NEW YORK INDEPENDENT SYSTEM OPERATOR
Building the Energy Markets of Tomorrow...Today℠

10 Krey Boulevard ♦ Rensselaer, NY 12144

February 10, 2009

By Hand Delivery

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

Re: ***New York Independent System Operator, Inc.*, Docket No. ER09-___-000 Filing to Align Real-time Pricing Outcomes with Actual Energy Output When Actual Generator Output Deviates from Scheduled Output, to Clarify the Real-time Pricing Process and to Request a Shortened Comment Period and Expedited Commission Action**

Dear Secretary Bose:

In accordance with Section 205 of the Federal Power Act and Part 35 of the Commission's regulations, the New York Independent System Operator, Inc. ("NYISO") respectfully submits proposed revisions to its Market Administration and Control Area Services Tariff ("Services Tariff") and its Open Access Transmission Tariff ("OATT") to better align real-time pricing outcomes with Generator output at times when a Generator's actual energy output diverges from its energy schedule. This improvement was suggested by the NYISO's independent Market Advisor, Dr. David Patton in his 2007 *State of the Market Report.*[1] The NYISO also proposes to clarify a phrase in the tariff provisions governing its real-time pricing process. The proposed tariff amendments have been unanimously approved by the NYISO's Management Committee.

For the reasons set forth in Section IV, below, the NYISO also requests that the Commission exercise its discretion to shorten the standard comment period to fourteen days, waive the usual sixty day notice period, and issue an order no later than March 13, 2009 that accepts the NYISO's proposed tariff revisions with a March 17, 2009 effective date.

[1] *See:*http://www.nyiso.com/public/webdocs/documents/market_advisor_reports/NYISO_2007_SOM_Final.pdf, pp 93-94.

I. Documents Submitted

1. This filing letter;

2. A clean version of the proposed revisions to the NYISO's OATT and Services Tariff ("Attachment I"); and

3. A blacklined version of the proposed revisions to the NYISO's OATT and Services Tariff ("Attachment II").

II. Background

As is explained in greater detail below, the NYISO's real-time pricing process does not incorporate the cost of dispatching replacement generation that may be necessary to serve load (or relieve over-generation by reducing output) when generation fails to follow its real-time schedules. This is a consequence of the NYISO's use of a "hybrid-pricing" methodology that allows Fixed Block Units (*i.e.* gas turbines) to set price when any part of their capacity is necessary to meet load.[2] The NYISO's independent Market Advisor, Dr. David Patton, has recommended that the costs of replacement generation be incorporated into the real-time price under these circumstances to better match real-time prices with actual system conditions and improve the efficiency of real-time prices.

The NYISO's real-time scheduling ("RTS") software produces both physical schedules for Suppliers, and zonal and Supplier-specific Energy prices ("Locational Based Marginal Prices" or "LBMPs") every five minutes using separate software logic or Passes ("scheduling and pricing Passes").[3] The scheduling Pass treats Fixed Block Units as able to run at or near their upper operating limit.[4] It also incorporates Generators' actual output at initialization and their physical ability to increase or decrease their output from the output scheduled for them in the previous Real-Time Dispatch ("RTD") interval when establishing schedules for all Generators.[5]

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[2] Capitalized terms not expressly defined herein have the meaning ascribed to them in the Services Tariff. A Fixed Block Unit is a Generator that, due to operational characteristics, can only be dispatched in one of two states, either turned completely off, or turned on and run at a fixed capacity level.

[3] Intervals are nominally five minutes in length.

[4] Fixed Block Units are dispatchable from an "off" to an "on" state but when "on" must run at or near their upper operating point.

[5] If the physical solution indicates that existing units' response will be insufficient to meet load, RTS will either commit ten-minute units or dispatch up other units.

The pricing Pass, on the other hand, treats Fixed Block Units as flexibly dispatchable between zero and their upper operating limit and assumes that all dispatchable Generators will increase or decrease their output from their previous pricing Pass schedule. Unlike the scheduling Pass, the pricing Pass does not account for or acknowledge that the actual output of Generators may differ from their scheduled output.[6]

Generators that do not respond to their physical basepoints, or that respond at a different rate then their registered ramp rate indicates is possible, can increase the divergence in system dispatch solutions between the scheduling and pricing Passes beyond what is necessary to manage gas turbine price setting. Divergence between the RTS scheduling and pricing solutions when Generators are not following their schedules can lead to several adverse consequences. First, since the pricing Pass does not recognize Generator dragging or over-production, it does not recognize, or price, the dispatch of additional resources or the backing down of otherwise economic resources that may be necessary to meet load when a Generator is not meeting its scheduled output. Real-time LBMPs may not, therefore, reflect the true cost of meeting load and as a result may send inefficient price signals to the market place. Second, divergence can result in real-time uplift to pay for resources that are dispatched in the physical Pass to meet load because other Generators have failed to respond to their basepoints. Since the offers of these newly marginal[7] units are not reflected in real-time LBMPs, it is likely that they will need a bid production cost guarantee ("BPCG") to cover their costs.

The NYISO's existing market design attempts to mitigate this outcome by penalizing Generators that fail to follow their basepoints and not paying for energy output in excess of schedule. The NYISO penalizes dispatchable Generators that are not providing Regulation[8] if they deviate from their basepoint by more than three percent of their upper operating limit ("UOL") for 15 minutes (3 real-time intervals) or more.[9] In addition, as explained in greater detail below, significant divergence from dispatch instructions that causes market impacts in excess of certain thresholds can also result in a Market Party being subject to financial sanctions for physical withholding or uneconomic overproduction.[10]

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[6] This functionality is also known as accumulating basepoints.

[7] These units are marginal because, given other Generators' failure to follow dispatch instructions, they are the units that are actually being dispatched up or down in order to reliably serve load.

[8] A performance factor in the settlement equation for Regulating resources penalizes them if they fail to follow their Regulation basepoints. *See*: Rate Schedule 3 Section 5.4.

[9] A performance factor in the settlement equation for Regulating resources penalizes them if they fail to follow their Regulation basepoints. *See*: Rate Schedule 3 Section 5.4. *See*: Services Tariff Rate Schedule 3A and Section 2.23a

[10] *See*: Attachment H to the Services Tariff, Sections 3.1.1, 3.1.3, 3.2.1, 4.1 and 4.3.

Nonetheless, for a variety of reasons, Generators may not always keep up with their basepoints. Both the NYISO's staff and Dr. Patton have noted that the dispatch solutions reached in the scheduling and pricing Passes can diverge, and inefficient pricing can result.

Dr. David Patton has recommended in his *State of the Market Report* that the NYISO:

> Re-calibrate the dispatch levels in the real-time market's pricing model for units that are not responding to dispatch signals. . . . [F]urther, improvements to the consistency of the pricing and physical dispatch passes of RTD could improve the efficiency of NYISO's energy and ancillary services pricing (particularly during shortages) and reduce uplift.

To effectuate Dr. Patton's recommendations, the NYISO is proposing Tariff revisions to improve the real-time pricing process in the event of deviations from schedules. In addition, the NYISO is proposing enhanced mitigation measures for physical withholding to ensure the NYISO can identify and penalize, as necessary, non-competitive conduct that the proposed pricing rule changes may now promote.

III. Tariff Description and Justification

The NYISO proposes to adjust the real-time pricing algorithms to reflect Generator dragging and overproduction by modifying the output which the pricing Pass assumes Generators will be providing in the next interval. The pricing Pass will adjust Generators' assumed output by the amount any Generator is deviating from the basepoint signals it had been sent in the interval immediately prior to the preceding interval. If the unit's actual output is not consistent with its physical schedule, the software will assume the unit can not respond and, in the pricing Pass, the Generator will no longer be expected to respond. If a unit is not capable of responding to basepoints, then it is not reasonable to assume additional availability to respond to basepoints for the purpose of setting price.

The NYISO proposes to reflect this modification in its Tariffs through amendments to Section I A 1 b (ii) of Attachment B of the Services Tariff and Attachment J to the OATT[11] to adjust the manner in which RTS determines upper and lower dispatch limits for Dispatchable Generators not providing Regulation Service. The underlined language below is the NYISO's proposed adjustment to the setting of the Upper Dispatch Limit:

> The upper dispatch limit for the first time point of the second pass for a Dispatchable Resource not scheduled to provide Regulation Service shall be the

[11] The relevant provisions of Attachment B to the Services Tariff and Attachment J to the OATT are substantively identical.

> higher of: (A) its upper dispatch limit from the first pass; or (B) its "pricing base point" from the first time point of the prior RTD interval adjusted up within its Dispatchable range for any possible ramping since that pricing base point was issued less the higher of: (i) the physical base point established during the first pass of the Real-Time Dispatch immediately prior to the previous Real-Time Dispatch minus the Resource's metered output level at the time that the Real-Time Dispatch run was initialized, or (ii) zero.

The underlined language below is the NYISO's proposed adjustment to the setting of the Lower Dispatch Limit:

> The lower dispatch limit for the first time point of the second pass for a Dispatchable Resource not scheduled to provide Regulation Service shall be the lower of: ~~(i)~~ (A) its lower dispatch limit from the first pass; or (B) its "pricing base point" from the first time point of the prior RTD interval adjusted down within its Dispatchable range to account for any possible ramping since that pricing base point was issued plus the higher of: (i) the Resource's metered output level at the time that the Real-Time Dispatch run was initialized minus the physical base point established during the first pass of the Real-Time Dispatch immediately prior to the previous Real-Time Dispatch; or (ii) zero.

In addition, the NYISO proposes to remove from Section I A 1 b (iii) of Attachment B to the Services Tariff and Attachment J to the OATT a parenthetical describing pricing base points for RTS scheduled Dispatchable Resources calculated in the second RTS pricing Pass (the third Pass overall) as Energy schedules when they are not. While this phrase is descriptive only, it is inaccurate and should be eliminated. The elimination of this phrase is indicated in the paragraph below:

> The third Real-Time Dispatch pass is the same as the second pass with three variations. First, the third pass treats Fixed Block Units that are committed by RTC, or are otherwise instructed to be online or remain online by the ISO that received a non-zero physical base point in the first pass, and that received a hybrid base point of zero in the second pass, as blocked on at their UOL_N or UOL_E, whichever is applicable. Second, the third pass produces "pricing base points" ~~(i.e., real-time Energy schedules)~~ instead of hybrid base points.

When Generators ignore dispatch instructions and their actions adversely impact the New York markets they may also be subject to physical withholding or uneconomic overproduction penalties in accordance with the Market Mitigation Measures ("MMM") that are set forth in Attachment H to the Services Tariff. In order to implement the changes to the NYISO's method of determining real-time prices that are described above, the NYISO must make corresponding

changes to the mitigation measures that it applies to dispatchable Generators that fail to follow their schedules.

The NYISO presently identifies the physical withholding of, or uneconomic overproduction from, dispatchable Generators that are not scheduled to provide Regulation, by comparing a Generator's actual output level to the point at which the Generator is committed in the NYISO's pricing dispatch (which reflects the point at which the Generator would have been operating had it followed the NYISO's dispatch instructions). The improved pricing method that the NYISO is proposing to implement will not permit this direct comparison between a Generator's actual output and its pricing Pass schedule because, as explained above, the NYISO's improved pricing method will take into account each Generator's actual output, rather than relying on a theoretical, "ideal" dispatch to determine prices. When the NYISO's proposed improvements are implemented, a Generator's actual real-time output will affect its dispatch in the NYISO's pricing Pass and the NYISO will lose the simple comparison it now uses between a Generator's actual output and its pricing Pass dispatch in order to identify physical withholding or uneconomic overproduction. In order to determine when a Generator's failure to follow its schedule was inappropriate conduct that had a market impact, the NYISO will have to use a different standard.

In addition to the proposed changes to Attachment B to the Services Tariff and Attachment J to the OATT that are described above, therefore, the NYISO proposes the following modifications to its MMM to permit it to adequately monitor for, and apply sanctions to, physical withholding and uneconomic overproduction. The NYISO's Market Advisor has been consulted regarding the proposed changes to the MMM and supports the proposed Tariff revisions that are included herewith.

The NYISO proposes to modify Sections (and sub-sections) 2.3(b), 2.4(a)(1), 2.4(b), 3.1.1, 3.1.3, 4.1 and 4.3.2 of its MMM to make clear that, in assessing whether or not market power is being exercised via physical withholding, the NYISO will also consider the actions of, and benefits received by, entities that are affiliated with Market Parties that participate in the NYISO's markets.

The NYISO also proposes to revise sub-section 2.4(a)(1)(iv) and to the definition of an "unjustifiable change" in Section 2.4, in order to clarify the standard that the NYISO will apply to identify entities that are physically withholding by modifying a Resource's operating parameters, or by failing to follow the NYISO's dispatch instructions.

In addition, the NYISO proposes to substantially re-write Section 3.1.1 of the MMM, which sets forth the conduct thresholds[12] for identifying possibly physical withholding. As

[12] The MMM require the NYISO to sanction physical withholding that violates both the relevant conduct and market impact thresholds.

revised, Section 3.1.1 will clearly permit the NYISO to consider actions taken by, and benefits received by Affiliates of Market Parties in assessing conduct for possible physical withholding. In addition, the NYISO proposes to change the standard it applies to identify conduct that may indicate physical withholding by Generators located in a designated Constrained Area.[13] For Electric Facilities[14] located in a Constrained Area, section 3.1.1(d) of the MMM currently requires the NYISO to treat any failure to offer or to obey operating instructions as a violation of the conduct thresholds used to identify possible physical withholding. The NYISO proposes to replace the "zero threshold" physical withholding conduct standard that applies in Constrained Areas with a set of thresholds that are, on the whole, tighter than the conduct thresholds that are used to test for physical withholding outside the designated New York City Constrained Area, but looser than the unnecessarily stringent "zero threshold" standard that is presently in place.[15] The NYISO also proposes to add language to indicate that a determination of Physical Withholding requires, *inter* alia, dragging for a period longer then 15 minutes. *See* proposed Section 3.1.1.a(2)(i). The NYISO's Market Monitoring and Performance Department and its Market Advisor utilized the years of experience they have in administering the physical withholding thresholds to determine the proposed Constrained Area thresholds.

The NYISO proposes to modify Section 3.1.3 of the MMM, which sets forth conduct thresholds for identifying uneconomic production.[16] The proposed revisions clarify the NYISO's authority to consider the impact of Affiliates and propose conduct thresholds that are in line with the thresholds proposed in the NYISO's revisions to Section 3.1.1 of the MMM.

The NYISO also proposes to correct a typographical error in Section 3.2.1(1) of its MMM, and to modify Section 3.2.1(3) of its MMM to require it to apply the Constrained Area

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[13] At this time, the New York City area is the only designated Constrained Area in New York State. *See* Section 2.1 of the MMM.

[14] "Electric Facilities" include both Generators and electric transmission facilities. *See* MMM § 2.1. However, given the language of Section 3.1.1(c) of the MMM, which already provides "A transmission facility shall be deemed physically withheld if it is not operated in accordance with ISO instructions and such failure to conform to ISO instructions causes or contributes to transmission congestion. A transmission facility shall not be deemed withheld if it is subject to a forced outage or is out of service for maintenance in accordance with a ISO maintenance schedule", the NYISO sees no need for a separate or different standard to be applied in Constrained Areas.

[15] Because testing to determine if the physical withholding of a Generator had a market impact requires the NYISO to re-run its markets after-the-fact, the NYISO cannot possibly test each and every Bid or action that fails to satisfy the Constrained Area physical withholding "zero threshold" standard for market impact. Rather, it tests the conduct-failing Bids and actions that it expects could possibly exceed the market impact threshold. The NYISO's proposed Constrained Area conduct thresholds present a more reasonable method of identifying Bids and actions that need to be tested for market impact.

[16] Uneconomic production occurs if a Resource is Bid or operated without regard to the economics of the Resource's operation (presumably) in order to increase congestion on the transmission system.

market impact threshold to determine market impact for physical withholding by Generators located in Constrained Areas during Constrained Hours. Hence, while the NYISO is proposing to loosen the conduct threshold it applies to test for physical withholding in Constrained Areas, it is proposing to tighten the threshold it uses to test conduct-failing Bids and actions for market impact during Constrained Hours.

Finally, the NYISO proposes to modify Section 4.3.3 of the MMM to add a distinct method of calculating penalties for failure to follow ISO dispatch instructions in real-time in a manner that violates the applicable conduct and impact thresholds. The penalty that the NYISO proposes to apply is:

> One and a half times the estimated additional real time LBMP and Ancillary Services revenues earned by the Generator, or Market Party and its Affiliates, meeting the standards for impact during intervals in which MW were not provided or were overproduced.

The NYISO's proposed penalty is appropriate because it ties the penalty calculation to the benefits received by the entity or entities that failed to follow the NYISO's dispatch instructions. The proposed penalty is set at a level that should be adequate to disincent physical withholding and uneconomic production without being draconian in nature.

IV. Request for Shortened Notice and Comment Period, for Expedited Commission Action, and for a March 17, 2009 Effective Date

The NYISO requests an effective date of March 17, 2009, the date that the software modifications necessary to implement its proposed tariff revisions are scheduled to be integrated into the NYISO's scheduling systems. The Commission's regulations specify that tariff revisions will normally take effect after a sixty notice period and that twenty one days will normally be allowed for interested parties to submit protests.[17] The Commission has discretion, however, to shorten both periods for good cause. In this case there is good cause for the Commission to shorten the usual comment period to fourteen days and to issue an order no later than March 13 making the proposed tariff revisions effective on March 17. Taking these actions will permit the NYISO to implement the tariff revisions presented in this filing as part of its regularly scheduled March software deployment. It would also allow the NYISO to proceed with its planned May deployment[18] of additional software (to be addressed in one or more future Section 205 filings) that will improve the NYISO's management of wind resources and facilitate participation by energy storage resources in the NYISO markets in time for the Summer

[17] *See* 18 C.F.R. §§ 35.3 and 35.8. (2008)

[18] The NYISO installs software on a set of preplanned deployments scheduled nominally once every two months.

Capability Period.[19] No interested party will be disadvantaged if the Commission grants the NYISO's request for a seven day reduction in the standard comment period because the NYISO's proposals have already been vetted through the stakeholder process and interested parties have thus had ample time to formulate their views.

V. Requisite Stakeholder Approval

The proposed modifications described above were discussed with Market Participants at the Management Committee on November 10, 2008 at which time the changes proposed for Services Tariff Attachment B, OATT Attachment J and the bulk of the proposed revisions to Services Tariff Attachment H were approved. Further revisions to Attachment H were recommended for approval by the Management Committee on January 27, 2009. The Tariff amendments proposed here were approved, in their totality, at one of these two Management Committee meetings.

VI. Communications and Correspondence

All communications and service in this proceeding should be directed to:

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[19] More specifically, the NYISO intends to file for Commission approval, at least sixty days before planned implementation, new market rules allowing the NYISO to limit wind output to maintain reliability when economically indicated and introducing Limited Energy Storage Resources to the New York market as Regulation Service providers. To manage these May 2009 software deployments in a manner that will ensure the NYISO has an adequate opportunity to remedy any issue that may appear at or soon after deployment without disrupting the markets or reliable service requires that the NYISO not delay the deployment of the enhancements addressed in this filing from March until May.

VII. Service

The NYISO will electronically send a link to this filing to the official representative of each of its customers, to each participant on its stakeholder committees, to the New York Public Service Commission, and to the electric utility regulatory agencies of New Jersey and Pennsylvania. In addition, the complete filing will be posted on the NYISO's website at www.nyiso.com. The NYISO will also make a paper copy available to any interested party that requests one. To the extent necessary, the NYISO requests waiver of the requirements of Section 35.2(d) of the Commission's Regulations (18 C.F.R. § 35.2(d) (2007)) to permit it to provide service in this manner.

VIII. Conclusion

Wherefore, for the foregoing reasons, the New York Independent System Operator, Inc. respectfully requests that the Commission act expeditiously and accept for filing the proposed Tariff revisions that are attached hereto with an effective date of March 17, 2009.

Respectfully submitted,

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