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The Honorable David P. Boergers, Secretary Federal Energy Regulatory Commission 888 First Street, N.E. Washington, D.C. 20426

# New York Independent System Operator, Inc. Automated Mitigation Procedure Docket No. ER01-2076-000

Dear Mr. Boergers:

On June 28, 2001, the Commission issued an Order Accepting Tariff Filing as Modified in Docket No. ER01-2076-000 ("June 28 Order")<sup>1</sup>, which approved the proposal of the New York Independent System Operator, Inc. ("NYISO") to implement an Automated Mitigation Procedure ("AMP") for the Day-Ahead Market administered by the NYISO.<sup>2</sup> The June 28 Order directed that the AMP terminate on October 31, 2001. The NYISO, by counsel, pursuant to Section 205 of the Federal Power Act, hereby requests that the termination date for the AMP be extended to October 31, 2002.

This proposed extension of the AMP was approved by the NYISO members at a special meeting of the Management Committee held on September 21, 2001. This filing had previously been approved by the NYISO Board of Directors at its monthly meeting on September 18, 2001, pending approval by the Management Committee.

<sup>&</sup>lt;sup>1</sup> New York Independent System Operator, Inc., 95 FERC ¶ 61,471 (2001).

<sup>&</sup>lt;sup>2</sup> Capitalized terms not otherwise defined herein having the meaning ascribed to them in Article 2 of the NYISO Market Administration and Control Area Services Tariff ("Services Tariff").

#### I. Documents Submitted

Pursuant to Section 205 of the Federal Power Act and 18 C.F.R. § 35.13, the NYISO submits six copies of:

- 1. This filing letter;
- 2. NYISO Memorandum to the Management Committee re AMP Extension (Attachment I); and
- 3. A form of Notice for the Federal Register (Attachment II).

# II. Copies of Correspondence

Copies of correspondence concerning this filing should be served on:

Robert E. Fernandez General Counsel and Secretary John P. Buechler Director of Regulatory Affairs New York Independent System Operator, Inc. 3890 Carman Road Schenectady, NY 12303 rfernandez@nyiso.com (518) 356-7504 jbuechler@nyiso.com (518) 356-6153 William F. Young Ted J. Murphy Hunton & Williams 1900 K Street, N.W., Suite 1200 Washington, DC 20006 wyoung@hunton.com (202) 955-1684 tmurphy@hunton.com (202) 955-1588

#### III. Request for AMP Extension

During this past summer, the AMP operated in accordance with its design, and served as an important backstop for the competitive performance of the New York Day-Ahead Market. At the same time, the AMP did not interfere with the competitive performance of those markets.

As noted in the June 28 Order, the AMP procedures are not activated unless the Security Constrained Unit Commitment software ("SCUC") that calculates Day-Ahead Market

prices makes a preliminary determination that prices in a given area of New York will exceed \$150 absent mitigation. This threshold was selected because it is unlikely that the thresholds for mitigation of bids will be exceeded if prices are below \$150.<sup>3</sup> Once the AMP is activated, however, it only mitigates bids if specific thresholds for both bidding conduct and market impact are crossed.

The conduct and impact thresholds used by the AMP are the same thresholds approved by the Commission for use in the NYISO's Market Mitigation Measures generally.<sup>4</sup> Prices hit the \$150 level 12 times this summer. The AMP imposed bid caps, however, only four times. Of those four times, the largest average number of megawatts mitigated was 481, while customers were protected from more than \$11 million in unwarranted energy costs. Only twice did AMP mitigation apply to more than one entity in one zone. Thus, while the AMP is an automated procedure, it does not automatically apply bid caps whenever prices are high.

As discussed further below, the NYISO is in the process of doing a detailed analysis of the performance of the AMP over this past summer. The initial focus of this analysis has been on whether the performance of the AMP was consistent with its design. The NYISO has determined that that was in fact the case. At the same time, the fundamental reason for having the AMP continues to exist. As noted in the June 28 Order, the main purpose of the AMP is to eliminate the delay of one DAM cycle inherent in manual application of the market mitigation thresholds.<sup>5</sup> That delay can be important any time market conditions arise that permit an exercise of market power. In an interconnected network with significant potential for congestion, such conditions can arise at any time and can -- absent mitigation -- result in significant unwarranted wealth transfers from buyers to sellers. Moreover, while the likelihood that market power conditions may also arise during shoulder months, when load may be down but generation units may also be down, for scheduled maintenance. In addition, transmission constraints can create tight market conditions in small areas even during shoulder months.

<sup>3</sup> 95 FERC ¶ 61,471 at 62,689.

<sup>&</sup>lt;sup>4</sup> The Market Mitigation Measures are set forth in Appendix H to the Services Tariff.

<sup>&</sup>lt;sup>5</sup> 95 FERC ¶ 61,471 at 62,688.

In addition, the automated processes of the AMP enable the conduct test for bids to be applied to DAM bids for the same day in which the market impact test is applied.<sup>6</sup> By contrast, with manual mitigation it is only possible to apply the conduct test to the prior day's bids, with those bidders then subject to mitigation if the impact test is met in the day being examined. Finally, as noted above the AMP does not involve the adoption of any new substantive standards for mitigation, but instead automates the standards used in the Market Mitigation Measures generally. The upshot is that, while the AMP can be improved, it performs as designed, provides a valuable market backstop, mitigates only rarely, will almost certainly be needed next summer for all the reasons that it was needed this summer, and may well be needed in the intervening shoulder periods between October 31 and this coming summer. Thus, the NYISO recommends that the Commission authorize the continuation of the AMP while further analysis is undertaken and proposed improvements are implemented by the NYISO in consultation with the Market Participants.

And indeed, the NYISO recognizes that AMP can be improved. In the motion for continuation of the AMP proposed to the Management Committee by the NYISO, the NYISO undertook several specific commitments for further study and improvement of the AMP:

WHEREAS the NYISO is committed to using its best efforts to make improvements in the Automated Mitigation Procedure ("AMP") prior to next summer as are more fully described in the memorandum distributed with the meeting materials for this meeting; and

WHEREAS the NYISO is also committed to undertaking appropriate analysis and working with Market Participants to determine if other refinements or changes in the AMP design should be considered, including changes to ensure that, as much as possible, the AMP is only triggered by high prices that are a result of market power, or to ensure that the AMP does not unreasonably limit arbitrage between the Day-Ahead and Real-Time markets; and

WHEREAS the NYISO is also committed to sharing the results of its analysis of the AMP with the Market Participants as appropriate consistent with confidentiality requirements; and

<sup>&</sup>lt;sup>6</sup> 95 FERC ¶ 61,471 at 62,687.

WHEREAS the NYISO is committed to bringing appropriate proposals to the NYISO committees for review in time for any necessary tariff changes to be implemented prior to the Summer 2002 Capability Period;

NOW THEREFORE, the Management Committee concurs in the NYISO Board's approval of a filing with the FERC to maintain the effectiveness of the AMP through October 31, 2002.

This is the motion that was adopted by the Management Committee.

In the memorandum referred to in the motion that was distributed with the meeting materials to the Management Committee, the NYISO identified two specific improvements to the AMP that it intends to implement as soon as feasible:

- Exclude from mitigation by the AMP a Market Participant's bids that trigger the conduct test for mitigation if the total quantity of those bids is 50 MW or less, unless analysis shows the relevant units are in a position to exercise market power at those quantity levels.
- Limit mitigation to zones in which the impact test for mitigation is met by implementing an additional iteration in SCUC.

As stated in the memorandum to the Management Committee:

Both of these features were deemed desirable in the original Working Group and Committee review of the AMP, but were deferred because of time and software constraints. In addition, the implementation of an additional SCUC pass raised concerns about the potential to delay posting of DAM prices. Pending SCUC performance improvements should permit an additional SCUC pass without delaying the DAM posting time. Thus, it should be feasible to make both of the foregoing improvements prior to the summer of 2002, and the NYISO is committed to using its best efforts to do so.

As the foregoing paragraph indicates, the absence of these two features from the initial design of the AMP was a result of a conscious reconciliation of competing design and implementation trade-offs. Thus, it would not be accurate to say that the absence of these features compromised the performance of the AMP this past summer. Nonetheless, a reassessment of the underlying trade-offs in light of current conditions is certainly appropriate, and that analysis now favors making these improvements in the AMP.

The first change -- a 50 MW exclusion -- would help ensure that the AMP does not automatically mitigate an entity's bids for quantities that are so small as to be unlikely to represent an exercise of market power. At present, the AMP excludes bids by bidding organizations with 50 MW or less of capacity. As the NYISO explained when it first proposed the AMP last May,

bidding that trips the conduct thresholds by a bidding organization, including its Affiliates, which owns or controls 50 MW or less of capacity is exempt from the AMP because withholding of such small amounts will rarely have a material effect on prices. Thus, it is unlikely that any such bidding would reflect an effort to abuse market power, and may well reflect legitimate bidding considerations. The same considerations may also apply to withholding of only 50 MW or less by any bidding organization, and the NYISO is evaluating such an extension of the exclusion and the software requirements to do so. Of course, as noted above, the mere fact that a category of bids is not subject to automated mitigation does not mean that such bids are exempt from mitigation under the other procedures of the Market Mitigation Measures, if the NYISO determines on a case-by-case basis that such mitigation is appropriate.<sup>7</sup>

The NYISO is now in a position to commit to making the software changes to extend the 50 MW exemption as described in the original filing. Of course, the primary assurance that the AMP will only apply bid caps to instances of abuse of market power lies in the levels of the conduct and impact thresholds. These are set at levels intended to ensure that they would rarely, if ever, be triggered unless a bidder enjoys a significant degree of market power.

The second change -- adding at least one additional AMP "pass" to  $SCUC^8$  -- would help fine-tune the application of the AMP to limit mitigation to the specified zones and hours

<sup>8</sup> The SCUC computer algorithm performs a series passes, or computer runs, that sequentially evaluate the generation resources bid into the DAM against demand bids, NYISO load forecasts, ancillary services needs and reliability requirements. Through this analysis, the SCUC selects the optimal least-cost, security-constrained dispatch of generation and load.

<sup>&</sup>lt;sup>7</sup> Exigent Circumstances Filing of the New York Independent System Operator, Inc., at the Direction of its Board of Directors to Implement Automated Mitigation Procedure, Request for June 15<sup>th</sup> Effective Date and Request for Shortened Comment Period, dated May 17, 2001, Docket No. ER01-2076-000.

where the impact test is met. At present, the AMP is implemented with two SCUC passes. This requires the use of certain simplifying assumptions with respect to the impact test. Currently, all bids subject to the AMP that exceed the conduct thresholds from units in the areas with zonal prices exceeding \$150 are tested for their impact on prices in a single SCUC pass. If the price impact threshold is exceeded in any hour or any zone, the results of the mitigated pass are retained to determine the Day-Ahead prices. Because of other improvements that will be forthcoming shortly in the performance of the SCUC, the NYISO is now in a position to undertake implementation of an additional SCUC pass for the AMP without a significant risk of incurring the adverse market consequences that would be associated with a delay in the completion of the SCUC process and the posting of DAM prices. Therefore, the results of the first AMP pass in SCUC will be used in the second AMP pass to exclude mitigation from occurring in those areas or hours where the price impact test is not met, thus appropriately narrowing the scope of the mitigation.

In addition to the foregoing major improvements, the NYISO will also be fixing a relatively minor flaw in the way the SCUC evaluates the Reference Levels that are the basis for the bidding conduct threshold. Again as a result of practical software coding trade-offs, the AMP currently uses a six point curve to represent the Reference Levels against which bids are compared. In some cases, this may result in the interpolated value for an output level between a given pair of the six points to be below the Reference Level for that output level, with the result that the unit would be mitigated at that output level even though its bid was actually slightly below its mitigation threshold (*i.e.*, 300 percent of, or \$100/MWh above, the Reference Level at that output level). A finer representation of the Reference Level curve with a greater number of points would allow a more accurate comparison of the current bid for a unit to the actual Reference Level values at each output level. The current curve implementation is likely to be an issue only for units with relatively large final output blocks that have much higher Reference Levels than the rest of the unit, which is rarely the case. Nonetheless, it is clearly desirable to match the SCUC implementation to the Reference Levels for every unit output level as closely as possible, and the NYISO is undertaking to implement a more finely drawn SCUC curve for Reference Levels as soon as possible. In the meantime, the NYISO has already implemented a capability to make adjustments to the points in the SCUC curve to match Reference Levels for specific units on a case-by-case basis.

Finally, as also stated in the memorandum to the Management Committee: "The NYISO is also committed to working with Market Participants to determine if other refinements or changes in the AMP design should be considered, and if so will bring appropriate proposals to the NYISO committees for review."

## IV. Stakeholder Approval

The proposed extension of the AMP was approved by the NYISO Management Committee at a special meeting held on September 21, 2001, with 60.53% of the votes being cast in favor of the extension. The AMP extension was approved by the NYISO Board of Directors at its monthly meeting on September 18, 2001, subject to approval by the Management Committee. Accordingly, pursuant to the provisions of Sec. 19.01 of the ISO Agreement, this filing is submitted under Sec. 205 of the Federal Power Act.

# V. Proposed Effective Date and Request for Waiver

The NYISO respectfully requests that the Commission waive its usual sixty-day notice period and make this filing effective no later than November 1, 2001, pursuant to Section 35.11 of the Commission's regulations.<sup>9</sup> Waiver is appropriate in order to avoid a gap in the availability of the AMP. As described above, the AMP has functioned in accordance with the design approved by the Commission. Thus, with the conditions necessitating the AMP almost certain to be present this coming summer as they were this past summer, and with the potential for market power problems to arise in shoulder periods as well, it is preferable to keep the AMP in place while improvements are implemented and additional analysis undertaken, rather than to summarily terminate the AMP. Waiver and expedited treatment are also appropriate because the proposed measures have been reviewed and approved by the NYISO market participants, as well as the NYISO Board of Directors and the Market Advisor.

# VI. Parties on whom Copies have been Served

The NYISO has mailed a copy of the filing to all parties in Docket No. ER01-2076. In addition, in order to facilitate accelerated Commission action, the NYISO has e-mailed an electronic copy of this filing to all subscribers to the NYISO Technical Information Exchange ("TIE") list, which encompasses virtually all NYISO Stakeholders.

<sup>9</sup> 18 C.F.R. § 35.11.

#### VII. Federal Register Notice

A form of *Federal Register* Notice is provided as Attachment II hereto. A diskette of the Notice is also provided in WordPerfect format.

#### VIII. No Costs Relating to Discriminatory Employment Practices

The NYISO has no expenses or costs that have been alleged or judged to be illegal, duplicate, or unnecessary costs that are demonstrably the product of discriminatory employment practices.

#### IX. Conclusion

WHEREFORE, for the foregoing reasons the New York Independent System Operator, Inc., respectfully requests that the Commission approve this filing and grant the requested effective date.

Respectfully submitted,

William F. Young Counsel for New York Independent System Operator, Inc.

- cc: Alison Silverstein, Advisor to Commissioner Wood, Rm. 11B-3, Tel. 202/208-0388 Mary C. Morton, Advisor to Commissioner Brownell, Rm. 10F-09, Tel. 202/208-0642 Office of Commissioner Breathitt, Rm. 11C-3, Tel. 202/208-0377 Wilbur C. Earley, Advisor to Commissioner Massey, Rm. 11D-2, Tel. 202/208-0366
  - Daniel L. Larcamp, Director, Office of Markets, Tariffs & Rates, Rm. 8A-01, Tel. 202/208-2088
  - Alice M. Fernandez, Director, Division of Tariffs & Rates-East, Rm. 82-15, Tel. 202/208-0089
  - Andrea C. Wolfman, Lead Counsel for Market Oversight and Enforcement, Rm. 9E-01, Tel. 202/208-2097

Stanley P. Wolf, Office of the General Counsel, Rm. 101-03, Tel. 202/208-0891 Michael A. Bardee, Lead Counsel for Markets, Tariffs & Rates, Rm. 101-09, Tel. 202/208-2068 ATTACHMENT I

# ATTACHMENT II

# **CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document upon each person on the Commission's official service list in Docket No. ER01-2076-000 in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 2010 (2001).

Dated at Washington, D.C. this 28<sup>th</sup> day of September 2001.

Ted J. Murphy Hunton & Williams 1900 K Street, N.W. Washington, DC 20006-1109 (202) 955-1588

## UNITED STATES OF AMERICA BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

New York Independent System Operator, Inc. ) Docket Nos. ER01-\_\_\_-000,

#### NOTICE OF FILING

Take notice that on September 28, 2001, the New York Independent System Operator, Inc. ("NYISO"), at the Direction of its independent Board of Directors, made a filing under Section 205 of the Federal Power Act to extend the expiration date for its Automated Mitigation Procedure to October 31, 2002. The NYISO has requested that the Commission act on this filing in an expedited manner and that it shorten the usual period for comments. The NYISO has also requested that the Commission waive its usual 60-day notice requirement and make the filing effective no later than November 1, 2001.

The NYISO has served a copy of the filing on all parties in Docket No. ER01-2076. The NYISO has also emailed a copy of this filing to all of the subscribers to the NYISO's Technical Information Exchange list.

Any person desiring to be heard or to protest this filing should file a motion to intervene or protest with the Federal Energy Regulatory Commission, 888 First Street, NE, Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 C.F.R. §§ 385.211 and 385-214). All such motions or protests should be filed on or before \_\_\_\_\_\_. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a motion to intervene. Copies of this application are on file with the Commission and are available for public inspection.

David P. Boergers Secretary