



December 30, 2011

Honorable Kimberly D. Bose  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E., Room 1A  
Washington, D.C. 20426

Re: *New York Independent System Operator, Inc.*,  
Docket No. ER08-1281-\_\_\_\_;  
*New York Independent System Operator, Inc. and PJM Interconnection, L.L.C.*,  
Docket No. ER12-\_\_\_\_ - 000  
Jointly Submitted Market-to Market Coordination Compliance Filing

Dear Ms. Bose:

Pursuant to the Federal Energy Regulatory Commission's ("Commission") December 30, 2010 *Order on Rehearing and Compliance* issued in this proceeding ("December Order")<sup>1</sup> and the Commission's July 1, 2011 *Order on Rehearing* ("July Order"),<sup>2</sup> the New York Independent System Operator, Inc., ("NYISO") and PJM Interconnection, L.L.C. ("PJM") (collectively the "RTOs") submit, in electronic format, revisions to the Joint Operating Agreement ("JOA") between NYISO and PJM that is set forth in Attachment CC to the NYISO's Open Access

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<sup>1</sup> *New York Independent System Operator, Inc.*, 133 FERC ¶ 61,276 (2010).

<sup>2</sup> *New York Independent System Operator, Inc.*, 136 FERC ¶ 61,011 (2011).

Transmission Tariff (“NYISO OATT”).<sup>3</sup> The NYISO also proposes revisions to its Market Administration and Control Area Services Tariff (“NYISO Services Tariff”) to remove a congestion management pilot program that will be superseded when M2M takes effect.<sup>4</sup> In future filings the RTOs will request permission to terminate their Unscheduled Transmission Service (“UTS”) Agreement that the Commission accepted for filing in 2002,<sup>5</sup> when the Market-to-Market Coordination Process (“M2M”) takes effect at the end of 2012. The RTOs propose to implement an improved UTS process as a component of M2M.<sup>6</sup>

The RTOs request a flexible effective date for the JOA and other tariff revisions proposed herein. The RTOs will use best efforts to deploy and be prepared to implement M2M by the end of 2012. In no event will implementation occur later than January 15, 2013.<sup>7</sup>

## **I. Background**

In compliance with the Commission’s directives, the RTOs and their stakeholders have worked together for the past year to develop mutually agreeable M2M provisions for the JOA.

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<sup>3</sup> Order No. 714, *Electronic Tariff Filings*, ¶ 31,276 (2008), and Section 35.1 of the Commission’s regulations, 18 C.F.R. § 35.1(a), allow multiple public utilities that are parties to the same tariff (*e.g.*, a joint tariff such as the JOA) to designate one of the public utilities as the designated filer of the joint tariff. The designated filer submits a single tariff filing for inclusion in its database that reflects the joint tariff, along with the requisite certificates of concurrence from the other parties to the joint tariff. NYISO is the designated filing party for the JOA. Therefore, NYISO is submitting the JOA modifications in the instant filing along with PJM’s Certificate of Concurrence. The designation of the NYISO as the designated filer for the JOA is for administrative convenience and in no way shall limit PJM’s filing rights under the Federal Power Act as they relate to the JOA.

<sup>4</sup> PJM will submit to FERC a separate eTariff filing to remove from the PJM OATT the *Interregional Congestion Pilot Program*. PJM will submit such filing at least 60 days prior to the effective date of the proposed JOA modifications.

<sup>5</sup> The UTS Agreement was accepted for filing in a Letter Order that was issued pursuant to delegated authority in Docket Nos. ER01-1115-000, 001 and 002 on March 6, 2002.

<sup>6</sup> The RTOs will submit such filings at least 60 days prior to the effective date of the proposed JOA modifications.

<sup>7</sup> The RTOs recognize that an extension of time or waiver would be needed to permit implementation after December 31, 2012.

The attached JOA revisions including a new M2M Schedule D represent the culmination of those efforts.

A. Description of M2M

The fundamental philosophy behind the M2M transmission congestion coordination process that is set forth in the RTOs' proposed JOA revisions is to allow transmission constraints that are significantly impacted by generation dispatch changes in both the NYISO and PJM markets or by the operation of the Ramapo PARs to be jointly managed in the real-time security-constrained economic dispatch models of both RTOs. 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 facilitate price convergence at the market boundaries.

M2M focuses on real-time market coordination to manage transmission limitations that occur on designated M2M Flowgates in a more cost effective manner. Coordination between the RTOs will include not only joint redispatch, but will also incorporate coordinated operation of the Ramapo 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.

M2M Entitlements are the equivalent of financial rights that will be granted to PJM and to the NYISO to use each other's transmission system within the confines of the M2M process. A crucial element of M2M is developing an equitable set of entitlements for both PJM and NYISO so that benefits are expected to be derived by both parties. Whatever level of M2M Entitlements are agreed to will be used as a baseline to provide compensation to either PJM or the NYISO

depending on how the actual level of each others' Market Flows compares to the level of M2M Entitlements.

Given the direct impact that M2M Entitlements can have on interregional settlement outcomes, developing a sound approach for determining M2M Entitlements is imperative. Because M2M Entitlements are rights to use the stakeholder-owned transmission system and M2M Entitlements result in settlement obligations that the Parties' stakeholders are directly responsible for, stakeholder vetting is a prerequisite to the Parties reaching agreement on an approach for determining M2M Entitlements. Before M2M is implemented, both the method of determining M2M Entitlements and the initial M2M Entitlements must be verified by both Parties and vetted with stakeholders.

#### B. Scope of M2M

The first market-to-market coordination process was implemented by PJM and the Midwest Independent Transmission System Operator, Inc. ("MISO"). PJM and MISO operate contiguous, intertwined, control areas with sinuous borders that are hundreds of miles long. The PJM and MISO transmission systems are largely synchronously interconnected via alternating current ("A/C") facilities. There are few phase angle regulators ("PARs"), direct current ("D/C") interfaces, or other transmission facilities designed specifically to regulate or control power flows located at the PJM/MISO borders.

The border between the NYISO and PJM is quite different from the MISO/PJM border. The NYISO/PJM border is limited to the Southern, and a bit of the Western boundary of New York State (on the NYISO side) and to the Northern boundaries of Pennsylvania and New Jersey (on the PJM side). The eight 230 kV and above transmission facilities interconnecting New York and New Jersey are all PAR-controlled, or are separately scheduled and operate using D/C or

other advanced control technologies. Only four major (230 kV and above) interconnection facilities are completely free-flowing. They are located along the border between Western New York and Pennsylvania.

Because there are PAR controls at the NYISO/PJM border that can (and do) provide a significant, cost effective regional congestion management resource, the expected operation of the PARs at the PJM/NYISO border needs to be incorporated into the RTOs' implementation of M2M. Failure to incorporate PAR operations into M2M could (a) result in PAR actions that would be inconsistent with and negate the expected benefit of M2M redispatch, or (b) result in M2M redispatch actions that would be inconsistent with PAR schedules, or (c) preclude the utilization of available, cost effective congestion management resources. In other words, failure to incorporate PAR operations into M2M could produce inefficient results that could increase system costs and reduce or eliminate the benefits that M2M can provide.

To the extent the operation of PARs at the PJM/NYISO border is governed by existing agreements, the RTOs have endeavored to ensure that M2M will not prevent the implementation of those existing agreements. There are two existing agreements that the RTOs paid careful attention to when developing M2M—the UTS Agreement and the *Operating Protocol for the Implementation of Con Ed – PJM Transmission Service Agreements* (“ConEd Wheel Agreement”).<sup>8</sup>

The UTS Agreement addresses unscheduled transmission service and the operation of the Ramapo PARs to minimize regional transmission congestion. The Ramapo PARs connect the NYISO and PJM bulk transmission systems together at the New York/New Jersey border. The Ramapo PARs are utilized to (i) facilitate scheduled interchange transfers between PJM and

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<sup>8</sup> The ConEd Wheel Agreement is Schedule C to the RTOs' JOA. Schedule C to the JOA replaces Attachment M-1 to the NYISO's Services Tariff effective May 1, 2012.

NYISO, (ii) ensure other transmission facilities between PJM and NYISO can meet their schedules, and (iii) reduce congestion caused by heavy west to east system dispatch.

The use of Ramapo PARs to minimize congestion is governed by the UTS Agreement. The UTS Agreement allows PJM or NYISO to recover part of the costs of unscheduled transmission service caused by mismatches between the actual and scheduled flows on the 5018 interconnection, across the Ramapo PARs. The existing UTS settlement is limited to times when a few select constraints are active, and limits the recovery to the delta of the prices at two surrogate locations.

The proposed M2M Real-Time Ramapo PAR Coordination process will improve upon the existing UTS Agreement by (a) expanding the permitted cost recovery to include any and all congestion on agreed upon M2M Flowgates caused by one RTO's "overuse" of the other RTO's transmission system, and (b) using the actual congestion cost calculated at the Ramapo PARs to determine the settlement instead of approximating the cost using prices from designated surrogate locations. These two improvements will lead to more efficient use of the Ramapo PARs and to better convergence of transmission congestion costs at the RTOs' common border.

The M2M rules that NYISO and PJM propose also differ from PJM's implementation of market-to-market with MISO because the RTOs can draw upon PJM's experience in implementing market-to-market with MISO. For example, the RTOs do not propose to include the yet-to-be-used Day-Ahead market-to-market pre-coordination process that exists in PJM's agreement with MISO.

### C. Stakeholder Involvement

The M2M rules proposed in this filing are the product of extensive discussions between the RTOs and they reflect input from the RTOs' market participants. The RTOs held M2M Joint Stakeholder Meetings on July 21, 2011 and November 3, 2011.

In addition to the Joint Stakeholder Meetings, the NYISO has formally presented on and discussed M2M with its stakeholders on at least eight occasions. These occasions include presentations at the NYISO Market Issues Working Group meetings held on March 31, May 26, September 16, September 26, October 19 and October 27, 2011, and presentations to the NYISO's Business Issue Committee ("BIC") on October 12 and November 9, 2011. In addition to the formal BIC presentations listed above, M2M was addressed in the Market Seams Reports that were presented and discussed at almost every BIC meeting held in 2011.

PJM also formally presented on and discussed M2M coordination with the NYISO with its stakeholders at its Market Implementation Committee ("MIC") meetings held on January 11, February 8, March 17, April 12, May 10, June 14, July 12, August 9, September 13, October 6, November 1, and December 13, 2011. Similar presentations were also provided to PJM Stakeholders at its Markets and Reliability Committee ("MRC") meetings held on January 19, February 16, March 16, April 27, June 22, August 17, September 15, October 12, November 16, and December 21, as well as the PJM Members Committee ("MC") on November 22, 2011.

During the meetings, the RTOs have explained key M2M concepts and, in some cases, presented and discussed the proposed JOA revisions, proposed M2M Schedule, and other proposed Tariff revisions with their stakeholders. The RTOs received feedback from their stakeholders and incorporated stakeholder-requested changes that ranged from conceptual proposals to specific edits into the M2M Tariff revisions that are submitted with this filing letter.

The NYISO's stakeholders have requested, but have not yet been presented with information addressing expected M2M Entitlement values. Because M2M Entitlements are the equivalent of financial rights to use the stakeholder-owned transmission system and result in interregional settlement obligations that stakeholders are directly responsible for, the RTOs agree that further stakeholder review of both the method of developing M2M Entitlements and the calculation of M2M Entitlements are warranted.

## **II Communications and Correspondence**

Copies of correspondence concerning this filing should be served on:

Ricardo T. Gonzales,  
Chief Operating Officer  
Rana Mukerji,  
Senior Vice President of Market Structures  
Robert E. Fernandez,  
General Counsel  
Raymond Stalter,  
Director of Regulatory Affairs  
\*Alex M. Schnell  
James H. Sweeney,  
Attorney  
New York Independent System Operator, Inc.  
10 Krey Boulevard  
Rensselaer, NY 12144  
Tel: (518) 356-6000  
Fax: (518) 356-4702  
aschnell@nyiso.com

Steven R. Pincus  
Assistant General Counsel  
James M. Burlew  
Counsel  
PJM Interconnection, L.L.C.  
955 Jefferson Avenue  
Valley Forge Corporate Center  
Norristown, PA 19403  
Tel: (610) 666-4370  
Fax: (610) 666-8211

\* Persons designated for receipt of service.

## **III. Description of Proposed Tariff Revisions**

As discussed in detail below, the vast majority of the revisions submitted in this compliance filing are to the RTOs' JOA. In particular, the RTOs propose to add a new Schedule D to the JOA that will specify the rules for implementing M2M. The revisions that the NYISO proposes to its Market Services Tariff are limited to removing an interregional congestion management

pilot program that the NYISO and PJM put in place back in 2002,<sup>9</sup> but that the RTOs have not attempted to implement in several years.<sup>10</sup>

A. Proposed Revisions to the Body of the JOA

The RTOs propose to revise Section 35.1 of the JOA to update the overall purpose and goal of the JOA. In addition, Section 35.2—Abbreviations, Acronyms and Definitions—is revised by moving all abbreviations and acronyms contained in the existing Section 35.2.1, Abbreviations and Acronyms, into a comprehensive list of all abbreviations, acronyms and definitions and to remove the standalone Section 35.2.1. NYISO also proposes to add a number of “standard” defined terms to the JOA.

NYISO also propose to add the following definitions to the JOA:

- **“CIM”** refers to a Common Infrastructure Model.
- **“Generator to Load Distribution Factor”** refers to a generator’s impact on a Flowgate while serving load in that generator’s market footprint.
- **“M2M”** refers to the transmission congestion coordination process that is set forth in the proposed Schedule D to the JOA.
- **“M2M Entitlement”** refers to the share of the Monitoring RTO’s M2M Flowgate’s capability allocated to the Non-Monitoring RTO.
- **“M2M Event”** refers to the period when both the RTOs are operating under the M2M coordination process contained in Schedule D to this Agreement.
- **“M2M Flowgate”** refers to the Flowgates where Constraints are jointly monitored and coordinated by the Monitoring and Non-Monitoring RTOs throughout a M2M Event.
- **“Market Flows”** refers to the calculated energy flows on a specified Flowgate resulting from dispatch of generating resources serving load within an RTO’s market.

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<sup>9</sup> The NYISO’s Tariff revisions to implement the interregional congestion management pilot program were submitted in Docket No. ER02-194-000 and ultimately accepted (following the NYISO’s submission of compliance revisions) in a Letter Order dated February 27, 2002.

<sup>10</sup> PJM will submit to FERC a separate eTariff filing to remove from the PJM OATT the *Interregional Congestion Pilot Program*. PJM will submit such filing at least 60 days prior to the effective date of the proposed JOA modifications.

- **“Monitoring RTO”** refers to the Party that has operational control of a M2M Flowgate.
- **“Non-Monitoring RTO”** refers to the Party that does not have operational control of a M2M Flowgate.
- **“PAR OTDF”**, also known as PAR shift factor, shall mean the ratio of a change in flow on a Flowgate, up to 1, due to a change in PAR active power transfer.
- **“RTO”** means Regional Transmission Organization. For ease of reference, the New York Independent System Operator, Inc., is referred to as an RTO in this Agreement and the NYISO and PJM are referred to collectively as the “RTOs” or the “participating RTOs.”
- **“Shadow Price”** means the marginal value of relieving a constraint which is determined by the reduction in production cost that would result from an incremental relaxation of that constraint.
- **“Target Value”** shall be determined for each Ramapo PAR by a formula based on the net interchange schedule between the NYISO and PJM plus the deviation of actual flows from desired flows across the ABC and JK interfaces.

In Section 35.3—Overview, Administration, and Relationship with Other Agreements—the RTOs propose to include M2M coordination as a fundamental purpose of the JOA and to revise the Coordination Committee’s responsibilities. The proposed revisions clarify the Coordination Committee’s duty to implement the intent of the JOA, not to execute the real-time aspects of the JOA. The Coordination Committee cannot be responsible for all aspects of the JOA due to the immediacy of certain real-time functions, such as M2M coordination.

In Section 35.7—Exchange of Information—the RTOs propose to specifically identify additional information that they may need to exchange to implement M2M. Such information includes the following: (i) modeling data; (ii) actual M2M Flowgate Flows; (iii) actual limits for M2M Flowgates; (iv) *ex ante* Shadow Prices on constrained M2M Flowgates; (v) requested relief during a M2M Event; (vi) Market Flow calculation data; (vii) Market Flows on M2M Flowgates; and (viii) binding constraint thresholds.

Section 35.8—Confidential Information—the RTOs propose to more clearly define the basis, treatment and protection of confidential information within NYISO and PJM.

Section 35.12—M2M Coordination Process—the RTOs propose to add a new Section to the body of the JOA that briefly summarizes the M2M process.

For Section 35.15—Dispute Resolution Procedures—the RTOs propose to revise the procedures that will be utilized for resolution of M2M coordination disputes, in addition to disputes that arise under other provisions of the JOA. The proposed additional provisions will allow: (i) the RTOs' senior officers to agree to continue to work together to resolving disputes; (ii) the RTOs to request FERC's Dispute Resolution Service to mediate a dispute; or (iii) either RTO to seek formal resolution by initiating a proceeding before the Commission.

Section 35.19—Effective Date, Implementation, Term and Termination—the RTOs propose to remove the ten year term and provide that the JOA shall continue in full force and effect unless terminated. The RTOs also propose to revise Section 35.19.4, to require that Confidential Information be protected for a period of seven years following termination of the JOA.

In Section 35.20—Additional Provisions—the RTOs propose a number of additions including: (i) a Limitation on Claims Section; (ii) General Billing and Payment Rules; and (iii) Billing and Payment rules for the M2M Coordination Process.

- The proposed Limitation on Claims Section specifies that no claim seeking an adjustment in the billing for any service, transaction, or charge under this JOA may be asserted with respect to a week or month, if more than one year has elapsed.
- The proposed General Billing and Payment Rules provide a more structured process for billing and payment, than the current JOA, for any charges arising outside of the M2M process.

- The proposed Billing and Payment provisions that apply to the M2M Coordination Process require: (a) the NYISO to provide invoice and settlement information to PJM; (b) all amounts due be paid pursuant to the relevant RTO's tariffs, respectively; (c) that each RTO assume responsibility for satisfying the M2M payment obligations; and (d) that interest on unpaid balances be calculated in accordance with the methodology specified for interest on refunds in the Commission's regulations.

In addition to the revisions to the body of the JOA that are described above, the RTOs propose several types of ministerial revisions that appear throughout the JOA.

B. Proposed Revisions to Schedule A to the JOA

The RTOs propose to delete a reference to the UTS Agreement from Schedule A to the JOA because the RTOs propose to implement an improved set of UTS rules as a component of M2M.

C. Proposed Addition of Schedule D to the JOA

Proposed Schedule D to the JOA is entirely new. Schedule D sets forth the RTOs' proposed rules for implementing M2M.

Section 1 of proposed Schedule D introduces the M2M concept and explains that M2M includes both generator redispatch and PAR control actions. The proposed M2M process focuses on real-time market coordination to manage congestion that occurs on M2M Flowgates in a more effective manner.

Section 2 introduces the concept of M2M Flowgates and explains how they will be developed. Only a subset of the transmission constraints that may exist in New York or PJM will be eligible for coordinated congestion management. M2M Flowgates are Flowgates where

constraints will be jointly monitored and coordinated by the RTOs. All M2M Flowgates will be eligible for coordination using the Ramapo PARs. A smaller subset of M2M Flowgates will also be eligible for generator redispatch coordination. NYISO and PJM will each publicly post a list of the M2M Flowgates in their respective control areas on their web sites.

Section 3 explains the study process that will be used to determine which constraints should be jointly coordinated as M2M Flowgates. The studies determine if a generator located in the Non-Monitoring RTO, or if the Ramapo PARs, have a significant impact on a studied constraint located in the Monitoring RTO. The RTOs must mutually agree to the introduction of each M2M Flowgate, and may mutually agree to add a M2M Flowgate that does not meet the specified study criteria.

Section 4 sets forth the proposed rules for removing previously established M2M Flowgates.

Section 5 sets forth the proposed rules for determining M2M Market Flows. M2M Market Flows are used in the M2M redispatch coordination process and to determine the resulting settlement. M2M Market Flows are defined in the body of the JOA as “the calculated energy flows on a specified Flowgate as a result of dispatch of generating resources serving load within an RTO’s market.” The determination of M2M Market Flows is a data intensive process. The details of how M2M Market Flows are determined are described below.

Section 5.1—Determine Shift Factors for M2M Flowgates—the first step in determining M2M Market Flows is calculating generator, load and PAR shift factors for the each M2M Flowgate. For real-time M2M coordination, the shift factors will be based on the real-time transmission system topology.

Section 5.2—Compute RTO Load Served by RTO Generation—compute the RTO load served by RTO generation, in MWs, by summing the load and losses for each load zone to determine the total zonal load for each RTO load zone and subtracting out the load that is served by imports in each RTO load zone.

Section 5.3—Compute RTO Generation Serving RTO Load—using real-time generation output in MWs, sum the output of RTO generation within each load zone after subtracting out generation serving export schedules to compute the RTO generation serving RTO load.

Section 5.4—Compute RTO Generation-to-Load for all M2M Flowgates—determine the impact that the Non-Monitoring RTO's Generation that is serving the Non-Monitoring RTO's Load has on each M2M Flowgate in the Monitoring RTO.

Section 5.5—Compute the RTO Interchange Scheduling Impacts for all M2M Flowgates—compute the impact of the Non-Monitoring RTO's scheduled interchange on each M2M Flowgate in the Monitoring RTO. Interchange scheduled directly between PJM and NYISO is assigned to the Monitoring RTO.

Section 5.6—Compute the PAR Effects on M2M Flowgates—this section identifies two classes of PARs, Common and Non-Common. Common PARs are located at the NYISO/PJM border. The Non-Common PARs are the St. Lawrence PARs at the New York/Ontario border. The Non-Monitoring RTO incorporates the impact of the Common PARs operation when determining the impacts of its M2M Market Flow on the Monitoring RTO's M2M Flowgates. The NYISO is responsible for incorporating the impacts of the Non-Common PARs on the M2M Market Flows affecting both participating RTOs M2M Flowgates.

Section 5.7—Compute the RTO Aggregate Market Flow for all M2M Flowgates—calculates the Non-Monitoring RTO’s M2M Market Flow impact on each of the Monitoring RTO’s M2M Flowgates, taking into account all of the adjustments described above.

Section 6 provides a preliminary explanation of how the RTOs anticipate M2M Entitlements will be determined. M2M Entitlements are rights granted to the Non-Monitoring RTO to use the Monitoring RTO’s M2M Flowgates. When a M2M Flowgate is congested, the Monitoring RTO pays the Non-Monitoring RTO if its M2M Market Flow over the congested M2M Flowgate is less than the Non-Monitoring RTO’s M2M Entitlement. The Non-Monitoring RTO pays the Monitoring RTO if its M2M Market Flow over the congested M2M Flowgate exceeds the Non-Monitoring RTO’s M2M Entitlement.

The RTOs worked together to develop a preliminary M2M Entitlement determination method. The RTOs are utilizing prototype market flow calculator systems in order to produce indicative values of what the M2M Entitlements would be in production. The RTOs continue to evaluate these systems and investigate market flow results on a subset of flowgates that are higher than the RTOs expected. The RTOs agree that further review of both the method of developing M2M Entitlements and the calculation of M2M Entitlements are warranted. A crucial element of M2M is developing an equitable set of M2M Entitlements so that both PJM and New York derive benefits from M2M. The RTOs expectations, given the PAR controlled nature of the interfaces between the two markets, is that the M2M Entitlements will be small on both systems. Given the direct impact that M2M Entitlements have on interregional settlement outcomes, developing a sound approach for determining M2M Entitlements is imperative.

For the reasons explained above, the RTOs have not included in the proposed M2M Schedule the specific formulas used to calculate M2M Entitlements. The RTOs expect to be

able to complete these evaluations in approximately four months; at which time the RTOs expect to file additional revisions to Section 6 of proposed Schedule D of the JOA.

There are two other M2M Entitlement-related issues that the RTOs may propose to revise Section 6 of Schedule D to address in approximately four months time. They are: (a) the modeling of external capacity resources for purposes of developing M2M Entitlements; and (b) agreeing on appropriate criteria to determine when the Ontario/Michigan PARs will be reflected in the M2M Entitlement calculations as holding flow.

Should anomalous M2M Market Flow or M2M Entitlement results occur after M2M is implemented, the parties to the JOA will have the ability to utilize Schedule D, Section 10.1.7 to suspend M2M coordination until a equitable resolution is achieved.

Section 7 sets forth the proposed rules for coordinating real-time dispatch. The M2M coordination tools available in real-time are redispatch coordination and Ramapo PAR coordination. Coordinated operation of the Ramapo PARs will permit the RTOs to use the PARs to redirect energy to reduce the overall cost of managing transmission congestion and to converge the RTOs' cost of managing transmission congestion.

When a M2M redispatch coordination Flowgate binds 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 M2M Flowgate that may benefit from redispatch assistance. The Monitoring and Non-Monitoring RTOs will each provide the economic value of the M2M Flowgate constraint (*i.e.*, the Shadow Price) as calculated by their respective dispatch models and the security-constrained economic dispatch of the Non-Monitoring RTO will include the M2M Flowgate constraint. The Monitoring RTO will evaluate the actual loading of the M2M 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 can. The iterative process of evaluating both participants' Shadow Prices to relieve the active M2M Flowgate will continue until the RTOs Shadow Prices converge and an efficient redispatch solution is achieved.

Section 7.1 provides a step-by-step explanation of how the RTOs will carry out the real-time redispatch coordination process.

Section 7.2 recognizes the multiple purposes that the Ramapo PARs serve (facilitating scheduled interchange between the NYISO and PJM, supporting the ConEd Wheel Agreement,<sup>11</sup> and participating in M2M congestion relief) and explains how the Ramapo PARs may be operated to minimize regional congestion. Sections 7.2 (including all sub-sections) and 8.3 of proposed Schedule D replace the UTS Agreement.

Section 7.2.1 sets the target value that each of the Ramapo PARs will operate to. Ordinarily, the Ramapo PARs are expected to direct 61% of the net interchange between New York and PJM that is scheduled at the Keystone Proxy Generator Bus over the 5018 A/C transmission line. Consistent with the terms of the UTS Agreement (which the RTOs propose to retire and replace with this Schedule D to their JOA), the 5018 line is also expected to carry 72% of any imbalance in the ConEd Wheel Agreement schedule. Additionally, the Parties have agreed to include the remaining 28% of any imbalance in the ConEd Wheel Agreement schedule when calculating the Ramapo target value. Provisions of the ConEd Wheel Agreement, including the Auto Correction Factor that may apply if the ConEd Wheel is not delivered consistent with ConEd's election, are also reflected in Section 7.2.1 of Schedule D. The RTOs have incorporated certain ConEd Wheel Agreement terms and conditions into the M2M rules

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<sup>11</sup> Again, the ConEd Wheel Agreement is Schedule C to the RTOs' JOA. Schedule C to the JOA replaces Attachment M-1 to the NYISO's Services Tariff effective May 1, 2012.

that address the operation of the Ramapo PARs to ensure that the RTOs' implementation of M2M will occur in a manner that is consistent with their preexisting regulatory obligations.

The RTOs are discussing whether, and under what circumstances, it may be appropriate to limit M2M obligations and settlements based on the physical capabilities (*e.g.*, thermal rating) of the 5018 transmission line. The RTOs expect to be able to complete their evaluations and all necessary stakeholder discussions in approximately four months; at which time the RTOs may file additional revisions to Section 7 of proposed Schedule D of the JOA.

Section 7.2.2 sets forth the method for calculating NYISO and PJM's respective congestion costs at the Ramapo PARs. The RTOs' respective congestion costs are compared to determine when the Ramapo PARs can provide cost-effective congestion relief. In some circumstances, significant congestion relief may be provided to New York or PJM by permitting the Ramapo PARs to deviate from their expected schedule.

Section 7.2.3 explains how the RTOs may operate the Ramapo PARs when a comparison of the congestion costs developed in accordance with Section 7.2.2 indicates that permitting power flows over the 5018 line to deviate from the 61% of scheduled interchange expectation is likely to provide valuable congestion relief. Section 8.3 of Schedule D sets forth settlement rules that apply whenever the Ramapo PARs are off-schedule.

Section 8 of Schedule D to the JOA describes the rules for financially settling the M2M coordination process. This section breaks the settlement into two distinct components, settlement of redispatch coordination and settlement of Ramapo coordination, and then combines the two components into a single real-time settlement for all M2M coordination that was underway for a particular day, hour, or portion of an hour. All settlements will be computed by the NYISO for invoicing.

Section 8.1 explains that the M2M settlement calculations require *ex-ante* Shadow Prices, Market Flows, and Ramapo PAR impacts for each M2M Flowgate, as well as, the actual real-time flow and target flow of each Ramapo PAR.

Section 8.2 explains the determination of the real-time redispatch settlement, including how the M2M Entitlement for each M2M Flowgate is used to determine whether the Monitoring RTO pays the Non-Monitoring RTO for the relief provided, or whether the Non-Monitoring RTO owes the Monitoring RTO for contributing to the Monitoring RTO's M2M Flowgate congestion. These calculations will be performed on an interval (normally five minutes long) basis by the NYISO based on the M2M Flowgate *ex-ante* Shadow Price times the difference between the M2M Entitlement and the Non-Monitoring RTO's Market Flow.

Section 8.3 explains the determination of the Ramapo PARs settlement. Comparison of the actual real-time Ramapo PAR flow and Ramapo PAR target flow will determine which RTO is overtaking MWs across the Ramapo PARs/5018 transmission line. The RTO that is delivering MWs across Ramapo in excess of its scheduled value will compensate the other RTO based on the difference between the actual and target flows times the transmission congestion costs of the other RTO.

Section 8.4 describes how the two settlements in Sections 8.2 and 8.3 will be combined and rolled up to an hourly settlement.

Section 9 addresses how the shadow price to resolve a constraint on a M2M Flowgate will be determined when one of the RTOs does not have sufficient redispatch capability available to resolve the constraint. The proposed solution should improve the RTOs' shadow price convergence.

Section 10 addresses when M2M settlements will, or will not, apply. Sections 10.1.1 through 10.1.3 describe the circumstances under which M2M will apply.

Section 10.1.4 effectively states that when the Monitoring RTO has multiple constrained M2M Flowgates, the M2M process will ordinarily be applied to the most limiting of the M2M Flowgates.

Sections 10.1.5 and 10.1.6 address abnormal or transient operating conditions under which an RTO may briefly delay implementation of M2M.

Section 10.1.7 provides a “circuit breaker” that permits an RTO that has received an M2M charge in excess of \$500,000 for a market-day to temporarily suspend the M2M process (for a specific M2M Flowgate, or overall) while the RTOs perform a review to make sure that the M2M process is being implemented appropriately and is producing just and reasonable results. If, following their review, the RTOs agree that there is no problem (the charge was justified), then M2M shall be re-initiated as quickly as possible. Otherwise, M2M may be partially or wholly suspended until the RTOs resolve their concerns.

Section 10.1.8 excuses payment for Ramapo PAR overuse charges when the RTO that is overusing the other RTO’s transmission system requested that PAR taps be taken to reduce or eliminate such overuse, but the request for PAR taps to prevent overuse was denied.

Section 10.2 permits either RTO to request an after-the-fact review of M2M coordination to determine if M2M was invoked consistent with the proposed Schedule D rules. Settlements may be adjusted if the results of the review indicate that the M2M process should not have been invoked.

Section 10.3 guarantees each of the RTOs access to sufficient data to verify the calculations that determine M2M settlement. The body of the JOA also includes new provisions that grant the RTOs access to data that is necessary to implement M2M.

Section 11 of the JOA provides for review when either RTO proposes to change a process that it uses to implement M2M. Notice of a proposed change and an opportunity to request modifications to or dispute a proposed change are required.

D. M2M Issues that Still Need to Be Resolved

There are several topics that the RTOs continue to discuss which may result in subsequent filings to amend Schedule D of the JOA. As discussed above, the RTOs may propose revisions to: (1) the method of calculating M2M Entitlements; (2) the modeling of external capacity resources for purposes of developing M2M Entitlements; (3) set appropriate criteria to determine when the Ontario/Michigan PARs will be reflected in the M2M Entitlement calculations as holding flow (*i.e.*, modeled as regulating the power flow across the interface); (4) determine whether and when it is appropriate to limit M2M obligations and settlements based on the physical capabilities (*e.g.*, thermal rating) of the 5018 transmission line; and (5) determine how to reflect PJM's service to its Rockland Electric Company ("RECo") load in the M2M Market Flow and M2M Entitlements processes.

The RTOs anticipate that they will be able to identify any changes to proposed Schedule D that may be needed to resolve the first four concerns in approximately four months; at which time the RTOs may propose additional revisions to Schedule D of the JOA. On the fifth concern, in order to permit timely implementation of M2M, the RTOs have agreed on how they will initially model RECo for purposes of M2M Market Flow and M2M Entitlements. The

RTOs, in concert with other parties, will work toward a final agreement addressing RECo. When an agreement is reached, the RTOs will file it for the Commission's consideration.

E. Proposed Deletion of Interregional Congestion Management Pilot Program from NYISO's Services Tariff

The NYISO proposes to delete the text of Section 5.1.2, and the entirety of Sections 5.1.2.1 through 5.1.2.5 of the Services Tariff because they are components of an Interregional Congestion Management Pilot Program between the RTOs that the RTOs have not activated in the past several years. The NYISO proposes to replace the pilot program with M2M.

Section 5.1.2.6 of the Services Tariff is not related to the Interregional Congestion Management Pilot Program. The NYISO proposes to move the text of current Section 5.1.2.6 into Section 5.1.2.

#### **IV. Request for Flexible Effective Date**

The RTOs request a flexible effective date for the JOA and other tariff revisions proposed herein. Consistent with the Commission's July Order, which authorized the NYISO to implement M2M in the fourth quarter of 2012, the RTOs will use best efforts to deploy and be prepared to implement M2M by the end of 2012.<sup>12</sup> In no event will implementation occur later than January 15, 2013.<sup>13</sup>

The RTOs request that the Commission permit the JOA and other tariff revisions proposed herein to take effect on a date to be mutually determined by the RTOs. The RTOs will not be able to propose a precise effective date until the software changes needed to implement the proposed tariff revisions are ready for deployment and testing is complete. The RTOs

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<sup>12</sup> July Order at PP 13, 15.

<sup>13</sup> The RTOs recognize that an extension of time or waiver would be needed to permit implementation after December 31, 2012.

therefore propose to establish a final effective date based on assessment of each region's readiness as they complete their M2M testing procedures.

The effective date will not occur until: (i) the Commission has issued an order accepting proposed JOA and other tariff revisions; (ii) at least two weeks after the RTOs have notified the Commission and their stakeholders that the revisions are ready for implementation; and (iii) notice of the effective date has been posted on the NYISO and PJM websites for at least five days. The Commission has previously permitted the NYISO to use flexible effective dates for tariff revisions that require complex software enhancements to implement.<sup>14</sup> The nature and complexity of the M2M changes make it appropriate to take the same approach here.

## **V. Documents Enclosed**

The RTOs enclose with this transmittal letter:

1. A certificate of service in Docket No. ER08-1281;
2. A clean version of the Applicants' proposed revisions to their JOA, which is on-file with the Commission as Attachment CC to the NYISO's OATT, including the proposed new Schedule D to the JOA (Attachment I);
3. A blacklined version of the Applicants' proposed revisions to their JOA, which is on-file with the Commission as Attachment CC to the NYISO's OATT, including the proposed new Schedule D to the JOA (Attachment II);
4. PJM's concurrence letter, concurring with the proposed revisions to the JOA (Attachment III);
5. A clean version of the proposed revisions to the NYISO's Services Tariff deleting the interregional congestion management pilot program (Attachment IV); and
6. A blacklined version of the proposed revisions to the NYISO's Services Tariff deleting the interregional congestion management pilot program (Attachment V).

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<sup>14</sup> *New York System Operator, Inc.*, 106 FERC ¶ 61,111 at PP 5, 10 (2004) ("We will allow NYISO to implement parts of the filing prior to September 2004, as such parts become ready for implementation, provided that NYISO adheres to the three steps identified above in Paragraph 5 of this order."); *New York Independent System Operator, Inc.*, Letter Order, Docket No. ER11-2544-000 (Feb. 10, 2011).

## VI. Service

### A. NYISO Service

This filing will be posted on the NYISO's website at [www.nyiso.com](http://www.nyiso.com). In addition, the NYISO will e-mail an electronic link to this filing to the official representative of each party to this proceeding, to each of its customers, to each participant on its stakeholder committees, to the New York Public Service Commission, and to the New Jersey Board of Public Utilities.

### B. PJM Service

PJM has served a copy of this filing on all PJM Members and on all state utility regulatory commissions in the PJM Region by posting this filing electronically. In accordance with the Commission's regulations,<sup>15</sup> PJM will post a copy of this filing to the FERC filings section of its internet site, located at the following link: <http://www.pjm.com/documents/ferc-manuals/ferc-filings.aspx> with a specific link to the newly-filed document, and will send an e-mail on the same date as this filing to all PJM Members and all state utility regulatory commissions in the PJM Region<sup>16</sup> alerting them that this filing has been made by PJM and is available by following such link. If the document is not immediately available by using the referenced link, the document will be available through the referenced link within 24 hours of the filing. Also, a copy of this filing will be available on the FERC's eLibrary website located at the following link: <http://www.ferc.gov/docs-filing/elibrary.asp> in accordance with the Commission's regulations and Order No. 714.

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<sup>15</sup> See 18C.F.R §§ 35.2(e) and 385.2010(f)(3).

<sup>16</sup> PJM already maintains, updates and regularly uses e-mail lists for all PJM Members and affected state commissions.

**VII. Conclusion**

Wherefore, for the foregoing reasons, the RTOs respectfully requests that the Commission accept the attached JOA and other tariff revisions for filing in compliance with the Commission's directives in the December Order and July Order.

Respectfully submitted,

/s/ Alex M. Schnell

Robert E. Fernandez, General Counsel  
Alex M. Schnell  
James Sweeney, Attorney  
New York Independent System Operator, Inc.

/s/ Steven Pincus

Steven Pincus, Assistant General Counsel  
James Burlew, Counsel  
PJM Interconnection, L.L.C.

## **CERTIFICATE OF SERVICE**

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

Dated at Rensselaer, NY this 30<sup>th</sup> day of December, 2011.

*/s/ Joy A. Zimmerlin*

Joy A. Zimmerlin  
New York Independent System Operator, Inc  
10 Krey Blvd.  
Rensselaer, NY 12114  
(518) 356-6207