UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

New York Independent System Operator, Inc.	)	Docket No.	ER01-3155-000
	)		
Consolidated Edison Company of New York, Inc.	)	Docket Nos.	ER01-1385-001 and
	)		EL01-45-001

COMPLIANCE FILING OF THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC. REGARDING COMPREHENSIVE MARKET MITIGATION MEASURES AND REQUEST FOR INTERIM EXTENSION OF EXISTING AUTOMATED MITIGATION PROCEDURE

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I. INTRODUCTION

This filing contains the New York Independent System Operator, Inc.'s ("NYISO") proposal for comprehensive market power mitigation measures (the "Comprehensive Mitigation Filing") developed in response to the Commission's November 27, 2001 Orders in the above dockets.

The Commission's November 27, 2001 *Order Approving Extension of Automatic Mitigation Procedures Subject to Conditions* in Docket No. ER01-3155-000 ("NYISO AMP Order") directed the NYISO to: "[F]ile a comprehensive mitigation proposal" addressing the NYISO's Automated Mitigation Procedure ("AMP") and how the NYISO's "overall mitigation measures work in conjunction with the other mitigation measures already in effect or proposed for the NYISO,"[1] including the AMP, the NYISO's existing Market Mitigation Measures, and the mitigation measures for New York City implemented pursuant to certain filings made by the Consolidated Edison Company of New York, Inc. ("ConEd").

[1] *New York Independent System Operator, Inc.*, 97 FERC ¶ 61,242 at 62,098 (2001).

The Commission's November 27, 2001 *Order on Motions Requesting Extension of the Revised Localized Mitigation Measures* in Dockets Nos. ER01-1385-001 and EL01-45-001 ("ConEd LMM Order") directed the NYISO and ConEd to file "revised tariff sheets that place all in-City mitigation measures in NYISO's tariff and remove them from ConEd's tariff."[2]

II. EXECUTIVE SUMMARY

The NYISO's Comprehensive Mitigation Filing addresses the Commission's November 27th Orders by revising certain features of the NYISO's Market Mitigation Measures ("MMM") and making the requisite tariff changes to the NYISO's tariff.

This Comprehensive Mitigation Filing continues the NYISO's basic conduct and impact approach to market mitigation approved by the Commission. The conduct and impact framework applies a two-part test to determine when mitigation may be warranted. The first test, the conduct test, identifies whether the owner or operator of an electric facility is engaging in conduct that may warrant mitigation. The conduct test relies on specific threshold levels for evaluation of a bidder's behavior.

[2] *Consolidated Edison Company of New York, Inc.,* 97 FERC ¶ 61,241 at 62,092 (2001). The Order's directive includes measures for the Day-Ahead and Real-Time Markets, the In-City capacity price cap, and any appropriate replacements for the Localized Mitigation Measures ("LMM") revisions proposed by ConEd in connection with the 2001 Summer Capability Period. The ConEd LMM Order also directed that the filing shifting the In-City measures to the NYISO tariff "address the reasonableness of any reference prices proposed to be used, and how the proposed use of such prices is consistent with NYISO's comprehensive market mitigation plan," as well as "address the experience with in-City mitigation during the 2001 Summer Capability Period." Finally, the ConEd LMM Order directs the NYISO to file tariff changes and take such other actions as may be required for the NYISO to assume "ultimate responsibility" for the New York City transmission grid and the direction of out-of-merit dispatch in the City.

If an owner or operator fails the conduct test, a second test, the impact test, must still be applied to determine if the behavior that met the thresholds for the conduct test has an actual significant effect on market outcomes. Often, a bidder's conduct is wholly unrelated to any attempt to exercise market power, and such conduct will not have an effect on market outcomes. The application of these tests allows the NYISO's MMM to be much more focused than other approaches, minimizing unwarranted intervention in the market by the NYISO.

This Comprehensive Mitigation Filing proposes both an extension of and enhancements to the NYISO's MMM. The primary change proposed for the MMM is the adoption of measures to address the locational market power issues in New York City ("NYC"), by applying lower thresholds to generation in NYC that vary depending on the frequency of congestion. These lower thresholds appropriately recognize the higher potential exposure of these constrained areas to market power relative to the rest of the New York market. This extension of the NYISO's mitigation plan replaces the existing Con Ed measures for both the Real-Time and Day-A head markets.

Other proposed revisions to the NYISO's MMM include: adding thresholds for monitoring and mitigation for non-price bid parameters that may be used to withhold resources from the market; several refinements to the automated mitigation procedures ("AMP"), which will improve the focus and effectiveness of the AMP; the adoption of specific conduct thresholds for non-price bid parameters; implementing a limited exemption from mitigation measures for new generation, which recognizes the competitive benefits that new generation provides to the system while reducing any disincentives to new generation; and improvements in the ConEd In-City DAM mitigation measures for short-term implementation, until automation of conduct and impact mitigation in the In-City DAM is achieved.

This Comprehensive Mitigation Filing also describes steps to be undertaken by the NYISO to assume "ultimate responsibility" for In-City transmission operation, with the goal of maximizing the least-cost dispatch of In-City generation and minimizing the need for OOM dispatch. The Comprehensive Mitigation Filing proposes the continuation of the penalty provisions previously approved by the Commission, and provides for the transfer to the NYISO's tariff from ConEd's tariff of the price cap for installed capacity sales from the units divested by ConEd. The Comprehensive Mitigation Filing also addresses the other questions raised by the Commission in the November 27 Orders. Finally, the NYISO requests that the Commission extend the existing AMP provisions beyond April 30, 2002 in the event the Commission is unable to complete its review of these proposals before that date.

III. LIST OF DOCUMENTS SUBMITTED

1. This filing submission;

2. Redlined revisions to the NYISO Market Mitigation Measures, Attachment H to the Services Tariff, to implement the measures described in this filing (Attachment I);

3. A clean version of the NYISO Market Mitigation Measures incorporating the proposed revisions (Attachment II);

4. An Affidavit from Mr. Steven Corey, the NYISO Manager of Transmission Planning (Attachment III);

5. An Affidavit from Mr. Ricardo Gonzales, the NYISO Manager of Market Operations (Attachment IV);

6. An Affidavit with attachments from Dr. James H. Savitt, the NYISO Market Monitor (Attachment V);

7. An Affidavit from Dr. David B. Patton, the independent Market Advisor to the NYISO (Attachment VI); and

8. A Form of Notice suitable for publication in the *Federal Register* (Attachment VII).

IV. COPIES OF CORRESPONDENCE

Copies of correspondence concerning this filing should be served on:

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V. THE STAKEHOLDER CONSULTATION PROCESS

The NYISO AMP Order further directed that the NYISO meet and work with market participants in connection with developing the Comprehensive Mitigation Filing.[3] As a result, the NYISO placed the Comprehensive Mitigation Filing on the agenda for the first meeting of its Scheduling and Pricing Working Group ("S&P Working Group") following the issuance of the November 27, 2001 Orders.[4] The S&P Working Group is a subgroup of the Business Issues Committee ("BIC"), and is the body generally tasked with working level responsibility for matters such as the Comprehensive Mitigation Filing. The S&P Working Group formed a Task

[3] *See New York Independent System Operator, Inc.*, 97 FERC ¶ 61,242 at 62,098.

[4] Throughout this filing, unless otherwise specified, capitalized terms shall have the meanings assigned in the NYISO's Market Administration and Control Area Services Tariff ("Services Tariff").

Force ("AMP/ICM Task Force") to deal with the AMP, In-City Mitigation and other features of the Comprehensive Mitigation Filing which met weekly from December 7 through February to review, and provide stakeholder input on, the range of issues arising from the Commission's Orders. A total of nine stakeholder meetings were held.

Concept of Operations documents[5] were prepared for the enhancements to the AMP, and for the In-City Real-Time mitigation measures. The Concept of Operations documents describe the key operational and software features for the AMP and In-City Real-Time mitigation proposals. Drafts of both documents were circulated to and reviewed in detail with the AMP/ICM Task Force.

The results of the AMP/LMM Task Force deliberations were considered by the BIC, the Management Committee, and the NYISO Board of Directors. Subsequently, the NYISO circulated drafts of the proposed revisions to the Tariff to the stakeholders. The S&P Working Group held an additional meeting to discuss comments on the revised tariff on Comprehensive Mitigation Filing issues.

This Comprehensive Mitigation Filing has benefited from the rigorous scrutiny and analysis of the stakeholders. While the stakeholder process did not achieve consensus on all aspects of the Comprehensive Mitigation Filing, all issues were thoroughly discussed and reviewed, and all stakeholders had an opportunity to express views and provide analytic or other input on the matters to be addressed in this Comprehensive Mitigation Filing. The stakeholders were also invited to share opinions and analysis by email and the NYISO's website, and the

[5] Under NYISO procedures, Concept of Operations documents are the guiding documentation for significant software development projects.

stakeholders took advantage of this opportunity. The NYISO has incorporated ideas and suggestions from the stakeholder process, where appropriate, in this filing, consistent with its obligations to administer open and competitive markets for energy and ancillary services with an effective program for monitoring and mitigating market power.

VI. CONDUCT AND IMPACT MITIGATION AS A REMEDY FOR MARKET POWER

This filing sets forth a comprehensive approach to the detection and mitigation of market power throughout the New York Control Area ("NYCA"), including both economic and physical withholding of resources. Economic withholding occurs when the bid for a resource is raised above its marginal cost.[6] Physical withholding is defined as refusing to offer the output of a resource when it would be economic to do so.[7] In both cases, this conduct would only constitute an attempt to exercise market power if it is intended to raise the market clearing price above competitive levels.

This Comprehensive Mitigation Filing continues the NYISO's conduct and impact approach to market power detection and mitigation by setting forth specific tests for market participant conduct and resulting market impacts that warrant mitigation. This approach strikes an appropriate balance between undue interference in markets, and protection of consumers from

[6] *See* Affidavit of Dr. David B. Patton, Independent Market Advisor, Attachment IV at ¶ 17 [hereinafter Patton Affidavit].

[7] *See* Patton Affidavit at ¶ 30.

significant abuses of market power. This approach has been the foundation of the Market Mitigation Measures since their initial approval by the Commission.[8]

The conduct and impact structure achieves three key objectives. First, it allows the mitigation to accurately distinguish between scarcity and market power.[9] Prices will rise justifiably due to shortage when no significant economic or physical withholding is occurring, which is indicative of true scarcity. In addition, when the system is in shortage and prices are set at scarcity levels, most conduct that would be identified as economic withholding will not have a significant impact on market prices and would, therefore, not be mitigated. For example, when prices are set at $1000 per MWh due to shortage, a unit that has raised its bid from a Reference Level of $50 to $500 will have no impact on the market price.

Second, the conduct and impact approach limits the intervention of the NYISO in the market under conditions when there is no clear market power issue to be mitigated. Other mitigation measures that call for mitigation in response to a specified system condition run the risk of compelling frequent intervention in the market when no exercise of market power is possible or likely. When structural changes occur that eviscerate the market power concerns

[8] *See Central Hudson Gas & Electric Corp*, 89 FERC ¶ 61,196 (1999) (accepting in part and rejecting in part the NYISO's proposed market monitoring plan and market monitoring mitigation measures); *Central Hudson Gas & Electric Corp.*, 90 FERC ¶ 61,317 (2000), *clarified in* 91 FERC ¶ 61,154 (2000) (accepting the NYISO's market monitoring and market mitigation compliance filings); and *New York Independent System Operator, Inc.*, 95 FERC ¶ 61,471 (2001).

[9] *See* Patton Affidavit at ¶ 14-15.

addressed by these measures, the conduct and impact tests will simply stop being satisfied and mitigation will no longer occur.[10]

Finally, the conduct and impact framework described in this filing allows for the implementation of prospective mitigation that maintains the integrity of the market, avoiding the need to remedy market power abuses retroactively through refunds or price corrections. The NYISO strongly believes that these retroactive remedies are substantially inferior to the protection afforded under the conduct and impact mitigation structure proposed in this filing.

Under the NYISO market mitigation procedures, two separate tests are conducted before mitigation occurs. First, the "conduct" test examines the bidding behavior of each Market Participant and assesses whether its bids exceed target levels determined by the application of specified percentage or dollar thresholds to a set of Reference Levels specific to each generating unit. The Conduct test is described in greater detail below. Second, the "impact" test examines whether bidding at levels exceeding the conduct thresholds has caused LBMPs or guarantee payments to increase above specified dollar or percentage amounts. The impact test is described in greater detail below. If a seller's bids trigger the applicable conduct and impact tests, then that seller's submitted bids are mitigated by replacing the bids with bids at the applicable Reference Level.

With this filing the NYISO proposes to replace the current ConEd In-City mitigation measures with conduct and impact mitigation that is consistent with those measures used elsewhere in the state. However, in recognition of the market situation in New York City, the

[10] *See* Patton Affidavit at ¶ 16.

NYISO will apply alternative thresholds developed specifically to address these locational market power concerns. The NYISO also proposes to automate the application of conduct and impact mitigation to both the In-City Real-Time and Day-Ahead Markets.

A. The Conduct Test

In order to screen bidders' conduct for potential economic withholding, the NYISO uses past accepted bids over a reasonable period, rather than direct determination of marginal or variable production costs, as the preferred method for setting Reference Levels as the competitive benchmark (i.e., proxy for marginal costs) for identifying economic withholding.[11] Using past accepted bids to screen current bidding conduct uses a bidder's own conduct in competitive conditions to identify economic withholding. This is an effective approach because, under competitive conditions, a unit's profit-maximizing strategy is to bid at the level of its marginal costs to ensure that it runs at any prices that exceed those costs. Hence, past bidding under competitive conditions should be the best evidence of a unit's marginal costs, and thus the best basis for setting a Reference Level for assessing its bids. Moreover, using variable production costs as a proxy for marginal costs ignores important factors, for example, the opportunity costs of generators that can only run in a limited number of hours.[12]

Once Reference Levels are determined for each bidding unit, economic withholding is identified by observing bids at specified dollar or percentage thresholds above a unit's Reference

[11] *See* Patton Affidavit at ¶ 18-20.

[12] *See* Patton Affidavit at ¶ 18. In its recent Order in Docket EL01-118-000, the Commission found that: "Economic withholding occurs when a supplier offers output to the market at a price that is above both its full incremental costs and the market price (and thus, the output is not sold)." *Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorizations,* 97 FERC ¶ 61,220 at 61,976 (2001).

Level for the output corresponding to the bid.[13] Setting a threshold above a unit's Reference Level is necessary to accommodate normal variations in competitive bids. For example, marginal costs can fluctuate considerably with changes in spot fuel prices, opportunity costs and operational risks. Screening conduct by employing a threshold above the reference levels is necessary to prevent justifiable conduct from being mitigated.

B. The Impact Test

If the applicable conduct test is met, mitigation is only imposed if the conduct has a significant effect on market prices. That is, the level of market prices that would result with the bids as submitted, is compared to the market prices that would result if bids crossing an applicable conduct threshold are mitigated to their Reference Level. Mitigation is deemed to be appropriate only if the difference in prices exceeds thresholds specified in the Market Mitigation Measures.[14] For energy, the impact threshold is generally set at a price increase of 200% or $100 per MWH, whichever is lower.[15]

Mitigation on the basis of a determination of a significant impact on prices is appropriate because the ability to exercise market power changes with market conditions, including load levels, supply outages, transmission constraints and other factors. Under most market conditions, moderate amounts of withholding have very little effect on prices. Employing an

[13] *See* Patton Affidavit at ¶ 22.

[14] *See* Section 3.2 of NYISO Market Mitigation Measures, Attachment H to the Services Tariff [hereinafter NYISO Market Mitigation Measures].

[15] *See* Section 3.2.1(a) NYISO Market Mitigation Measures.

impact threshold limits mitigation to cases in which the conduct detected has a sufficient effect on prices so as to be deemed an attempt to exercise market power.

The NYISO impact thresholds are set at levels that are likely to be achieved only if structural problems (transmission congestion or residual demand) enable the exercise of market power. The market impact test is more accurate than any structural screen because it directly measures the impact of withholding rather than relying on indirect evidence supporting an inference that mitigation is warranted.[16] Thus, the conduct and impact approach triggers mitigation when, and only when, market structures result in market power that is used to increase prices.

An alternative to conduct and impact mitigation might be the use of a purely structural test for the imposition of mitigation measures, such as a concentration index or other measure of market concentration, or the presence of transmission congestion as an indicator of concentrated conditions. Such a structural screen, however, will be triggered whether or not the screened for market structure actually results in market power abuse. Alternatively, a structural standard, such as the congestion trigger for the New York City load pockets proposed below, can usefully be added to the conduct and impact framework as may be appropriate to recognize sustained structural problems in specific areas that would warrant adjustment of the conduct and impact thresholds appropriate for normal conditions.

[16] *See* Patton Affidavit at ¶¶ 37-38.

VII. ENHANCEMENTS TO THE DETERMINATION OF REFERENCE LEVELS

A. Current Market Mitigation Measures Provisions for the Determination of Reference Levels

As currently specified in § 3.1.4(a) of the Market Mitigation Measures, Reference Levels are generally determined on the following basis:

> a) A reference level for each component of a generator's bid shall be calculated on the basis of the following methods, listed in the order of preference subject to the existence of sufficient data:
>
> (1) The lower of the mean or the median of a unit's accepted bids or bid components over the previous 90 days for similar hours or load levels, adjusted for changes in fuel prices;
>
> (2) The mean of the LBMP at the unit's location during the lowest-priced 25 percent of the hours that the unit was dispatched over the previous 90 days for similar hours or load levels, adjusted for changes in fuel prices; or
>
> (3) A level negotiated with the Market Party submitting the bid or bids at issue, provided such a level has been negotiated prior to the occurrence of the conduct being examined by the NYISO.

If the foregoing, in the order shown, cannot be used, then § 3.1.4(b) of the Market Mitigation Measures specifies that:

> b) If sufficient data does not exist to calculate a reference level on the basis of either of the first two methods and the third is not applicable or an attempt to negotiate such a level has not been successful, the NYISO shall determine a reference level on the basis of:
>
> (1) the estimated costs of an Electric Facility, taking into account appropriate input from the Market Party; or
>
> (2) an appropriate average of competitive bids of one or more similar Electric Facilities.

The same Reference Levels are used for a given bid parameter of a given generating unit throughout the Comprehensive Mitigation Filing.

The Comprehensive Mitigation Filing uses Reference Levels, as opposed to price caps or other mitigation measures, for the following reasons:

- Reference Levels are set at the level of a unit's competitive bids, and thus provide an appropriate competitive benchmark to evaluate whether a seller is using market power to cause LBMPs to increase significantly by engaging in economic withholding. Reference Levels are normally established by a weighted average of a unit's accepted bids during competitive market conditions.

- For higher cost resources that seldom run in merit order, or for higher output levels that are reached infrequently, a hierarchy of alternative methodologies is specified in the Market Mitigation Measures that provide a means for determining competitive bidding levels for such units or output levels.

- Reference Levels can vary substantially over a unit's output levels, reflecting the loss of efficiency, and other increased costs (*e.g.* outage risks), of producing energy at high output levels.

- Reference Levels are adjusted to account for changes in fuel costs, as measured by generally accepted indices.

- Reference Levels can also be adjusted to account for particular circumstances, upon request by a Market Participant and demonstration that an adjustment is appropriate; the NYISO routinely requests relevant cost information in a standard format from Market Participants in order to verify Reference Levels and determine if adjustments may be warranted.

- The Reference Level methodology is applicable to In-City units because such units share the same general characteristics and, when constraints are not binding, face the same competitive pressure as other generating units.

Thus, Reference Levels are a flexible and effective competitive benchmark that can reflect a range of operating costs and technologies.

B. Reference Level Enhancements

In order to improve its overall market mitigation, the NYISO has added several enhancements to the determination of Reference Levels. First, additional language has been added to spell out how Reference Level determinations are made in practice, based on experience with implementation of the Market Mitigation Measures. In addition, a proposed

default formula has been included in the Market Mitigation Measures for use as a starting point for determining default Reference Levels in consultation with a Market Party when a bid-based Reference Level cannot be estimated for the resource.[17]

Concerns have been expressed in the stakeholder review process about the transparency of the NYISO process for setting Reference Levels on the basis of costs data. While the NYISO does not necessarily agree that the process for setting default Reference Levels suffers from this defect, this Comprehensive Mitigation Filing addresses these concerns by proposing that language be added to the Market Mitigation Measures setting forth a formula for default Reference Level determinations:

> ((heat rate * fuel costs) + (emissions level * emissions allowance price) + other variable operating and maintenance costs)[18]

This starting point can be adjusted to account for the additional factors that can determine the marginal cost of a generating unit.[19]

In addition to this formula, a Reference Level floor is included in the Market Mitigation Measures for new generation, including net new capacity additions by existing generation owners.[20] For the first three years after the new capacity begins commercial operations, under the proposed floor, the Reference Level for new generation would be set at the higher of the level determined in accordance with the methods for determining Reference Levels for all units

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[17] *See* Section 3.1.4 of Revised Market Mitigation Measures.

[18] *See* Section 3.1.4.(a)(3) of Revised Market Mitigation Measures.

[19] *See* Section 3.1.4.(a)(3) of Revised Market Mitigation Measures.

[20] *See* Section 3.1.4.c of Revised Market Mitigation Measures.

specified in the Market Mitigation Measures, or the average of the peak LBMPs in hours when the new unit (given its characteristics) would be expected to run in which the new generator is located over the twelve months preceding the unit's entry. Thereafter, the floor will be removed and the unit will be treated as an existing unit, subject to the existing mitigation resources.

The proposed Reference Level floor is intended to account for the competitive benefits provided by new generation capacity, and to minimize any potential disincentive to entry from the Market Mitigation Measures. In the short run, new entry can only improve competitive market conditions; indeed, complete withholding of new capacity would leave a market no worse off than it was if entry had not occurred.[21] The proposed floor will ensure a new entrant that mitigation of its unit will not result in prices lower than the prices that induced its entry in the first place. Market clearing pricing would provide efficient new entrants the incentive to submit low bids in order to ensure that they will operate and realize available margins between clearing prices and their operating costs. The new generation is in no way prevented from bidding prices down to whatever level its marginal costs may warrant. In recognition of the fact that after some period, control of the new unit is comparable to control of existing generation from a market power perspective, particularly as older units exit a market through retirement or displacement by newer units, or load growth pushes market clearing levels up the supply curve, the proposed floor would be limited to three years.[22]

The proposed Reference Level floor would be applied to new net additions of capacity as well as *de novo* entry, because the considerations described above apply equally to both

[21] *See* Patton Affidavit at ¶ 141.

[22] *See* Section 3.1.4.c of Revised Market Mitigation Measures.

situations. A supplier with existing capacity would, however, have to make a net addition to its capacity. It could not seek the benefit of the floor for new capacity while simultaneously removing an equal or greater capacity and thus conferring no net benefit on the market.

VIII. CONDUCT TESTS

A. The Conduct Test Thresholds in the Market Mitigation Measures

The Comprehensive Mitigation Filing does not propose to change the thresholds applicable throughout the state under normal conditions for identifying conduct warranting mitigation. These conduct thresholds were approved by the Commission,[23] and have not been shown to be inappropriate for normal market conditions in New York. The Market Mitigation Measures apply the following thresholds relative to Reference Levels to determine whether mitigation may be warranted for economic withholding:

> (1) Energy and Minimum Generation Bids: A 300 percent increase or an increase of $100 per MWh, whichever is lower;
>
> (2) Real-time Spinning Reserves Bids: A 300 percent increase or an increase of $50 per MW, whichever is lower;
>
> (3) All Other Reserves Bids: A 300 percent increase or an increase of $100 per MW, whichever is lower;
>
> (4) Start-Up Costs Bids: A 200 percent increase.

Additional thresholds are specified for physical withholding and uneconomic production.

[23] *See Central Hudson Gas & Electric Corp.* 89 FERC ¶ 61,196 (1999) (accepting in part and rejecting in part, the NYISO's proposed market monitoring plan and market monitoring mitigation measures); *Central Hudson Gas & Electric Corp.,* 90 FERC ¶ 61,317 (2000), *clarified in* 91 FERC ¶ 61,154 (2000) (accepting the NYISO's market monitoring and market mitigation compliance filings).

As discussed further below,[24] this Comprehensive Mitigation Filing proposes certain reductions in these thresholds for In-City generation in light of the degree and frequency of transmission congestion, which correlates with the creation or aggravation of market power In-City. The Comprehensive Mitigation Filing also specifies thresholds for non-price bid parameters, and minimum thresholds for mitigation of energy and reserves bids.

B. Basis For the Conduct Test Target Level Thresholds

The conduct thresholds established under the NYISO's Market Mitigation Measures seek to identify bidding that is at levels highly indicative of market power. That is, the conduct thresholds seek to identify bidding levels that a seller should not be able to reach in a workably competitive environment. These thresholds also seek to provide sufficient bidding flexibility to accommodate short term or unexpected increases in costs that would legitimately affect bidding levels. Thus, consistent with the stated purposes of the MMM, the thresholds seek to "mitigate the market effects of any conduct that would substantially distort competitive outcomes in the New York Electric Markets administered by the NYISO, while avoiding unnecessary interference with competitive price signals."[25] The approved conduct thresholds in the Market Mitigation Measures are also set at levels that recognize that the New York electric markets are in general competitive.[26]

The Comprehensive Mitigation Filing proposes certain reductions in these thresholds in areas in which transmission constraints or other structural market defects significantly limit

[24] *See* Section XIII.

[25] NYISO Market Mitigation Measures § 1(a).

[26] *See Summer 2001 Review of New York Electric Markets*, David B. Patton, Ph.D., Oct. 17, 2001 at 2.

participation in the market in that area in a substantial number of hours. Initially, the only area in New York in which the degree and frequency of market power warrant such reductions in the thresholds is the In-City area of New York City. If and to the extent that comparable load pockets arise in other parts of the NYCA, reduced mitigation thresholds, as proposed for New York City, would likely be equally applicable in those other load pockets. This Comprehensive Mitigation Filing contemplates that if such additional load pockets are identified, the NYISO would seek approval from the Commission to institute the locational thresholds proposed for New York City to the newly identified load pockets.

C. Thresholds for Non-Price Bid Parameters

Since generation bids include a variety of competitive variables measured in units other than dollars, and because manipulation of those bid parameters could be a means for economic withholding in the same manner as manipulation of price parameters, it is appropriate to specify conduct thresholds for those parameters. The proposed parameters are based on the recommendations of the Market Advisor, and are comparable to the existing thresholds for the price parameters of bids.[27] The Comprehensive Mitigation Filing proposes the addition of new subsections (5) and (6) to § 3.1.2 ("Thresholds for Identifying Economic Withholding") of the Market Mitigation Measures.[28]

D. Minimum Bids Required for the Imposition of Mitigation Measures

The size of the New York markets and the generally prevailing price levels leads to the conclusion that bids below certain minimum dollar levels are very unlikely to reflect an attempt

[27] *See* Patton Affidavit at ¶¶ 131-137.

[28] *See* Section 3.1.2(5)-(6) NYISO Revised Market Mitigation Measures.

to exercise market power by economic withholding in order to drive up prices, and that scrutiny of bids at such levels for possible mitigation is unlikely to be a beneficial use of the NYISO's resources. The NYISO proposes to follow the NYISO Independent Market Advisor's recommendation to incorporate minimum bid exemptions in the Market Mitigation Measures.[29]

As Dr. Patton explains, these minimum bid exemptions account for the fact that the NYISO's conduct threshold includes a percentage increase element (generally 300 percent). Although this is a large percentage value, resources with a relatively low Reference Level can exceed this threshold with modest increases in bid prices that are unlikely to constitute an exercise of market power. For example, a resource with a $2 per MWh Reference Level for energy will exceed the 300 percent increase if it submits a bid price of $8 per MWh.

The proposed exemptions are at the levels currently used by ISO-NE as part of its market power mitigation standards.[30] The similarities in the generating resources and market pricing between New York and New England strongly suggest that the same minimum exemption would be appropriate in both markets. In addition, implementing a comparable minimum exemption would facilitate combining the New York and New England markets in accordance with the recently announced agreement between the ISOs.

Accordingly, the Comprehensive Mitigation Filing proposes adding new provisions to the standards in § 3.1.2 of the Market Mitigation Measures specifying the standards for identifying economic withholding of energy and operating reserves. Energy and Minimum Generation Bids

[29] *See* Patton Affidavit at ¶¶ 151-152.

[30] *See* NEPOOL Market Rules and Procedures, Rule § 17.2.2.2.

below twenty-five dollars will not be deemed to constitute economic withholding.[31] Operating Reserve bids below five dollars shall not be deemed to constitute economic withholding.[32]

E. Anti-Gaming Provision Proposals

The New York Public Service Commission ("NYPSC") proposed two anti-gaming provisions in prior filings to the Commission: (1) a $1,000 per MWh limit on payments to suppliers applied over a 24-hour period for a daily maximum payment of $24,000 per MW, to prevent a supplier from bidding high Start-Up costs, high minimum generation levels, or long minimum runtimes as a way of evading a bid cap; and (2) suspension of bid production cost guarantee payments for suppliers that bid minimum runtimes, minimum generation levels or Start-Up costs whenever the LBMP averages over $200 for the entire day.

In its Order on Rehearing and Requests for Clarification,[33] issued in Docket EL00-70-002 ("Anti-gaming Order"), the Commission rejected the anti-gaming provisions proposed by the NYPSC because they were not made in a tariff filing, but invited the NYISO to file a proposal for inclusion of such anti-gaming provisions in its tariff as may be warranted.[34]

The NYPSC's anti-gaming proposals were premised on manipulation of various bid parameters other than energy bids. The Comprehensive Mitigation Filing directly addresses any such strategies by specifying conduct tests for all bid parameters, whether expressed in dollars, quantities or time. This proposed comprehensive set of conduct thresholds for the available

[31] *See* Section 3.1.2(1) of Revised Market Mitigation Measures.

[32] *See* Section 3.1.2(2)-(3) of Revised Market Mitigation Measures.

[33] *See New York Independent System Operator, Inc.,* 97 FERC ¶ 61,154 (2001).

[34] *See id.* at 61,675.

range of bid parameters should obviate the need for additional anti-gaming provisions. Accordingly, the additional anti-gaming provisions suggested by the NYPSC are not warranted and are not included in the Comprehensive Mitigation Filing.

IX. THE IMPACT TEST

The Market Mitigation Measures' impact test is applied to determine whether bids that exceed the applicable conduct test cause a material change in one or more prices, or an increase in guarantee payments. The impact test recognizes that while high bids may be an attempt to exercise market power, unless such behavior has some material impact on market prices, no mitigation is required to maintain workably competitive market outcomes. The impact test helps assure that market intervention is limited to situations in which there is in fact significant evidence of an exercise of market power.

A. Impact Test Thresholds

The Comprehensive Mitigation Filing does not propose to change the thresholds applicable under normal conditions for identifying market impacts warranting mitigation. These impact thresholds were approved by the Commission,[35] and have not been shown to be inappropriate for normal market conditions in New York. In general, the Market Mitigation Measures apply the following thresholds, by an analysis of market prices or guarantee payments

[35] *See Central Hudson Gas & Electric Corp.*, 89 FERC ¶ 61,196 (1999) (accepting in part and rejecting in part, the NYISO's proposed market monitoring plan and market monitoring mitigation measures); *Central Hudson Gas & Electric Corp.*, 90 FERC ¶ 61,317 (2000), *clarified* 91 FERC ¶ 61,154 (2000) (accepting the NYISO's market monitoring and market mitigation compliance filings).

calculated with submitted bids as compared to those calculated with mitigated bids (if there are any bids that cross an applicable conduct test):

> § 3.2.1. Market Impact Thresholds
>
> In order to avoid unnecessary intervention in the New York Electric Markets, Mitigation Measures shall not be imposed unless conduct identified as specified above (i) causes or contributes to a material change in one or more prices in a New York Electric Market administered by the NYISO, or (ii) substantially increases guarantee payments to participants in the New York Electric Market. Initially, the thresholds to be used by the NYISO to determine a material price effect or change in guarantee payments shall be:
>
> (1) an increase of 200 percent or $100 per MWh, whichever is lower, in the hourly day-ahead or real-time energy LBMP at any location, or of any other price in a New York Electric Market administered by the NYISO; or
>
> (2) an increase of 200 percent in guarantee payments to a Market Party for a day.

B. Basis For Impact Test Thresholds

The thresholds set forth above are intended to catch significant episodes of market power in markets that are generally expected to be workably competitive. That is, although the markets in New York are generally not subject to market power, but that transmission congestion, unusually high loads coupled with facility outages, or other conditions may arise from time to time that would permit an exercise of market power. The impact thresholds are set at levels that would indicate that structural conditions in a given area at a given time has given rise a significant degree of market power that is being exercised to increase prices. At the same time, the thresholds are intended to avoid inappropriate intervention that could cause artificially depressed prices. For example, mitigation measures that are imposed in response to the presence of congestion or other system condition can cause mitigation to occur when market power does not exist. An artificial reduction in prices can foster inefficient market outcomes as much as

artificially elevated prices, by stimulating over consumption of energy, distorting regional transactions and energy flows, and reducing the accuracy of price signals for market entry by new generation.

As with the normal conduct thresholds, the impact levels for generally competitive markets may not be appropriate for markets that frequently exhibit high levels of concentration. Moreover, as discussed below, the Comprehensive Mitigation Filing proposes certain proxies for the application of the impact test for Real-Time mitigation of the In-City load pockets, as a result of the time limits inherent in the operation of the Security Constrained Dispatch ("SCD")[36].

X. BASIS FOR THE CONDUCT AND IMPACT THRESHOLDS

In his Calendar Year 2000 Report, the NYISO's Independent Market Advisor, Dr. David B. Patton, concluded that "[a]lthough a number of operational issues have arisen in the implementation of these markets, the transition to competitive electric markets [in the New York market] has been remarkably smooth given the unprecedented scope of this effort."[37] Moreover, Dr. Patton concluded that the "electric markets in New York have been competitive under most conditions experienced to date."[38] In his report *Summer of 2001 Review of the New York Electric*

[36] The Services Tariff defines "Security Constrained Dispatch" or "SCD" as: "The allocation of Load to Generators by the ISO through the operation of a computer algorithm which continuously calculates individual Generator loading at minimum Bid cost, balancing Load and scheduled interchange with Generation while meeting all Reliability Rules and Generator performance Constraints consistent with the terms of the ISO Services Tariff." NYISO Services Tariff § 2.166.

[37] *See New York Market Advisor Annual Report on the New York Electric Markets for Calendar Year 2000,* David B. Patton, Ph.D., Apr. 2001, at *i.*

[38] *See id.* at *iii.*

Markets, Dr. Patton determined that during summer 2001 the New York markets performed well with "prices established at competitive levels."[39]

While the New York energy markets have generally performed well, Dr. Patton has assessed the effectiveness of the existing thresholds for the identification of conduct warranting mitigation by determining the additional conduct that would have been identified had lower thresholds been in place. Dr. Patton's analysis reaches two conclusions regarding the threshold levels used by the NYISO. First, Dr. Patton concludes that the quantity of bids identified as economic withholding that may warrant mitigation would not have increased significantly if the conduct thresholds had been set at significantly lower levels.[40] Second, Dr. Patton concludes that the focus of the mitigation measures can appropriately be on significant price increases resulting from market power without exposing customers to substantial unwarranted price increases. Thus, the conduct threshold can be set at levels that provide significant bidding flexibility.

As described by Dr. Patton in his affidavit, mitigation under the AMP was triggered very rarely and only when there were structural conditions that raised substantial market power concerns.[41] However, he does recommend the enhancements described below be implemented to improve the focus of the mitigation applied through the AMP. In addition, Dr. Patton explains

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[39] *See, Summer 2001 Review of New York Electric Markets*, Report to New York ISO Management Committee, David B. Patton, Oct. 17, 2001 at 2.

[40] *See* Patton Affidavit at ¶ 27.

[41] *See* Patton Affidavit at ¶¶ 99-101.

that the AMP did not mitigate on the tightest days in New York when prices rose appropriately result of scarcity.[42]

XI. AMP ENHANCEMENTS

As the Commission recognized in the November 27 NYISO Order, the purpose of the AMP has been to "close[] the one day lag inherent in the manual application of mitigation measures in the current [Market Mitigation Measures] and thus advance[] the ability of the NYISO to mitigate market power."[43] Because the Comprehensive Mitigation Filing continues the basic "conduct and impact" framework of the Market Mitigation Measures, this inherent potential for a one day lag in the application of mitigation is also inherent in the Comprehensive Mitigation Filing. The AMP thus continues to serve the same purpose recognized, and determined to be appropriate, by the Commission in the November 27 NYISO Order. As it has since its inception, the AMP does not create new mitigation standards, but merely automates the applications of the relevant conduct and impact thresholds specified in the Market Mitigation Measures. The NYISO requests that the Commission approve the AMP as a permanent part of the NYISO's Market Mitigation Measures, subject to the revisions proposed in this filing.

The Comprehensive Mitigation Filing proposes several significant enhancements to the AMP. First, the AMP would include a minimum quantity exemption, in order to ensure that the AMP does not automatically mitigate an entity's apparent withholding of quantities that are so small as to be unlikely to represent an exercise of market power. Second, the NYISO will add an additional computer run to the SCUC algorithm, in order to limit automated mitigation to the

[42] *See* Patton Affidavit at ¶ 101.

[43] *New York Independent System Operator, Inc.*, 97 FERC ¶ 61,242 at 62,098 (2001).

specific zones and hours where the impact test is met, that is, to increase the geographic and temporal selectivity of the AMP. Third, enhanced modeling of reference price curves will be implemented to eliminate potential differences in the shapes of a unit's bid and reference price curves. Fourth, automated mitigation of Minimum Generation and Start-Up bids would be added to the AMP.

A. Minimum Quantity Exemption

The purpose of the minimum quantity exemption is to establish a level of potential withholding from a supply portfolio, below which the NYISO will presume the conduct is not an attempt to exercise market power for the purposes of the automated mitigation process. This conduct will remain subject to non-automated mitigation by the NYISO if it determines that withholding levels by a supplier below this exemption level does constitute an abuse of market power that warrants mitigation.

The proposed minimum quantity exemption would operate as follows:

- If the bids for the generation portfolio of a Market Participant and its Affiliates that violate the applicable conduct threshold are for quantities equal to or less than a specified amount, automated mitigation measures will not be applied.
- If bids for more than the specified minimum number of MW of a portfolio fail the conduct and impact tests, all of the MW of a Market Participant and its Affiliates failing the conduct and impact tests will be subject to mitigation.

A "portfolio" for this purpose will include all generation owned by a Market Participant and its Affiliates, as well as all capacity the output levels or pricing of which is determined by the Market Participant and its Affiliates. This is necessary in order to ensure that AMP will correctly recognize all of the generating resources controlled by a Market participant, whether through ownership or by contract.

The NYISO will continuously monitor the market effects of any units benefiting from the minimum capacity exemption, as part of its on-going market monitoring. Withholding at or below the specified minimum threshold that is determined to be an exercise of market power that is significantly affecting LBMPs will continue to be subject to the Market Mitigation Measures through manually implemented measures. In addition, the NYISO will have authority to reduce or remove the exclusion for any bidding organization, *i.e.*, a Market Participant and its Affiliates, determined to be engaging in economic withholding below the minimum threshold that is having significant market impact.

At the recommendation of Dr. Patton, the Comprehensive Mitigation Filing proposes to initially set the minimum capacity exemption at 50 MW. A number of factors support a conclusion that 50 MW is a reasonable minimum mitigation threshold:

- In a market as large as the New York Control Area, withholding only 50 MW is unlikely to reflect an attempt to exercise market power because total capacity in NYCA is in excess of 30,000 MW;
- The New York Day-Ahead Market (the market subject to the AMP) also now supports Virtual Bidding of both supply and loads, with Virtual Bidding not subject to any pre-established quantity limits;
- The New York Control Area also has some 3,000 MW of price capped load, as to which bidders can specify maximum prices above which they do not wish to purchase energy; this volume of load that is capable of specifying price caps while still relatively small compared to total demand, is relatively large compared to the small level of withholding that might occur as a result of the 50 MW exemption, and more than sufficient to protect loads from such low level withholding strategies.

As shown by the analysis performed by Dr. Patton, the combination of price capped load bids, virtual bids and the slope of the resulting supply curve makes it very unlikely that

withholding at a level of 50 MW or less would trip the impact test for mitigation, and that withholding at such low levels is unlikely to be a profitable strategy for abusing market power.[44]

Thus, withholding at such low levels should not be subject to automatic mitigation. The exemption, however, is only from the automated mitigation done by the AMP. All capacity will remain subject to the Market Mitigation Measures generally, and will be subject to mitigation by the Market Mitigation Unit after consultation with the affected market party--that is, in accordance with the normal procedures for non-automated market monitoring and mitigation.

The minimum quantity exemption would be implemented by revising § 4.2.2(d)(1) of the Market Mitigation Measures.[45]

In addition, Addendum B to the NYISO Market Monitoring Plan ("List of Data the NYISO May Request from Market Parties") would be revised by adding a new item 4. This revision is necessary to ensure that the NYISO has access to the information necessary to identify the units comprising a portfolio of generation being bid by a group of affiliated entities.

B. Enhanced Zonal and Temporal Selectivity

Currently, the AMP is applied on the basis of three SCUC steps, with a single SCUC run used to evaluate the impact test. The SCUC determines whether there are zones and hours in which the LBMP exceeds $150 based on the first run of the SCUC. If so, the bids of any generating resource that exceed the applicable conduct threshold in these zones is replaced by its reference price. A second SCUC run is conducted with these mitigated bids and the impact of

[44] *See* Patton Affidavit at ¶ 129.

[45] *See* Section 4.2.2(d)(1) of Revised Market Mitigation Measures.

the identified conduct is determined by comparing the mitigated results to the first unmitigated results. If the price impact in any hour for any of the zones exceeds the impact threshold of $100 per MWh, the SCUC will retain the results of the second (mitigated) run to complete the commitment process and post the results.

A consequence of using a single SCUC run to for the impact test is that units breaching conduct thresholds in any hour in any location will be mitigated for all of the hours and zones for which a $100 reduction in LBMPs is observed. That is, while the SCUC implements a highly sophisticated and comprehensive unit commitment and pricing algorithm, a single SCUC pass cannot limit mitigation only to the particular hours and locations in which there was a material price impact. This outcome is inherent in the limitations of using only a single additional run of SCUC to determine both impact and the extent and duration of mitigation and this limitation was known to stakeholders prior to the initiation of the AMP in the Summer of 2001. Given the capabilities of the SCUC software and hardware when AMP was developed, however, an additional pass could not have been incorporated in SCUC without a substantial likelihood of significant delays in posting the DAM schedules.

Since the initial implementation of the AMP, improvements in the execution speed of SCUC as a result of software and hardware improvements will permit an additional SCUC run, immediately after the second run described above. This additional run will implement a reduced set of mitigation for the times and locations where impact is observed in the second run, thus enabling the AMP to be more geographically and temporally selective in its application. Thus, upon approval of the AMP as modified, the NYISO will add the additional computer run to the SCUC software. No tariff language changes are necessary to implement this additional SCUC run.

While the additional SCUC run will improve the effectiveness of the NYISO's mitigation efforts, the implementation of an additional SCUC run could, in some situations, cause delays in the posting final DAM prices and commitments beyond the normal 11:00 deadline for posting the results of the DAM. The NYISO expects that such delays, if any, would be relatively infrequent, would be on the order of an hour or less, and that the economic consequences of a short delay in posting the DAM results would be substantially outweighed by the benefits of adding the additional pass to SCUC. Further improvements in the speed of the SCUC could minimize the potential for any delay in DAM postings. In any event, the NYISO will monitor the extent and consequences of any delays in DAM postings.

C. Automated Mitigation of Minimum Generation and Start-Up Bids

As soon after May 1, 2002 as the necessary software can be developed, tested and implemented, the NYISO proposes to include automated mitigation of Minimum Generation and Start-Up bids. This is appropriate because economic commitment is based not only on the attractiveness of energy bids, but also on the attractiveness of Minimum Generation and Start-Up bids. As a result, these latter two parameters could be used to economically withhold resources and should be subject to the AMP, just as they have been subject to the Market Mitigation Measures generally since their inception.

The enhanced AMP will accordingly incorporate Minimum Generation and Start-Up bids as well as incremental energy bids in its tests for conduct and impact. In connection with the development of the necessary software, the NYISO anticipates that at least initially the AMP may not be able to assess the impact of bidding on guarantee payments. A bidder who is using a unit's Minimum Generation and Start-Up bids to engage in economic withholding may well

precipitate a material impact on LBMPs by changing the commitment of generation and should be subject to mitigation under the AMP on that basis.

For mitigating Start-Up bids from a given unit, if the LBMP impact test in area containing the unit is met and the unit is committed for more hours in the second SCUC run (with mitigated bids) than it is in the preceding run using with unmitigated bids, the mitigated Start-Up bid will be used for that unit for all hours of that DAM. For mitigating the Minimum Generation bids for a unit, if the LBMP impact test is met, then the mitigated Minimum Generation bid will be mitigated for its entire minimum run-time or the duration of the market impact, whichever is longer.

An exception to the automated mitigation of Minimum Generation bids should be made for units to be started late in a dispatch day, to avoid mitigating bids that reflect the legitimate costs of operating at Minimum Generation levels for only a few hours. The SCUC algorithm operates on the basis of a 24 hour day that ends at midnight, and thus does not recognize Minimum Generation costs that would be recovered after midnight, *i.e.*, in the next dispatch day. As a result, a unit started up late in the day may well be at risk of not recovering its costs by midnight if its legitimate minimum run time would take it past that hour. Such a unit would have a legitimate need to submit relatively high Minimum Generation bids for late starts in order to recover its full Minimum Generation costs, or to avoid being scheduled when a late start would result in under-recovery of Minimum Generation costs. For these reasons, the NYISO proposes an exception for units that would be scheduled to start after hour 20 and that have minimum run-times of at least 4 hours.

The tariff language changes necessary to implement Minimum Generation and Start-Up bid mitigation in the AMP are set forth in a proposed new subsection (3) to § 4.2.2 (with the existing subsection (3) renumbered as subsection (4)). The new language specifies the duration of Minimum Generation mitigation, and the exemption for units that would be started late in a scheduling day.

D. Day-Ahead In-City Mitigation in the AMP

For practical reasons, mitigation of locational market power issues within the New York City will continue to be addressed pursuant to the former ConEd In-City mitigation measures as modified by this filing. However, in the longer-term (after the Summer 2002) the NYISO will modify the AMP software employed within the SCUC model to implement the In-City locational conduct and impact thresholds. The AMP software is well-suited to implement these provisions since it currently implements the conduct and impact structure in the current MMM for the entire state, which is very similar. This modification of the AMP is described in more detail below in the In-City mitigation section of this filing.

E. Other AMP Improvements

As originally implemented, the AMP could improperly impose mitigation measures on a portion of a seller's output because of differences in the resolution of the curves used to implement Reference Levels in the Market Information System ("MIS") software as opposed to the software used by the Market Monitoring Unit ("MMU"). These differences will be resolved by improving the ability of the MIS Reference Level curve to match the shape of the bid curve from a given unit. That is, the output quantities at which a unit's Reference Levels (which can vary by output) apply will conform to the quantities at which a unit's bids apply. In the interim, a process has been implemented for manual adjustments to the MIS Reference Level curve so

that the correct Reference Level can be applied to a given output level from a unit. This will avoid problems that have occurred in a few instances in which a Market Participant has demonstrated a need for an adjustment to a Reference Level curve that results in a relatively steep increase in the curve at certain high output levels. Without an adjustment there could be a mismatch between the shapes of a unit's bid and Reference Level curves that could result in unwarranted mitigation.

F. Request to Extend the Existing AMP

The NYISO also requests that Commission extend the existing AMP, which is scheduled to terminate on April 30, 2002,[46] until the Commission acts on this Comprehensive Mitigation Filing. As the NYISO explained in its September 28, 2001, *Request for AMP Extension*, the AMP has operated in accordance with its design, and served as a competitive backstop for the performance of the New York DAM. The Commission recognized the benefit of the AMP in its NYISO AMP Order noting that the AMP closes the one day lag inherent in the manual application of mitigation to the Day Ahead Market.[47] Moreover, because the conditions necessitating the AMP are almost certain to be present this coming summer and during the shoulder periods, it is preferable to keep the existing AMP in place, if the Commission's deliberation on this Comprehensive Mitigation Filing should extend past April 30, 2002.[48]

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[46] *See New York Independent System Operator, Inc.,* 97 FERC ¶ 61,242 at 62,098 (2001).

[47] *See id.*

[48] The NYISO has previously provided the Commission with good cause for making this filing after March 1, 2002.

XII. NYISO ASSUMPTION OF ULTIMATE RESPONSIBILITY FOR THE IN-CITY TRANSMISSION SYSTEM

In the ConEd LMM Order the Commission directed the NYISO to assume "ultimate responsibility" for the New York City transmission grid and the direction of out-of-merit ("OOM") dispatch in the City.[49] To implement this directive, the NYISO has undertaken development of the software modifications necessary to model the In-City load pocket interfaces in the SCD. As a result of these changes, the SCD will be able to determine the least-cost redispatch of In-City units when In-City load pockets or sub-pockets are congested. These software enhancements are described in the affidavit of Mr. Ricardo T. Gonzales, the NYISO Manager of Market Operations.

Because the SCD was not originally designed to model the transmission interfaces into and within the 138 kV In-City system, those interfaces have been monitored by ConEd, as the In-City transmission owner, as part of its local system. ConEd has been responsible for informing the NYISO when congestion conditions required the OOM redispatch of units.[50]

With the modeling improvements described above, the SCD will be able to calculate any redispatch necessary to relieve In-City congestion by using its normal least-cost dispatch method. As a result, the regular use of OOM dispatch to relieve congestion in New York City will no longer be necessary.[51] The NYISO will dispatch units on the In-City transmission system in accordance with the normal least-cost, security-constrained dispatch algorithms in the SCD,

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[49] *Consolidated Edison Company of New York, Inc.,* 97 FERC ¶ 61,241 at 62,092 (2001).

[50] *See* Affidavit of Ricardo T. Gonzales, Manger of NYISO Market Operations at ¶ 13 [hereinafter Gonzales Affidavit].

[51] *See* Gonzales Affidavit at ¶ 9.

and any redispatch required as a result of congestion into or within the 138 kV system will be handled on the same basis. At the same time, any unit that has a significant ability to control prices because it must be redispatched to maintain system reliability in the face of congestion will be subject to mitigation, in accordance with the applicable provisions of the Market Mitigation Measures as modified by the Comprehensive Mitigation Filing.[52]

The improvements in the capabilities of SCD notwithstanding, there may be some residual need for ConEd, consistent with the rights of all transmission owners in New York, to request that certain units be dispatched OOM to comply with local reliability requirements. Such situations could occur because of unusual or special operating conditions not directly related to NYC load pocket congestion, such as environmental limitations. The NYISO anticipates that with the enhanced capabilities of the SCD, the occasions for using OOM dispatch will be infrequent.[53] The NYISO will independently verify the need for any such OOM dispatch requests, and will post details about any OOM dispatch on its OASIS.[54] Moreover, in accordance with standard NYISO procedures, OOM units will not be considered in determining market clearing prices, and OOM units in a position to exercise market power will be subject to mitigation.

The modeling changes will also enable the NYISO to apply conduct and impact mitigation on an automated basis in the In-City Real-Time Market, as described in the following

[52] *See* Gonzales Affidavit at ¶ 13.

[53] *See* Gonzales Affidavit at ¶ 9.

[54] *See id.*

section. No tariff changes are needed to implement the enhanced SCD modeling. Certain tariff changes are necessary to implement the related mitigation measures.

XIII. IN-CITY MITIGATION MEASURES

This Comprehensive Mitigation Filing proposes to bring the market mitigation of In-City units within the conduct and impact methodology used throughout the rest of the State. The NYISO plans to apply this conceptual framework, tailored to the local market power circumstances present in New York City, to its administration of both the day-ahead and Real-Time energy markets. The NYISO will also automate the approach set out in this filing to In-City mitigation, as it has done with the AMP, although the initial phase of the proposed Real-Time monitoring will be performed manually.[55] Thus, the NYISO will apply market power mitigation measures to all In-City generation on the basis of appropriate conduct and impact tests, rather than the current test used in the market mitigation measures approved at the request of ConEd in connection with the divestiture of its generation.[56]

One key to the achievement of both goals is the modification of the methodology used to develop Reference Levels for In-City units. The NYISO proposes that Reference Levels be determined for In-City units on the same basis as is used under the Market Mitigation Measures for units throughout the rest of the State.

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[55] *See* Affidavit of James H. Savitt, Ph.D., Market Monitor NYISO at ¶ 25 [hereinafter Savitt Affidavit].

[56] While the existing Market Mitigation Measures do not exclude In-City generation, the Market Mitigation Measures have as a practical matter been rendered moot for In-City units by the ConEd measures. The NYISO understands that simultaneously with this filing, ConEd is submitting a filing to delete any market power mitigation measures from its tariffs.

A. In-City Market Conditions

The In-City market is subject to significant levels of transmission congestion that can result in significant levels of market power.[57] The Commission has recognized the In-City market power issues in its October 15, 2001 ConEd order.[58] The Commission noted "the conditions that gave rise to potential market power in the City may still exist, that supplies in the New York City were projected to be tight during [the 2001 Summer Capability] period, and the effectiveness of new demand response programs was then uncertain."[59] ConEd stated that "the conditions requiring the Revised LMM are almost certain to be present this coming summer, as they were this past summer."[60] Thus, the In-City market will continue to face market power issues during times of congestion.

In his affidavit, Dr. Patton states that a traditional concentration analysis of the seven In-City sub load pockets shows that they are highly concentrated with Herfindahl-Hirschman Index ("HHI") numbers ranging from 3700 to 10000.[61] Moreover, the Commission has recently issued a new Supply Margin Analysis Screen to assess whether an applicant has generation market power, which provides a newer analysis to determine the potential for market power abuse

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[57] *See* Patton Affidavit at ¶¶ 41-53.

[58] *See Consolidated Edison of New York, Inc.,* 97 FERC ¶ 61,050 (2001).

[59] *See id.* at 61,287.

[60] *Motion of Consolidated Edison of New York, Inc.,* Docket Nos. ER01-1385-001 & EL01-45-001, filed Oct. 5, 2001.

[61] *See* Patton Affidavit at ¶ 43. The HHI is a measure of market concentration used in the Merger Guidelines and in the Commission's Merger Policy Statement. According to criteria set forth by the antitrust agencies, markets with HHIs above 1800 are considered to be highly concentrated. *See* U.S. DEP'T OF JUSTICE AND FEDERAL TRADE COMM'N, HORIZONTAL MERGER GUIDELINES (1992 with April 8, 1997 revisions), *reprinted at* 4 Trade Reg. Rep. (CCH) ¶ 13,104.

exists.[62] Under the Commission's new analysis "[w]hen an applicant is pivotal, it is in a position to demand a high price above competitive levels and be assured of selling at least some of its capacity. An applicant will be pivotal if its capacity exceeds the market's surplus of capacity above the peak demand."[63] As part of his analysis of whether lower thresholds are warranted In-City, Dr. Patton assessed the extent to which one or two suppliers would be pivotal and, therefore, able to exercise market power. Dr. Patton concludes finds that a single supplier would be pivotal in the entire NYC area 2 to 6 percent of the hours. He illustrates the significance of this finding by showing that a supplier that is pivotal in 4 percent of the hours that uses this capability to raise prices in the constrained area to $1000 would raise the average annual spot price for energy in that area by 70 percent.[64] He also indicates that although this pivotal supplier analysis could not be done for the sub load pockets because load data for these narrower areas was not available, suppliers in these areas are likely to be pivotal more frequently than they are in NYC because the constraints bind much more frequently and the concentration of supply is much higher.[65] On this basis he concludes that the NYC load pockets are potentially subject to substantial locational market power that justifies the lower thresholds proposed in the Comprehensive Mitigation Filing.

In sum, the frequency of congestion into and within New York City creates opportunities for a persistent exercise of market power, that is, for sellers to bid persistently right below the

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[62] *See AEP Power Marketing, Inc.,* 97 FERC ¶ 61,219 at 61,969 (2001).

[63] *Id.*

[64] *See* Patton Affidavit at ¶ 48-50.

[65] *See* Patton Affidavit at ¶ 51.

normal Market Mitigation Measures thresholds and realize monopoly rents at that level. Because that pricing could be sustained, it would become significant over time. Thus, while the In-City market and sub-load pockets will be subject to the same thresholds that are appropriate for unconcentrated areas of the New York Control Area when they are not experiencing persistent congestion, in the face of such congestion, these areas would be subject to potential market power abuse without additional mitigation in the form of tighter mitigation thresholds.

B. In-City Real-Time Conduct and Impact Mitigation

As proposed in this Comprehensive Mitigation Filing, the NYISO will incorporate mitigation of In-City units bidding into Real-Time markets within the conduct and impact mitigation methodology starting May 1, 2002. The NYISO's Real-Time monitoring will address the unique market power considerations applicable In-City, and previously recognized by the Commission in approving the ConEd mitigation measures, by adopting lower conduct and impact thresholds whenever the In-City Real-Time markets are subject to transmission congestion.[66] Specifically, the NYISO will apply these lower conduct and impact thresholds whenever there is congestion on the interface into New York City (the "cable interface"), or on the interface into the 138 kV system within the City, or on an interface into a subpocket within the 138 kV system. The NYISO will determine the existence of congestion by the presence of a shadow price[67] greater than a threshold value on the relevant interface. This congestion trigger

[66] *See* Section 3.1.2(b) NYISO Revised Market Mitigation Measures.

[67] The term "shadow price" refers to the economic value of relieving one MW of congestion on a constraint. The shadow price threshold value would initially be established at zero, meaning that the lower thresholds would be triggered as soon as an interface becomes congested.

coupled with lower thresholds will ensure that the conduct and impact framework responds appropriately to the structural market power situation encountered in New York City.[68]

The NYISO proposes to set the In-City load pocket thresholds according to a formula that is proportional to the number of congested hours experienced over the preceding twelve month period.[69] This approach seeks to balance two competing concerns: protection against market power abuse and the need for pricing flexibility. In addition, as is more fully explained below, this approach permits the In-City thresholds to relax as the number of congested hours decreases, whether due to additional generation or increases in transmission capability.

The thresholds would be designed such that if a bidder were able to perfectly anticipate congested hours and raise its bid to the level of its conduct threshold, the maximum sustained price increase it could realize would be 2% over the course of a year in a constrained area. Therefore, it is necessary to reduce the conduct and impact thresholds as the frequency of congestion increases to limit the annual exposure to the 2% level. Likewise, as investments are made or other changes occur (e.g., demand response) that reduce the frequency of congestion into a constrained area, the thresholds would increase and ultimately revert to the levels applicable to the State.

In reality, the expected price increase would be substantially less than that amount, since bidders would not be able to anticipate congestion with complete accuracy, and thus could not

[68] The economic underpinnings and design of the In-City mitigation measures are described in detail in the Patton Affidavit at ¶¶ 41-96.

[69] *See* Section 3.1.2(b)(1) Revised Market Mitigation Measures.

raise their bids to their conduct thresholds without a significant risk of losing sales without affecting prices.

The declining threshold function would be defined by the following formula:[70]

$$\frac{Threshold * Constrained\ Hours}{8760\ Hours * Average\ Price} = 2\% \text{ or } Threshold = \frac{2\% * Avg.\ Price * 8760}{Constrained\ Hours}$$

This conduct test would be applied in the MIS, which would select the appropriate bid depending on the amount of load pocket congestion and the outcome of the conduct tests, and pass mitigated or unmitigated bids to the SCD. The conduct and impact tests for 30 minute GTs would be applied in the Balancing Market Evaluation ("BME"),[71] since the commitment of those units occurs over a longer period of time than the five minute intervals scrutinized by SCD.[72]

Three additional situations can give rise to market conditions that would facilitate an exercise of market power similar to that created by transmission congestion. Thus, the lower In-City thresholds should be applied in each of these situations as well. First, occasionally it is necessary to impose operational limits on the transmission capacity into the city during thunderstorms or other severe weather conditions, in order to bring on enough generation In-City

[70] *See* Section 3.1.2(b)(1) NYISO Revised Market Mitigation Measures.

[71] *See* Patton Affidavit at ¶ 96. The BME begins ninety (90) minutes before the beginning of the hour in which dispatch occurs. Based upon the Day-Ahead commitment and updated Load forecasts and Generator schedules, BME will assess new Bids for the Locational Based Marginal Pricing ("LBMP") Markets and requests for new Bilateral Transaction schedules for the Dispatch Hour to which the SCUC applies. BME will redispatch Internal Generators, schedule External Generators, schedule new Bilateral Transactions if feasible, update Desired Net Interchanges if needed, and Reduce or Curtail Bilateral Transactions with Non-Firm and Firm Transmission Service as needed for the Dispatch Hour for which SCUC applies.

[72] *See* Patton Affidavit at ¶ 95.

to assure reliable service if a lightning strike or other weather-related event causes a transmission outage. Thus, a Storm Watch condition has the practical effect of creating a form of transmission congestion.

Second, and as discussed further below, in some situations, generally relating to environmental or other reliability requirements not arising from transmission congestion, it may be appropriate for ConEd to request that particular generation be OOM. To the extent the underlying requirement can only be met by a particular unit or small number of units, the responding units would in effect be "must-run" units with consequent control over prices. Thus, market power mitigation of such units would be warranted, and mitigation at the lower threshold would be warranted to limit the effect of any OOM price increase being added to any congestion-related price increases.

Finally, similar considerations would apply to a Supplemental Resource Evaluation, or SRE. Under the Services Tariff, a Supplemental Resource Evaluation is defined as: "A determination of the least cost selection of additional generators, which are to be committed, to meet changed conditions that may cause the original dispatch to be inadequate to load and/or reliability requirements."[73] A unit that is contacted to provide service under an SRE will generally know that it has a form of "must-run" status, and consequently a measure of control over prices. Thus, the same reasoning described above with respect to the mitigation of OOM situations would apply to In-City SRE situations as well.

[73] NYISO Services Tariff § 2.176.

Initially, for the Real-Time market, the NYISO will implement this mitigation system manually. NYISO staff will monitor congestion on the load pockets and use the same congestion triggering criterion (*i.e.*, shadow prices on an interface greater than load pocket thresholds) to identify conditions that may warrant mitigation. The NYISO will also utilize the approach to the conduct test described here in determining whether, under those circumstances, a particular bidder should be mitigated. Bids for generators who fail the conduct test in an hour will be replaced with reference bids for the following BME run and SCD dispatch.[74] Automation of mitigation for the Real-Time market will occur by August 31, 2002.

C. Basis for the Two Percent Standard

Given the structure of the locational thresholds that decline as the frequency of congestion increases over the year, an annual threshold level must be selected to establish locational thresholds that reasonably balance the need to provide flexibility to generators bidding in constrained areas to reflect legitimate changes in marginal costs with limiting undue exposure of the market to locational market power.

In Figure 1 of Dr. Patton's affidavit, he calculates illustrative locational thresholds based on application of 1%, 2%, 3%, 4% and 5% annual threshold levels with an historic average In-City price of $49.[75] The resulting curves show the locational conduct and impact thresholds that would apply as the frequency of congestion increases. The curves also illustrate that the In-City thresholds would increase as the level of historic congestion decreases, with the In-City

[74] *See* Savitt Affidavit at ¶¶ 25-26.

[75] *See* Patton Affidavit at Figure 1.

thresholds eventually returning to the $100 level applied in the rest of New York if congestion into and within the City were to be eliminated.

Based on the analysis in his affidavit, Dr. Patton has recommended the 2% annual level as a reasonable level for establishing the locational thresholds for the In-City load pockets. At the applicable at the level of congestion on the 345 kV interface into the City experienced during 2001 of 572 hours, the locational threshold would be approximately $15. Alternatively, the much higher estimated frequency of congestion during 2001 into the sub load pockets in the 138 kv system would result in thresholds ranging from $3 to $5 per MWh.

Based on his analysis of likely bidding behavior, Dr. Patton has concluded that with a 2% annual threshold, the actual exposure of the market to potential price increases in various locations throughout NYC would range from 0.3% to 2.7% depending on the location.[76] The high side of the range corresponds to the smallest sub load pockets where, based on the relatively high frequency of estimated constraints, the conduct and impact thresholds would be set at approximately $3 per MWh (versus the $100 per MWh threshold for the State). Thus, setting a threshold significantly below 2% would remove virtually all flexibility for bids to allow for changing market conditions or operating considerations that change a generator's marginal costs and thus justify changes in its bid prices.

At the other extreme, the 5% price effect for assessing market power set forth in Horizontal Merger Guidelines of the Dept. of Justice and Federal Trade Commission, and in this Commission's Merger Policy Statement, provides an appropriate upper bound on the range of

[76] *See* Patton Affidavit at ¶ 92.

thresholds that should considered for the In-City mitigation measures.[77] The ability by In-City generators to sustain a 5% average price increase would, under the Merger Guidelines, be indicative of an ability to exercise significant market power.

Overall, as the Commission itself noted in the NYISO AMP Order, there is a balance required between applying measures so that significant exercises of market power are mitigated, while not creating a potential for undue intrusion into the operation of competitive markets by over mitigation.[78] Using the 2% annual level sets the conduct and impact thresholds for Constrained areas at a reasonable level, between levels that are impractically low and thus likely to mitigate unjustifiably, that is, to mitigate instances of legitimate conduct, and levels that would permit sustained price increases resulting from the presence of locational market power.

The operation of a 2% maximum threshold is illustrated by the chart showing possible alternative mitigation curves included in Dr. Patton's affidavit.[79] Under the Comprehensive Mitigation Filing proposal, the historic congestion experience for the rolling 12 month period prior to the effective date of the proposal would be examined to determine the frequency of congestion, and the appropriate starting point for the In-City conduct threshold. The average price that would actually be used to set the thresholds would vary from load pocket to load pocket.

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[77] *See* Patton Affidavit at ¶ 62*;* U.S. DEP'T OF JUSTICE AND FEDERAL TRADE COMM'N, HORIZONTAL MERGER GUIDELINES (1992 with April 8, 1997 revisions), *reprinted at* 4 Trade Reg. Rep. (CCH) ¶ 13,104; *Federal Energy Regulatory Commission*, *Order No. 592, Policy Statement Establishing Factors the Commission Will Consider in Evaluating Whether a Proposed Merger is Consistent with the Public Interest*, 77 FERC ¶ 61,263 (1996).

[78] *See New York Independent System Operator, Inc.,* 97 FERC ¶ 61,242 at 62,098 (2001).

In Figure 1 of his affidavit, Dr. Patton calculates thresholds based on application of 1%, 2%, 3%, 4% and 5% maximum price increase limits with an historic weighted average In-City price of $49.[80] The resulting curves show a maximum amount a theoretical pure monopolist could raise prices in the load pocket during the constrained hours without being mitigated. The curves also illustrate that the In-City thresholds would increase as the level of historic congestion decreases, with the In-City thresholds eventually returning to the $100 level applied in the rest of New York if congestion into and within the City were to be eliminated.

In sum, Dr. Patton concludes that thresholds that set a theoretical 2% bound above average prices as a trigger for market mitigation would provide substantial protection against the exercise of market power, while providing bidders a measure of pricing flexibility. The NYISO believes that Dr. Patton's recommended threshold is reasonable and appropriate, and should be adopted. In order to ensure that the 2% threshold level continues to represent an appropriate resolution of these two objectives, however, the NYISO will review and analyze the results of the new In-City measures during the coming 2002 Summer Capability period, and report to the stakeholders whether a change in the threshold is warranted.

D. Proxy Impact Thresholds

Ideally, the market impact test is applied through comparison of the results of two passes of the dispatch model, either the SCUC in the DAM or the SCD in the Real-Time Market. The first pass would calculate market prices with as-submitted bids, and the second would calculate prices using mitigated bids for all units submitting bids that exceeded the conduct test. Because

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[79] *See* Patton Affidavit at Figure 1.

[80] *See id*.

the SCD must be re-run for every five minute interval of the Real-Time dispatch, however, adding an additional impact test run is not feasible with the current capabilities of the system.

Accordingly, three proxy impact tests would be used within SCD to implement conduct and impact mitigation In-City in the Real-Time Market on an automated basis.[81] The first would impose mitigation if a resource exceeding the conduct test had been scheduled in the prior SCD interval. Mitigation in this circumstance is appropriate because if the unit had been scheduled in the prior five minute interval, it would be very likely to be scheduled in the current interval and would by definition either be the marginal unit and thus set the clearing price, or else would be inframarginal and thus would not be adversely affected by being mitigated (since it would still be eligible to receive the market clearing price).

Second, if a resource is not scheduled, mitigation would be imposed if a unit's Reference Level is less than the offer price of the otherwise marginal resource by an amount greater than the amount of the applicable conduct threshold. This test is intended to preclude mitigation in circumstances where the withheld resource could not be raising prices by more the applicable locational threshold. For example, a unit with a reference price of $50 per MWh that is not running when the marginal bid in the Constrained Areas is $55 per MWh cannot have a price impact larger than $5 per MWh. If this is less than the locational threshold then mitigation is not warranted.

Third, as a safeguard against unwarranted mitigation, mitigation would not be imposed if the sum of the shadow prices on the transmission interfaces into a Constrained Area (the cable

[81] *See* Section 3.2.1(3) NYISO Revised Market Mitigation Measures.

interface, or the cable interface plus the 138 kV system interface and any applicable sub-pocket interface) is less than the applicable locational conduct and impact threshold. This is appropriate because it effectively identifies the maximum potential impact of any economic withholding occurring within the Constrained area. In other words, if the congestion is entirely caused by economic withholding of resources within the Constrained Area, then the impact of the withholding cannot be larger than the total value of congestion into to Constrained Area. Therefore, mitigation would be inappropriate if the total value of congestion is less than the locational threshold.

For example, if the price in eastern New York is $50 and the price in a sub load pocket is $55 so that the sum of the shadow prices into the sub load pockets is equal to $5, the largest potential impact that can be expected by mitigating the conduct is $5 (i.e., the constraints disappear and the prices in NYC join the rest of eastern NY at $50). If this value is less than the locational threshold, the NYISO will not mitigate the conduct. This additional test was proposed by a Market Participant during an AMP/ICM Task Force meeting, and has been adopted by the NYISO as a providing significant assurance that mitigation occurs only when warranted by market conditions.

E. On-Dispatch Operation Requirement

Under the Services Tariff, an "On-Dispatch" generation unit is "A Dispatchable Generator … that is capable of responding to computer-issued ISO instructions."[82] As can be seen from the description above, the proposed Real-Time In-City mitigation measures are intended to be applied through the operation of the Real-Time, least-cost security-constrained

[82] NYISO Services Tariff § 2.125.

dispatch resulting from the SCD. The SCD only controls units that are operating On-Dispatch. The mitigation will also be applied through the BME for off-dispatch and 30-minute gas turbines, but with a potentially substantial delay. Dr. Patton therefore concludes that it is appropriate to require all units that are capable of doing so within Constrained Areas to operate on-dispatch, in order to facilitate the effectiveness of SCD mitigation.[83] Moreover, there is no apparent efficiency justification for units that are capable of operating On-Dispatch from not doing so. Indeed, operating On-Dispatch will help ensure that the application of mitigation is fine-tuned as much as practicable to the five minute intervals examined by SCD, rather than the longer intervals examined by BME or that might be required for mitigation of Real-Time markets on a non-automated basis.[84]

F. Duration of Real-Time In-City Mitigation

Real-Time bids are required to be effective for the one hour interval examined by the BME. Consequently, if mitigation is applied by SCD in a given five minute interval, the mitigated bid would continue to be used for the remainder of the hour in which the interval first warranting mitigation occurred.

G. In-City DAM Mitigation

As suggested above, the NYISO plans to automate mitigation for In-City units in the DAM, as it has done for the rest of the state with the current version of the AMP. Day Ahead Mitigation for In-City units can and should rely on the same conduct and impact approach already articulated in the Market Mitigation Measures. In principle, there is no reason why the

[83] *See* Patton Affidavit at ¶ 96.

[84] *See id.*

same conduct and impact tests should not be applied to the In-City DAM as to the In-City Real-Time Market.

Accordingly, as soon as the necessary modifications to the SCUC can be developed, tested, and implemented, the NYISO will operate the AMP for In-City units in the DAM using the same congestion trigger and reduced conduct and impact thresholds proposed for use in the In-City Real-Time Market. Like the approach of the current AMP for the whole state, the NYISO will determine impact by comparing the In-City LBMPs resulting from the use of unmitigated bids to the LBMPs resulting from the substitution of mitigated bids for all units in Constrained Areas that exceed the locational conduct threshold, rather than relying on the proxy impact test proposed here for the Real-Time Market. This comparison would be made using successive SCUC runs, in accordance with the enhanced AMP procedures applicable to the DAM generally.

Until the foregoing AMP modifications can be implemented, the NYISO will continue to apply the ConEd DAM measures previously approved by the Commission,[85] but with the following proposed improvements:

- Use of NYISO Reference Levels in lieu of the default bids specified in the ConEd measures, which would bring the In-City measures in line with the methodology used throughout the rest of the State, and would incorporate the flexibility to adjust Reference Levels as may be appropriate to recognize changes in operating costs; and

- Increase the trigger for In-City DAM mitigation to a difference of 107% between the LBMP at the Indian Point 2 bus and the bus of a given In-City generator, rather than the current 105% trigger.

[85] *See Consolidated Edison Company of New York, Inc.,* 84 FERC ¶ 61,287 (1998).

The NYISO's analysis of DAM mitigation using the 105% test indicates that the test may be triggered by transmission losses, rather than the transmission congestion conditions that the test was intended to detect. The NYISO's analysis is described by Dr. James H. Savitt, the NYISO Market Monitor.[86] The ConEd DAM measures have been triggered whenever there is a difference between an In-City generator bus and the Indian Point 2 bus outside the City that equals or exceeds 5%. As Dr. Savitt explains, examination of losses between Indian Point 2 and representative In-City busses indicates that losses can account for close to 2% of the relevant price difference.[87] Dr. Savitt concludes on the basis of his analysis that increasing the mitigation threshold by two percentage points should be sufficient to ensure that mitigation of the In-City DAM is triggered only by congestion and not transmission losses.[88] The proposed increase in the ConEd DAM mitigation threshold would reduce incidents of over mitigation under that mitigation method, pending transition to the NYISO's automated conduct and impact methodology.

H. Elimination of Quantity Thresholds for Physical Withholding

Section 3.1.1 of the Market Mitigation Measures specifies the following thresholds to identify physical withholding of a generating unit:

> (1) Withholding that exceeds the lower of 10 percent or 100 MW of a unit's capability, or the lower of 5 percent or 200 MW of a bidding entity's total capability; or

[86] *See* Savitt Affidavit at ¶ 16-24.

[87] *See* Savitt Affidavit at ¶ 19.

[88] *See* Savitt Affidavit at ¶ 123.

(2) Operating a unit in real-time at an output level that is less than 90 percent of the NYISO's dispatch level for the unit (i.e., basepoint).

In light of the history of persistent congestion on the cable and sub-pocket interfaces, the Market Advisor recommends that the quantity thresholds for physical withholding be eliminated.[89] This elimination of the quantity thresholds for identifying physical withholding In-City would be comparable to the economic withholding provisions, for which there are no quantity thresholds. A breach of the impact test would continue to be required before mitigation could be imposed as a result of physical withholding.

I. Operation of the In-City Measures

The Comprehensive Mitigation Filing brings the In-City mitigation measures into conformity with the measures used throughout the rest of the state by using the conduct and impact framework for In-City mitigation, while adjusting the conduct and impact thresholds as appropriate to recognize the unique market power problems in NYC. Thus, implementation of the Comprehensive Mitigation Filing will bring In-City mitigation into full harmonization with the measures used throughout the rest of the State. Conduct and impact mitigation is the preferred method for use In-City for all the reasons described above that support this approach.

J. Tariff Changes to Implement the Proposed In-City Mitigation Measures

To implement the new In-City measures, the NYISO proposes the following changes to the Market Mitigation Measures: revise § 3.1.1 (Thresholds for Identifying Physical Withholding), add a new section (b) to § 3.1.2 (Thresholds for Identifying Economic Withholding), with four subsections, revise § 3.2.1 to add a new subsection (3), and implement

[89] *See* Patton Affidavit at ¶ 146.

an On-Dispatch requirement through the addition of a new § 5.1 in the NYISO's Market Mitigation Measures.

The ConEd LMM Order directs the NYISO and ConEd to file "revised tariff sheets that place all in-City mitigation measures in NYISO's tariff and remove them from ConEd's tariff."[90] The revised Market Mitigation Measures accordingly include a new § 5.2 that incorporates the ConEd DAM mitigation measures previously found in ConEd FERC Tariff 199, with the necessary editorial changes, such as conforming defined terms to the usages of the Services Tariff. In addition, the incorporated language has been made consistent with the revisions to the ConEd LMM approved by the Commission this past summer.[91] In particular, the imported language deletes a parenthetical in what would now be § 5.2 that would exclude Minimum Generation and Start-Up bids from mitigation. Finally, the language incorporated in the Market Mitigation Measures omits the provisions from the ConEd tariff dealing with the determination of reference prices for mitigation of In-City units. With the omission of this language, the In-City units would default to the normal NYISO Reference Level methodology.

The NYISO also has incorporated an ICAP provision[92] regarding certain deficiency penalty payments required of units divested from ConEd that fail to comply with Section 5.13.1 of the Services Tariff. That section requires divested unit owners to offer for sale all Unforced Capacity associated with divested units in an appropriate NYISO-administered Installed

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[90] *See Consolidated Edison Company of New York, Inc.*, 97 FERC ¶ 61,241 at 62,092 (2001).

[91] *See Consolidated Edison Company of New York, Inc.*, 96 FERC ¶ 61,095 (2001).

[92] *See* Section 4.5(c) Revised Market Mitigation Measures.

Capacity auction. Payments of this deficiency penalty will be to the NYISO. The NYISO will distribute such payments to affected In-City LSEs in accordance with procedures to be determined through the normal stakeholder review process. The original provision for payment, which has not been applicable to ICAP auctions to date, provided for payment solely to ConEd. The amended provision moved into the NYISO tariff reflects changes in the In-City market since the ConEd tariff was written, and allows payments to be distributed to all In-City load serving entities as applicable.

XIV. EXPERIENCE WITH THE IN-CITY MITIGATION MEASURES DURING THE 2001 SUMMER CAPABILITY PERIOD

In the ConEd LMM Order, the Commission stated that: "The filing that the NYISO must make for the summer 2002 must address the experience with In-City mitigation during the 2001 Summer Capability Period, however limited that experience may be . . . ."[93] The experience with the ConEd In-City mitigation measures during the 2001 Summer Capability Period is addressed in Dr. Savitt's affidavit.[94]

Dr. Savitt's affidavit examined an "extensive data collection" that

> focused on the bid load pass of the security constrained unit commitment ("SCUC"), the NYISO software that evaluates bids in the day-ahead market ("DAM") and commits units based on their economic ranking, because that is the point at which the in-City mitigation occurs. The data included in-City unit-by-unit mitigations, commitments, and schedules that are part of the SCUC process.[95]

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[93] *Consolidated Edison Company of New York, Inc.,* 97 FERC ¶ 61,241, at p. 62,092 (2001).

[94] *See* Savitt Affidavit at ¶¶ 5-15.

[95] Savitt Affidavit at ¶ 7.

Based on his analysis of this data, Dr. Savitt concludes that "while the ConEd Measures were imposed on some fraction of the energy committed in the DAM, an equivalent or larger portion of the total MW that was subject to mitigation was competitively bid and not mitigated."[96] A series of charts were prepared by Dr. Savitt showing breakdowns of: the MW subject to mitigation that were committed and mitigated; the MW subject to mitigation that were committed and not mitigated; the MW subject to mitigation that were not committed; the MW not subject to mitigation and committed; and the MW not subject to mitigation and not committed.[97]

Although further analyses of last summer's In-City mitigation experience could be performed, the changes proposed in the Comprehensive Mitigation Filing for both the DAM and Real-Time In-City mitigation measures render the experience with last summer's In-City measures largely moot. Moreover, the changes proposed in the Comprehensive Mitigation Filing are based on reconciling the fundamental approaches to market power mitigation underlying the ConEd and NYISO measures, rather than any specific historic experience with the ConEd measures last summer, and are focused on the adoption of an appropriate mitigation methodology for the New York markets going forward into this summer and thereafter.

XV. TRANSFER OF CONED ICAP/UCAP BIDDING CAP TO MARKET MITIGATION MEASURES

Consistent with the directive to the NYISO in the ConEd LMM Order to file "revised tariff sheets that place all in-City mitigation measures in NYISO's tariff and remove them from

[96] Savitt Affidavit at ¶ 15.

[97] *See* Savitt Affidavit at Exhibits 1 - 12.

ConEd's tariff,"[98] the tariff revisions submitted with the Comprehensive Mitigation Filing include a new § 4.5 that incorporates the cap on capacity sales from the ConEd tariff. The new language in the Market Mitigation Measures does not change the substance of the capacity cap, but merely moves the specification of the level of the cap from the ConEd tariff to the NYISO Services Tariff. Consistent with the current design of the capacity market in New York, the new language translates the cap from the level of $105 per kW-year of Installed Capacity originally approved by the Commission[99] to the equivalent figure of $112.95 per kW-year of Unforced Capacity recently approved by the Commission.[100]

Near the end of the meetings of the stakeholder Task Force working on the Comprehensive Mitigation Filing, issues were raised by Keyspan-Ravenswood, Inc. ("Ravenswood") concerning the level and terms and conditions of the In-City capacity cap. These issues have now been raised in a complaint filed with the Commission on February 15, 2002 by Ravenswood.[101] Because the level or terms and conditions of the capacity cap were not at issue in the dockets resulting in the November 27 Orders, and because concerns about the cap were not raised until late in the Task Force meetings, the NYISO is not in a position to express any views on the merits of these issues. The NYISO believes that there should be an opportunity

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[98] *Consolidated Edison Company of New York, Inc.,* 97 FERC ¶ 61,241, at p.62,092 (2001).

[99] *See Consolidated Edison Company of New York, Inc.*, 84 FERC ¶ 61,287 (1998).

[100] *See* Letter Order, Docket No. ER01-2536-001, Alice M. Fernandez, Director Division Tariffs and Rates-East, to the New York Independent System Operator, Inc. (Nov. 6, 2001).

[101] *Complaint of Keyspan-Ravenswood, Inc., Requesting Limited Changes to In-City Installed Capacity Mitigation Measures and Request for Fast-Track Processing*, Docket No. EL02-59-000.

for full consideration of the of the changes Ravenswood suggests, by the NYISO and the stakeholders, before revisions to the cap and the other In-City changes sought by Ravenswood are taken up on the merits by the Commission.

XVI. 10 MINUTE NON-SYNCHRONOUS RESERVES MITIGATION MEASURES

In the Spring of 2000, a bid cap and a mandatory bidding requirement were imposed on the 10 Minute Non-Synchronous Reserves ("10 Minute NSR") market as a result of an episode of physical and economic withholding that resulted in substantial price increases.[102] As a result of this episode, certain limits were placed on bids submitted for 10 Minute NSRs and continue today.

At the request of the NYISO Board, Dr. Patton is in the process of analyzing the current state of the 10 Minute NSR market. Dr. Patton is examining whether there have been significant changes affecting the ability of sellers in this market to exercise market power since the Spring of 2000, including an examination of any increases in the amount of excess capacity available to provide 10 minute NSR, and an examination of the implementation of the NYISO's Market Mitigation Measures as they relate to the 10 minute NSR market.

Dr. Patton reviewed his preliminary conclusions with the NYISO Business Issue Committee, the NYISO Scheduling and Pricing Working Group, and the AMP/ICM Task Force in February. Issues were raised by the stakeholders that Dr. Patton indicated warranted further consideration in the completion of his analysis and recommendations. Accordingly, the NYISO anticipates further review by the stakeholders of appropriate mitigation measures for the 10

[102] *See New York Independent System Operator, Inc.,* 91 FERC ¶ 61,218 (2000).

Minute NSR market in connection with completion of Dr. Patton's analysis and recommendations. The NYISO will make such filing with respect to 10 Minute NSR as may be warranted after the completion of that review.

XVII. PENALTY PROVISIONS

In a December 21, 2001 Order on Tariff Filing ("Penalties Order"), the Commission granted the NYISO's "request for extension of the Commission-approved penalties, effective as of the date of this order until April 30, 2002, at which time NYISO will have filed a comprehensive market mitigation proposal to become effective May 1, 2002, as directed by the order granting extension of the Automated Mitigation Procedures (AMP)."[103] As stated in the Penalties Order, the "penalties are imposed on generators that submit false information and fail to follow NYISO's dispatch instructions, as well as on load-serving entities (LSEs) that repeatedly cause operational problems by underscheduling in the day-ahead market (DAM)."[104]

The reasons set forth in the NYISO's October 24, 2001 filing requesting extension of the penalties remain valid.[105] These penalties are consistent with, and an integral part of, the overall design of the Market Mitigation Measures. In particular, penalties for physical withholding are necessary because an entity engaging in physical withholding is by definition not submitting bids that can be changed to a default bid at an appropriate Reference Level. Thus, penalties are the only available means for imposing mitigation measures on physical withholding that meets the

[103] *New York Independent System Operator, Inc.*, 97 FERC ¶ 61,334 at 62,576 (2001).

[104] *See id.*

[105] *See Request of New York Independent System Operator, Inc. at the Direction of its Board of Directors to Extend Market Mitigation Penalties,* filed Oct. 24, 2001, Docket No. ER02-209.

applicable conduct and impact tests. Accordingly, provisions carrying forward the penalties previously approved by the Commission, which included penalties for physical withholding and for withholding of load bids, are set forth in the Market Mitigation Measures submitted with the Comprehensive Mitigation Filing. The NYISO also requests that Commission extend the existing penalties, which are scheduled to terminate on April 30, 2002, until the Commission acts on this Comprehensive Mitigation Filing.

XVIII. RESPONSES TO COMPREHENSIVE MITIGATION FILING ISSUES RAISED IN THE NOVEMBER 27 ORDERS

As discussed throughout this filing, the NYISO adopts a consistent conduct and impact framework for market power mitigation that extends across the existing Market Mitigation Measures, the AMP and the In-City mitigation measures. This adoption of a consistent methodology for mitigation responds to the Commission's directives to the NYISO in its November 27 Orders to file "a comprehensive mitigation proposal" that shows how the NYISO's "overall mitigation measures work in conjunction with the other mitigation measures already in effect or proposed for the NYISO."[106] In addition, in the November 27 Orders the Commission required the NYISO to address certain other issues, including the nature and extent of appropriate mitigation for new generation, the appropriate mitigation for "must-run" units, whether exempting new generation from the AMP will encourage more rapid entry of new generation, and whether exempting all energy limited resources from the AMP would be warranted. In addition, the Commission directed the NYISO to collaborate with PJM and ISO-NE during the development of the comprehensive mitigation measures.

[106] *New York Independent System Operator, Inc.,* 97 FERC ¶ 61,242 at 62,098 (2001).

A. The AMP is Not a Barrier to Entry

The NYISO AMP Order raised as an issue whether the "AMP may be one of the many barriers to entry for new generating facilities," and directed the NYISO "to examine barriers to entry for new generation."[107] Because the AMP as presently constituted applies equally to new and existing generation, it is not a "barrier to entry" in the economic sense of a factor that places new entrants at a disadvantage relative to incumbents. Thus, the NYISO understands the Commission to be asking whether the AMP operates as a disincentive to entry by setting prices below the level that would encourage optimal levels of entry.

The NYISO does not believe that the AMP operates as such a disincentive. The conduct and impact thresholds do not suppress prices to artificially low levels, but rather require units to bid at competitive levels, notwithstanding an ability to impose higher bids as a result of market power. The competitive prices resulting from such mitigation send the appropriate signals for new entry. Conversely, prices at artificially high levels as a result of market power do not send accurate signals for new entry, but would instead provide incentives for unwarranted, inefficient entry. The conduct and impact thresholds espoused in the Comprehensive Mitigation Filing provide ample latitude for prices to rise in response to legitimate scarcity, and provide significant flexibility for units to respond to short-term changes in operating conditions, and thus allow prices to provide appropriate incentives to new entry.

Moreover, there is no evidence that the Market Mitigation Measures, including the AMP, have in fact to date acted as a disincentive to entry by new generation. To the contrary, there has and continues to be a large number of applications for new generation, especially in the

[107] *See id.*

downstate area. This experience is described in the attached affidavit of Mr. Steven L. Corey, the NYISO's Manager of Transmission Planning.[108] Mr. Corey states that there are 40 generation projects proposing to interconnect to the In-City grid, representing potentially about 11,930 MW of new In-City generation capacity. This compares to 8,944 MW of capacity currently located In-City or directly connected to the In-City system, and a 2002 In-City Summer Capability Period projected peak load of 10,655 MW. Mr. Corey also states that in New York as a whole, generation projects have been proposed totaling approximately 35,850 MW, as compared to a total existing capacity in the State of 36,356 MW, and a 2002 Summer Capability Period projected peak load of 30,475 MW.[109] Thus, Mr. Corey's affidavit shows that there are generation projects being pursued both In-City and statewide that would effectively double the existing capacity, and that more than exceed the expected summer peaks both in the City and statewide. These figures strongly support a conclusion that the NYISO's market mitigation measures have not been acting as a disincentive to new entry into the New York markets.

B. New Generation Should Not Be Exempt from the Market Mitigation Measures

The NYISO AMP Order directed the NYISO to "consider exempting new generators from AMP in its March filing."[110] In general, a new entrant to a market can only improve the competitive conditions existing at the time of entry.[111] Indeed, even complete withholding by

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[108] Affidavit of Steve L. Corey, Manager of Transmission Planning, NYISO. [hereinafter Corey Affidavit].

[109] *See* Corey Affidavit at ¶ 5.

[110] *See New York Independent System Operator, Inc.,* 97 FERC ¶ 61,242 at 62,098 (2001).

[111] *See* Patton Affidavit at ¶ 141.

new capacity would at worst leave a market in the same condition that would have prevailed if the entry had not occurred.[112] Nonetheless, changes in loads, exits from the market as a result of unit retirements, changes in transmission congestion as a result of new flow patterns, or other factors could elevate a new entrant into a position of market power. Thus, any generator, new or old, may have the potential to exercise market power, and new generation should be subject to the market monitoring and mitigation process at some point in time.[113] When that process is applied, under the conduct and impact methodology a new entrant that does not have an ability to exercise market power will not trigger the conduct and impact screens, and will be able to realize legitimate scarcity rents. As an additional safeguard against the administration of conduct and impact test acting as a disincentive to entry in the first place, however, the NYISO proposes a Reference Level floor for new units, as described and for the reasons set forth above.

C. Application of the AMP to Energy Limited Resources

The NYISO AMP Order noted the exemption for hydro units from the AMP, and directed the NYISO "to work with market participants to determine whether there are other energy limited resources and to develop an appropriate accommodation within the AMP procedures. This coordination should develop both standing protocols as well as an accounting for possible day-to-day considerations affecting bids."[114]

Energy Limited Resources ("ELR") other than hydro units should not be exempt from the AMP. As explained in the original AMP filing, it would be very difficult to administer

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[112] *See id*.

[113] *See* Patton Affidavit at ¶ 142.

[114] *See New York Independent System Operator, Inc.,* 97 FERC ¶ 61,242 at 62,098 (2001).

Reference Levels for hydro units, because the variable cost determining the Reference Level of the bids for such a unit is very likely to be the opportunity cost of the unit, which can vary from day to day, and indeed hour to hour. For units constrained by environmental rules, or that are otherwise ELRs other than hydro units, opportunity costs can be significant, but are typically not nearly as significant a factor in the determination of Reference Levels for such resources. Moreover, the procedures for consultation between the NYISO and Market Parties on adjustments to Reference Levels have accommodated changes to Reference Levels for the units subject to the AMP, including non-hydro ELRs and environmentally constrained units. As a result, the NYISO has not encountered significant difficulties in establishing Reference Levels for non-hydro ELRs, or units constrained by environmental rules.[115]

Because opportunity costs are not a sufficient basis to exclude non-hydro ELRs or environmentally constrained units from the AMP, and there is no other reason unique to such units to exclude them from the AMP, non-hydro ELRs and environmentally constrained units should be accommodated in the AMP in the same manner as other units. Thus, the standing protocols for non-hydro ELRs should be the same as for all other generation. That is, Reference Levels and conduct and impact tests should be applied, as specified in the Market Mitigation Measures. The day-to-day application of the AMP to such units should likewise be the same as for all others. The AMP should apply a default bid in the amount of the applicable Reference Level, if warranted by the conduct and impact tests, with the potential for a Market Party to request adjustments to Reference Levels from time to time as conditions may warrant.

[115] *See* Savitt Affidavit at ¶¶ 27-29.

D. In-City Mitigation Issues

The ConEd LMM Order directed that the Comprehensive Mitigation Filing

> evaluate, through the stakeholder review process, the extent to which market conditions in New York City may warrant structural triggers for market power mitigation; whether in-City mitigation measures should apply only to reliability must-run units, or more broadly, and whether reliability must-run units are adequately addressed by any in-City mitigation measures; and whether in-City mitigation measures should apply to all generation in New York City, or just to units divested by ConEd.[116]

As described above, the potential for frequent and substantial episodes of market power In-City warrants the use of congestion thresholds as "structural triggers" for the application of more stringent conduct and impact thresholds. Under the proposed shadow price test for In-City markets, mitigation measures will be applied whenever transmission congestion leads to a concentrated market structure conducive to the exercise of market power. Thus, the NYISO proposes an appropriate form of "structural trigger" for In-City mitigation.

In-City measures should apply to all generation in NYC, not just "must-run" units, since concentration levels In-City create the potential for any In-City unit to exercise market power. Furthermore, the In-City measures in the Comprehensive Mitigation Filing should apply to all units in NYC, not just those divested by ConEd, because whenever there is transmission congestion into or within the City, any In-City unit has the potential to exercise market power. Moreover, applying the measures to all units will ensure that whenever a unit becomes a "must-run" unit, in the sense that it has a significant measure of market power at its location, it will be subject to the imposition of mitigation measures whenever it attempts to exercise such market

[116] *Consolidated Edison Company of New York, Inc.,* 97 FERC ¶ 61,241, at p. 62,092 (2001).

power. Finally, new In-City units should also be included, for the reasons discussed above with respect to new entrants generally.

E. In-City Reference Levels

The ConEd LMM Order directed that the Comprehensive Mitigation Filing "address the reasonableness of any reference prices proposed to be used, and how the proposed use of such prices is consistent with NYISO's comprehensive market mitigation plan."[117] The NYISO proposes that the same Reference Level methodology be used throughout the New York markets, both In-City and in the rest of the State. As noted above, the same Reference Level methodology is applicable to In-City units as to other units in state because such units share the same general characteristics as the other generation units, and the Reference Level methodology has the same virtues for mitigation of In-City units as it does for units elsewhere in the State. Consequently, the Reference Levels used in the Comprehensive Mitigation Filing for In-City mitigation are reasonable, and consistent with the other provisions of the Comprehensive Mitigation Filing. Any fine-tuning of the mitigation measures for particular market situations should be done through the adjustment of the conduct or impact thresholds, not Reference Levels, as discussed above.

F. Mitigation of Must-Run Units

Must-run units are adequately addressed by the Comprehensive Mitigation Filing, both In-City and elsewhere in the State. The NYISO understands the term "must-run" to refer to units that from time to time, or perhaps for significant periods of time, can exercise market power over

[117] *Consolidated Edison Company of New York, Inc.,* 97 FERC ¶ 61,241 at 62,092 (2001).

the market clearing price at the unit's location. That is, "must-run" units generally exist due to transmission constraints that require them to be run and are a market power concern because such constraints can allow the unit's owner to raise prices substantially. Must-run market power is the most extreme instance of locational market power that is addressed by the locational thresholds in this filing. For purposes of this filing, the NYISO understands that the Commission's references to must-run issues refers more generally to locational market power caused by transmission constraints.

The NYISO will apply mitigation to any unit In-City or elsewhere in the State that seeks to have a significant effect on prices through an exercise of market power, as defined by the Market Mitigation Measures conduct and impact tests. Moreover, the Market Mitigation Measures address locational market power, because location-specific conduct and impact thresholds are established at lower levels that constrain suppliers' ability to frequently raise prices in a Constrained Area.

The approach of this Comprehensive Mitigation Filing is thus fundamentally similar to the mitigation of "must run" units in PJM and New England, in that all three ISOs apply a default bid to units determined to be capable of exercising locational market power. In PJM, units are subject to a cost-based bid whenever congestion occurs other than on the three interfaces that the Commission determined would not give rise to market power concerns. ISO-NE uses a conduct and impact approach to market power mitigation, including locational market power exercised by "must-run" units, in areas not subject to persistent congestion.[118]

[118] *See* NEPOOL Market Rules & Procedures, § 17.3.

The ISO-NE approach is substantially similar to that set forth in this Comprehensive Mitigation Filing. While ISO-NE uses a form of structural screen currently for mitigation in areas that are subject to persistent congestion, *i.e.*, Boston and Southwest Connecticut, the NYISO understands this methodology is under review as the ISO-NE implements an LMP market design as part of its SMD reform. ISO-NE has represented that it is considering moving to an approach similar to that outlined in the Comprehensive Mitigation Filing for In-City mitigation when this market design is implemented. Thus, the NYISO believes that the Comprehensive Mitigation Filing embodies a methodology for dealing with exercises of locational market power by "must-run" units that is appropriate, that is consistent with the approaches in surrounding areas, and that provides a framework for super-regional market mitigation measures.

XIX. COLLABORATION WITH PJM AND ISO-NE IN THE FORMULATION OF THE COMPREHENSIVE MITIGATION FILING

The NYISO AMP Order also directed that in connection with developing the Comprehensive Mitigation Filing, the NYISO collaborate with PJM and ISO-NE. [119] As directed by the Commission, the NYISO held meetings with both ISO-NE and PJM to review the key features of the Comprehensive Mitigation Filing, and to discuss the relationship of the Comprehensive Mitigation Filing to the approaches to market mitigation used in ISO-NE and PJM. As a result of these meetings, the NYISO has concluded that this Comprehensive Mitigation Filing is not inconsistent with the approach to mitigation in PJM, and is very compatible with the approaches to market mitigation being used or developed in ISO-NE.

[119] *See New York Independent System Operator, Inc.,* 97 FERC ¶ 61,242 at 62,098 (2001).

ISO-NE mitigation is based on a conduct and impact framework substantially similar to that used in the Comprehensive Mitigation Filing, except in Boston and Southwest Connecticut, the areas in New England that exhibit persistent transmission congestion comparable to that experienced in New York City. The NYISO understands from its consultations with ISO-NE, however, that ISO-NE is planning to move to conduct and impact mitigation in its congested areas when the pending plans to implement a Standard Market Design in New England reach fruition. In addition, ISO-NE and the NYISO are considering ways to articulate uniform criteria for applying lower conduct and impact thresholds for areas such as Boston, Southwest Connecticut and New York City, and any similar congested areas that may arise in the future.

The similar approaches to mitigation in New York and New England will facilitate consummation of the recently announced agreement to work toward combination of the New York and New England markets. In light of the similar approach to market monitoring and mitigation taken by the NYISO regarding market mitigation, the NYISO understands that ISO-NE is satisfied that the NYISO's Comprehensive Mitigation Filing is consistent with plans for future integration into a Northeast RTO.

Consultations with PJM revealed that PJM and the NYISO take different avenues to achieve their market mitigation objectives. PJM uses the presence of transmission congestion to determine that market-based bids should be replaced by cost-based bids. By contrast, the NYISO conduct and impact approach looks directly at bidding behavior and resulting price effects to determine if market power exists that warrants mitigation. Both apply unit-specific default bids that are intended to reflect a unit's marginal costs.

As shown above in the discussion of the factual analysis supporting the mitigation thresholds, NYISO mitigation is triggered when there are underlying structural problems for the intervals in which mitigation measures are applied. Given the nature and level of the thresholds, the New York mitigation measures would be triggered by significant levels of overall market concentration, such as typically associated with a high HHIs, and would also be triggered by an episode of market power resulting from a residual demand problem, that is supply and demand conditions in which demand cannot be supplied without calling on a particular "pivotal" supplier.

The consultations indicated that the PJM and NYISO approaches can readily co-exist over the coming summer high load period. Moreover, the two ISOs are committed to ongoing consultation to remedy any problems that might arise from the mitigation of their respective markets. Experience with both systems will ultimately contribute to adoption of the best available market mitigation practices as the Northeast markets continue to develop and move closer together. Furthermore, the recently signed *Interregional Coordination and Issue Resolution Agreement* between the NYISO and PJM will facilitate the resolution of any interregional market mitigation disputes and other related market mitigation issues.[120]

XX. PROPOSED EFFECTIVE DATE, REQUEST FOR WAIVER AND IMPLEMENTATION SCHEDULE

To meet the multiple requirements of the November 27 Orders, and in order to ensure successful deployment of the comprehensive plan, the NYISO requests authorization to implement the new and modified mitigation measures it proposes here according to a staggered schedule. Thus, effective May 1, 2002 or as soon thereafter as the Commission authorizes, the

NYISO will implement the steps described in Section XII to assume ultimate responsibility for the dispatch of In-City generation. Simultaneously, the NYISO will undertake mitigation for both the In-City Real Time and Day-Ahead Markets as discussed in Section XIII of this filing. By June 1, 2002, the NYISO will put in place the enhancements to the AMP that are discussed in Section XI; among these are the 50 megawatt ("MW") exemption, and the inclusion of an additional Security Constrained Unit Commitment ("SCUC") pass to improve the AMP's geographic and temporal selectivity.

The NYISO requests a waiver of the Commission's Notice requirements so as to permit a May 1, 2002 effective date. The NYISO requested extensions of time to make the filing, first to incorporate the results of additional stakeholder comments, and then as a result of a major personal emergency that made it impossible for the lawyer leading the NYISO's compliance filing effort to continue working on the filing.

The implementation of certain other improvements discussed here will require additional time beyond the start of this summer's Capability Period. Automation of the In-City Real-Time mitigation proposed in this filing will not be possible on May 1 but will be implemented by August 31, 2002. Full displacement of the existing ConEd In-City Day Ahead mitigation measures cannot be achieved until significant software changes and procedural modifications are in place to incorporate the NYISO's proposals into the AMP. Additional software development is necessary to enact the proposals made here for the evaluation of Start-Up and Minimum Generation bids. However, the substance underlying each of these changes is described in detail

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[120] *Interregional Coordination and Issue Resolution Agreement Between the New York Independent System Operator, Inc. and PJM Interconnection, L.L.C.,* March 15, 2002.

in this filing, and it is only the scarcity of technical resources that dictates the need for additional time. Therefore, the NYISO requests that the Commission authorize the implementation of these revisions to the Market Mitigation Measures upon the NYISO's providing notice to the Commission and the Market Participants that the necessary software has been developed and tested.

The tariff changes necessary to implement the Comprehensive Mitigation Filing are all changes to the NYISO's Market Mitigation Measures, which are set forth in Attachment H to the NYISO Market Administration and Control Area Services Tariff ("Services Tariff"). Clean and redlined versions of the revised Market Mitigation Measures implementing the proposals in the Comprehensive Mitigation Filing are included with this filing.

XXI. CONCLUSION

Overall, the NYISO believes that the Comprehensive Mitigation Filing embodies a number of features that may evolve into "best practices" that should be used in the development of mitigation measures for a super-regional RTO. The conduct and impact approach to mitigation stands on a sound theoretical footing, and has worked well in application. The Comprehensive Mitigation Filing proposals are more discriminating and selective in the imposition of mitigation, thus reducing instances of over mitigation. As described above, the Comprehensive Mitigation Filing is directly compatible with the measures used by ISO-NE.

Evaluation of the operation of the Comprehensive Mitigation Filing during the 2002 Summer Capability period will provide experience with a sophisticated and targeted mitigation system in a market that experiences significant episodes of transmission congestion. This experience would provide a valuable foundation on which to build mitigation measures for a

Northeast RTO. In the meantime, implementation of the Comprehensive Mitigation Filing would in no way preclude the development of further or different measures for a Northeast RTO.

Accordingly, for the reasons set forth above, the NYISO respectfully requests approval of the tariff changes submitted with this Comprehensive Mitigation Filing.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing New York Independent System Operator, Inc. Request for Rehearing of Order on Rehearing on all parties that have executed Service Agreements under the NYISO's Open-Access Transmission Tariff or Services Tariff, the New York State Public Service Commission, the electric utility regulatory agencies in New Jersey and Pennsylvania and on all parties in Docket Nos. ER01-3155-000, ER01-1385-001 and EL01-45-001.

Dated at Washington, DC this 20th day of March, 2002.

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