Transmission Customer’s Actual Energy Withdrawals (for all internal withdrawals) or Scheduled Energy Withdrawals (for all Export Energy withdrawals), including withdrawals for Wheels Through.

**WTSC Component:** As defined in the ISO Services Tariff.

## **1.24 Definitions - X**

## **1.25 Definitions - Y**

## **1.26 Definitions - Z**

**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. No re-dispatch settlement will occur on Other Coordinated Flowgates.

“**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 (s)**

The Parties will adhere to IROLs that each Party develops in accordance with its respective procedures.<sup>1</sup> IROLs will be determined as needed to maintain acceptable steady-state and transient performance of the NYISO and PJM Transmission Systems. Each Party will specify in its procedures the list of interfaces to which IROLs apply.<sup>2</sup> Each Party will monitor these limits for their respective IROLs in accordance with this Agreement and independently determine the applicable import and export transfer limits. Each Party agrees to operate the NYISO – PJM 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, when requested by either Party, to avoid an exceedance of any IROL identified. If an exceedance occurs, actions will be taken to clear the exceedance 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.

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<sup>1</sup> NYISO procedures are defined as ISO Procedures in the NYISO OATT. *See*, NYISO Emergency Operations Manual, available at [https://www.nyiso.com/documents/20142/2923301/em\\_op\\_mnl.pdf/99ef389d-4bca-fc0e-f12e-d91c0763cdca](https://www.nyiso.com/documents/20142/2923301/em_op_mnl.pdf/99ef389d-4bca-fc0e-f12e-d91c0763cdca). PJM's procedures are set forth in PJM Manual 37, section 3, SOL and IROL Limits available at: <https://www.pjm.com/-/media/documents/manuals/m37.ashx>

<sup>2</sup> *See*, NYISO Emergency Operations Manual Table A-6 and PJM Manual 37, section 3, SOL and IROL Limits available at: <https://www.pjm.com/-/media/documents/manuals/m37.ashx>.

## **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.

NYISO and PJM shall jointly develop and maintain a ‘PJM – NYISO Interconnection Facilities List’ (including a description of the facilities 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, NYISO and PJM shall post an updated list on their respective websites. Neither Party shall knowingly post a list that includes changes that are not the product of mutual agreement.

The PJM-NYISO *Interconnection* contains twenty-five (25) alternating current (“AC”) *Interconnection Facilities*, seven (7) of which form one (1) AC pseudo-tie<sup>3</sup>; and further contains two (2) HVDC *Interconnection Facilities* as well as one (1) *Variable Frequency Transformer (VFT)*.

For *Operational Control* purposes, the point of demarcation for each of the *Interconnection Facilities* is the point at which the *Interconnection Facility* crosses the PJM-New York State boundary, except as otherwise noted in the PJM – NYISO Interconnection Facilities List posting.

The following table identifies 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>4</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

<sup>3</sup> WEQ-007 “Inadvertent Interchange Payback Standards,” North American Energy Standards Board (NAESB), on-line at [www.naesb.org](http://www.naesb.org).

<sup>4</sup> See NYISO Market Administration and Control Area Services Tariff Section 4.4.4 for additional information.

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).
- 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.

$Zonal\_Total\_Load_{zone} = Load_{zone} + Losses_{zone}$ , 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\***

<b>Proxy</b>	<b>Balancing Authorities Responsible</b>
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,
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(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;

$MICH-OH\_PAR\_Impact_{Flowgate-m}$  = the expected impact of the operation of the PARs at the Michigan-Ontario border on the flow on Flowgate m;

$PSF_{(MICH-OH\ Path, Flowgate-m)}$  = the PSF of each of the four Michigan-Ontario PAR paths on Flowgate m;

$RTO\_MF_{MICH-OH\ Path}$  = 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.

$$LEC\ Adjusted\ Market\ Flow_{Flowgate-m} = RTO\_MF_{Flowgate-m} - MICH - OH\_PAR\_Impact_{Flowgate-m}$$

Where:

Flowgate-m = the relevant flowgate;

MICH-OH Path = each of the four PAR paths connecting Michigan to Ontario, Canada;

$MICH-OH\_PAR\_Impact_{Flowgate-m}$  = the expected impact of the operation of the PARs at the Michigan-Ontario border on the flow on Flowgate m;

$RTO\_MF_{Flowgate-m}$  = 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; and

LEC Adjusted Market Flow $_{Flowgate-m}$  = 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>5</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>5</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>6</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>6</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.