

April 30, 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., Proposed Compliance Tariff Revisions, Docket Nos. RM11-7-000, AD10-11-000;***

Dear Ms. Bose:

The New York Independent System Operator, Inc. (“NYISO”) respectfully submits the enclosed tariff revisions to comply with the Federal Energy Regulatory Commission’s (“Commission”) directives in Order No. 755.<sup>1</sup> This filing includes proposed compliance revisions to the NYISO’s Market Administration and Control Area Services Tariff (“Services Tariff”) and Open Access Transmission Tariff (“OATT”) to satisfy the Commission’s Order No. 755 directives with respect to compensation for providers of Regulation Service.<sup>2</sup>

In preparing this filing, the NYISO conducted several meetings with its Market Participants to discuss the requirements of Order No. 755 and the NYISO’s compliance proposal. The NYISO made adjustments to its initial proposals and performed additional analysis to explore issues and resolve questions raised in the stakeholder process. In particular, based in part on stakeholder input, the NYISO is proposing a “Regulation Movement Multiplier” (“RMM”), discussed in detail below, for use in establishing Regulation Service schedules.

The NYISO also performed a financial impact assessment on consumer costs of its proposed Order No. 755 compliance plan. This financial impact analysis revealed the potential for significant increases in the cost of Regulation Service to consumers as “Regulation Movement” becomes separately bid and settled.<sup>3</sup> Market Prices and related settlements for Regulation Movement may be unnecessarily volatile as Regulation Service providers engage in price discovery and explore potential market outcomes for this new product.

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<sup>1</sup> *Frequency Regulation Compensation in the Organized Wholesale Power Markets*, Order No. 755, 137 FERC 61,064 (2011), *reh’g denied*, Order No. 755-A, 138 FERC ¶ 61,123 (2011) (“Order No. 755”).

<sup>2</sup> Capitalized terms used but not defined in this filing shall have the meanings given to them in the Services Tariff.

<sup>3</sup> As is discussed below, the NYISO proposes a new term “Regulation Movement” to describe the quantity of frequency regulation service provided by a resource when it is following its dispatch signal. The Commission referred to this service as “performance.” See: Order 755 ¶¶ 3, 128, 133.

As a result, the NYISO is proposing a temporary Bid Restriction on the Regulation Movement Bid price. Although the value of this Bid Restriction is not yet known, the NYISO expects it to be between \$2 and \$3/ MW. The actual Bid Restriction value requires completion of an analysis of the six-second responses of the NYISO's Regulation Service providers over the last several years. While this analysis has yielded preliminary results, it is not expected to be complete until mid-summer.<sup>4</sup> Therefore, while the NYISO is proposing a Bid Restriction in this filing (discussed in greater detail in Section IV. F. below), it proposes to submit an additional compliance tariff revision specifying the actual Bid Restriction value in a supplement to this compliance filing that will be filed at least 60 days prior to the effective date of these compliance tariff revisions.

Upon completion of the compliance filing proposed herein, and upon successful implementation of the new implementation software, the NYISO will have fully complied with the Commission's requirements in Order No.755. The NYISO and its stakeholders intend to continue discussing this market and to evaluate potential improvements as part of the annual budget and project prioritization process.<sup>5</sup>

## **I. Communications**

Communications and correspondence regarding this filing should be directed to:

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<sup>4</sup> Preliminary results indicate that Regulation Service Suppliers provide between 8 and 12 times their scheduled Capacity MW in Regulation Movement MW.

<sup>5</sup> The current proposal is the only method the NYISO could identify which would meet the Order's requirements and timetable for implementation.

## **II. Documents Submitted**

1. This filing letter ;
2. A clean version of the proposed revisions to the NYISO's OATT ("Attachment I");
3. A clean version of the proposed revisions to the NYISO's Services Tariff ("Attachment II");
4. A blacklined version of the proposed revisions to the OATT ("Attachment III");
5. A blacklined version of the proposed revisions to the Services Tariff ("Attachment IV");

## **III. Background**

In Order No. 755, the Commission revised its regulations to remedy what it concluded was undue discrimination in the procurement of frequency regulation in the organized wholesale electric markets and to ensure that providers of frequency regulation receive just and reasonable rates that are not unduly discriminatory or preferential.<sup>6</sup>

Specifically, the Commission required that ISOs and RTOs institute a two-part bid / two-part compensation program for Regulation Service providers.<sup>7</sup> Under the new rule, the NYISO will be required to pay a uniform, market-based price for scheduled Regulation Capacity and a uniform, market-based price for the MW of Regulation Movement.<sup>8</sup> The Commission required that the Regulation Capacity Market Price include the marginal resource's opportunity costs and that the Regulation Movement settlement for each Regulation resource account for Supplier accuracy in following operator dispatch instructions. The Commission also required that accuracy be measured the same way for all regulating resources.<sup>9</sup>

Finally, the Commission required new market power mitigation methods "appropriate to redesigned . . . regulation markets," or an explanation of why such were unnecessary.<sup>10</sup>

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<sup>6</sup> Order No. 755, ¶1

<sup>7</sup> *Id.* ¶77, 185

<sup>8</sup> *Id.* ¶99

<sup>9</sup> *Id.* ¶¶ 153, 154

<sup>10</sup> *Id.* ¶136

#### **IV. Overview and Justification of the NYISO's Compliance Proposal**

##### **A. Bidding Regulation Service**

Generators and Demand Side Resources bidding to provide Regulation Service will be required to submit two-part Bids in both the Day-Ahead and Real-Time Markets. They will submit a Regulation Capacity Bid indicating the MW and price (\$/MW) of the Regulation Capacity they are making available to the NYISO, and a Regulation Movement Bid indicating the price (\$/MW) for each MW of Regulation Movement they would provide when instructed.<sup>11</sup>

Each Supplier will also be required to provide the NYISO with two response rates for use in scheduling and dispatching its resource. The Regulation Capacity Response Rate is the Regulation Service a resource is capable of providing over five minutes and is the same parameter that all Regulation Service bidders provide currently. The Regulation Movement Response Rate is the Regulation Movement a resource can deliver in six seconds. This value must be no lower than the six-second equivalent of the Supplier's Regulation Capacity Response Rate but can be greater.

##### **B. Scheduling Regulation Service Providers and the Regulation Movement Multiplier ("RMM")**

In the Day-Ahead and Real-Time Markets, the NYISO will submit to its scheduling and pricing software the Regulation Service Bids provided by each Supplier for use in solving to meet the NYISO's Regulation Capacity requirement.<sup>12</sup> Specifically, the NYISO will enter into the Day-Ahead and real-time software each Regulation Service Supplier's Regulation Capacity Bid MW and the sum of its i) Regulation Capacity Bid price and ii) the product of: a) the Supplier's Regulation Movement Bid price and b) the RMM established for that hour.<sup>13</sup>

The NYISO is proposing that the RMM be a uniform hourly value to reflect the number of MW of Regulation Movement likely to be provided by any Regulation Service Supplier for each MW of Capacity that it offers. The RMM value is expected to be between 8 and 12.<sup>14</sup> However, the final RMM hourly values depend on completion of the detailed review of the six-second movement historically required of New York's Regulation Service providers. This is the

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<sup>11</sup> The NYISO will instruct its scheduled Regulation Service Suppliers to provide Regulation Movement every six seconds using the same tool it uses today to instruct its Regulation Service Suppliers - that is the Automated Generation Control ("AGC") program.

<sup>12</sup> See: Services Tariff Section 15.3.1.1 and the *Ancillary Services Manual*, Section 4.1

<sup>13</sup> The software will also use the Suppliers' Regulation Capacity Response Rate and their Regulation Movement Response Rates.

<sup>14</sup> As mentioned in footnote 4, *supra*, preliminary analysis indicates that regulating resources have historically been asked to provide between 8 and 12 times the number of MW in Regulation Movement that they are scheduled to provide in Regulation Capacity each hour. Since the RMM is expected to be consistent with historical experience, the NYISO expects the RMM values to be between 8 and 12.

same review upon which the NYISO's proposed Regulation Movement Bid Restriction is also based, as mentioned at page 2 above. As indicated, this review is not yet complete. Therefore, while the NYISO proposes the use of the RMM in this filing, it will submit tariff revisions including the actual hourly values for the RMM to the Commission in a supplement to this compliance filing at least 60 days prior to the effective date of the other compliance tariff revisions proposed herein.

The use of the RMM is appropriate in summing each Supplier's Capacity Bid and Movement Bid because it will better reflect in the scheduling and pricing solution the likely cost of each Supplier in providing both the Capacity and Movement components of Regulation Service.<sup>15</sup> As a result, use of the RMM will allow the scheduling solution to select the most cost effective set of regulating resources.

The NYISO is also proposing tariff language that would allow it to temporarily adjust the RMM, if necessary, should the NYISO experience operational or reliability issues given the level at which the RMM is then set. A selection of appropriate Regulation Service Suppliers depends, in part, on an appropriately set RMM. Should operational or reliability problems surface that require an adjustment to the RMM, the NYISO should be authorized to institute a temporary change immediately. The NYISO's proposed tariff language would require that it, immediately after entering a revised RMM into the scheduling software, post the revised RMM and report on the reasons for the revision(s) at the next meeting of its Business Issues Committee. If, after investigation, the NYISO decides a revision to the RMM is necessary for a period of 90 days or longer, to avoid future operational or reliability problems that would otherwise require recurring operator intervention outside normal market scheduling procedures, the NYISO would file a revised RMM with the Commission. If circumstances reasonably allow, the NYISO would consult with its Market Monitoring Unit ("MMU"), the Business Issues Committee, the Commission and the PSC before making the filing.

The Commission has previously granted the NYISO authority to temporarily revise parameters which, like the RMM, are used in scheduling and pricing software, when such revision was necessary to resolve operational or reliability issues. In the Commission's January, 2008 Order in ER07-720-000, the Commission accepted the NYISO's transmission demand curve values and also approved its proposal to temporarily adjust those values, if necessary, to resolve operational or reliability conditions.<sup>16</sup> The Commission also accepted the NYISO proposals to describe the conditions under which the NYISO would exercise that authority and that it would file the revised transmission demand curve value(s) with the Commission if the NYISO intended to retain the revised values for 90 days or more.

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<sup>15</sup> The RMM is used in the scheduling software only; it is not used in settlements and impacts price only to the extent the marginal resource is a function of its summed Bids vs. all other Bid-in Regulation supply. The NYISO intends to list the hourly RMM values in the Tariff.

<sup>16</sup> See: Letter Order issued January 11, 2008 in ER07-720-000 ("January 2008 Order").

This proposal is similar in design to the proposal accepted by the Commission's January 2008 Order. This proposed Tariff provision establishes the criteria the NYISO would use in evaluating whether a revision was necessary - that is whether a revised RMM was necessary to avoid recurring operator intervention outside normal market scheduling procedures. The proposed tariff revisions also contain a filing requirement similar to that accepted by the January 2008 Order.

### **C. Regulation Capacity and Regulation Movement Market Prices**

The scheduling and pricing software for both the Day-Ahead (SCUC) and Real-Time (RTC/RTD) Markets <sup>17</sup> will schedule Regulation Service providers and establish market-based prices for Regulation Capacity. RTD will establish real-time market based prices for Regulation Movement. The NYISO will not calculate a Day-Ahead Regulation Movement Market Price as there is no Regulation Movement scheduled or provided Day-Ahead.

The Day-Ahead Regulation Capacity Market Price in each hour will be the shadow price for the NYISO's Regulation Service constraint for the hour minus the product of the marginal Resource's Bid for Regulation Movement and the RMM. As currently calculated, the shadow price includes the Regulation Service Bid and lost opportunity cost ("LOC") of the marginal resource providing Regulation Service. Going forward, the shadow price will continue to include the lost opportunity cost ("LOC") of the marginal resource. As such, the LOC of the marginal resource will appear in the new Regulation Capacity Market Price.

The real-time Regulation Capacity Market Price will be calculated for each interval in the Real-Time Market in the same way as it was for each hour in the Day-Ahead Market - by removing from the real-time shadow price for the Regulation Service constraint for the interval the product of the Regulation Movement Bid of the marginal resource for the interval and the RMM. The real-time Regulation Capacity Market Price for the interval will also include the LOC of the marginal resource. The real-time Regulation Movement Market Price for each interval will be the Regulation Movement Bid of the marginal resource for that interval.

### **D. Regulation Settlements**

The NYISO will settle the Regulation Capacity scheduled for Day-Ahead Regulation Service providers at the Day-Ahead Regulation Capacity market price. The NYISO will settle Regulation Capacity scheduled in real-time (such schedules being incremental to any Day-Ahead schedule) at the real-time Regulation Capacity Market Price. Resources with Day-Ahead Regulation Capacity schedules will balance any deviations in real-time at the real-time Regulation Capacity Market Price.

There will be no Day-Ahead settlement for Regulation Movement as there is no movement provided in the Day-Ahead Market. The NYISO will settle real-time Regulation

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<sup>17</sup> SCUC is the Day-Ahead security constrained unit commitment software; RTC is the real-time commitment software and RTD the real-time dispatch software.

Movement as the product of: i) the Regulation Movement Market Price; ii) the Regulation Movement instructed by the NYISO for each resource in each five-minute interval; and iii) the resource's performance factor in that interval. The regulation performance factor reflects the actual Regulation Movement provided by the resource and is further discussed below.

In addition, Regulation Service providers whose daily Energy and Ancillary Service Market revenues do not cover the cost of their market Bids, including their Regulation Service Bids, will be entitled to a Bid Production Cost Guarantee ("BPCG") calculated in the same manner as the BPCG is calculated for Energy and Operating Reserve Bids. The NYISO also proposes expanding eligibility for a BPCG to include Limited Energy Storage Resources. The NYISO is modifying the Day-Ahead Margin Assurance Payment as well to account for Regulation Movement revenue.

#### **E. Regulation Supplier Performance**

The NYISO is proposing two performance based settlements. First, to comply with the Commission's requirement for performance-based settlements for Regulation Movement,<sup>18</sup> the NYISO is proposing to apply its current performance factor to Regulation Movement settlements.<sup>19</sup> The current performance factor formula, adjusted to reflect the new terminology, measures the ratio of provided movement to instructed Regulation Movement. It will be applied to Regulation Movement settlements to ensure a Supplier is not compensated for Regulation Movement that, while instructed, was not delivered.

The NYISO is also proposing to use this performance factor in calculating a new Regulation Service performance charge to account for the accuracy of the provider-supplied Regulation Movement in each provider's real-time Regulation Capacity settlement. The application of the performance penalty will align the real-time Regulation Services settlement with the amount of Regulation Service actually provided and avoid a settlement whereby a Supplier that fails to provide all or some portion of the NYISO-instructed Regulation Movement in real-time would otherwise retain, without reduction, its Day-Ahead Regulation Capacity revenue. Non-performance should impact both the Regulation Capacity and the Regulation Movement settlements to appropriately incent compliance with NYISO AGC signals. The calculation of the performance charge is described in detail in Section IV. A.

#### **F. Regulation Movement Bid Restriction**

As mentioned, the NYISO is proposing a Bid Restriction for Regulation Movement to avoid unforeseen but potentially significant volatility in the newly designed Regulation Market. While it may be reasonable to assume that total Regulation revenue should not increase under the two-part Bid design because, at least theoretically, the cost of movement has always been included in the Regulation Service Suppliers' one-part Bid, the NYISO and many of its

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<sup>18</sup> See footnote 9, *supra*.

<sup>19</sup> Order No. 755 ¶ 153.

stakeholders are concerned that the new market could potentially produce significant and unjustified cost increases for Loads. The historic 8 or 12 to 1 ratio of movement MW to capacity MW, each hour, indicates that even a moderately sized Regulation Movement Bid could increase Load's exposure to the cost of Regulation Service by several times its current level unless there was an equivalent reduction in the size of the Regulation Capacity Bid price.<sup>20</sup>

This is of particular concern since, at market start, the NYISO will not have all the information necessary to employ the mitigation tools it traditionally uses to prevent the abuse of market power. Specifically, at the time that the new market design becomes effective, the NYISO will not have reference bids for Regulation Movement Bids - information it will need to evaluate the competitive nature of Regulation Movement Bids. The NYISO currently relies on bid-based reference prices to evaluate the competitive conduct of its Ancillary Service Suppliers but will need time, as much as several months, to develop Regulation Movement Bid-based reference levels.<sup>21</sup> Moreover, the NYISO and its Market Participants will require some experience with providers of Regulation Movement to determine appropriate cost-based references. A temporary Bid Restriction will allow the NYISO a reasonable period of time to establish these reference-levels .

The methodology for calculating the proposed Bid Restriction will allow for just and reasonable rates. The NYISO intends to use a calculation method that will set the Bid Restriction at the quotient of the average annual fuel-adjusted Regulation Service revenue historically paid to Regulation Service providers divided by the amount of Regulation Movement typically realized based on historical experience. Calculating the Bid Restriction in this fashion should ensure that Suppliers have an opportunity to recover sufficient revenue to cover the costs of providing Regulation Movement. Unless the Regulation Movement MW historically seen in the NYISO market drastically overstate the amount of Regulation Movement that will be instructed by the NYISO going forward, this Bid Restriction design contemplates recovery of the entire Regulation Service Revenue in Regulation Movement settlements alone.

The NYISO proposes that its Market Monitoring Unit ("MMU") 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

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<sup>20</sup> The NYISO's reflection in the Consumer Impact evaluation of its proposal to employ a Regulation Movement Bid Cap of between \$2 and \$3 ameliorated the concern of several Load customers and Transmission Owners that the introduction of a payment for Regulation Movement, in addition to the payment for Regulation Capacity to which these Loads are already exposed, could increase their Regulation Service financial obligation to unreasonable levels. See: presentation at [http://www.nyiso.com/public/webdocs/committees/mc/meeting\\_materials/2012-03-28/agenda\\_06\\_Frequency\\_Regulation\\_Compensation\\_Consumer\\_Impact\\_Analysis\\_MC.pdf](http://www.nyiso.com/public/webdocs/committees/mc/meeting_materials/2012-03-28/agenda_06_Frequency_Regulation_Compensation_Consumer_Impact_Analysis_MC.pdf)

<sup>21</sup> A Bid-based reference level, for each component of a Generator's Bid, is calculated as the lower of the mean or the median of a Generator's accepted Bids or Bid components, in hour beginning 6 to hour beginning 21 but excluding weekend and designated holiday hours, in competitive periods over the most recent 90 day period for which the necessary input data are available to the ISO's reference level calculation systems, adjusted for changes in fuel prices consistent with Section 23.3.1.4.7. See MST Section 23.3.1.4.1.1.



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 concern 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.

As mentioned, the calculation of the Bid Restriction value relies on an analysis of historical movement that is not yet complete. The NYISO proposes to file the Regulation Movement Bid Restriction value, together with its underlying calculation methodology, with the Commission as part of a supplement to this compliance filing to be submitted at least 60 days before the amendments proposed herein become effective.

Should the Commission, nonetheless, determine that a Bid Restriction, regardless of its value, would not be just and reasonable, the NYISO requests that the Commission afford it an opportunity to propose alternative mechanisms before the compliance tariff revisions proposed herein go into effect. Sufficient protection against unnecessary and potentially significant price volatility will ensure a smoothly functioning Regulation Service Market through the introduction of this new design.

#### **G. Market Power Mitigation Methods**

The NYISO proposes clarifying tariff amendments to confirm that Regulation Capacity Bids will be subject to the same existing threshold for identifying economic withholding that is currently applied to Regulation Service Bids. Specifically, an increase in a Regulation Capacity Bid of 300 percent or \$50 whichever is lower would indicate potential economic withholding of Regulation Capacity. The NYISO is proposing to add, as a new threshold for identifying the potential for economic withholding of Regulation Movement, an increase in a Regulation Movement Bid of 300 percent.

### **V. Tariff Amendment Descriptions**

#### **A. Services Tariff**

##### **Section 2.18 Defined Terms**

The NYISO is proposing eight new terms:

Regulation Capacity: The NYISO proposes to define this term as the Energy or Demand Reduction capability, measured in MW, that a Regulation Service provider offers and/or which it is scheduled to provide for Regulation Service

Regulation Capacity Market Price: This is the price the NYISO will establish for settling scheduled Regulation Capacity pursuant to a methodology described in Section 15.3 (Rate Schedule 3) of the Services Tariff.

Regulation Capacity Response Rate: Previously known as the Regulation response rate, this is the Regulation Capacity a Resource is capable of providing over five minutes, measured in MW/minute.

Regulation Movement: This term introduces the concept of up and down movement by a Regulation Services provider as a new service in the NYISO market. It is defined as the absolute change in Energy or Demand Reduction over a six second interval, measured in MW, that a Regulation Service provider is instructed to deliver for the purpose of providing regulation service.

Regulation Movement Market Price: This is the real-time price the NYISO will establish for settling instructed Regulation Movement as determined pursuant to a methodology described in Section 15.3 the Services Tariff.

Regulation Movement Multiplier: This is the previously described factor to be used with the Regulation Movement Bids in scheduling Regulation Service providers in both the Day-Ahead and Real-Time Energy markets. Within 60 days of the effective date of these tariff revisions, the NYISO will submit to the Commission the value of the Regulation Movement Multiplier (“RMM”) proposed to be inserted in this Section 2.18 of the Services Tariff. The NYISO also describes in this Section the proposed use and filing of a revised RMM as necessary to avoid operational or reliability problems the resolution of which would otherwise require recurring operator intervention outside normal market scheduling procedures.

Regulation Movement Response Rate: This is the amount of Regulation Movement a Regulation Service provider is capable of delivering in six seconds.

Regulation Service: The Ancillary Service defined by the Commission as “frequency regulation” which the NYISO schedules as Regulation Capacity in the Day-Ahead and Real-Time Markets and instructs as Regulation Movement in the Real-Time Market through Automated Generation Control (“AGC”) basepoints. Day-Ahead and Real-Time Bids to provide Regulation Service include a Bid for Regulation Capacity and a Bid for Regulation Movement. The NYISO-established hourly Regulation Service requirement is for MW of Regulation Capacity.

#### Section 4.4

The NYISO proposes revisions to update existing language using the new terms proposed in this filing. The NYISO also proposes to replace language describing a suspension of the regulation market in Sections 4.4.3.1.1 and 4.4.3.1.2 during reserve pick-ups and maximum generation pick-ups with language indicating the NYISO sets all regulation schedules to zero in such circumstances. These revisions are further described in Section 15.3.9 (renumbered 15.3.8) below.

#### Section 4.5.9

The NYISO has relocated language, currently found in Section 15.3.3, describing the Performance Tracking System for Suppliers serving Load in New York, to this new Section 4.5.9. Performance Tracking is used to measure compliance with criteria associated with providing Energy and other Ancillary Services as discussed in the NYISO's *Accounting and Billing Manual*. It is also used to report Load metrics.

#### Section 4.6

The NYISO proposes to clarify in Sections 4.6.6.1, 4.6.6.3 and 4.6.6.4, that Generators' Bids to provide Regulation Capacity and Regulation Movement are specifically included in the BPCG calculation. The NYISO also proposes to amend Section titles and descriptions in Sections 4.6.6.9 and 4.6.6.10, the Sections describing the payment of a BPCG for Demand Side Resources scheduled for Operating Reserves or Regulation Service. Eligibility for a BPCG for those Demand Side Resources offering either or both of these Ancillary Services was established in Docket ER04-230-034<sup>22</sup> and these revisions are for clarification only.

#### Section 15.3

This Section, also known as Rate Schedule 3, describes the rates, terms and conditions of offering and settling Regulation Service.

Section 15.3.1 is proposed to be amended to describe the additional duty of the NYISO to establish Regulation Service schedules in MW of Regulation Capacity for Day-Ahead and real-time scheduled suppliers.

Section 15.3.1.2 is proposed to be amended to include, among the responsibilities of Regulation Service Suppliers, the obligation to provide a Regulation Capacity Response Rate and a Regulation Movement Response Rate. Language that is now redundant of the proposed new term "Regulation Capacity Response Rate" is deleted from this Section.

Section 15.3.2 is proposed to be amended to clarify existing language and to delete extraneous, unnecessary or redundant language. Real-time Regulation Capacity Market Prices are established as described in Section 15.3.5 and provisions describing the calculation of real-time Regulation Capacity prices when the provisions of 15.3.9 are in effect are relocated to Section 15.3.5. The requirement to select Regulation Service Suppliers from those that are qualified is now found in Section 15.3.1.2. The NYISO is also proposing two entirely new provisions as Sections 15.3.2(b) and (c) to describe the use, in the Day-Ahead and real-time scheduling software, respectively, of the sum of the Supplier's Regulation Capacity and Regulation Movement Bids and the use of the Regulation Movement Multiplier as described above. The NYISO's obligation to calculate a Regulation Movement Market Price is also proposed to be added to Section 15.3.2(d).

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<sup>22</sup> See: May 23 Order, *New York Independent System Operator, Inc.* 123 FERC ¶ 61,134 (2008)

Section 15.3.2.1 is proposed to be amended by eliminating the description of, and requirement to provide the NYISO with, Regulation Service response rates as redundant of the proposed definitions of these terms in Section 2.18 and the location of the requirement to provide the NYISO with such response rates in Section 15.3.1.2(b). The NYISO also is proposing to add to this Section a requirement for Suppliers to include a Regulation Movement Bid price in their Regulation Service Bid.

Section 15.3.3 is proposed to be amended to indicate that the Performance Tracking System will also be used to establish a performance charge pursuant to Section 15.3.5.5.2. As mentioned above, the use of the Performance Tracking System for Suppliers serving NYCA Load is moved to a new Section 4.5.9.

Section 15.3.4 is proposed to be amended to describe the calculation of the Day-Ahead Regulation Capacity Market Price as the shadow price of Regulation Service constraint minus the product of the marginal resource's Day-Ahead Regulation Movement Bid and the RMM. Minor non-substantive clarifications are also proposed.

Section 15.3.5 is proposed to be amended to describe the calculation of the real-time Regulation Capacity Market Price as the shadow price of the Regulation Service constraint minus the product of the marginal resource's real-time Regulation Movement Bid and the RMM. The NYISO also describes the calculation of the real-time Regulation Movement Market Price as the Regulation Movement Bid of the marginal resource.

The NYISO also describes that the Real-Time Regulation Capacity and Movement Market Prices during intervals when the NYISO has called for a reserve pickup or a maximum generation pickup pursuant to Services Section 4.4.3.1.1. Under these circumstances, the Real-Time Regulation Capacity and Movement Market Prices are zero. The price of Regulation Service is currently set to zero during these circumstances, pursuant to the provisions of Section 15.3.9 (renumbered herein as 15.3.8). Minor nonsubstantive clarifications are also proposed in this Section.

Section 15.3.5.2 is amended to indicate that existing scarcity pricing rules will be applied to the Regulation Capacity Market Price.

Section 15.3.5.3 is proposed to be amended to clarify that the existing two-settlement system for Regulation Service will apply to Regulation Capacity. In addition, the NYISO proposes to describe the settlement for Regulation Movement in real-time as the product of i) instructed Regulation Movement; ii) the Regulation Movement Market Price; and iii) the Supplier's performance factor developed pursuant to Section 15.3.5.5.1. The limitation on Regulation Supplier settlements to the amount of Regulation Service scheduled by the NYISO is relocated to this Section from Section 15.3.5.5.1.

Section 15.3.5.5 is proposed to be divided into two subsections. The first, Section 15.3.5.5.1 describes the calculation of the performance factor to be used in Regulation Movement settlements. The formula currently used to measure the performance of

Regulation Suppliers is retained with clarifications to incorporate new terminology. Since existing Sections 15.3.4 and 15.3.5 describe Day-Ahead and real-time settlements for Regulation Service Suppliers, the redundant settlement descriptions located here are unnecessary and are proposed for deletion.

In addition, the NYISO is proposing to eliminate the automatic setting of the performance factor for Limited Energy Storage Resources (“LESRs”) to one (1) in compliance with the Commission requirement that the performance of all resources be measured and applied to their settlements in a non-discriminatory fashion.<sup>23</sup>

The second subsection, 15.3.5.5.2, is entirely new and describes the calculation of the performance charge to be applied to all Regulation Suppliers. The Regulation Service performance charge is an interval level real-time charge also based on the performance factor of the individual Regulation Service provider. The performance charge is based on the MW of a supplier’s real-time Regulation Capacity Schedule that it failed to provide (if any) as measured by the resource’s performance factor over an RTD interval. For Regulation Capacity which was scheduled in the Day Ahead market, the performance charge for the interval is the product of: i) the MW of underperformance increased by a factor of 10 percent and, ii) the higher of the Day-Ahead or real-time Regulation Capacity price. For Regulation capacity that has been scheduled only in the Real-Time Market, the performance charge for the interval is the product of: i) the MW of underperformance increased by a factor of 10 percent, and ii) the real-time Regulation Capacity price. The increase of ten percent in the performance factor when calculating the performance charge is intended to incent regulation suppliers good control performance. The performance charge is used to off-set the cost of Regulation Service which is paid by all LSE’s in the NYCA.

Section 15.3.6 is proposed to be amended to clarify that LESRs are not included in the routine Energy settlement as they are Regulation-only providers.<sup>24</sup> LESRs have never been in the Energy Market and this is a clarification, not a substantive change.

Section 15.3.6.2 is proposed to be amended to revise its format for clarification only, no substantive changes in this section are proposed.

Section 15.3.7 is proposed to be amended to indicate that the Regulation Demand Curve applies to the Regulation Capacity Market Prices and the Regulation Capacity settlement only.

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<sup>23</sup> Order No. 755 ¶ 154.

<sup>24</sup> See: Services Section 2.12: the definition of an LESR as a “Generator authorized to offer Regulation Service only and characterized by limited Energy storage, that is, the inability to sustain continuous operation at maximum Energy withdrawal or maximum Energy injection for a minimum period of one hour.”

Section 15.3.8 is deleted as the NYISO does not intend to reinstate the performance charge calculated pursuant to this section. This performance charge was included in the NYISO's original market design and was retained while the NYISO transitioned to the Regulation performance charge that is currently described in Section 15.3.5.5 should the performance charge fail to maintain NYISO compliance with NERC standards. The NYISO no longer has this concern and this legacy calculation is being proposed for deletion. Conforming changes to recognize the deletion of this section are also proposed for 15.3.1.2(e) and 15.3A.2 and 15.3A.3.

Section 15.3.9 is renumbered Section 15.3.8. The NYISO is proposing to replace the reference to suspension of the Regulation Service Market, when the NYISO experiences large control area error and uses special dispatch instructions, with a reference to the NYISO practice of setting all Regulation Service schedules to zero. This language more precisely characterizes NYISO actions in these circumstances. The NYISO also clarifies that the real-time Market Prices for both Regulation Capacity and Regulation Movement will be set to zero in these circumstances. Conforming changes to recognize these amendments are also proposed to Sections 17.1.2.1.3, the pricing rules for Energy that are applicable when the NYISO is pursuing reserve pickups or maximum generation pickups, and Sections 4.4.3.1.1, and 4.4.3.1.2 the description of the NYISO real-time scheduling software for Reserve and Maximum Generation pickups.

Section 15.3A is amended to replace the existing Regulation Service terminology with the new terms for Regulation Service that are proposed herein. The formulae included are used to calculate the under-performance charge for Generators not providing Regulation Service and to calculate the Overgeneration charge for Generators using wind as their fuel.

Section 18 describes the calculation of Bid Production Cost Guarantees ("BPCG").

Section 18.2.1 is proposed to be amended to include a BPCG for Regulation Service.

Sections 18.2.1.2 and 18.5.1.3 are proposed to be amended to delete the current exemption of LESRs from BPCG eligibility.

Sections 18.2.2.2, 18.4.2 and 18.10.2, 18.11.2 are proposed to be amended to describe the changes to the BPCG formula for Generators in the Day-Ahead and Real-Time Markets, and Demand Side Resources in the Day-Ahead and Real-Time Markets, respectively, to recognize the eligibility of Regulation Service Bids for a BPCG. The Day-Ahead BPCG is limited to Bids for Regulation Capacity as Regulation Movement is not scheduled or settled in the Day-Ahead Market. As Sections 18.4.2 and 18.11.2 indicate for Generators and Demand Side Resources, respectively, both Regulation Capacity and Regulation Movement Bids are protected with a real-time BPCG.

While revenues for supplying Regulation Service were previously included in the BPCG calculation to the extent such revenues exceeded the Regulation Service Bids, the Regulation Service Bids were previously set to zero if they exceeded the Regulation

Service revenue. The provisions setting the Regulation Service Bids to zero are being proposed for deletion.

Section 21.5.2 is proposed to be amended to indicate that the floor for Regulation Capacity and Regulation Movement Bids is zero.

Section 21.5.3 is proposed to be amended to indicate that the NYISO would apply a Bid Restriction, as described above in Section IV. F., on the Regulation Movement Bid price. Section 21.5.3 indicates the NYISO will provide the Bid Restriction in this Section of the Services Tariff prior to the effective date of the revisions necessary to comply with Order No. 755. It also provides for a periodic review of the Bid Restriction no less frequently than once a year and indicates that the criteria for review include an evaluation of whether an increase in the offer cap, 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. The review shall include a recommendation by the MMU on raising, eliminating or retaining the Bid Restriction.

Section 23.3.1.2.1.2 is proposed to be amended to apply the current threshold for economic withholding of Regulation Service to Regulation Capacity. Thus, the NYISO proposes to apply a threshold to the Regulation Capacity Bid price of a 300 percent increase or an increase of \$50 per MW whichever is lower. The NYISO proposes to retain the exemption for Bids below \$5 per MW which are deemed not to constitute economic withholding. The threshold for economic withholding of Regulation Movement is identified by an increase of 300 percent in the Regulation Movement Bid price.

The NYISO also proposes to amend Section 23.1.4.6 to indicate reference levels for Regulation Capacity and Regulation Movement Bid prices are established in the same manner as the NYISO established Bid price references for Operating Reserves.

Section 25, the Tariff Attachment describing the Day-Ahead Margin Assurance Payment (“DAMAP”), is proposed to be amended to revise the definitions of the terms  $DABreg_{hu}$  and  $RTBreg_{iu}$  to represent Regulation Capacity Bids in the Day-Ahead and Real-Time Markets, respectively. The proposed revisions also include new terms which, in various formulas, represent the revenue to be collected by Regulation Service Suppliers in their Regulation Movement settlement, to the extent the revenue exceeds the Supplier’s Regulation Movement Bid. The formulas revised to add Regulation Movement revenue include the formulae for:

- i) Generators with real-time Regulation Service schedules either less than or greater than their Day-Ahead Regulation Service schedules;
- ii) Demand Side Resources with real-time Regulation Service schedules either less than or greater than their Day-Ahead Regulation Service schedules;
- iii) LESR’s with real-time Regulation Service schedules less than their Day-Ahead Regulation Service schedule when the real-time Regulation Capacity Market Price is greater than the Day-Ahead Regulation Capacity Bid price;

- iv) LESR's with real-time Regulation Service schedules less than their Day-Ahead Regulation Service schedules when the real-time Regulation Capacity Market price is less than or equal to the Day-Ahead Regulation Capacity Bid price; and
- v) LESR's with real-time Regulation Service schedules greater than or equal to their Day-Ahead Regulation Service schedules.

The NYISO applies the performance factor in the formula when the real-time Regulation Capacity Market Price is greater than the Day-Ahead Regulation Capacity Bid price (iii above), to ensure that the DAMAP appropriately reflects the Supplier's poor performance. When the real-time Regulation Capacity Market price is less than or equal to the Day-Ahead Regulation Capacity Bid price (iv above), the NYISO does not include the performance factor in the DAMAP calculation to avoid a DAMAP that would benefit the Supplier for poor performance.

Section 30.4.6.3.3 is a new subsection describing the obligation of the MMU to perform a periodic review of the Bid Restriction described in Section 21.5.3.

The NYISO has also included minor non-substantive revisions to adjust existing terminology to reflect the new terms described above, as appropriate, in Sections 4.2.1.3.1, 4.4, 4.5, 4.5.3.3, 4.5.4.1, 4.6.6.3, 15.3.1.2, 15.3.4, 15.3.5.2, 15.3.5.4, and 17.

## **B. OATT**

The NYISO is proposing to amend Section 6.3 to delete the reference to a reinstatement of performance charges pursuant to Section 15.3.8.

## **VI. Effective Date**

The NYISO is scheduled to implement the software code adjustments necessary for the tariff revisions proposed in this compliance filing to become effective on October 27, 2012. Because of the simultaneous and ongoing effort to also implement Commission-ordered Market to Market revisions in ER12-718-000, the code for both designs is being built as an integrated whole. Only by processing these required design changes through code improvements pursued in this fashion can the NYISO meet the effective dates set for it by the Commission in both dockets. The NYISO advises the Commission of this development process to alert it to the fact that an unanticipated delay in the effective date of revisions in this docket or in ER12-718-000 will effectively delay both these efforts.



## **VII. 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 of October 27, 2012.

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 30th day of April, 2012

/s/ Mohsana Akter

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