

August 17, 2012

**By Electronic Delivery**

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

**Re: *New York Independent System Operator, Inc., Further Compliance Tariff  
Revisions, Docket Nos. AD10-11-000, RM11-7-000, ER12-1653-00\_***

Dear Ms. Bose:

The New York Independent System Operator, Inc. (“NYISO”) hereby make its second compliance filing in this docket to satisfy the Commission’s Order No. 755 directives with respect to compensation for providers of Regulation Service.<sup>1</sup> In this filing, the NYISO proposes to add to its Market Administration and Control Area Services Tariff (“Services Tariff”) and Open Access Transmission Tariff (“OATT”) the values for the temporary Bid Restriction and the Regulation Movement Multiplier that the NYISO proposed in its Initial Compliance Filing.<sup>2</sup>

In its Initial Compliance filing, the NYISO described its proposal to place a temporary Bid Restriction on the price that bidders could include in their Regulation Movement Bid and explained that it would include the actual value for the Bid Restriction in a second compliance filing to be made at least sixty days before the proposed effective date (“second compliance filing”). Similarly, in the Initial Compliance Filing, the NYISO described its proposal to use a Regulation Movement Multiplier (“RMM”) in its economic evaluation and scheduling of Regulation Service Suppliers and explained that it would include the value for the RMM in the second compliance filing.

The NYISO has now completed the analysis which serves as the basis for calculating the Bid Restriction value and the Regulation Movement Multiplier value. As is described in the attached affidavit from Rana Mukerji, and as is explained in greater detail below, the NYISO is proposing a RMM of ten (10) and a Bid Restriction of \$2.47.

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<sup>1</sup> Capitalized terms used but not defined in this filing shall have the meanings given to them in the Services Tariff

<sup>2</sup> *New York Independent System Operator, Inc.*, Docket No. ER12-1653-000, Letter to Kimberly D. Bose, April 30, 2012 (“Initial Compliance Filing”)

The NYISO presented these values to its Market Participants at the July 19, 2012 meeting of the Market Issues Working Group and explained how they were derived.<sup>3</sup> There was a discussion of the data but no follow-up was requested of the NYISO staff.

This filing completes the NYISO's proposal to satisfy Order No. 755. However, the NYISO and its stakeholders intend to continue discussing this market and evaluate, as necessary and appropriate, potential improvements as part of the annual budget and project prioritization process.<sup>4</sup>

## **I. Communications**

Communications and correspondence regarding this filing should be directed to:

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## **II. Documents Submitted**

1. This filing letter;
2. An Affidavit from Mr. Rana Mukerji, Senior Vice President of Market Structures for the NYISO ("Attachment I");
3. A clean version of the proposed revisions to the NYISO's Services Tariff ("Attachment II"); and
4. A blacklined version of the proposed revisions to the Services Tariff ("Attachment III").

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<sup>3</sup> See: Presentation at:  
[http://www.nyiso.com/public/webdocs/committees/bic\\_miwg/meeting\\_materials/2012-07-19/4\\_Reg\\_Movement\\_Bid\\_Restriction.pdf](http://www.nyiso.com/public/webdocs/committees/bic_miwg/meeting_materials/2012-07-19/4_Reg_Movement_Bid_Restriction.pdf)

<sup>4</sup> As mentioned in the Initial Compliance Filing, the current proposal incorporates the only commitment and settlement methods that the NYISO could identify which would meet the Order's requirements and timetable for implementation.

### **III. Tariff Proposal and Justification**

#### **A. The Regulation Movement Multiplier**

As explained in greater detail in the Initial Compliance filing, the NYISO's proposed RMM would be used when the NYISO enters the Day-Ahead and real-time price offers from each Regulation Service Supplier into its scheduling software. Specifically, the NYISO proposed to sum the Regulation Capacity offer price (per MW of capacity) and the product of the RMM and the Regulation Movement offer price (per MW of movement). This allows the NYISO to more reasonably evaluate Suppliers' total cost to provide Regulation Service and select the most cost effective set of regulating resources.<sup>5</sup>

As the attached affidavit from Mr. Rana Mukerji indicates, at paragraph 6, the NYISO derived the value of ten (10) for the RMM as follows: The NYISO documented the absolute number of MW its Regulation Service Suppliers have provided in response to the NYISO's Regulation dispatch over the most recent 29 month period January 2010 through May 2012.<sup>6</sup> For each Regulation provider scheduled for Regulation Service during a given hour during this period, the NYISO calculated a Movement MW value for each 6-second interval during the hour, where Movement MW is defined as the absolute change in Energy or Demand Reduction over a 6-second interval that a Regulation Service provider is instructed to deliver for the purpose of providing regulation. Directions to a resource to provide Energy were not counted as Movement MWs. The Movement MWs were then summed across all Regulation Service providers for the given hour, and divided by the NYISO Regulation Requirement (in MWs) for that hour. The average of the Movement MWs-to-NYISO Regulation Requirement ratio for each hour of the historic period is 9.28. The average ratio for the time period 2011-2012 is 10.46.

When compared to the Regulation Service awarded each of those suppliers, the NYISO was able to create a ratio of Regulation Movement MW to Regulation Capacity MW. Based on historical performance, the NYISO is proposing to set the initial Regulation Movement Multiplier to 10. Since the RMM either did not vary significantly, or did not have a predictable pattern, by season, by day of week, by weekday versus weekend, by on-peak versus off-peak, or by hour of day, the NYISO is proposing to use a single RMM for all hours and will continue to monitor and evaluate this value for potential adjustments.<sup>7</sup>

As the attached Affidavit from Mr. Rana Mukerji indicates at paragraph 8, the NYISO does not intend to develop individual RMMs for each potential Regulation Service provider or type of provider at this time. This new market design is as yet untested and the NYISO believes

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<sup>5</sup> The NYISO schedules least-cost Suppliers first, considering transmission constraints and the unit's ramping capability. The software will also use the providers' Regulation Capacity Response Rate and their Regulation Movement Response Rates.

<sup>6</sup> Daylight Savings transition days and 8/22/2010 were excluded due to data problems.

<sup>7</sup> For analysis of historic data, reference  
[http://www.nyiso.com/public/webdocs/committees/bic\\_miwg/meeting\\_materials/2012-07-19/4\\_Reg\\_Movement\\_Bid\\_Restriction.pdf](http://www.nyiso.com/public/webdocs/committees/bic_miwg/meeting_materials/2012-07-19/4_Reg_Movement_Bid_Restriction.pdf)

a uniform RMM based on the average capacity / movement ratio for all Suppliers is appropriate at this time. A uniform RMM for all Suppliers will install, for the NYISO's Regulation Service scheduling process, a level evaluation method for the new two-part Regulation Service Bid. As the NYISO gains experience with the new design, and as more new-technology Regulation Service Suppliers enter the market, the NYISO may find it is appropriate to propose a different RMM methodology.<sup>8</sup>

## **B. Regulation Movement Bid Restriction**

The NYISO is proposing a \$2.47 Bid Restriction for Regulation Movement to avoid unforeseen but potentially significant volatility in the newly designed Regulation Market. As mentioned in the NYISO's Initial Compliance filing, this Bid Restriction is temporary and subject to review by the NYISO's MMU at least annually, if not more frequently, to ensure it remains necessary and does not act as a barrier to new entry. When the MMU shares its review of the reasonableness of the Bid Restriction with Market Participants it will also be recommending its continuation, adjustment or removal.<sup>9</sup>

As the attached affidavit from Mr. Rana Mukerji indicates at paragraph 10, the NYISO derived the value of \$2.47 using historic data for the time period 2009 through 2011. For each day in the historic period, the Regulation settlement dollars paid to Regulation Service providers were fuel-indexed to a baseline futures price for natural gas. These adjusted daily settlement dollars, totaling approximately \$129.8 million, were then divided by the estimated number of Movement MWs over the time period (approximately 52.5 million MWs).

As Mr. Mukerji explains in his attached affidavit at paragraphs 11 through 13, a Regulation Movement Bid Restriction of \$2.47 is reasonable. The value of \$2.47 contemplates recovery of all historic Regulation Market revenues through the new Regulation Movement settlement alone independent of any accompanying Regulation Capacity settlement revenue which suppliers will remain eligible to Bid and receive under the new market design.<sup>10</sup>

Because the Bid Restriction was derived in this fashion, a Regulation Movement market clearing price of \$2.47 alone can recover the cost to supply Regulation Service, as least as those costs were reflected in historic Regulation Service bids. Some Suppliers of Regulation Service, which recycle energy for example and face costs that are tied to the real-time price of Energy, may face infrequent events where the real-time price of Energy spikes high. In these infrequent events, their variable costs may exceed revenue recovered for the day from the Regulation Movement Clearing Price, and any BPCG<sup>11</sup> paid.<sup>12</sup> They could thus be uncomfortable with a

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<sup>8</sup> The NYISO's Initial Compliance Filing included a proposed process to immediately adjust the RMM if it presented reliability or operational issues. *See*: Initial Compliance Filing at 5.

<sup>9</sup> *See*: Initial Compliance Filing, Proposed Services Tariff Section 21.5.3.

<sup>10</sup> This is true unless the Regulation Movement MW historically seen in the NYISO market significantly overstate the amount of Regulation Movement that will be instructed by the NYISO going forward.

<sup>11</sup> *See*: Initial Compliance Filing at p xx for a description of the Bid Protection Cost Guarantee ("BPCG").

<sup>12</sup> For example, a storage resource scheduled for 10MW of Regulation Capacity in the hour may experience 1MW of net losses for the hour. If the RT LBMP were \$1,000/MWh, the energy purchase obligation for the resource

Bid Restriction that reflects adequate variable cost recovery only over the year rather than some shorter period.

Several options exist for Market Participants to recover these costs, or hedge themselves from exposure to these costs, when they project that their Regulation Movement revenue, and the related Bid Production Cost Guarantee, will not be sufficient to cover the costs of these infrequent price spiking events. First, the Market Participant has the option to hedge its exposure to volatile real time prices by purchasing energy via a virtual position in the DAM or pursuing out-of-market opportunities appropriate to their product. These could include Contracts for Differences, bilateral contracts, nodal exchanges, and others. Second, the Market Participant could recover this missing revenue through a small adder to the Regulation Movement Bid, if it is not yet being bid at the Bid Restriction, or to the Regulation Capacity Bid.

The need to recover the costs of infrequent events through adders (sometimes referred to as “risk premiums”) to price bids in the NYISO markets is not new. Generators that may be exposed to balancing market obligations at volatile real time prices when they trip off-line are similar, and similarly infrequent, costs that can be, for any single event, significant.<sup>13</sup> Generators have the option of increasing their energy bid by a small amount to, over time, recover these trip buy-back costs. Similarly, Regulation Suppliers that expect infrequent but potentially significant real-time energy prices have the opportunity to cover this missing cost by submitting slightly higher Regulation price Bids.<sup>14</sup>

As described in the Initial Compliance Filing, the NYISO’s Market Monitoring Unit (“MMU”) will review the Bid Restriction at least annually to evaluate, among other things, whether it can be lifted because its elimination (or an increase in its size) would not provide incentives to raise offers for Regulation Movement substantially above levels that would be anticipated in an efficient market. The MMU would also evaluate whether the Bid Restriction allowed appropriate cost recovery. Any allegation that the Bid Restriction was preventing adequate cost recovery could be investigated by the MMU at any time. Following its evaluation, the MMU would be required to recommend continuation, adjustment or elimination of the Regulation Movement Bid Restriction.

The NYISO urges the Commission to adopt the Bid Restriction value of \$2.47 as reasonable. The NYISO reiterates its request, however, that the Commission afford it an

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for the hour would be \$1,000. That hour’s revenues for the unit would be from Regulation Capacity and Movement. Assume the Regulation Capacity market price is \$10/MW. If the Movement bid cap was \$2.47 and the resource moved 100MWs in the hour, the total net revenue for the resource would be -\$653,  $(\$100 + \$247 - \$1,000)$ . It is worth noting that frequently when RT energy prices are volatile, Real-Time Regulation prices are also volatile and can trigger the Demand Curves - establishing a real-time market price of \$400. In the previous example such a market price for Regulation Capacity would produce \$3,247 of revenue for the resource.

<sup>13</sup> Large steam generators in New York City, for instance, can create real-time price volatility when they trip off-line.

<sup>14</sup> Using the previous example, assume that the high prices discussed occur 10 times a year. This could result in losses of \$6,530 annually. A premium of \$ 0.07-0.08/ MW in the Regulation Capacity Bid price would recover these costs over the remaining 8,750 hours of the year. The Market Participant could also add this to the Regulation Movement Bid as appropriate.

opportunity to propose alternative mitigation mechanisms before the compliance tariff revisions proposed herein go into effect if the Commission cannot determine that the proposal Bid Restriction of \$2.47 is just and reasonable. Sufficient protection against unnecessary and potentially significant price volatility will ensure a smoothly functioning Regulation Service Market through the introduction of this new design.

#### IV. Tariff Amendment Descriptions

##### A. Services Tariff

###### Section 2.18 Defined Terms

The NYISO proposes to add the value of ten (10) to the proposed definition of the term “Regulation Movement Multiplier”:

**Regulation Movement Multiplier:** A factor with the value of ten (10), used with the Regulation Movement Bids, to schedule Regulation Service providers in both the Day-Ahead and Real-Time Energy markets. The Regulation Movement Multiplier may differ by hour. The ISO shall calculate the Regulation Movement Multiplier based on the historical relationship between the number of MW of Regulation Capacity that the ISO seeks to maintain in each hour and the number of Regulation Movement MW instructed by AGC in each hour.

In order to avoid operational or reliability problems the resolution of which would otherwise require recurring operator intervention outside normal market scheduling procedures, the ISO may use, on a temporary basis, a Regulation Movement Multiplier that differs from the Regulation Movement Multiplier set forth in this Services Tariff. The ISO shall post a notice of such change as soon as reasonably possible and shall report on the reasons for the change at the next meeting of its Business Issues Committee. The ISO shall also immediately initiate an investigation to determine whether it is necessary to modify the Regulation Movement Multiplier to avoid future operational or reliability problems. The ISO will consult with its Market Monitoring Unit when it conducts this investigation.

If the ISO determines that it is necessary to modify the Regulation Movement Multiplier in order to avoid future operational or reliability problems, it may modify the Regulation Movement Multiplier for a period of ninety days or more provided however, the ISO shall file such modifications with the Commission pursuant to Section 205 of the Federal Power Act within 45 days of such modification. If circumstances reasonably allow, the ISO will consult with its Market Monitoring Unit, the Business Issues Committee, the Commission, and the PSC before implementing such modification for this ninety-day period. In all circumstances, the ISO will consult with those entities as soon as reasonably possible after implementing a ninety-day modification.

### Section 21.5.3

The NYISO proposes three amendments to Section 21.5.3, the Section containing the proposed Bid Restriction. In addition to an amendment to add the value of \$2.47, the NYISO proposes two clean up revisions, as shown:

**21.5.3** The Bid Restriction established in Section 21.5.3.1 shall apply to the Regulation Movement Bid Price ~~which Bid Restriction shall be added to this Tariff Section before the tariff amendments required by Commission Order 755 are implemented.~~ Following implementation of the Bid Restriction on the Regulation Movement Bid Price, the Bid Restriction shall be the subject of a periodic, but no less frequent than annual, review by the Market Monitoring Unit, which review shall be presented to the ISO and to Market Participants. The review shall include, but not be limited to, an evaluation of whether an increase in the Bid Restriction, or its elimination, would provide incentives to raise offers for Regulation Movement substantially above levels that would be anticipated in an efficient market and whether the Bid Restriction prevents appropriate cost recovery. With its review, the Market Monitoring Unit shall recommend continuation, adjustment or elimination of the Regulation Movement Bid Restriction. The responsibilities of the Market Monitoring Unit that are addressed in this Section of Attachment F are also addressed in Section of Attachment O.

**21.5.3.1** The Bid Restriction on the Regulation Movement Bid Price shall be ~~specified herein prior to the effective date of revisions to this Services Tariff as required by Order 755~~ \$2.47/MW.

## **V. Effective Date**

The NYISO requests an effective date between October 10, 2012 and November 14, 2012, which the NYISO will provide with two weeks' written notice to the Commission and its market. The software updates to effectuate Non-Historic Fixed Price TCCs, described in ER 12-1868-000, are tied to the software upgrades being developed to effectuate the provisions described herein and in the NYISO's Initial Compliance filing. The NYISO requests that the Commission accept this date in the same manner and for the same reasons it accepted this effective date for the NYISO's filing to comply with Commission Order Nos. 681 and 681A in Docket No. ER12-1868-000.<sup>15</sup>

The NYISO also requests that the Commission issue an Order in this proceeding by October 10, 2012. The NYISO expects to implement the supporting software changes on October 26, 2012 for an October 27, 2012 effective date. The NYISO will not be implementing these changes earlier than that. An Order by October 10 would allow us the two-week time frame necessary to alert the market and the Commission of this effective date.

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<sup>15</sup> New York Independent System Operator, Inc. ER12-1868-000 & ER07-521-011, August 1, 2012 Office of Energy Market Regulation, Acceptance for Filing.

## **VI. Conclusion**

Wherefore, for the foregoing reasons, the New York Independent System Operator, Inc. respectfully requests that the Commission accept for filing the proposed tariff revisions that are attached hereto with an effective date between October 10, 2012 and November 14, 2012, which the NYISO will provide with two weeks' written notice to the Commission and its market.

Respectfully submitted,

/s/ Mollie Lampi

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## **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 17<sup>th</sup> day of August, 2012.

/s/ Joy A. Zimmerlin

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